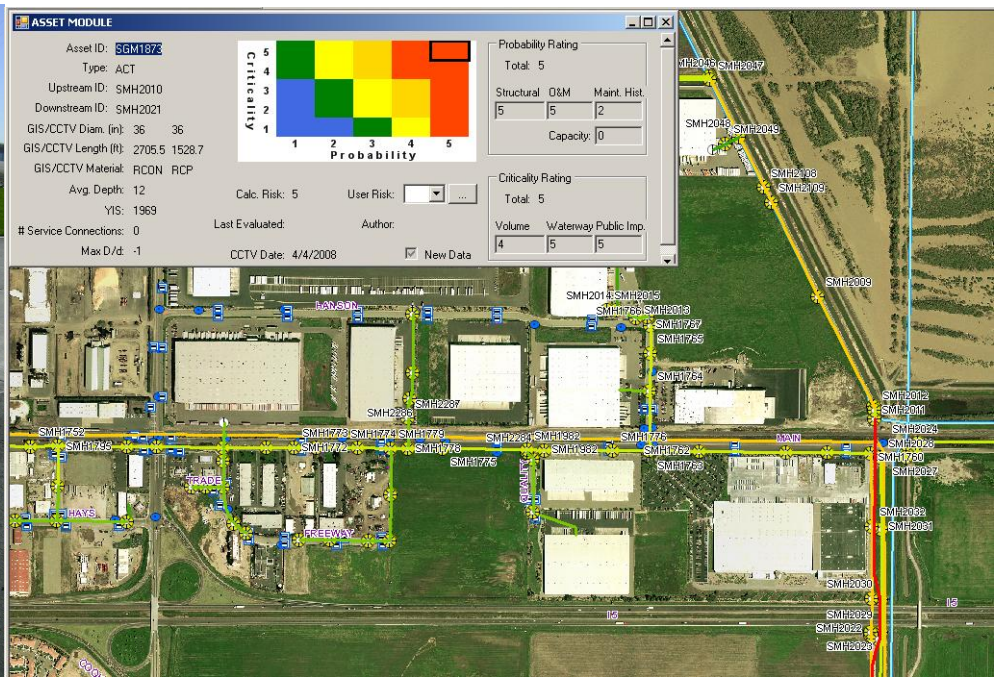
City of Woodland

Sewer System Management Plan (SSMP)



Originally Prepared by:

Kimley-Horn and Associates, Inc.

May 2, 2009

Revised by: City of Woodland Staff

May 22, 2015

CITY OF WOODLAND SSMP
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0 Introduction / Document Use

SSMP Requirement Background

This Sewer System Management Plan (SSMP) has been prepared for the City of Woodland in compliance with the requirements of California State Water Resources Control Board (SWRCB) order no. 2006-0003, dated May 2, 2006. The order consists of general waste discharge requirements (GWDRs) which prohibit the discharge of untreated wastewater which may reach waters of the United States or cause a public nuisance as defined in the California Water Code Section 13050(m). The order requires that all publicly owned wastewater collection system utilities owning more than one mile of pipe prepare a written SSMP to assist in the proper operation, maintenance, and funding of the system to ensure the prevention of sanitary sewer overflows (SSOs). On September 9, 2013, Attachment A, SWRCB Order No. WQO 2013-0058-EXEC, amending the Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (together these documents constitute the "SSS WDR").

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

A completed online sanitary sewer system questionnaire for the City of Woodland is included in **Attachment 0-1**. The questionnaire displays the information provided by the City to the SWRCB through the CIWQS system, and is required to be updated annually.

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Purpose of the SSMP

Any prohibited SSO originating from a publicly owned collection system constitutes a violation of the California Water Code and is subject to enforcement action. The SWRCB will take into consideration the adequacy of the actions taken by the utility in response to any spill as prescribed by the utility's SSMP when determining enforcement actions. The purpose of this document is to ensure that the City of Woodland Department of Public Works (DPW) is making an effective effort to reduce or eliminate SSOs and protect public health by implementing a plan specifically designed to maximize the functionality of its capital and human resources. The SSMP accomplishes this by defining specific procedures and performance indicators in 11 categories defined by the GWDRs by which performance may be measured to enhance operation and maintenance of the sewer collection system.

City Service Area and Sewer System Information

The City of Woodland is located in Yolo County, California and has approximately 57,000 residents. The City's Department of Public Works (DPW) owns 180 miles of sanitary sewer piping which service approximately 15,000 lateral connections. The average lateral is 40 feet in length, which translates to approximately 106 miles of sanitary sewer laterals within the sewer collection system. The collection system conveys an average of 4.5 million gallons of wastewater per day (mgd) to the City water pollution control facility. The sewer collection system includes three lift stations. Spring Lake and Gibson Ranch lift stations serve developments in the southern part of the City, and one influent pump station delivers flow into the headworks of the water pollution control facility. An overview map of the City's sewer collection system is included in **Attachment 0-2**.

Wastewater Utility Department Staffing

The DPW is managed by the City Council, under the direction of the City Manager. The Director of the DPW oversees the actions of six divisions which include Utility Maintenance, Right of Way (ROW) Maintenance, Environmental Operations, Fleet and Facilities, and Administration. The Utility Maintenance Division performs routine inspection and repairs of the sewer system, and responds to problems or complaints reported by system customers. The Environmental Operations Division ensures that all discharges from the sewer collection and treatment system comply with the Federal Clean Water Act, California Water Code, and other applicable regulations. This division also monitors the operation of the City water pollution control facility and sewer collection system lift stations. The Fleet and Facilities Division includes mechanics who conduct maintenance of City equipment and manage parts inventories. The Administration Division is mainly responsible for managing information that includes staff time cards, work orders, budgeting information, training records, etc.The Utility Engineering Division is part of Community Development Department (CDD) and assists in the production of design drawings for infrastructure maintenance and construction, construction specifications, construction and design standards, and system maps and models. This division also plans for necessary expansion of the system in order to accommodate new contributions to the service area.

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Sewer Collection System Budgeting Process

Funding for the sewer collection system, including both O&M costs and capital costs, comes from the sewer enterprise fund (City Fund 220), which collects utility fees paid by City customers. Utility fees are reset periodically when rate studies are done, which project O&M and capital costs ten years into the future in order to determine the fee rates that will provide the required funds. Additionally, funding for capital improvement projects may become available through the Sewer Development Fee Fund. Development fee funding is generated by fees charged to developers to pay for City infrastructure impacted by development projects, including upgrades or entirely new infrastructure components. Project-specific development fees are determined within the City's Major Projects Financing Plan (MPFP), which was last produced in 2008 and determines specific development project infrastructure impacts. For each fiscal year, the DPW submit O&M budgets and Utility Engineering Division submits capital improvement project budgets which extend 1-10 years into the future. O&M and capital improvement budgets are reviewed by the City Manager, a Finance Officer, CDD Director, and the Public Works Director, and are ultimately approved by City Council.

Document Organization

The GWDRs require that the SSMP address 11 specific aspects of the agency's responsibility regarding its operation and maintenance of the collection system. These sections address the following:

1. Goals
2. Organization
3. Legal Authority
4. Operation and Maintenance
5. Design and Performance Provisions
6. Overflow Emergency Response
7. Fats, Oils, and Grease (FOG) Control
8. System Evaluation and Capacity Insurance
9. Monitoring, Measurement, and Program Modifications
10. SSMP Program Audits
11. Public Communication

This SSMP describes the actions of the City's DPW which constitute compliance with each requirement of the GWDRs pertaining to all 11 categories. Each section of the SSMP begins with the presentation of the specific requirements of that section per the GWDRs as well as a narrative providing additional background on the section. Subsequently, a sub-section exists for each sub-requirement within the section.

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Each sub-section of the SSMP presents the following:

a. The exact language of the sub-requirement
b. A discussion of specific actions performed by the City which satisfy the requirement
c. A list of related documents in support of the discussion
d. A plan and schedule for implementing any actions that the utility is not currently performing that are needed to meet the requirement, actions that are ongoing to maintain compliance, and / or actions that the utility wants to complete that are above and beyond the requirements but will enhance utility performance

An appendix is included at the end of each main SSMP section that contains all attached related documents for that section.

Responsibilities of the Legally Responsible Official

The representative of the Utility Maintenance Division of the DPW responsible for the maintenance and implementation of this SSMP will be required to perform the following tasks:

I. Submission and endorsement of all reports required by SWRCB order no. 2006-0003 and Attachment A, SWRCB Order No. WQO 2013-0058-EXEC.
II. Management of the City's online SSO reporting system account, CIWQS
III. Completion of the certification portion of the Online SSO Database,CIWQS Questionnaire
IV. Completion of bi-annual program audits
V. Completion of 5-year SSMP re-certifications

City Council SSMP Certification and Re-Certification Requirements

In order to certify and re-certify the City's SSMP, the City Council must review the document and ensure that it fully meets all of the requirements of the GWDR and recommends actions and procedures to be taken by the DPW that are generally feasible and acceptable to the City Council. Prior to review by City Council, the final version of the SSMP will be reviewed by a committee which includes the Infrastructure O&M Superintendent, Utility Maintenance Supervisor, Principal Utilities Civil Engineer, Lab & Environmental Compliance Manager, and Management Analyst. They will perform a limited technical review of the document, with a more focused review on the potential fiscal impact based on recommendations regarding O&M, rehabilitation / replacement, and any other additional program modifications. Following approval of the SSMP by the review committee, a presentation of the document to City Council will be made by the Utility Maintenance and Utility Engineering Divisions.

SSMP Performance and Implementation Task Schedule

All of the SSMP tasks that are shown within the plan and schedule portion of each separate SSMP sub-section have been summarized in a master "SSMP Performance and Implementation Task Schedule", found in **Attachment 0-3**. This task schedule is updated bi-annually by the Infrastructure O&M Superintendent and adjusted if necessary to ensure timely completion of required tasks.

Related Documents

- Attachment 0-1: City of Woodland CIWQS Questionnaire
- Attachment 0-2: City of Woodland Sewer Collection System Overview Map
- Attachment 0-3: SSMP Performance and Implementation Task Schedule

Glossary

The following is a list of abbreviations and acronyms used in this document:

Abbreviation	Meaning
ARB	Automotive Repair Businesses
BMP	Best Management Practices
CA&CIP	Condition Assessment and Capital Improvement Planning
CCTV	Closed Circuit Television
City	The City of Woodland, CA
CIP	Capital Improvement Plan
CIWQS	California Integrated Water Quality System
CMMS	Computerized Maintenance Management System
CWEA	California Water Environment Association
DPW	Department of Public Works
ERP	Enforcement Response Plan
FOG	Fats, Oils and Grease
FSE	Food Service Establishments
GWDR	General Waste Discharge Requirements
ID	Identification
LRO	Legally Responsible Official
MACP	Manhole Assessment Certification Program
MRP	Monitoring and Reporting Program
MPFP	Major Projects Financing Plan
MSC	Municipal Service Center
NASSCO	National Association of Sewer Service Companies
NOI	Notice of Intent
OERP	Overflow Emergency Response Plan
OES	Office of Emergency Services
O&M	Operations and Maintenance
PACP	Pipeline Assessment Certification Program
PI	Performance Indicators
PM	Preventative Maintenance
POTW	Publicly Owned Treatment Works
PPP	Pollution Prevention Program
RP	Responsible Party
SECAP	System Evaluation and Capacity Assurance Plan

Element 0. Introduction / Document Use

Abbreviation	Meaning
SIU	Significant Industrial User
SOP	Standard Operating Procedure
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
UPC	Uniform Plumbing Code
IPP	Industrial Pretreatment Program

Attachment 0-1:

City of Woodland CIWQS Questionnaire

SSO - Questionnaire [?] SSO Menu

Regional Water Board: Region 5S - Sacramento
Agency: Woodland City
Sanitary Sewer System: City of Woodland CS
WDID: 5SSO10903

Collection System Questionnaire

Save *Note: All questions are required to be answered. Enter NA or 0 for questions that do not apply.*

Last updated: 2015-04-03 **First updated:** 2007-05-31

Collection System Questionnaire [?]

1) Sanitary Sewer System Category: Municipal (Public)

2) What is the population served by your agency's sanitary sewer system? 56,590

3) What is your current annual operation and maintenance budget for sanitary sewer system facilities? $2,586,941

4) What is your current annual capital expenditure budget for sanitary sewer system facilities? $1,750,000

Please identify the total number of employees (technical and mechanical) for your agency's sanitary sewer system (including pump station operations) working within the different classifications listed below.

5) Entry Level (Less than 2 years experience)
Number of agency employees? 3

6) Journey Level (Greater than or equal 2 years experience)
Number of agency employees? 9

7) Supervisory Level
Number of agency employees? 1

8) Managerial Level
Number of agency employees? 1

Please identify the total number of employees who hold CWEA Certification for Collection System Maintenance and/or Plant Maintenance-Includes Mechanical Technologist and Electrical/Instrumentation for your agency's sanitary sewer system (including pump station operations) for the various Certificates and Grades levels listed below.

9) Grade I
Number of certified (Grade I Collection System Maintenance) agency employees: 2
Number of certified (Grade I Plant Maintenance Technologist) agency employees? 1

10) Grade II
Number of certified (Grade II Collection System Maintenance) agency employees: 4
Number of certified (Grade II Electrical/Instrumentation Technologist) agency employees: 0
Number of certified (Grade II Mechanical Technologist) agency employees: 0

11) Grade III
Number of certified (Grade III Collection System Maintenance) agency employees: 2
Number of certified (Grade III Electrical/Instrumentation Technologist) agency employees: 0
Number of certified (Grade III Mechanical Technologist) agency employees: 0

12) Grade IV
Number of certified (Grade IV Collection System Maintenance) agency employees: 2
Number of certified (Grade IV Electrical/Instrumentation Technologist) agency employees: 0
Number of certified (Grade IV Mechanical Technologist) agency employees: 0

13) OFFICE OF WATER PROGRAMS at CALIFORNIA STATE UNIVERSITY's CERTIFICATES OF COMPLETION
Number of certified (Operation and Maintenance of Wastewater Collection Systems, Volume I) agency employees: 3
Number of certified (Operation and Maintenance of Wastewater Collection Systems, Volume II) agency employees: 0

14) How many miles of forced mains and other pressure systems? 5

15) How many miles of gravity sewers? 180

16) Estimated Size Distributions of Assets (note: total % must sum to 100%)

Diameter of sewer pipe	Gravity Mainlines (%)	Force Mains (%)
6 inches or less	12	0
8 inches	62	0
9 - 18 inches	15	100
19 - 36 inches	10	0
> 36	1	0
Unknown Diameter	0	0
Totals	100	100

17) Estimated total miles of laterals (upper and lower)? 160

18) Which portion of laterals is your agency responsible for? Lower only

(If the answer of question-18 is None, answer 0 (zero) for question-19)

19) Estimated total miles of laterals your agency is responsible for? 79

20) Number of service lateral connections? 15101

21) Approximately, what percentage of your sewer system piping and mumber of pump stations were constructed between the years of: (note: total % must sum to 100%)

Age	Gravity Mainlines & Force Mains (%)	Pump Stations (*) 75k Gal/day & Over (number of stations)	Pump Stations (*) Under 75k Gal/day (number of stations)
2000 - Present	14	1	0
1980 - 1999	29	1	0
1960 - 1979	33	0	0
1940 - 1959	11	0	0
1920 - 1939	8	0	0
1900 - 1919	5	0	0
Before 1900	0	0	0
Unknown Age	0	0	0
Totals	100	2	0

(*) For pump stations, flow categories are the maximum flow rate occurring over a 24-hr period based on annual operating data (i.e., flow measurement) or calculated peak flow (e.g., # EDUs x Flow/EDU x Peaking Factor). Age is date asset was originally constructed.

22) Estimated total miles of your sewer system not accessible for maintenance? 10

23) How many miles of sewer system did you clean last year(miles)? 61.9

24)How many miles of sewer system did you inspect(e.g., CCTV) last year (miles)? 39.1

25) Estimated Sewer System Flow Characteristics

Average Daily Dry Weather Flow (MGD)	Peak Daily Wet Weather Flow (MGD)
4.095	5.664

26) Where does this Sanitary Sewer System Discharge to?

Where it goes?	Name	WDID
WWTP same agency	Woodland WPCF	5a570105001
Select ...		
Select ...		
Select ...		

27a) Are there any tributary sanitary sewer systems? No

28) How many gravity mainline aerial or under ground crossings of water bodies (i.e. gravity sewer lines crossing over water bodies) are located throughout the sewer system 0

29) How many force main aerial or under ground crossings of water bodies (e.g. pressurized sewer lines crossing over or under water bodies) are located throughout the sewer system? 0

30) How many siphons used to convey sewage are located throughout the sewer system? 0

Save

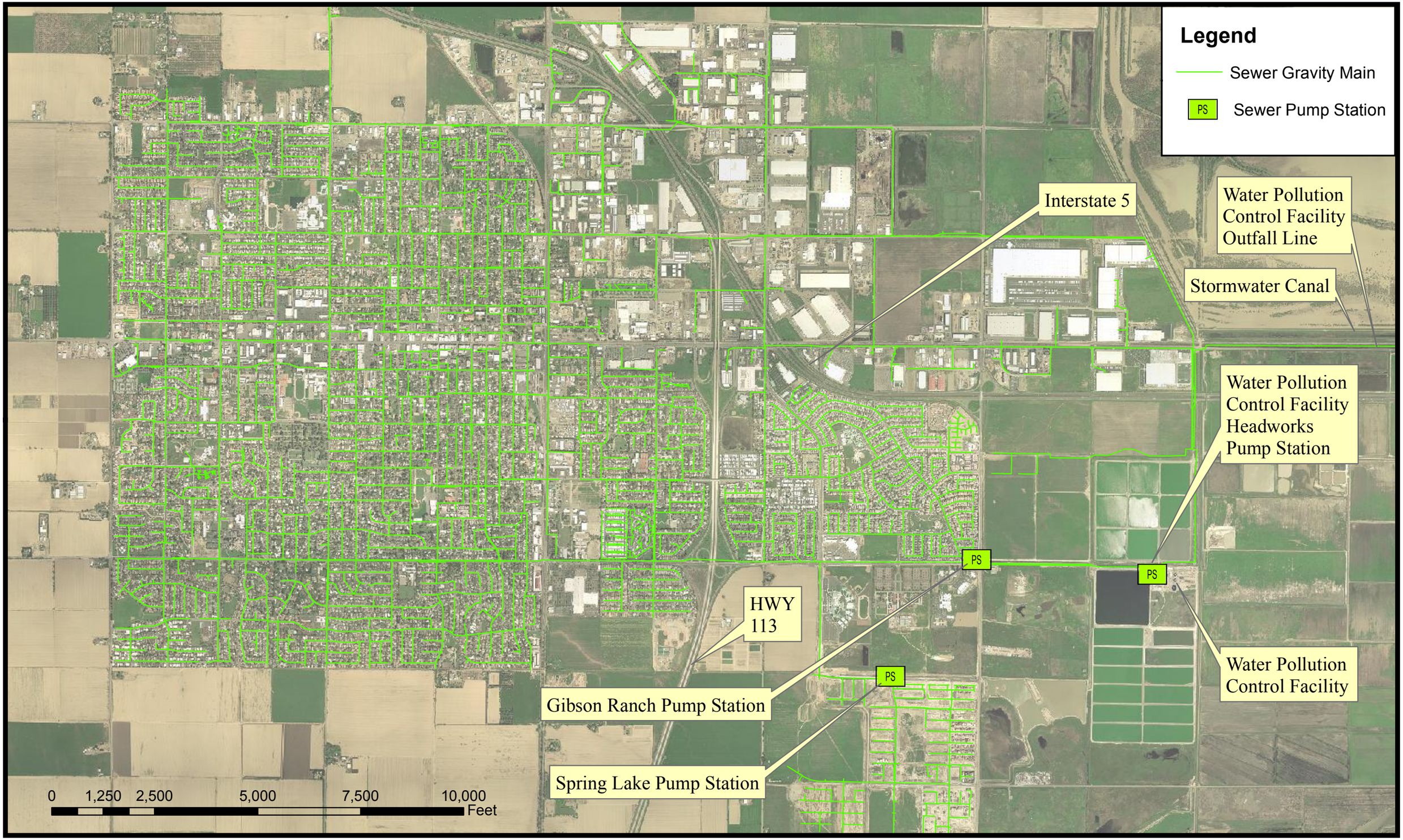
Note: All questions are required to be answered. Enter NA for questions that do not apply or unknown.

Export Questionnaire History To Excel

Attachment 0-2:

City of Woodland Sewer Collection System Overview Map

City of Woodland Sewer System Overview Map



Attachment 0-3:

City of Woodland SSMP Performance and Implementation Task Schedule

SSMP Performance and Implementation Task Schedule

SSMP Section No.	Task Description	Responsible Party	SSMP Deadline / Frequency	Actual Task Completion Date (Last)	2015												2016												2017											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	Update sanitary sewer system questionnaire through CIWQS.	Wastewater Systems Administrator	Annually																																			
ii-b	Update position specific SSMP tasks and contact information appendix.	Management Analyst/ Admin Clerk	Annually																																			
ii-c	Update phone numbers and make any necessary changes to SSO chain of communication and re-distribute.	Management Analyst/ Admin Clerk	Annually																																			
iii-b	Update City Major Projects Financing Plan	Principal Util. Civ. Engineer	Continuously																																			
iii-c	Find sewer utilities that are on private property but have no City easement	GIS Analyst	Continuously																																			
iii-c	Complete legal review of Code Section 23C-6-7 to allow City access to all utilities in sewer collection system	Principal Util. Civ. Engineer	2016-2017																																			
iv-a	Complete GIS mapping of stormwater infrastructure.	GIS Network Specialist	Ongoing																																			
iv-a	Obtain updated aerial photography for use with GIS maps.	GIS Network Specialist/ Civil Engineers	Bi-Annually																																			
iv-a	Update AutoCAD and GIS maps to include new infrastructure, capital Improvements, and field corrections.	GIS Network Specialist/ Civil Engineers/ Engineering Technician	Continuously																																			
iv-b	Create a Lateral Repair Program including plans and protocols for inspecting and repairing private laterals, including a mandatory lateral inspection program required at the time of property sale	Principal Util. Civ. Engineer	2015																																			
iv-b	Create a written lateral inspection and repair program.	Senior Civil Engineer	N/A																																			
iv-b	Run work order Crystal Report to identify assets in need of increased frequency preventative maintenance scheduling based on a high number of recent work orders.	Engineering Technician	Semi -Annually																																			
iv-b	Conduct or contract out scheduled preventative maintenance activities.	Utility Supervisor / Utility Maintenance Workers	Continuously																																			
iv-b	Enter all work orders, service calls, etc. into CMMS.	Utility Supervisor	Continuously																																			
iv-b	Update preventative maintenance schedules based on new information for CCTV inspections, field observations, and risk assessments.	Utility Supervisor	Continuously																																			
iv-c	Train staff on use of the CA&CIP software module.	Engineering Technician	Continuously																																			
iv-c	Upload all CCTV, CMMS, hydraulic model output, and GIS data into the CA&CIP module and obtain risk ratings for all assets	GIS Technician/ Analyst	Continuously																																			
iv-c	Update near-term CCTV inspection and flushing schedule to maintain 7-year system-wide CCTV inspection and 5-year system wide flushing frequencies.	Wastewater Systems Administrator/Senior Utility Maintenance Worker	Annually																																			
iv-c	Complete scheduled condition assessments and upload data into the CA&CIP Module.	Senior Utility Maintenance Worker	Continuously																																			
iv-c	Work to obtain the funds necessary to support the preventative maintenance and capital improvement budgets by producing and presenting data that justifies funds needed to maintain acceptable system "risk".	Wastewater Systems Administrator/ Principal Util. Civil Engineer	Continuously																																			
iv-d	Execute decision to change city-wide employee training software	Director of Public Works	January 2016																																			
iv-d	Create and distribute "training needed" reports.	Administrative Clerks	Annually																																			
iv-d	Develop annual monthly training topic schedule and document within a SSMP appendix.	Utility Supervisor	Annually																																			
iv-d	Conduct scheduled training and document	Wastewater Systems Administrator / Utility Supervisor	Continuously																																			
iv-e	Ensure fleet equipment associated with the SSMP have set preventative maintenance schedules in the fleet management software.	Equipment Services Lead	Continuously																																			
iv-e	Order fleet parts per minimum/ maximum inventory status and add any parts to regular inventory that show a trend of recurring failure.	Equipment Services Clerk	Semi -Annually																																			
iv-e	Establish pipeline, manhole, and lift station replacement parts and equipment lists.	Utility Maint. Worker / WPCP Operator	Continuously																																			
iv-e	Back-check pipeline, manhole, and lift station equipment and replacement part inventory lists and order needed items.	Utility Maint. Worker / WPCP Operator	Semi -Annually																																			
v-a	Circulate City Standards and Specifications, receive comments on proposed updates, review and adopt comments.	Principal Util. Civ. Engineer	Every 5 years																																			
v-a	Adopt newly acquired trenchless design and construction standards within the City Standard Specifications.	Principal Util. Civ. Engineer	Every 5 years																																			
v-b	Adopt newly acquired trenchless construction inspection and testing standards within the City Standard Specifications.	Wastewater Systems Administrator/ Principal Utilities Civil Engineer	Every 5 years																																			
vi-a	Update phone numbers and contacts in the three call groups as necessary in the OERP.	Wastewater Systems Administrator	Annually																																			
vi-d	Set up joint annual meetings (including a first annual roll-out meeting) to distribute the updated OERP and review response procedures with the Utility Maintenance Division, Fire Department, Police Department, and Yolo County Health Department.	Wastewater Systems Administrator	Annually																																			
vi-d	Review SSO response review notes and update the OERP annually to improve response techniques.	Wastewater Systems Administrator	Annually																																			
vi-d	Plan and execute annual SSO field response training for all O&M workers.	Utility Maintenance Supervisor	Annually																																			
vii-a	Establish a hard copy file of public outreach materials used.	Environmental Compliance Inspector	Ongoing																																			
vii-a	Provide information on the City website that instructs residents on how to properly collect and contain grease and where it can be disposed.	Environmental Compliance Inspector / IS Technician	Ongoing																																			
vii-a	Conduct FOG public outreach activities and maintain records of all activities as work orders in CMMS.	Environmental Compliance Inspector	Continuously																																			
vii-d	Grease interceptor Inspection	Environmental Compliance Specialist	Continuously																																			
vii-e	Track staff time spent implementing the use of Cityworks, reviewing maintenance record submissions, and conducting PPP permit holder inspections. Produce report summarizing FTEs required to support the established inspection schedule.	Laboratory and Environmental Compliance Manager	On-going																																			
vii-e	Collect semi-annual records from PPP permit holders. Review records, schedule inspections, and conduct inspections for non-reporting or under-reporting permit holders.	Environmental Compliance Inspector	Semi -Annually																																			
vii-e	Create Cityworks work orders specific to PPP inspections, public education, and enforcement actions.	IS Technician	5/2/2009																																			
vii-e	Produce report evaluating staffing levels to support implementation of SSMP FOG control program.	Environmental Compliance Specialist	N/A																																			
vii-f	Update GIS maps of hot spots and cleaning routes as changes to assets on the lists occur.	Wastewater Systems Administrator / GIS Network Specialist	Semi -Annually																																			
viii-a	Coordinate with consultants to gather data and implement necessary updates to sewer system GIS mapping for hydraulic model use.	GIS Network Specialist	April 2015 -June 2015																																			
viii-a	Obtain training for hydraulic model use for select City Staff.	Associate Civil Engineer	June 2015 - September 2015																																			

SSMP Performance and Implementation Task Schedule

SSMP Section No.	Task Description	Responsible Party	SSMP Deadline / Frequency	Actual Task Completion Date (Last)	2015												2016												2017											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
viii-a	Conduct system-wide flow monitoring to quantify and track I/I in specific sewer "sheds".	Associate Civil Engineer / WPCP Superintendent	Every 5-10 Years																																				
viii-a	Implement targeted flow monitoring for rehabilitation / replacement projects, new major development, and assets of concern (future CIPs).	Associate Civil Engineer	Continuously As Needed																																				
viii-a	Review and comment on the effect of major proposed projects or land use changes on sewer collection system capacity, coordinate with consultants as needed.	Associate Civil Engineer	Continuously As Needed																																				
viii-a	Maintain permanent wet weather flow monitoring data on major trunk lines.	Associate Civil Engineer	Continuously																																				
ix-a	Pis will be updated based on SSMP Change Log	Engineering Tech.	Annually																																				
ix-b	Complete data entry for each PI.	Various DPW Employees	Quarterly																																				
ix-e	Create the SSO field within the sewer main and manhole shape files, review all historical SSO records, and enter the data into the new fields created in the shape files.	GIS Network Specialist/ Utility Supervisor	May 2015																																				
ix-e	Update the SSO bar graph with data from SSO report forms and attach to SSO prevention PI tracking sheet.	Utility Supervisor	Quarterly																																				
x-a	Conduct annual internal audit.	Infrastructure 0 & M Superintendent	Annually																																				
x-a	Present 2 years of internal audits to Council		Bi-annually																																				
x-a	Update SSMP programs based on audit results.		Every 5 years																																				
xi-a	Perform and document completion of the public communication tasks outlined in the SSMP.	Administration Clerk / IT Technician	Continuously																																				
xi-b	Determine if any privately owned facilities own and operate more than 1 mile of sewer collection system piping.	Infrastructure 0 & M Superintendent	On going																																				
xi-b	Compose sewage acceptance agreements if necessary with newly identified satellite facilities.		Within 5 months of occurance																																				
xi-b	Communicate with utility managers of any satellite facilities to negotiate and sign sewage acceptance agreements, and to review satellite facility SSMP's as they are being written.																																						
xi-b	Hold annual performance indicator review meeting with any satellite facility utility manager(s).		Annually																																				

Key	
	= Recommended timeframe for completing task
	= Continuous / Ongoing tasks
	= Recurring Task

i Goals

SWRCB Requirement:

> *The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help* ***reduce and prevent sanitary sewer overflows (SSOs)****, as well as mitigate any SSOs that do occur.*
>
> *Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.*

Background

This SSMP section describes the goals of the City for the management, operation and maintenance of the sanitary sewer collection system. These goals help focus the long term efforts of the City to meet the objectives of GWDR, which are to reduce and prevent SSOs. This section fulfills the requirements of the GWDR SSMP mandatory element i.

Element i. Goals

i. Goals

Requirement

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

Discussion

The City of Woodland Utility Division has developed a mission statement and goals for the management, operation, and maintenance of the sewer collection system, which provide a vision for the activities of the Utility Division for the future. Each element of the SSMP is developed to bring the Utility Division closer to achieving one of these goals. The Utility Division is responsible for the City's sewer, storm and water utilities. Only the goals related to the City's sewer collection system have been included below.

Mission

The City of Woodland Utility Division will provide safe, reliable, efficient water, sewer and storm service at a minimum cost to the community of Woodland (see **Attachment i-1**).

Goals

1. Protect public health
2. Perform all operations in a safe manner to avoid personal injury
3. Minimize the number and impact of sanitary sewer overflows (SSOs) that occur
4. Use the funds available to operate, maintain and improve the condition of the water, sewer and stormwater infrastructure to provide reliable service in the most efficient manner
5. Prevent excessive expenditures for claims and legal fees due to sewer system backups by providing immediate concern and efficient service to all emergency calls
6. Provide adequate sewer capacity to accommodate design storm flows and convey wastewater to treatment plant by cost-effectively minimizing inflow and infiltration
7. Minimize inconveniences by responsibly handling service interruptions
8. Prevent unnecessary damage to public and private property
9. Maintain open communication between all staff levels to ensure adequate funding to provide quality and cost-effective management, operation, and maintenance of wastewater utilities

Element i. Goals

The mission statement and goals of the Utility Division express the role of the City in managing the sewer collection system. The mission statement and goals are purposefully left in broad terms. They are meant to remain constant over time and provide a baseline for future endeavors. These broad statements are subsequently broken down into short-term priorities on a more frequent basis with more specific and measurable goals. The process by which these short-term priorities are developed, tracked, and evolve is outlined in section ix of the SSMP - "Monitoring, Measurement and Program Modifications".

Related Documents

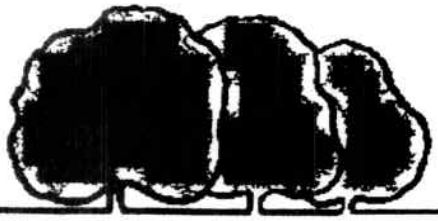
- Attachment i-1: City of Woodland Utility Division Mission Statement

Plan & Schedule

No further efforts are projected for this element at the present time.

Attachment i-1:

City of Woodland Utility Division Mission Statement



City of Woodland

MISSION

The City of Woodland Utility branch will provide safe, reliable, efficient Water, Sewer and Storm service at a minimum cost to the community of Woodland.

GOALS

- Protect public health
- Minimize inconveniences by responsibly handling interruptions in service
- Prevent unnecessary damage to public and private property
- Use the funds available for the operation of Water, Sewer and Storm in the most efficient manner
- Provide safe drinking water
- Convey wastewater to treatment plant with minimum of inflow and infiltration
- Convey storm water to outlet channel at East Main Street with minimum amount of delay within the system capabilities
- Prevent excessive expenditures for claims and legal fees due to backups by providing immediate concern and efficient service to all emergency calls
- Perform all operations in a safe manner to avoid personal injury

ii Organization

The SSMP must identify:

*(a) The name of the responsible or **authorized representative** as described in Section J of this Order.*

*(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an **organization chart** or similar document with a narrative explanation; and*

*(c) The **chain of communication** for reporting SSOs, from receipt of a complaint or other information, including the **person responsible** for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).*

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.

Background

This section of the SSMP identifies the individual responsible for implementation of the SSMP and for signing and certifying all reports and documents required by the GWDRs. The organizational structure for the City employees that have responsibility for implementing the SSMP is clearly presented along with essential job functions and contact information for each employee. The chain of command for the identification, reporting, and mitigation of SSOs is established. This section fulfills the requirements of the GWDR SSMP mandatory element ii.

Element ii. Organization

ii-a. Authorized representative

Requirement	The SSMP must identify the name of the responsible or authorized representative as described in Section J of the GWDRs.
Discussion	The City Public Works Wastewater Systems Administrator is currently listed with the SWRCB as the Legally Responsible Official" (LRO) for GWDR compliance, and will submit all official reports and information required with respect to the SSMP. Coverage of the City under the GDWR was completed after certification of the SSMP was approved by Council on 6/16/09.
Related Documents	○ None
Plan & Schedule	No further efforts are projected for this element at the present time.

Element ii. Organization

ii-b. Organizational chart

Requirement

Identify the names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation.

Discussion

The organization chart for the City employees responsible for implementation of SSMP tasks is shown in **Attachment ii-1**. The names and contact information for the employees filling these positions are found in **Attachment ii-2**. This list is updated with contact information as employees filling each position change. The contact list is stamped with its publication date for reference. General job functions and requirements used by the City for each position can be found in **Attachment ii-3**. SSMP specific tasks that are performed by each position are described below. Not every position shown on the organization chart is directly responsible for an SSMP specific task.

Director of Public Works

Responsible for SSMP Tasks: i, ii-b,c, iii-a,b,c,d,e, iv-c, vii-c,e, viii-c, xi

Ensure that the goals of the DPW remain relevant with time and with respect to the safety and concerns of the customers (i). Ensure that the proper personnel are in place to adequately service all needs of the system and the public it serves (ii-b). Participate as needed in response to SSOs including communication with relevant City and State departments (ii-c). Ensure that the DPW has the necessary authority to adequately maintain and control its collection system (iii-a,b,c,d,e, vii-c,e). Work to secure the funds needed to properly maintain the collection system and service public demand while minimizing SSOs and protecting public safety (iv-c, viii-c). Oversee communications on the development, implementation, and performance of the SSMP with system customers and various stakeholders and ensure necessary communications with any satellite systems (xi). Communicate as needed with the City Manager and City Council to relay appropriate information regarding the development, certification, and implementation of the SSMP.

City Attorney

Responsible for SSMP Tasks: iii-e

Assist as needed to enforce the provisions of the City Code and prosecute violations as directed by information provided by Wastewater Systems Administrator.

Finance Officer

Responsible for SSMP Tasks: iv-c, viii-c

Work with the Public Works Director, Wastewater Systems Administrator, and Civil Engineers to obtain and schedule funding for operation and maintenance activities, rehabilitation / replacement projects, and other programs developed in accordance with the SSMP (iv-c, viii-c).

Wastewater Systems Administrator

Responsible for SSMP Tasks: ii-a,c, iv-c, v-a,b, vi-a,b,c,d,e,f, viii-c,d, ix-b,c,d, x

Act as the individual responsible for proper implementation of the SSMP and as the executive authorized to submit official reports and information required by the GWDRs, including online SSO reporting (ii-a,c). Develop a list and schedule of CIP projects based on risk considerations, and have involvement in the procurement of project funding (iv-c, viii-c,d). Supervise the development, maintenance, and implementation of design, construction, and inspection standards for new, repaired, and rehabilitated infrastructure components (v-a,b). Maintain and implement a complete OERP and educate all involved personnel on communication, reporting, and mitigation procedures regarding SSOs, including collaboration with other necessary City departments such as the Fire and Police who may be involved in response procedures (vi-a,b,c,d,e,f). Monitor and assess the effectiveness of the preventative maintenance program by reviewing performance indicator reports (ix-c), and make changes as needed to meet the specific short and long term goals and requirements of the SSMP (ix-b,d). Perform annual SSMP audit reports assessing overall department performance and make changes to SSMP goals and specific benchmarks to reflect changes in system performance and maintenance needs (x).

Principal, Senior and Associate Civil Engineers

Responsible for SSMP Tasks: iv-c, viii-a,b,c,d v-a,b, ix-a

Develop a list and schedule of CIP projects based on risk considerations, and have involvement in the procurement of project funding (iv-c, viii-c,d). Oversee the use of collection system hydraulic models and assess the ability of the system to meet capacity demands. Utilize flow monitoring data and incorporate any changes to collection system infrastructure to maintain an up-to-date hydraulic model. Ensure that the system hydraulic models and maps remain consistent (viii-a,b). Assist in creation, production, and maintenance of City collection system construction standards and specifications (v-a,b). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

City Engineer

Responsible for SSMP Tasks: iv-c, v-a,b, viii-c,d

Coordinate and approve scheduling and funding for capital improvement projects. Oversee the execution of contracts for the construction of identified capital improvement projects (iv-c, viii-c,d). Review and approve changes and updates to construction and inspection standards and specifications (v-a,b).

Engineering Technician

Responsible for SSMP Tasks: iv-a, ix-a

Create, maintain, and update collection system mapping (hard paper copies or CAD files), plan sets, and record drawings. Transfer mapping information for repair, rehabilitation, and CIP projects to the GIS Network Specialist for inclusion in the GIS mapping system (iv-a). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

GIS Network Specialist

Responsible for SSMP Tasks: iv-a, vii-f, viii-a

Work with the Engineering Technician to obtain the mapping information necessary to manage an up-to-date GIS mapping system which displays all collection system assets and information outlined in section iv-a of the SSMP (iv-a). Work with the Environmental Compliance Specialist to obtain FOG program data that can be integrated into GIS mapping (vii-f). Work with the Civil Engineers to coordinate GIS data with the hydraulic model (viii-a).

Public Works Utility Supervisor, Sewer (The Supervisor)

Responsible for SSMP Tasks: ii-c, iv-b, vi-c, ix-a

Directly respond to customer complaints and SSO reports, and relay SSO information promptly and accurately through the SSO chain of communication as necessary (ii-c, vi-c). Prioritize, schedule, and execute routine preventative maintenance activities based on the analysis of condition assessment data and historical field observations using all available data. Maintain accurate historical records of maintenance and inspection work performed and document all work using the City's CMMS (iv-b). Present relevant data to the Wastewater Systems Administrator for review using the performance indicator tracking process (ix-a).

Senior Utility Maintenance Worker

Responsible for SSMP Tasks: iv-b, iv-c

Conduct or contract out scheduled preventative maintenance activities (iv-b). Update near-term CCTV inspections and flushing schedule to maintain 7- year system-wide CCTV inspection and 5-year system wide flushing frequencies (iv-c). Complete scheduled condition assessments and upload data into the CA&CIP module (iv-c).

Utility Maintenance Worker III (O&M Workers)

Responsible for SSMP Tasks: ii-c, iv-b,d, vi-c, vii-f, ix-a

Ensure that preventative maintenance schedules reflect a quantitative risk-based approach by reviewing maintenance and field observation data with the Supervisor and Administrator. Maintain accurate records of all work performed and understand the procedures established by the SSMP for documenting work in the City CMMS (iv-b). Organize appropriate training for maintenance workers to ensure all necessary tasks are completed accurately and with a high level of quality (iv-d). Develop and maintain a list of system hot spots, including areas affected by FOG related discharges (vii-f). Understand procedures established by the SSMP OERP for responding to, mitigating, and reporting of SSOs (ii-c, vi-c). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

Utility Maintenance Worker I, II

Responsible for SSMP Tasks: ii-c, iv-c, vi-c, vii-f, ix-a

Complete system asset condition assessments utilizing the NASSCO rating system (iv-c). Respond to regular service and emergency calls, including SSOs. Understand procedures established by the SSMP OERP for responding to, mitigating, and reporting SSOs (ii-c, vi-c). Have the ability to identify FOG related issues within the collection system infrastructure (vii-f). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

Management Analyst, Admin Clerk

Responsible for SSMP Tasks: ix-a, xi

Maintain records of relevant information such as staff work hours, budgeting information, and scheduled and completed training. Present relevant data to the Wastewater Systems Administrator for review using the performance indicator tracking process (ix-a). Administrate and carry out public education efforts as directed by the Director of Public Works (xi).

Information Services Technician

Responsible for SSMP Tasks: iv-b, ix-a,e

Assist the Supervisor as needed to accurately and efficiently document work using the City CMMS (iv-b). Produce performance indicator data reports and deliver to persons responsible for tracking performance indicators (ix-a). Maintain records of and illustrate trends in SSOs (ix-e).

Laboratory and Environmental Compliance Manager

Responsible for SSMP Tasks: vi-b,f

Respond as required to SSOs to conduct testing, monitoring, and water quality reporting as prescribed by the OERP (vi-b). Schedule and execute lab water quality monitoring and reporting programs to comply with all City NPDES permits regarding the discharge of wastewater. Maintain ongoing records of baseline surface water quality data as described in the City's OERP (vi-f).

Environmental Compliance Specialist

Responsible for SSMP Tasks: vii-a,b,f,g, ix-a

Oversee and conduct FOG education programs to reduce discharge to the sewer system by the general public (vii-a). Organize and ensure proper disposal of FOG wastes generated within the sanitary sewer system service area (vii-b). Coordinate with the Manager and GIS Network Specialist to implement FOG source control measures as needed for identified FOG problem areas (vii-f,g). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

Environmental Compliance Inspector

Responsible for SSMP Tasks: vii-e, ix-a

Verify FOG discharge compliance throughout the system by conducting inspection and enforcement activities. Manage FOG program data including permits, cleaning records, and FOG removal device design submissions (vii-e). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

Water Pollution Control Operator I,III,IV

Responsible for SSMP Tasks: iv-b, ix-a

Conduct lift station operation and maintenance activities, and maintain accurate hard copy and / or electronic records (CMMS) of all completed activities (iv-b). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

Fleet and Facilities Manager

Responsible for SSMP Tasks: iv-e, ix-a

Identify critical equipment and replacement parts, and ensure adequate maintenance of City O&M equipment and replacement part inventories (iv-e). Present relevant data to the Administrator for review using the performance indicator tracking process (ix-a).

Equipment Mechanics (Senior, Heavy)

Responsible for SSMP Tasks: iv-e

Conduct regular equipment maintenance, and maintain hard copy and electronic records of maintenance activities (iv-e).

Equipment Service Clerk

Responsible for SSMP Tasks: iv-e

Maintain an accurate inventory of parts and equipment as prescribed by the SSMP, and ensure that an adequate reserve exists to service all routine and emergency maintenance requirements, by ordering more parts as needed (iv-e).

Element ii. Organization

Related Documents

- Attachment ii-1: City of Woodland SSMP Organizational Chart
- Attachment ii-2: City of Woodland Employee Contact Information
- Attachment ii-3: Standard City of Woodland Job Descriptions

Plan & Schedule

Task	Responsible Party	Scheduled Date
Update contact information and SSMP-specific task assignments constantly as needed.	Management Analyst / Admin Clerk	Annually

Element ii. Organization

ii-c. SSO reporting chain of communication

Requirement

Identify the chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

Discussion

The chain of communication for reporting SSOs is shown in **Attachment ii-4**. This chain of command is applicable to SSOs of any size and of public or private origin. Initial response to the report or observation of an SSO should always be immediate, whether the event occurs during or after normal City business hours. The actions taken by the DPW in mitigating the event may vary depending on the volume, location, or nature of the spill according to the established OERP. The timeline for reporting each event will also vary according to the provisions of MRP No. 2006-0003 which classifies spills into three categories. Category 1 spills will be reported in accordance with SWRCB Order No. WQ 2008-0002-EXEC, which requires 2-hour notification of the State Office of Emergency Services, local Health Officer, and Regional Water Quality Control Board.

Attachment ii-2 should be distributed to all employees involved in response to SSOs. Changes to telephone numbers on this figure should be updated as changes occur.

Related Documents

- Attachment ii-4: SSO Reporting Chain of Communication

Plan & Schedule

Task	Responsible Party	Scheduled Date
Update phone numbers on chain of communication and re-distribute as necessary.	Management Analyst / Admin Clerk	Annually

Attachment ii-1:

City of Woodland SSMP Organizational Chart

City of Woodland SSMP Responsibilities Organizational Chart

City of Woodland

- City Council
  - City Manager
    - **Administration**
      - **IT-GIS**
        - GIS Analyst
      - Finance Officer
    - **Department of Public Works**
      - Director of Public Works
        - Deputy Director of Public Works
          - Wastewater Systems Administrator
            - **Utility Maintenance**
              - Utility Maintenance Supervisor
                - Senior Utility Maintenance Worker
                - Utility Maintenance Worker I,II,III
            - **Wastewater Operations**
              - **Water Pollution Control Facility**
                - Chief Plant Operator
                - Water Pollution Control Operator III,IV
                - Treatment Plant Mechanic
              - **Lab & Environmental Compliance**
                - Lab & Environmental Compliance Manager
                - Environmental Compliance Specialist
                - Environmental Compliance Inspector
                - Lab Tech II
          - **Environmental Services**
            - Env. Resources Analyst
              - Conservation Coordinator
                - Code Compliance Officer I/II
          - **Fleet & Facilities**
            - Fleet & Facilities Manager
              - Storekeeper
              - Facility Maintenance Worker III
              - Senior Equipment Mechanic
                - Heavy Equipment Mechanic
                - Light Equipment Mechanic
                - Equipment Services Clerk
          - **Administration**
            - Senior Management Analyst
              - Admin Clerk II, III
    - **Legal**
      - City Attorney
    - **Engineering**
      - City Engineer
        - **Utilities Engineering**
          - Principal Utilities Civil Engineer
            - Senior Associate Civil Engineer
              - Associate Civil Engineer
                - Engineering Technician

Attachment ii-2:

City of Woodland
Employee Contact List

City of Woodland

CITY OF WOODLAND
EMPLOYEE CONTACT LIST
PUBLISHED 5/8/2015

Position	Individual	Phone Number
City Management		
City Manager	Paul Navazio	530-661-5802
Director of Public Works	Greg Meyer	530-661-5953 530-668-9645
City Attorney	Kara K. Ueda	916-551-2822
Administration		
Finance Officer	Kimberly McKinney	530-661-5849
Senior Management Analyst	Johanna Currie	530-661-5902
Administrative Secretary	Debbie Flemmer	530-661-5818
Admin Clerk III	Sue Parker	530-661-5998
Admin Clerk III	Elizabeth Torres	530-661-5891
Utility Maintenance		
Wastewater Systems Administrator	Tim Lloyd	530-661-5899
Deputy Dir. Of Public Works, O & M	Rob Sanders	530-661-5959
Utilities Maintenance Supervisor	Alex Truitt	530-661-5881
Sewer & Storm Drain		
Utility Maintenance Worker III	Mark Clifton	530-661-5881
Senior Utility Maintenance Worker	Andrew Cital	530-661-5894
Utility Maintenance Worker II	Eric Medrano	530-661-5881
Utility Maintenance Worker II	Rob Wheeler	530-661-5881
Utility Maintenance Worker II	KC Kindelt	530-661-5881
Utility Maintenance Worker I	Daniel Smith	530-661-5881
Utility Maintenance Worker I	Brian Graham	530-661-5881
Utility Maintenance Worker I	Francisco Ledesma	530-661-5881
Utility Maintenance Worker I	Victor Coronado	530-661-5881
Utility Maintenance Worker I	Aaron Armstrong	530-661-5881
Fleet & Facilities		
Fleet & Facilities Manager	Troy Thompson	530-661-5956
Sr. Equipment Mechanic	Pete Bair	530-661-5957
Heavy Equipment Mechanic	VACANT	530-661-5957
Heavy Equipment Mechanic	VACANT	530-661-5957
Lt. Equipment Mechanic	Victor Garcia	530-661-5957
Equipment Services Clerk	Philip Lovejoy	530-661-5889
Facility Maintenance Worker III	Richard Martino	530-661-7999

Position	Individual	Phone Number
Wastewater Operations		
Laboratory and Environmental Compliance Manager	Mark Severeid	530-661-2065
Chief Plant Operator	Shane Carlsen	530-661-2054
WPC Operator IV	Tony Gedatus	530-661-2055
WPC Operator IV	Josh Vieira	530-661-2051
WPC Operator III	Deanna Gonzales	530-661-2061
WPC Operator III	VACANT	530-661-2062
Treatment Plant Mechanic	Rudy Cardenas	530-661-2056
Env. Compliance Inspector I	Angela Weeks	530-661-2057
Lab Tech II	Jeromy Miller	530-661-2053
Lab Tech II	Rori Villarreal	530-661-2053
Environmental Services		
Environmental Resource Analyst	Roberta Childers	530-661-2060
Conservation Coordinator	VACANT	530-661-2067
Engineering		
City Engineer	Brent Meyer	530-661-5947
Utilities Engineering		
Principal Utilities Civil Engineer	Tim Busch	530-661-5963
Senior Associate Civil Engineer	Chris Fong	530-661-5972
Associate Civil Engineer	Ed Wisniewski	530-661-5975
Engineering Technician III	Sherry Kimura	530-661-5945
Information Technology - GIS		
GIS Analyst	Daniel Hewitt	530-661-5838

Attachment ii-3:

Standard City of Woodland Job Descriptions

City of Woodland

ADMINISTRATIVE CLERK I/II

DEFINITION

To perform a wide variety of general clerical and administrative duties for a City department; and assist the public.

DISTINGUISHING CHARACTERISTICS

Administrative Clerk I: This is the entry level class in the Administrative Clerk series and is distinguished from the II level in that work is generally routine and repetitive, and does not perform the full range of duties assigned to the II level. Positions in this class typically have little or no directly related work experience and work under immediate supervision while learning job tasks. Administrative Clerks I are normally considered to be on a training status, and as assigned responsibility and breadth of knowledge increase with increased experience, may reasonably expect their positions to be reassigned to the next higher class of Administrative Clerk II.

Administrative Clerk II: This is the journey level class in the series and is distinguished from the I level by the ability to perform the full range of duties assigned with only occasional instruction or assistance.

SUPERVISION RECEIVED AND EXERCISED

Immediate supervision is provided by higher level clerical positions. May receive functional or technical supervision from department staff. The Administrative Clerk II position may coordinate the work of persons within the Administrative Clerk personnel.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS:

Provides excellent customer service; answer telephone and direct callers; receive visitors at a public counter and identify a variety of needs; information on department policies and procedures as appropriate; schedule appointments.

Perform a wide variety of routine clerical work including filing, billing, checking and recording information on records, maintaining logs for assigned functions.

Type, proofread and process a variety of complex and/or sensitive documents including general correspondence, memos, and charts from rough draft, dictaphone recordings or verbal instruction.

Enter and retrieve data from on-line or stand-alone computer systems; operate computer systems to generate reports and perform other automated processes.

Work cooperatively with others**.**

Regular and consistent attendance.

Gather information from individuals or reference sources to complete and process various forms, records and applications; compile routine information and data for statistical and financial reports as assigned.

Receive, sort and distribute incoming and outgoing correspondence.

Issue, receive, type and process various applications, permits and other forms.

Accept payment of fees; maintain and process cash records, disburse petty cash funds, and perform related basic computations.

Maintain records and process forms, such as time records, purchase requisitions and orders, and other specific to the organizational unit.

Perform related duties as assigned.

QUALIFICATIONS

Administrative Clerk I:

Knowledge of:

Alphabetic and numeric filing, indexing, and cross-referencing methods.

English usage, spelling, grammar, and punctuation.

Modern office methods and equipment including filing systems and personal computers.

Skill to:

Communicate tactfully and effectively with the public.

Perform routine clerical work including maintenance of appropriate records and preparation of general reports.

Type with speed and accuracy at a rate sufficient to perform duties satisfactorily.

Demonstrate familiarity with word processing, spreadsheets and databases.

Learn the organization, procedures and operating details of City department to which assigned.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Work with complex and sensitive files and record systems.

Meet the physical requirements necessary to safely and effectively perform assigned duties.

Education and Experience

Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:

Equivalent to the completion of the twelfth grade.

Experience:

One year of experience performing general clerical work.

Administrative Clerk II

In addition to the requirements for Administrative Clerk I:

Knowledge of:

Principles and procedures of record keeping.

Skill to:

Perform more complex clerical work.

Compose routine correspondence from brief instructions.

Use initiative and sound independent judgment within established guidelines.

Work with minimum supervision.

Education and Experience

Experience:

One year of experience performing duties comparable to those of an Administrative Clerk I in the City of Woodland.

Council Action: November 7, 2000

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City of Woodland

ADMINISTRATIVE CLERK III

DEFINITION

To perform a variety of complex and responsible clerical and administrative support for a City department.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey level of the Administrative Clerk series and is distinguished from the II level by the more complex, responsible and sensitive duties performed in the clerical support function of the department. The duties of this class require greater expertise and the exercise of independent judgment in the interpretation and application of rules, procedures, policies, and precedents, and may involve technical and functional supervision of lower level clerical positions.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by higher level. Responsibilities may include the indirect supervision of part-time and/or lower level clerical positions.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS:

Ensure that work is handled on a priority basis and completed in a timely manner; and participate and assist in the administration of an independent office including routine purchasing and budgeting duties.

Perform general clerical duties including filing, checking and recording information on records, and processing a variety of requests for information; independently research, summarize and compose correspondence relative to routine departmental business; prepare summaries, memoranda, and reports as assigned.

Provides excellent customer services; answer telephone and in-person inquiries from staff and public; responds to inquiries of a complex and technical nature requiring personal discretion and some familiarity with the subject matter.

Regular and consistent attendance.

Schedule appointments; make logistical arrangements for committees and other meetings; notify all participants; coordinate the production and distribution of agenda packets.

May prepare routine administrative reports by researching, assembling and summarizing information and data.

Act as a receptionist; screen calls and visitors, and refer inquiries as appropriate; respond to complaints and requests for information based upon departmental policies and procedures.

Operate a variety of office equipment such as computers, copy machines, telephones, radio communications, and public address system.

Provide indirect supervision to lower level clerical positions as assigned; evaluate and make recommendations on improving office procedures.

Perform related duties as assigned.

Work cooperatively with others.

QUALIFICATIONS

Knowledge of:

Proper spelling, grammar, punctuation, and business correspondence format.

Modern office methods, procedures and equipment, including computer hardware and software where applicable.

Departmental operations and procedures.

Filing and recordkeeping systems.

Basic arithmetic.

Skill to:

Type with speed and accuracy at a rate sufficient to perform duties satisfactorily.

Demonstrate proficiency with word processing, spreadsheets and databases and department specific software.

Understand the organization and operations of the City and of outside agencies as necessary to assume assigned responsibilities; interpret and apply departmental policies, procedures, and rules.

Communicate clearly and concisely, both orally and in writing.

Work independently with little supervision and exercise initiative and sound judgment; analyze situations appropriately and adopt effective courses of action.

Learn to operate radio communications equipment as assigned.

Compile and maintain complex and sensitive records, files, statistical and financial reports.

Effectively organize and review the work of other clerical staff.

Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Meet the physical requirements necessary to safely and effectively perform assigned duties.

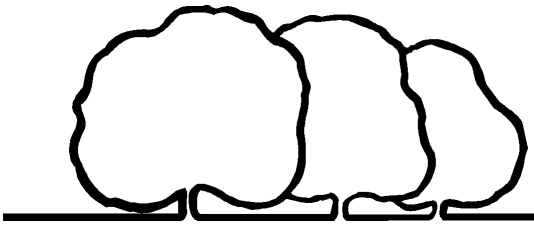
Education and Experience

Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:
Equivalent to the completion of the twelfth grade.

Experience:
Two years of increasingly responsible clerical experience, preferably including one year experience comparable to that of Administrative Clerk II with the City of Woodland.

Council Action: November 7, 2000



ASSOCIATE ENGINEER
ASSOCIATE CIVIL ENGINEER

DEFINITION

To perform responsible and difficult engineering work in the investigation, planning, programming, design, construction, inspection and operations and maintenance of public works and facilities.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey level of the professional engineering series and is distinguished from lower level engineering classes by the performance of more complex engineering work as well as by participation in the long-range planning and administrative functions within the Public Works Department.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by a branch level supervisor or a designee.

Incumbents of this class may also be assigned supervisory responsibility for a major functional area within the Division entailing the direct or indirect supervision of other professional, technical or administrative positions.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Provide leadership and direction and perform professional and technical engineering activities related to program and project management of City-wide development

services, traffic engineering, capital improvement, design and construction, wastewater, and utilities requirements.

Perform professional and technical engineering tasks relative to assigned area of responsibility; review and check final maps, parcel maps, and design subdivision improvement plans for accuracy and conformance with City codes, ordinances and departmental requirements; prepare complex estimates and technical reports for departmental use and/or presentation to the City Council and City commissions.
Supervise and participate in multi-department or multi-agency studies to provide engineering analysis and input; conduct detailed research and prepare extensive written reports.

Coordinate public construction projects from definition of scope through engineering or architectural design, contract specification/plan preparation, construction and warranty close-out; recommend and administer construction contracts with outside consultants as appropriate; review work and tasks performed, recommend progress payments and monitor billings.

Assign routine investigation, design, drafting and inspections tasks to technical subordinates.

Regular and consistent attendance.

Work cooperatively with others.

Promote and maintain safe work practices.

Confer and coordinate with contractors, private engineers, other public members, and other City departments on public works projects, City codes, ordinances, and policies.

Supervise and participate in the development, update and implementation of standard engineering plans and design criteria.

Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Engineering principles and practices as applied to municipal public works, including planning and development, design, inspection, and construction, and operation and maintenance.

Methods of preparing designs, plans, specifications, estimates, reports, and recommendations relating to municipal utilities and proposed public works facilities.

Codes, ordinances, resolutions, laws, recent developments, current literature and sources of information in municipal public works.

Contract preparation and administration.

Safety principles, practices and procedures.

Operation and basic programs of a personal computer.

Skill to:

Perform journey level engineering work with a minimum of supervision.

Analyze feasibility of projects and proposed programs; prepare complete and accurate reports.

Plan, coordinate, and prioritize a variety of engineering projects.

Communicate effectively, both orally and in writing.

Properly interpret and make decisions in accordance with laws, regulations and policies.

Efficiently operate a personal computer.

Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Independently perform difficult and complex professional engineering work; design, inspect and manage the construction of a variety of public works projects.

Interpret, analyze, apply and articulate relevant laws, rules, contracts, ordinances, regulations and guidelines.

Develop cooperative public relations with contractors, developers, private engineers, and the general public.

Perform field inspections of public works projects; review plans and maps submitted for compliance with all pertinent guidelines.

Prepare plans, specifications and write technical reports.

Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Education and Experience

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:

Bachelor's degree (or the equivalent of 120 completed semester units) from an accredited college or university with major coursework in engineering.

Experience:

Three years of increasingly responsible work experience in engineering or two years experience equivalent to an Assistant Engineer with the City of Woodland.

License or Certificate

Possession of a valid California Driver's license; a valid Engineer In Training (EIT) certificate is required in order to be employed by the City of Woodland as an Associate Engineer; a professional engineering registration is required in order to be employed by the City of Woodland as an Associate Civil Engineer.

Council Action: May 18, 2004

City of Woodland

CHIEF PLANT OPERATOR

DEFINITION

Plan and direct technical work involving process control, plant operation, repair and maintenance of the Water Pollution Control Facility and other facilities and programs as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Water Pollution Control Facility Superintendent. Exercises direct supervision over certified plant operators and other maintenance staff. Exercises discretion and independent judgment with respect to assigned duties.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class but are not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Plan, schedule and operate the Wastewater Treatment Plant to ensure compliance with all applicable regulations. Plan preventative maintenance functions. Interpret alarms, meters, gauges, computerized SCADA programs, control panels, and test results to determine process control criteria. Make daily decisions regarding need for adjustments and changes in plant operation to gain improvements in plant efficiency and economy. Schedule operation and maintenance work, ordering of materials, and maintain records. Implement an ongoing preventative maintenance program and accurately maintain and compile records and reports. Hire, train, supervise and evaluate personnel. Develop and review progress of projects and work assignments with assigned personnel and assist them in organizing resources. Oversee all plant operations and maintenance, to include telemetry communications with SCADA to the remote liftstations and storm water pump stations. Establish training of plant personnel in processes, operation of equipment, preventative maintenance, plant control, sampling and safety practices and recordkeeping. Prepare detailed operating budgets for the Water Pollution Control Facility. Compile and sign plant maintenance reports. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Review data, analyze results and prepare reports as required. Coordinate with other environmental services programs, such as the laboratory or pretreatment, ensuring tests and analysis are complete and a record of results are available for use. Respond

to inquiries or concerns from citizens and other departments and agencies. Participate with tours and public presentations related to environmental services programs. Work with consultants and contractors for plant expansions and operations. Oversee and manage maintenance contracts for plant operations. Plan and direct safety and training programs for the plant and the facility. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
Principles and practices necessary in operation and maintenance of a Class V 10.4 MGD Tertiary Wastewater Treatment Facility. Supervisory and training principles and practices of first line management. Use, handling and disposal of hazardous chemicals associated with wastewater treatment. Principles and practices of leadership, motivation, team building and conflict resolution. General chemical, biological and physical laboratory testing methods and procedures. Operation, use and applications of computer systems and related software. Work safety and accident prevention programs as related to wastewater treatment facilities. Budget development and expenditure control, including development of capital improvement plans. SCADA control systems and the data management needed for compliance with local, state and federal regulations. State and Federal water pollution control rules and regulations governing the treatment and disposal of wastewater and related programs. Safety programs related to wastewater treatment facilities.

Skill to:
Develop, interpret and implement Department policies. Manage, direct, coordinate, and evaluate the work of assigned personnel. Read and interpret blueprints and plans; interpret and apply laws and regulations. Prepare and present clear, concise, and competent reports, both orally and in writing. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:
Supervise and operate a 10.4 mgd Class V Wastewater Tertiary Treatment Facility. Use a variety of computer software to control plant process and prepare a variety of reports, spreadsheets and records. Work independently making appropriate decisions in fast paced, high-pressure situations. Interact effectively with the public and employees. Communicate clearly and concisely, both orally and in writing. Supervise and train assigned personnel.

Minimum Education and Experience:

Education:
Associate degree in a technical field related to wastewater plant operations, such as engineering, mechanical science, chemistry or biology.

Experience:
Four years of experience in work involving the maintenance and operation of a water pollution control facility, including laboratory, with at least two years of supervision in related facilities or programs.

License and Certificate:
Required upon hire possession of a valid California Driver's License. Possession of a current Grade V Wastewater Treatment Plant Operators Certificate by the State of California Water Resources Control.

Council Action: June 17, 2008

City of Woodland

CITY ENGINEER

DEFINITION
To plan, organize and direct the activities of the Engineering Division and to serve as the City Engineer.

SUPERVISION RECEIVED AND EXERCISED
General direction is provided by the Department Director. Responsibilities include direct and indirect supervision of assigned staff.

EXAMPLE OF DUTIES
The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS
Provide effective direction, control, and management over key engineering functions including: infrastructure and utilities engineering, transportation engineering, construction management, and development review. Manage, supervise and assist subordinate staff in the planning, design, construction and maintenance of street, sidewalks, water and sewage systems, drainage structures, transportation facilities and other public works. Prepare and oversee the preparation of engineering designs, specifications and cost estimates for a wide variety of capital improvement projects. Sign plans for public works improvements. Stamp plans for work designed in-house. Meet and confer with developers, contractors, engineers and the general public relative to the city policies, regulations, and procedures; coordinate discrepancies and problem situations with outside parties. Ensure the effective coordination of work and project development between engineering/design components and the operations/maintenance components. Also ensure effective coordination with the other Departments such as Community Development Department and Public Works Department. Determine priorities and work sequences necessary to achieve objectives and assigns personnel in accordance with priority and need. **Regular, predictable, consistent and timely attendance is an essential function of the position, in that the failure of such attendance undermines the City's ability to provide critical services to employees, department and the public.** Work cooperatively with others.

Prepare and compile the city's master plans, major projects financing plan, and capital improvement program for review by the Department Director. Develop and maintain City of Woodland Standard Specifications for use on City infrastructure

projects. Prepare and administer the division budget. Interpret and apply relevant codes, ordinances, rules, and regulations, including CEQA, the Subdivision Map Act, and the Public Contracts Code. Oversee and insure proper review of all private development proposals including subdivision and parcel maps and improvement plans. Prepare and direct the preparation of various reports to staff/City Council and state and federal entities; coordinate special studies on a variety of complex problems that require a high degree of technical competence and political awareness. Maintain regular contact with consulting engineers, construction project engineers, city, county, state and federal agencies, professional and technical groups and the general public regarding the City's activities and services. Supervise, train and evaluate assigned staff. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Civil engineering principles and practices as applied to municipal public works, including planning and development, design and construction, and operation and maintenance. Methods of preparing designs, plans, specifications, estimates, reports, and recommendations relating to a variety of public works projects. Codes, ordinances, resolutions, laws, recent developments, current literature and sources of information in municipal public works. Principles and practices of management and supervision. Principles and practices of leadership, motivation, team building and conflict resolution. Principles of budget preparations and expenditure control. Contract preparations and administration. Safety principles, practices and procedures. Operation and programs of a personal computer.

Skill to:

Plan, coordinate and prioritize a variety of engineering projects. Supervise and participate in the preparation and management of plans, drawings, specifications, diagrams, and sketches pertaining to public works constructions and development projects. Analyze complex technical and administrative problems, evaluate alternatives, and implement creative but sound alternatives. Manage, direct, coordinate, and evaluate the work of professional and technical personnel. Interpret, analyze, apply and articulate relevant laws, rules, contracts, ordinances, regulations, and guidelines. Prepare and present clear, concise, and competent reports, both orally and in writing. Efficiently operate a personal computer. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Meet the physical requirement necessary to safely and effectively perform the assigned duties.

Experience and Training:

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:
Equivalent to a Bachelor's Degree from an accredited college or university with major coursework in civil engineering. Postgraduate work preferred.

Experience:
Five years of increasingly responsible and varied civil engineering experience including at least two years of significant supervisory responsibilities.

License or Certificate:
Possession of a valid certificate of registration as a Professional Civil Engineer in the State of California; possession of a valid California Driver's License.

ADA COMPLIANCE

Physical Ability: Positions in this class typically require: climbing, balancing, stooping, kneeling, crouching, reaching, standing, walking, pushing, pulling, lifting, fingering, grasping, talking, hearing, seeing, and repetitive motions.

Heavy Work: Exerting in excess of 20 pounds of force seldom, and/or in excess of 20 pounds of force constantly to move objects.

Other Requirements:

Sensory Requirements: Requires the ability to recognize and identify similarities and differences between shade, degree or value of colors, shapes, sounds, forms, textures or physical appearance associated with objects.

Environmental Factors: May be subjected to moving mechanical parts, electrical currents, vibrations, fumes, odors, dusts, gases, poor ventilation, chemicals, oils, extreme temperatures, work space restrictions, intense noises, and environmental dangers.

Council Action:

City of Woodland

CITY MANAGER

DEFINITION

To plan, organize and direct the overall administrative activities and operations of the City; and to advise and assist the City Council.

SUPERVISION RECEIVED AND EXERCISED

Receives policy direction from the City Council. Exercises direct and indirect supervision over assigned staff as well as overall responsibility for all City personnel.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all-inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS:

Plan, organize and direct the work of all City departments; advising department directors to ensure all units function with maximum effectiveness.

Enforce and administer the provisions, laws, ordinances, legislative, regulatory and judicial mandates, regulations, and professional standards of the City.

Assure that the City has adequate resources to fulfill its mission through proper budgeting and planning, personnel selection, and training and development.

Oversee the development and growth of the community, including economic development.

Direct the preparation of City Council agendas.

Direct the preparation and administration of a comprehensive annual budget providing for the balancing of revenues and expenditures; keep City Council advised on financial conditions, program progress and present/future needs of the City.

Prepare and present reports to Council; provide technical and professional advice and recommendations related to levels of service and other related matters; coordinates special studies on a variety of complex problems which require a high degree of technical competence and political awareness.

Assure that positive public relations and effective working relationships are maintained with the general public, other governmental agencies, the City Council, City departments, and the media.

Conduct continuous research in administrative practices and recommend to the City Council those practices which will produce greater efficiency and economy in City government**.**

Confer with residents, taxpayers, businesses, and other individuals, groups, and outside agencies having an interest or potential interest in affairs of City concern.

Represent the City in the community and at professional meetings as requested; coordinate City activities with other governmental agencies and other outside organizations.

Promote and maintain safety in the work place.

Direct the City's intergovernmental relations activities including the application for and administration of grant-in-aid programs, and the tracking of pending legislation.

Perform all duties as may be prescribed by City Council action.

QUALIFICATIONS:

Knowledge of:
Comprehensive knowledge of municipal public administration, including public finance and personnel administration.

Organizational and management practices as applied to the analysis and evaluation of programs, policies, and operational needs.

Current social, political, and economic trends and operating problems of municipal government.

Applicable Federal and State laws, rules, codes and regulations regarding local government operations.

Principles of effective public relations and interrelationships with community groups and agencies, private businesses and firms, and other levels of government.

Operation and programs of a personal computer.

Skill to:
Analyze feasibility of projects and proposed programs; prepare complete and accurate reports.

Persuade and motivate individuals and groups toward the successful accomplishment of shared goals and objectives.

Delegate responsibility; schedule and program work on a long-term basis.

Communicate clearly and concisely, in both oral and written form.

Efficiently operate a personal computer.

Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:
Develop and implement City services which will meet the changing needs of the community; use financial, technological and staff resources effectively for the planning, programming and promoting of services; set priorities, work well under pressure and meet deadlines.

Serve effectively as the administrative agent of the City Council.

Deal patiently and tactfully with other department directors, elected officials, outside agencies, citizens, and the press.

Act calmly and quickly in emergency situations and make effective decisions in such cases.

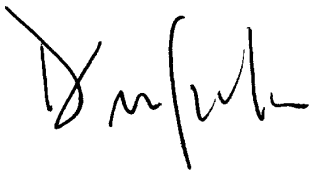
Interpret, analyze, apply and articulate relevant laws, rules, contracts, ordinances, regulations and guidelines.

Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Education and Experience
Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:
Equivalent to a Bachelor's Degree from an accredited college or university with major work in public administration or related field. A Master's Degree in public administration or related field is preferred.

Experience:
Five years of progressively responsible experience in municipal government; at least two years of responsible administrative/executive experience involving responsibility for planning, organizing and directing a varied work program.



Human Resources

Council Action: April 7, 1998

City of Woodland

CODE COMPLIANCE OFFICER I/II

DEFINITION

To perform office and field work involving the inspection, investigation, and compliance of City codes, ordinances and abatement regulations.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the Chief Building Official.

Code Compliance Officer I : This is an entry level class in the code compliance series. Positions in this class normally perform a variety of semi-skilled code compliance activities. Functional or technical coordination may also be received from Code Compliance Officer II.

Code Compliance Officer II : This is the journey level in the code compliance series. Positions assigned to this class are expected to perform semi-skilled and skilled code compliance activities. All positions assigned to this class require the ability to work independently, exercising judgment and initiative. Code Compliance Officer II may also be expected to assist in the oversight and training of less experienced personnel.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS:

Receives and responds to complaints regarding substandard dwellings or structures, zoning violations, debris, unsanitary conditions, abandoned or inoperative vehicles, overgrown vegetation, and other zoning and municipal code violations.

Investigate possible violations; photograph evidence; contact responsible persons and compose letters; issues notices of violation, infraction, and/or misdemeanor citations for non-compliance; perform follow-up investigations to ensure that remedial action has been taken; develop and maintain accurate case files.

Reads, interprets and applies state laws, municipal codes and ordinances, and other pertinent regulations.

Drive vehicles as required.

Work cooperatively with others.

Prepares necessary violation and other notices which outline proper repair and correction methods, time limits, permits and all necessary remedial work required.

Contacts property owners; schedules and conducts on-site inspections; interprets codes and regulations and explains inspection procedures and regulations to involved parties.

Prepare code violation cases for public hearings and court proceedings; appear at public hearing as necessary for case prosecution.

Performs abatement of hazardous items on vacant lots and other premises.

Builds and maintains positive working relationships with co-workers, other City employees, and the public, using principles of good customer service.

May issue and process building permits.

Explain and interpret requirements and restrictions.

Maintain records and prepare reports of inspections and related code enforcement files.

Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Applicable laws, ordinances and codes; principles and methods of enforcing varied municipal codes.

Basic terminology used in zoning, including legal descriptions.

Regulations and requirements for court evidence documentation.

Appropriate building, safety, hazardous materials and fire prevention techniques and requirements.

Safe work methods and safety regulations pertaining to the work, including driving habits.

Principles of building, planning and zoning permit processes and plan examining.

Correct English usage, spelling, punctuation, and grammar.

The operation and use of personal computers and various computer applications within the office environment.

Skill to:

Investigate zoning, code and other complaints in a timely and tactful manner.

Interpret and explain a variety of codes, ordinances, legal descriptions, and other regulations to the public.

Deal courteously, but firmly, and communicate effectively with a variety of individuals contacted in the course of work including resolving conflicts and problems.

Prepare accurate and detailed documentation of inspection findings and other written materials.

Organize work, set priorities and exercise sound, independent judgment within established guidelines.

Understand, learn, and utilize computer hardware/software in daily activities.

Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Education and Experience

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:

Code Compliance Officer I: Equivalent to completion of the twelfth grade.

Code Compliance Officer II: Equivalent to completion of the twelfth grade with advanced coursework or specialized training in planning, building inspection, technology or a related field desirable.

Experience:

Code Compliance Officer I: One year of experience performing duties involving code enforcement, including office and field investigation of a variety of code, ordinance and regulation violations.

Code Compliance Officer II: Two years of experience performing duties involving code enforcement, including office and field investigation of a variety of code, ordinance and regulation violations.

License or Certificate:

Code Compliance Officer I: Possession of, or ability to obtain, an Arrest Course 832 Penal Code certificate within one year of hire.

Code Compliance Officer II: Must possess Arrest Course 832 Penal Code certificate.

and

Possession of a valid California Driver's License.

Council Action: June 19, 2001

City of Woodland

CONSERVATION COORDINATOR

DEFINITION
To prepare and implement a wide variety of environmental programs in areas of integrated waste management, water conservation and other resources.

SUPERVISION RECEIVED AND EXERCISED
General supervision is provided by the Environmental Resource Analyst. Responsibilities may include direct or indirect supervision of volunteer, temporary or part-time staff.

EXAMPLES OF DUTIES
The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list.

ESSENTIAL JOB FUNCTIONS
Coordinates and updates the City's waste reduction and integrated waste management program; develop program materials for presentations to schools, community and neighborhood groups. Track and analyze waste management-related legislation; make recommendations for City involvement in pending legislation and compliance and implementation of existing legislation. Develop program and time schedules for implementation of water conservation and/or integrated waste management programs; accumulate data and prepare reports, including informational flyers, press releases, articles and prepare Council Communications and other correspondence. Provide general information to the public, other City departments, and other government agencies pertaining to waste reduction, integrated waste management, and other environmental programs including storm water protection and habitat conservation. Regular and consistent attendance.

OTHER JOB FUNCTIONS
Keep abreast of current developments, trends, legislative action and practices in the field of integrated waste management storm water, water conservation and other environmental programs. Identify, prepare and manage grants from a variety of funding sources. Assist with contract management, develop program protocols, create tracking systems. Prepare and track internal division annual budget. Plan, coordinate and update internal city recycling programs. Represent the City at board, commission and professional group meetings as necessary. Perform related duties as assigned. Work cooperatively with others.

QUALIFICATIONS

Knowledge of:
Principles and practices of designing effective resource conservation and integrated waste management programs. Public relations ideas and techniques. Operation and programs of a personal computer. Water conservation principles and integrated waste management principles. Codes, ordinances, resolutions, laws, recent developments, current literature and sources of information.

Skill to:
Provide information to the general public regarding waste reduction and integrated waste management. Work with a minimum of supervision and exercise initiative and sound judgment. Communicate effectively, both orally and in writing. Work cooperatively with other departments, outside agencies and the public. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:
Learn applicable laws and regulations. Develop cooperative public relations with other departments, businesses, and the general public. Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Minimum Education and Experience:

Education:
Completion of two years of college with major coursework in business, physical science, public administration, environmental studies, or a closely related field.

Experience:
One year of experience developing, promoting, or coordinating environmental, conservation or public outreach programs.

License or Certificate:
Required upon hire, possession of a valid California Driver's License.

Council Action: June 20, 2006

City of Woodland

DEPUTY DIRECTOR OF PUBLIC WORKS, OPERATIONS & MAINTENANCE

DEFINITION

To plan, direct, and supervise field maintenance division activities including infrastructure operations and maintenance, equipment and facility maintenance, and environmental operations.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by the Public Works Director. Responsibilities include direct and indirect supervision of staff.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Plan, organize and direct activities of the Public Works Operations and Maintenance Divisions providing the public works maintenance and operations functions pertaining to streets, trees, electrical services, park maintenance, storm drains, water production, water distribution, sewer collection, building and fleet maintenance, solid waste and wastewater treatment as assigned. Plan, organize, coordinate, supervise, and evaluate programs, plans, services, staffing, equipment, and infrastructure of the Public Works Department. Develop and implement goals, objectives, policies, procedures, schedules, and work standards for the various operating groups within the Public Works Department. Prepare and administer the annual Operations and Maintenance Budget for assigned program areas. Research and analyze complex problems, evaluate varied information and data, and exercise sound independent judgment within established guidelines. Coordinate maintenance service programs with other City departments and with outside agencies. Establish and maintain effective working relationships while providing for the evaluation, training, and professional development of assigned staff. Work cooperatively with others. Regular, predictable, consistent and timely attendance is an essential function of the position, in that Employee must be present to work on facilities and equipment impacting the public's health and safety.

OTHER JOB FUNCTIONS

Interpret City policies and procedures, update Department policies and procedures, draft City policies and procedures as appropriate, and take responsibility for the morale and productivity of assigned Department staff. Make presentations before the City Council, the public, and/or Boards and Commissions as assigned. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
Administrative principles and methods, including goal setting, program development, scheduling and implementation, budget preparation and administration, employee supervision, and contract evaluation and administration. Current principles, practices, and techniques of municipal public works maintenance and operations, including streets, fleet maintenance, building maintenance, underground utilities, and wastewater treatment. Applicable local, State, and Federal laws and regulations related to waste reduction, wastewater collection systems and water distribution systems. Public administration principles and practices related to the activities and functions of municipal government. Principles and practices of leadership, motivation, team building and conflict resolution. Safety principles, practices, and procedures. Operation and programs of a personal computer.

Skill to:
Plan, organize and administer comprehensive public works office and field activities with in-house and contract personnel. Develop, interpret and implement Department policies. Analyze complex problems, evaluate alternatives, and implement creative but sound alternatives. Manage, direct, coordinate, and evaluate the work of assigned personnel. Prepare and present clear, concise, and competent reports, both orally and in writing. Communicate clearly and concisely, orally and in writing. Establish and maintain cooperative working relationships with co-workers and those contacted in the course of work.

Ability to:
Develop cooperative public relations with other City departments, developers, businesses, and the general public. Serve in a standby status after regular working hours and respond to emergency call-outs

Minimum Education and Experience:

Education:

A Baccalaureate Degree from an accredited college or university.

An Associate's degree may be substituted for the Bachelor's degree by substituting additional qualifying experience with the City of Woodland, on a year to year basis One year (2,000 hours) of work experience equals 30 semester quarter units.

Experience:
Six (6) years of verifiable managerial experience including four (4) years of verifiable mid-management supervisory experience in Public Works activities related to street maintenance, electrical maintenance, signs and markings, urban forestry, parks and sport parks maintenance, cemetery maintenance, pool maintenance, and/or utility infrastructure maintenance.

License or Certificate:

Required upon hire, possession of a valid California Driver's License.

Council Action: December 2013

City of Woodland

PUBLIC WORKS DIRECTOR

DEFINITION

To plan, organize, direct, supervise, and review the activities of the divisions of a municipal public works department; and ensure the proper performance of those duties.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by the City Manager. Responsible for direct and indirect supervision over assigned staff. Exercises discretion and independent judgment with respect to assigned duties.

EXAMPLES OF DUTIES - The following are typical illustrations of duties encompassed by the job class, not an all-inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Direct, coordinate, and participate in the development and implementation of departmental goals, objectives, policies, procedures, and priorities, and provide staff leadership on policy planning for public works activities. Plan, organize and direct the operations and activities of the City's Public Works Department. Ensure compliance with legislative, regulatory and judicial mandates, regulations and professional standards. Prepare and direct the preparation of various reports to the City Council and state and federal agencies; coordinate special studies on a variety of complex problems which require a high degree of technical competence and political awareness. Assure that positive public relations and effective working relationships are maintained by the Department with the general public, other governmental agencies, the City Council, City departments, and the media. In consultation with the City Manager and City Council, assure that the department has adequate resources to fulfill its mission through proper budget planning and execution, personnel selection, and training and development. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Establish work methods and interdepartmental procedures to ensure effective work flow and compliance with established policies and procedures. Promote and maintain safety in the work place. Administer and oversee assigned contractual

agreements between the City and other agencies, private organizations and individual members of the public. Represent the City before the City Council, community, outside agencies and at professional meetings as appropriate. Recommend adoption and assist in the preparation of ordinances; prepare and recommend fees. Serve as Acting City Manager as assigned. Work cooperatively with others. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Comprehensive knowledge of municipal public works planning, design, construction, maintenance, and administration.

Organizational and management practices as applied to the analysis and evaluation of programs, policies, and operational needs.

Civil engineering principles and practices as applied to the field of municipal public works, including methods of preparing designs, plans, specifications, estimates, reports, and recommendations relating to municipal utilities and proposed public works facilities.

Strategic goals, program outcomes, and performance measures that can be applied to the evaluation of Public Works activities.

Codes, ordinances, resolutions, laws, recent developments, current literature and sources of information in municipal public works.

Operation and programs of a personal computer.

Skill to:

Analyze feasibility of projects and proposed programs; prepare complete and accurate reports in accordance with laws, regulations, and policies.

Persuade and motivate individuals and groups toward the successful accomplishment of shared goals and objectives.

Delegate responsibility; schedule and program work on a long-term basis.

Communicate clearly and concisely, orally and in writing.

Efficiently operate a personal computer.

Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Develop and implement services which will meet the changing public works needs of the community; use financial, technological and staff resources effectively for the planning, programming and promoting of services; set priorities, work well under pressure and meet deadlines.

Deal effectively with other department directors, elected officials, outside agencies, contractors, citizens, and the press.

Act calmly and quickly in emergency situations and make effective decisions in such cases.

Interpret, analyze, apply and articulate relevant laws, rules, contracts, ordinances, regulations and guidelines.

Apply strategic goals, program outcomes and performance measures in to Public Works operations in order to facilitate innovation and continuous improvement.

Minimum Education and Experience

Education:

Bachelor's Degree from an accredited college or university with major work in civil engineering, environmental studies, public administration or a closely related field is required. A Master's Degree in engineering, public administration, or management is preferred.

Experience:

Five years of increasingly responsible professional civil engineering experience is desirable; with at least three years of responsible administrative/management experience in the public sector.

License or Certificate

Required upon hire, possession of a valid California driver's license.

Council Action: January 8, 2008

City of Woodland

ENGINEERING TECHNICIAN I/II

DEFINITION

To perform paraprofessional and technical field and office engineering work in the design, construction and maintenance of public works facilities in one or more of the functional areas of the engineering division.

DISTINGUISHING CHARACTERISTICS

Engineering Technician I: This is the entry level class in the Engineering Technician series. Positions in this class normally perform responsible but less difficult types of paraprofessional engineering office and field work. Typically, the principles and techniques of civil engineering have been acquired primarily through past experience rather than formal training.

Engineering Technician II: This is the journey level class in the Engineering Technician series. Positions in this class are expected to perform responsible and highly technical engineering office and field work. All positions assigned to this class require the ability to work independently, exercising judgment and initiative.

SUPERVISION RECEIVED AND EXERCISED

Immediate supervision is provided by the Senior Civil Engineer or his/her designee. The Technician II may provide functional and technical supervision to lower level paraprofessional engineering personnel.

EXAMPLES OF DUTIES - The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Perform office engineering work such as making and reviewing maps/drawings/estimates, tabulating field data, designing elementary engineering structures, and preparing specifications, contracts, and other documents,
Assist in the preparation of preliminary studies of engineering projects and assist in the preparation of plans for public improvements; prepare written reports on engineering-related projects.

To inspect work quality and materials used in a variety of public works construction projects to ensure compliance with approved plans and specifications; provide guidance for contractor activities by applying a practical knowledge of engineering requirements and construction practices.

Prepare, review, and maintain various reports, documents, and files, such as, but not limited to inspection logs, change order requests, quantities and material estimates, progress reports, real property documents, submittals, as-built drawings, final payment and makes recommendations for approval or disapproval when appropriate.

Perform various traffic studies and investigate issues related to traffic and traffic control.

Provide general information to the public, other City departments, development community and other government agencies.

Regular and consistent attendance.

Prepare forms and permits as needed; perform survey work; prepare legal descriptions and plot maps for right-of-way acquisition.

Shares in the responsibility for a sound safety program. Is required to comply with all applicable safety directives. Promptly reports unsafe conditions to the immediate supervisor.

Attends pre-construction conferences. Prepares estimates of quantities and materials on site for weekly progress reports. Prepares data for as-built (record drawings), recording changes, dimensions, elevations, and other pertinent data.

Investigates complaints of using agencies and obtains compliance by contractor during guarantee/warranty period on construction projects.

Work cooperatively with others.

Perform related duties as assigned.

QUALIFICATIONS

Engineering Technician I

Knowledge of:

Basic mathematics including algebra, geometry, and trigonometry.

Basic principles and practices of engineering office and field work, including drafting and surveying procedures and equipment.

Basic operation of computers, including word processing, databases and spreadsheets.

Operation and programs of a personal computer.

Safety principles, practices and procedures.

Skill to:

Provide information to the general public regarding engineering department services.

Understand and interpret engineering plans and specifications; perform accurate engineering computations.

Communicate clearly and concisely, orally and in writing.

Assist in the preparation of plans, specifications, cost estimates and engineering reports.

Establish and maintain cooperative working relationships with co-workers and those contacted in the course of work.

Ability to:

Develop cooperative public relations with other City departments, developers, businesses, and the general public.

Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Education and Experience

Any combination of education and experience that provides the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:

Equivalent to completion of the twelfth grade supplemented by courses in drafting, algebra, geometry and trigonometry.

Experience:

Three years of increasingly responsible paraprofessional engineering experience including at least two years at a level comparable to that of Engineering Aide II in the City of Woodland.

License or Certificate

Possession of a valid California driver's license.

QUALIFICATIONS

Engineering Technician II

In addition to the qualifications for Engineering Technician I:

Knowledge of:

Techniques for preparing designs, plans, specifications, estimates, reports, and recommendations related to Public Works.

Basic engineering methods and techniques used in the construction, maintenance and repair of public works projects.

Principles, practices, methods, materials, equipment used in construction safety.

Basic soil mechanics.

Techniques used in contract administration and inspection.

Skill to:

Perform a variety of mathematical/engineering computations.

Perform technical engineering work of a complex nature with a minimum of supervision in a variety of areas.

Prepare cost estimates and engineering reports.

Ability to:

Correctly apply laws, regulations, codes, and departmental policies governing the construction of assigned projects.

Learn and accurately interpret laws, regulations, map sites, building plans, and engineering policies.

Education:

Additional course work related to civil engineering is desirable.

Experience:

Two years of increasingly complex paraprofessional engineering experience at a level comparable to that of an Engineering Technician I in the City of Woodland.

Council Action: Approved 9/21/99

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City of Woodland

ENVIRONMENTAL COMPLIANCE INSPECTOR I/II

DEFINITION

To perform semi-skilled and skilled work involving the City's Pollution Prevention Program, Industrial Pretreatment Program, Stormwater Program, and related programs.

SUPERVISION RECEIVED AND EXERCISED

Environmental Compliance Inspector I:
Immediate supervision is provided by the Laboratory Supervisor or designee. Incumbents may receive technical and functional supervision from the Environmental Compliance Specialist.

Environmental Compliance Inspector II:
Immediate supervision is provided by the Laboratory Supervisor or designee. Incumbents may receive technical and functional supervision from the Environmental Compliance Specialist.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job series, but are not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Assist in developing and implementing the Pollution Prevention Program. Assist in the day to day enforcement of the Industrial Pretreatment Program, Pollution Prevention Program and the Stormwater Program. Inspect Pollution Prevention Program facilities to ensure compliance with City Pretreatment regulations. Assist with inspection of Industrial Pretreatment Program facilities to ensure compliance with Pretreatment regulations. Inspect construction sites to ensure compliance with NPDES Phase II requirements. Issue discharge permits for new and existing businesses regulated under the Pollution Prevention Program. Regular and consistent attendance. Work weekends and holidays as assigned.

OTHER JOB FUNCTIONS

Collect samples and perform routine laboratory tests and analyses. Serve in a stand-by status after regular working hours and respond to emergency call-outs. Keep detailed records of Pollution Prevention Program activities. Assist with public education and outreach activities to permitted businesses and residential customers. Perform related duties as assigned.

QUALIFICATIONS

Environmental Compliance Inspector I:

Knowledge of:
Basic chemical and bacteriological wastewater characteristics. Basic mechanical and electrical systems. Uses and purposes of general construction tools and equipment. Safe work practices.

Ability to:
Learn Rules and regulations related to the Pollution Prevention and Stormwater programs. Learn the principles and practices necessary to perform inspections of Pollution Prevention Program facilities. Learn basic principles and practices as they relate to wastewater treatment and related programs. Learn routine repairs and adjustments to motors, pumps and other sample collection equipment. Establish effective working relationships with the public, City staff and outside agencies. Understand and carry out both oral and written instructions. Learn to read meters and gauges correctly. Learn to collect samples and perform routine laboratory tests. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Minimum Education and Experience:

Education:
High School Diploma or equivalent. Specialized training or coursework in the water pollution control field is highly desirable.

Experience:
One year of experience in working with mechanical equipment and basic water or wastewater chemical and bacteriological processes is desirable.

Licenses and Certificates:
Required upon hire, possession of a valid California Driver's license. A Grade I Environmental Inspection Certificate issued by California Water Environment Association is required within 12 months.

Environmental Compliance Inspector II:
In addition to the qualifications for Environmental compliance Inspector I:

Knowledge of:
Wastewater sampling and reporting requirements. Functions and purposes of water pollution control systems. Principles as they relate to industrial wastewater treatment. Basic knowledge of State and Federal water pollution control laws and regulations governing the treatment and disposal of industrial wastewater and related programs.

Hazardous chemicals associated with the treatment of wastewater. Occupation hazards and necessary safety precautions.

Ability to:
Use tools necessary to make general repairs to motors, pumps and other equipment. Read and interpret meters and gauges. Collect Samples and perform laboratory tests. Perform facility operations without direct supervision. Prepare written reports. Serve in a stand-by status after regular working hours and respond to emergency call-outs.

Minimum Education and Experience:

Education:
High School Diploma or equivalent, supplemented by specialized training or coursework in the water pollution control field.

Experience:
One year of experience in the operation of a Pretreatment program. One year of experience in the operation and maintenance of wastewater treatment plant and/or related facilities or programs is desirable.

Licenses and Certificates:
Grade I Environmental Inspection Certificate issued by the California Water Environment Association required upon hire. Must obtain a Grade II Environmental Inspection Certificate issued by the California Water Environment Association within 12 months of appointment.

Council Action: June 7, 2011

City of Woodland

ENVIRONMENTAL COMPLIANCE SPECIALIST

DEFINITION

To perform a variety of tasks necessary to ensure that the City's Industrial Pretreatment and Stormwater NPDES construction inspection programs are in compliance with all Federal, State and Local requirements and to ensure protection of the City's Water Pollution Control Facility, including the wastewater collection system and stormwater collection system.

SUPERVISION RECEIVED AND EXERCISED

Supervision is provided by the Laboratory Supervisor, or designee. This position is the senior level in the series and may provide functional supervision and training to subordinate personnel.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, but are not all inclusive or limiting:

ESSENTIAL JOB FUNCTIONS

Assists in the development and implementation of goals and objectives of both the Industrial Pretreatment Program and the Pollution Prevention Program. Inspects and coordinates enforcement actions for construction sites and illegal discharges for Stormwater NPDES Phase II compliance. Maintains and monitors Industrial User records. Inspects industrial facilities to ensure compliance with all EPA, RWQCB and City pretreatment regulations and prepares reports of inspections. Prepares quarterly and annual Industrial Pretreatment reports. Interprets and enforces pretreatment wastewater and stormwater collection systems regulations. Issues discharge permits for new and existing industries. Regular and consistent attendance. Work weekends and holidays as assigned.

OTHER JOB FUNCTIONS

Assists in budget preparation. Assists with the development of program standards, standard operating procedures, and reporting systems. Collects wastewater samples from industrial plants, wastewater collection system, and waterways for laboratory analysis. Performs routine laboratory test and analyses. Cleans, maintains, installs, and operates portable automatic samplers, flow monitoring, and related equipment. Provides plan check review as necessary to implement program objectives. Works weekend and holidays as assigned and responds to emergency call outs. Serve in a

standby status after regular working hours. Develops and implements public education and outreach materials, activities, and programs for the City's Industrial Pretreatment and Pollution Prevention efforts. Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:
Wastewater treatment processes and of the tests used in checking the effectiveness of such processes. Chemical and bacteriological wastewater characteristics. Standard methods of sampling and analyzing water and wastewater. Hydraulics, measuring devices, pumps, and other wastewater related equipment. Repair and calibration of equipment. Basic principles and practices as they relate to wastewater treatment and related programs. Knowledge of State and Federal water pollution control laws and regulations governing the treatment and disposal of industrial wastewater and related programs. Hazardous chemicals associated with treatment of wastewater. Occupational hazards and necessary safety precautions. Procedures for troubleshooting equipment. Principles and practices as they relate to industrial wastewater treatment. State and Federal Stormwater NPEDES Phase II regulations, best management practices, public education and outreach programs.

Ability to:
Communicate clearly, both orally and in writing. Apply and enforce EPA, RWQCB and City regulations. Interpret pretreatment facility plans, inspect pretreatment facilities and sample waste discharges. Read and interpret laws and ordinances, prepare reports, and maintain records. Establish effective working relationships with the public, City staff and outside agencies. Read and interpret basic blue prints and plans. Understand and carry out oral and written directions.

Minimum Education and Experience:

Education:
High School Diploma or equivalent. College level coursework in chemistry, biological sciences and wastewater technology is highly desired.

Experience:
Three years experience implementing Industrial Pretreatment and Pollution Prevention Programs (one year of related experience may be substituted for up to one year of this requirement).Two years experience with Stormwater Phase II compliance desirable.

License and Certificate:
Required prior to hire, possession of a valid California Drivers License and a Grade I Environmental Inspection Certificate issued by California Water Environment Association. A Grade II Environmental Inspection Certificate issued by California Water Environment Association is required prior to permanent appointment.

Council Action: June 7, 2011

City of Woodland

ENVIRONMENTAL RESOURCE ANALYST

DEFINITION

Develop, implement, and promote environmental programs to include Water Conservation, Solid Waste Reduction, and Phase II Storm Water Compliance and provide a wide variety of technical and administrative assistance related to environmental compliance on Public Works projects.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by the Director of Public Works or designee. Responsibilities include direct supervision of the Conservation Coordinators and may include direct or indirect supervision of volunteer, part-time or technical staff. Exercises discretion and independent judgment with respect to assigned duties.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, and are not an all-inclusive or limiting list.

ESSENTIAL JOB FUNCTIONS

Oversee the solid waste franchise program, ensuring compliance with Local, State and Federal requirements. Oversee the Water Conservation Program and related issues. Implement NPDES Phase II requirements, including planning, organizing, and administering the permitting, monitoring, inspection, enforcement, pollution prevention, and data management activities of the Storm Water Program in accordance with federal, state, and local laws and the City municipal NPDES permit. Provide environmental resource management support to the Public Works Department on city land stewardship issues. Supervise the development and implementation of City resource conservation and related outreach and education programs, to include supervision of the development and distribution of appropriate curriculum materials for presentation to schools, community groups and neighborhood groups. Respond to citizen concerns and requests for information and assistance. Identify, track, analyze and monitor State and regional environmental activities with the potential to affect existing and future City resources, including utilities, solid waste and energy issues. Develop alternatives and make recommendations regarding City resource management programs including utilities, solid waste and energy issues. Track and analyze related legislation and make recommendations for City involvement in pending legislation and compliance with existing legislation. Accumulate data, conduct research, analyze and summarize statistical data and prepare reports including Council Communications,

information flyers, newsletters, and press releases. Prepare detailed draft budgets, assist in preparation of final budgets, and administer adopted budgets. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Make presentations regarding water resource and environmental issues for both large and small group settings. Develop and analyze long-range financial needs. Administer vendor contracts and agreements. Make recommendations, track and monitor the budgets applicable to the programs supported by environmental resource specialist (water supply and conservation/solid waste/energy). Represent the City at State, Regional, Community, and professional meetings as needed. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Principles and practices of resource management, including implementing outreach and education programs to adhere with the intention and direction of policy makers. Techniques used in the long range planning, analysis and forecasting of resource needs and methods of achieving those needs. Customer relations concepts and techniques including measuring and predicting behavioral changes. Recent developments, current literature and sources of information regarding natural resource management. Conducting environmental audits and protocols for natural resource assessments. Advanced computer skills including the use of analytical and statistical modeling, database, presentation, and telecommunications software. Methods and requirements for grant proposals and grant administration. Principles, techniques and requirements for writing and administrating Service contracts.

Skill to:

Plan, coordinate, and prioritize work in assigned areas of responsibility. Work with a minimum of supervision and exercise initiative and sound judgment. Prepare technical analysis and reports. Work cooperatively with other departments, outside agencies and the public. Communicate effectively, both orally and in writing. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Do field reconnaissance and inspections of areas affecting City natural resources.

Minimum Education and Experience:

Education:

Bachelor's degree from an accredited college or university with major coursework in environmental studies, biology, water resources or a closely related field.

Experience:
Two years of increasingly responsible work experience in environmental studies, water resources, or a closely related field with experience in outreach and education programs. Prefer some experience in a supervisory capacity.

License or Certificate:
Required upon hire, possession of a valid California Driver's License.

COUNCIL ACTION: June 17, 2008

City of Woodland

EQUIPMENT SERVICES CLERK

DEFINITION

To maintain inventory control and stock for automotive, truck and mechanical equipment and parts used in the repair and maintenance of City vehicles and equipment. Provide administrative computer support for preventive maintenance and equipment inventory.

SUPERVISON RECEIVED AND EXERCISED

General supervision is provided by the Senior Equipment Mechanic. This position is entry level and exercises no supervision.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the position, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Order, receive, unpack, store, issue and account for requisitioned parts, supplies, equipment and materials; maintain parts inventory levels, including purchase of special order supplies. Inspect shipments of equipment and supplies received for conformity to purchase order specifications. Inventory stock of parts, hand tools and equipment, ensuring that automated records agree with actual count. Inspect faulty parts returned by mechanics against part warranty limits. Note shortages, damages, or other discrepancies. Coordinate annual physical inventory. Operate City vehicles to pick up and deliver special orders and vehicles needing servicing; and to drive as needed in the course of work. Maintain cleanliness and organization of parts storage area. Maintain and perform all computer-assisted preventive maintenance (PM) program efforts. Input and retrieve data for PM program; generate equipment replacement recommendations; and manage inventory records system. Maintain logs of hours worked on City vehicles and equipment, parts and equipment repair orders, and fuel records. Determine price and availability of parts and supplies from vendors and prepare purchase orders; maintain purchase order files. Provide information related to vendor inquires. Assist in budget preparation and monitor expenditures; maintain fixed assets inventory records; prepare budget reports. Prepare and negotiate damage reports and adjustments on purchase. Maintain back order file. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Perform a wide variety of routine clerical work including filing, typing, proofreading, check and record information, maintain logs, answer telephone and direct callers, and

schedule appointments. Receive, sort, and distribute incoming and outgoing correspondence. Prepare various automated reports on equipment services operations and activities.

QUALIFICATIONS

Knowledge of:
Inventory control and maintenance procedures. Basic design and function of automotive parts. Modern office methods, procedures, practices. Budget preparation and monitoring. Computer hardware and software programs. Records management systems. Hazardous materials storage and handling with commercial handling procedures experience desirable. Basic mathematical principles. English usage, spelling, grammar, and punctuation. Safe work practices.

Skill to:
Follow oral and written directions. Operate personal computer, office machines and equipment. Maintain accurate and current records of inventory transactions. Determine maximums and minimums for ordering. Fill orders accurately from repair orders. Perform routine clerical work. Communicate effectively, both orally and in writing. Enter data into a computer. Assist in the preparation of technical reports. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:
Read, interpret, understand, and apply automotive specifications and parts catalogs. Learn to operate a forklift and truck.

Minimum Education and Experience:

Education:
High school diploma or equivalent.

Experience:
One year of clerical work experience, including automated recordkeeping. Prefer automotive, truck, or heavy equipment inventory or warehousing experience.

License and Certificate:
Required upon hire, possession of a valid California Driver's License.

Council Action: June 20, 2006

City of Woodland

FACILITY MAINTENANCE WORKER III

DEFINITION

To perform a variety of semi-skilled and skilled tasks in the maintenance of City-owned buildings, equipment and facilities.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by assigned higher level personnel. Responsibilities include direct supervision over temporary personnel and functional supervision over Facility Maintenance Worker I/II.

This is the advanced journey level of the Facility Maintenance Worker series. It is distinguished from the Facility Maintenance Worker II classification in that positions assigned to this class are expected to perform the most complex and highly skilled duties assigned, including highly skilled equipment under minimal supervision. In addition, incumbents may assume general oversight over a small crew of Facility Maintenance Workers I and II as assigned.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Maintain and repair City facilities, equipment, and building by performing a variety of semi-skilled and skilled carpentry, electrical, painting, plumbing, heating, air conditioning and mechanical repair work. Inspect building facilities to identify building maintenance and custodial needs; research and recommend effective solutions to maintenance and repair needs of the City. Inspect, determine, and perform preventive maintenance and minor repairs on assigned facilities and equipment. Assign routine and special tasks to subordinates; coordinates the work of contractors and other assigned staff with other City employees and contractors. Work cooperatively with others. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Operate a variety of equipment including power saws, power sanders, drills, paint sprayers, plumbing snakes and rodders, routers and grinders. Operate, maintain and

repair a variety of mechanical equipment such as generators, engines and sump pumps. Determine quantity and types of supplies, materials, tools and equipment needed for maintenance programs and projects; arrange for purchase and procurement of same; assure that maintenance equipment and tools are kept in good working order. Read and interpret sketches, diagrams, drawings and blueprints. Assist in the research and implementation of department policies and procedures. Maintain time, material and equipment use records. Troubleshoot, maintain and repair the City's lock system. Perform work in emergency situations. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
Techniques, equipment and materials used in the maintenance, repair and remodeling of public facilities including plumbing, carpentry, painting and electrical. Federal, state and governmental agency laws and regulations pertaining to building maintenance, including building codes. Hazards associated with the assigned work and proper safety precautions. Methods and techniques used in estimating time and materials for assigned projects. Report preparation and maintenance. Research methods in regards to determining proper course of action to maintain and repair buildings, equipment and facilities.

Skill to:
Safely perform skilled maintenance, construction and repair work. Enter data into computer. Analyze and resolve problems; develop and present related recommendations. Oversee a small crew of facility maintenance personnel. Communicate effectively both orally and in writing. Use and operate hand tools, mechanical equipment and power tools and equipment required for the work in a safe and efficient manner. Read and interpret basic maps and blue prints.

Ability to:
Perform a full range of building maintenance work. Act calmly and quickly in emergency situations and make effective decisions in such cases. Prepare and understand comprehensive and complex reports and plans. Set priorities, work well under pressure and meet deadlines. Work independently in the absence of supervision; resolve technical problems as appropriate for the situations. Read and interpret sketches, drawings, diagrams and blueprints. Prepare and maintain accurate records, logs, orders and reports. Effectively provide direction and training to subordinates. Estimate necessary materials and supplies with a reasonable degree of accuracy. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Minimum Education and Experience:

Education:
High School Diploma or equivalent.

Experience:
Two years of experience performing duties comparable to those of a Facility Maintenance Worker II.

License or Certificate:
Required upon hire, possession of valid California Driver's License. Building Operator Certification is desired.

Council Action: June 20, 2006

City of Woodland

FINANCE OFFICER

DEFINITION

To plan, organize and manage all fiscal operations of the City; provide a framework for financial planning and analysis to support the operation and management of all City departments and manage the Accounting and Purchasing Divisions.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by the Director of Administrative Services. Position exercises direct and indirect supervision of professional, technical, and clerical staff. Exercises discretion and independent judgment with respect to assigned duties.

EXAMPLES OF DUTIES: The following are typical illustrations of duties encompassed by the job class; not an all-inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS:

Plan, organize and manage the financial activities of the City, including accounting, treasury management, revenue and licensing, capital management, redevelopment finance, purchasing and related support services. Administer the City's operating and capital budgets, analyze revenue sources/projections, expenditure patterns, services delivery alternatives and economic forecasts. Participate in investment strategies; identify debt financing needs and approve investment transactions; coordinate and conduct municipal and assessment district bond sales; and maintain all bond administration and accounting. Ensure compliance with legislative, regulatory and judicial mandates, regulations and professional standards, including internal control policies and procedures, cost allocation plans and financial audits. Oversee fiscal service delivery to various City Departments/Agencies, including maintenance of fiscal records, preparation of monthly/annual financial statements, development of budgets, and/or financial analysis and presentations to Council and Boards. Provide technical and professional advice and recommendations related to levels of service in the Department and other related matters; coordinate special studies on a variety of complex problems which require a high degree of technical competence and political awareness. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Identify, establish and execute Department plans and policies. Participate in the implementation of department and inter-departmental systems, programs, or processes. Prepare and manage the preparation of various financial and statistical reports including investment reports to the City Council, state and federal reports, and expenditure and tax receipt reports. Oversee internal and external financial reporting and audit requirements. Oversee the City's purchasing and warehousing program,

including ensuring compliance by all City departments with purchasing requirements. Serve as City Treasurer; serve as Acting Director of Administrative Services as needed. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
Comprehensive knowledge of municipal finance, accounting, budgeting, taxation/revenue forecasting, purchasing, treasury principles and techniques. Techniques utilized to administer public financing including certificates of participation, bonds, lease/purchases, assessment districts, etc. Laws regulating the financial administration of City government including the powers and responsibilities of a City Treasurer. Efficiently operate a financial software package and personal computer.

Skill to:
Analyze accounts, financial feasibility of projects and proposed programs; prepare complete and accurate reports and financial statements. Communicate clearly and concisely, in both oral and written form. Establish and maintain effective work relationships with those contacted in the performance of required duties. Research, analyze, and implement federal, state, and local rules and regulations.

Ability to:
Use financial, technological and staff resources effectively for the planning, programming, and promoting of services. Plan and manage the maintenance of the complete City financial records, analyze and interpret accounting records and data, develop and implement new and improved financial management systems; set priorities, work well under pressure and meet deadlines. Prepare informative financial reports; evaluate financial systems and formulate and install accounting procedures, forms, and records; analyze situations quickly and objectively in order to determine proper and timely course of action. Plan and supervise the work of employees.

Minimum Education and Experience:

Education:
Bachelor's Degree from an accredited college or university with major work in Accounting, Finance, Public or Business Administration, or a closely related field is required. A Master's Degree in Public or Business Administration or related field is preferred.

Experience:
Five years of increasingly responsible experience in governmental and/or financial management including accounting, budgeting and financial analysis or closely related field; at least two years of responsible administrative/management experience in a supervisory capacity. Government experience is highly desireable.

License or Certificate:
Possesion of a valid California Driver's License, required upon hire.

City of Woodland

FLEET AND FACILITIES MANAGER

DEFINITION

Plans, organizes, and manages the operation of the Fleet and Facilities branch of the Operations & Maintenance Division of the Public Works Department. Responsible for planning and directing the maintenance and repair of City fleet vehicles, equipment, and building maintenance for assigned City facilities.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by the Deputy Director of Public Works, Operations & Maintenance. Responsibilities include direct supervision of equipment maintenance and facility maintenance personnel.

EXAMPLES OF DUTIES

The following are typical of duties encompassed by the position, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Plan, organize, direct, and review the operations and activities of the Fleet and Facilities Division. Develop and implement goals, objectives, policies, and priorities. Manage and coordinate the purchase, maintenance, repair, replacement and disposal of the City vehicle fleet. Manage the facility maintenance program for City owned facilities. Plan, organize, and direct the servicing and maintenance of City vehicles and equipment. Ensure City equipment meets operating and safety standards. Maintain computerized maintenance record keeping system. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Establish a cost-effective procurement program, and maintain an inventory of materials and supplies for the shop and facilities. Continually upgrade facilities maintenance program and polices. Prepare and oversee the on-going preventative maintenance and repair program for City facilities. Provide contract administration input on all building remodel and construction projects, including all phases from planning to project construction. Advise City departments regarding equipment purchases, rental rates, equipment utilization, and operator training. Oversee the City's contracts for pest control, HVAC services, elevator maintenance, janitorial and other contracted building maintenance services. Participate in budget preparation and administration. Supervise, train, and evaluate subordinates. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
Principles, methods, and practices pertaining to the operation of fleet management, equipment maintenance and repair facility. Principles, materials, methods, tools, and equipment used in the maintenance of buildings. Tools, lubricants, equipment, and procedures used in servicing, over-hauling, repairing and adjusting a variety of automotive and other power-driven equipment, current trends in alternative fuel and fuel systems. Contracting and equipment specifications. Building maintenance practices and procedures. Safe work practices. Occupational Health and Safety Standards for Industrial and Commercial Facilities. Operating and repair characteristics of a variety of gas and diesel-powered light and heavy equipment. Record keeping, reporting and accounting procedures and practices. Personnel principles and practices including supervising, training and performance evaluation.

Skill to:
Communicate clearly and concisely, both orally and in writing. Use an automated maintenance management system. Plan, direct, and coordinate the mechanical repair and maintenance activities of City vehicles and equipment. Estimate labor and material costs and requirements for mechanical maintenance and repair; conduct cost-effective procurement program, resource utilization, budget and project cost analyses. Write vehicle, equipment, and general contract specifications. Analyze and interpret Federal and State regulations pertaining to the Fleet and Facilities Branch. Maintain records and prepare reports. Use Environmental Management Control Systems. Supervise, train, and evaluate subordinates.

Ability to:
Establish and maintain effective work relationships with those contacted in the performance of required duties. Read and understand building, remodel and construction blueprints. Read and understand vehicle/equipment electrical, air, hydraulic and coolant circuit diagrams. Establish and direct stormwater best management practices at facilities. Provide customer service to satisfy a diverse range of service requirements.

Minimum Education and Experience:

Education:
High school diploma or equivalent and specialized training in fleet and facility management. Associate degree or higher and/or coursework in management, business, or public administration is highly desirable.

Experience:
Four years of professional work experience in the maintenance and repair of automobiles and heavy equipment. Also, two years of experience that includes

administrative or supervisory capacity in a similar sized operation. Experience as a journey mechanic or in maintaining and repairing facilities is a plus.

License or Certificates:
Required upon hire, possession of a valid California Driver's License. Class B Driver's License is desirable.

Council Action: June 20, 2006

City of Woodland

GIS ANALYST

DEFINITION

To perform a variety of technical duties in support of the City's information technology division; to assist in the maintenance and administration of the day-to-day operations of the Cities Geographic Information Systems (GIS) functions.

SUPERVISION RECEIVED AND EXERCISED

Immediate supervision is provided by the Senior Applications Analyst or his/her designee. Responsibilities may include the indirect supervision of lower level clerical and technical positions.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class; not an all-inclusive or limiting list.

ESSENTIAL JOB FUNCTION:

Design, develop, maintain, administer, modify and troubleshoot the enterprise geodatabase architecture. Design, develop, maintain, administer, modify and troubleshoot geoprocesses for collecting, integrating, collating, and verifying geospatial data for use within the enterprise geodatabase architecture fabric. Maintain, administer, modify and troubleshoot the web mapping presence, including internal and external web mapping applications. Provide support for ArcIMS and ArcGIS Server. Create, configure, publish and manage ArcGIS Server image, map and data services. Complete GIS web mapping application development project management activities to include defining requirements, estimating resources, testing, and documentation, and fostering adoption. Serve as support for geodatabases, mapping applications, mapping functionality, usage, security, access and availability; database security access and availability. Perform data collection and produce reports, maps, or other products. Implement minor system upgrades and modifications. Test programs to ensure correct operations and no adverse impact affects programs or systems. Integrate and configure systems as needed. Regular, predictable, consistent and timely attendance is an essential function of the position, in that the failure of such attendance undermines the City's ability to provide critical services to employees, department and the public.

OTHER JOB FUNCTIONS:

Promote and maintain safety in the workplace. Ensure adherence to security and data confidentiality guidelines, and provide input on operational processes and procedures.. Provide on-site GIS support for emergency response drills and incidents. Perform general office duties; conduct data entry, prepare and file routine reports and correspondence. Consult with the Information Technology Manager regarding all City

standards on computer systems. Prepare and assist in presentations to City Council, miscellaneous committees, and local interest groups. Perform related duties as assigned.

QUALIFICATIONS:

Knowledge of:
Current computer industry technology, practices trends, and terminology; including computer system operations, maintenance. GIS concepts and analytical techniques, including computerized mapping and digital data conversion, manipulation and analysis. ESRI or similar remote sensing/GIS software, such as ArcView, ArcEdit, and ArcInfo. Digitizing and data manipulation procedures for geographic information systems... Principles, practices and techniques related to database management, geography and cartography, and GIS application and design Standard testing and troubleshooting techniques. Research techniques and procedures; business letter writing and basic report preparation. Safe work practices. Job planning, prioritizing, and scheduling techniques.

Skill to:
Prepare accurate correspondence, reports, maps, diagrams, graphs, charts, exhibits, displays and other descriptive material. Use graphic instructions such as blueprints, layouts, or other visual aids. Train and monitor departmental staff in the operation of existing or new systems including explaining concepts to non-technical users. Collect, organize and analyze data. Conduct any data entry functions accurately and timely. Present facts clearly and accurately in graphic form.

Ability to:
Become familiar with industry-specific terminology and symbology (such as water and wastewater or planning and zoning). Communicate effectively, both orally and in writing. Establish and maintain effective work relationships with coworkers and those contacted in the performance of required duties. Work with minimal supervision. Read and use zoning maps, quarter-section maps, plat maps, land use maps, single line maps, aerial maps, blueprints, and engineering plans. Travel across rough, uneven, or rocky surfaces when conducting field inspections. Prepare and maintains complete files, records and documentation of work performed.. Meet the physical requirements necessary to safely and effectively perform the assigned duties.

MINIMUM EDUCATION AND EXPERIENCE:

Education:
Associate's degree (or the equivalent of 60 completed semester units) from an accredited college or university with major course work in computer science, Geography, or a closely related field. Possession of specialized certificates in GIS related disciplines may be substituted for some or all required college education.

Experience:
Three years of experience performing duties of a GIS Technician for a large organization or municipal government.

License or Certificate:
Possession of a valid California Driver's License.

ADA COMPLIANCE

Physical Ability: Positions in this class typically require climbing, balancing, stooping, kneeling, crouching, reaching, standing, walking, pushing, pulling, lifting, fingering, grasping, talking, hearing, seeing, and repetitive motions.

Heavy Work: Exerting in excess of 50pounds of force occasionally, and/or in, and/or in excess of 20 pounds of force constantly to move objects.

Other Requirements:

Sensory Requirements: Requires the ability to recognize and identify similarities and differences between shade, degree or value of colors, shapes, sounds, forms, textures or physical appearance associated with objects and people.

Environmental Factors: May be subjected to moving mechanical parts, electrical currents, vibrations, fumes, odors, dusts, gases, poor ventilation, chemicals, oils, extreme temperatures, work space restrictions, intense noises, and environmental dangers.

Council Action:

City of Woodland

HEAVY EQUIPMENT MECHANIC

DEFINITION
To maintain and perform major mechanical repairs to automotive, power-driven, mechanical and heavy equipment.

SUPERVISION RECEIVED AND EXERCISED
This is an advanced journey level class in the Equipment Mechanic series. General supervision is provided by the Fleet and Facilities Manager or his/her designee. May exercise technical or functional supervision over subordinate personnel.

EXAMPLES OF DUTIES
The following are typical illustrations of duties encompassed by the position, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS
Inspect, diagnose and locate mechanical difficulties on automobiles, trucks and a variety of maintenance and construction equipment. Determine extent of necessary repairs including identifying major engine and transmission overhaul needs and prepare orders for required services. Road-test vehicles and determine the need for outsourcing to specialized vendors. Perform repairs and adjustments of gasoline and diesel engines, transmissions, differentials, clutches and brakes and hydraulic components. Tune up engines, diagnose computer controls, modules and air conditioning components using diagnostic equipment. Repair and/or replace all components of light and heavy frame assemblies, suspension systems drive trains, electrical systems, steering, braking, material handling, cap and drive, passenger comfort systems. Perform welding and brazing, fabricate and modify parts, equipment, miscellaneous structures and attachments. Maintain a variety of maintenance, repair and inventory records on the computerized fleet maintenance system. Maintain vehicle inspection records as required by the Department of Transportation. Adjust and repair air and hydraulic brake systems including high and low pressure systems. Clean, repair and replace fuel pumps, strainers, fuel lines, gasoline tanks and gauges. Operate equipment and vehicles with possession of all necessary licenses and certificates. Regular and consistent attendance.

OTHER JOB FUNCTIONS
Participate in division safety program. Diagnose, repair, expand and recondition electrical systems. Install and maintain special equipment on fire apparatus, including high volume water, hydraulic, foam and air pumps. Respond to emergency road calls,

field diagnose the problem and make field repairs as necessary. Maintain shop and shop equipment in a safe, clean and orderly condition. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
Tools, equipment and procedures used in the service, maintenance, overhaul, repair and adjustment of gas and diesel-powered equipment. Operating and repair characteristics of the entire range of City owned vehicles and equipment, including heavy duty trucks and construction equipment. Operation and care of internal combustion engines, hydraulics and electrical components. Use of a variety of hand and power tools and equipment. Safe working practices. Computerized inventory and record fleet maintenance system.

Skill to:
Enter data into Fleet Management system. Perform advanced journey level equipment mechanic work. Inspect gas and diesel-powered equipment to locate difficulties and estimate the cost and time of repairs. Perform major and technically complex mechanical work on vehicles and mechanical equipment. Use a variety of tools and equipment. Diagnose and repair computer controlled engine components and replace/repair as necessary. Maintain a variety of maintenance, repair and inventory records on the computerized fleet record system.

Ability to
Understand and carry out both oral and written directions. Work independently in the absence of supervision and exercise initiative. Establish and maintain effective work relationships with those contacted in the performance of required duties

Minimum Education and Experience:

Education:
High School diploma or equivalent, supplemented by specialized training in the maintenance and repair of gas and diesel-powered equipment.

Experience:
Two years of increasingly responsible experience in the area of vehicles and equipment repair and maintenance performing duties comparable to those of a Light or Heavy Equipment Mechanic in the City of Woodland.

License and Certificates:

Licenses

Required upon hire and maintained during probation, possession of a valid Class C California Driver's License.

Required prior to permanent appointment and maintained during employment, possession of a valid California Commercial Class A Driver's License with Tank Endorsement.

Certificates

Required upon hire and maintained during employment, possession of a minimum of two valid ASE Truck certifications, one of which must be T4 Heavy Duty Truck Brake Certification.

Required prior to permanent appointment and maintained during employment, possession of a valid Air Conditioning Refrigerant Recovery and Recycling certificate similar to ASE or MACS.

Possession of Fire Equipment Mechanic Certification is highly desirable.

COUNCIL ACTION: February 1, 2011

City of Woodland

INFRASTRUCTURE OPERATIONS AND MAINTENANCE SUPERINTENDENT

DEFINITION

To plan, organize, supervise and review the programs and activities in one of the Infrastructure Operations & Maintenance Branches: Right-of-Way including street maintenance, signs & markings, tree maintenance, and electrical maintenance or Utilities including water production and distribution, storm drainage and sewer collections.

SUPERVISION RECEIVED AND EXERCISED

Direction is provided by the Deputy Director of Public Works, Operations and Maintenance or designee. Responsibilities include direct and indirect supervision of staff. Exercises discretion and independent judgment with respect to assigned duties.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all-inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Plan, prioritize, assign, supervise, and review the work of staff for infrastructure operations, maintenance and repair work including street resurfacing, repairing and patching; traffic control signs and striping; street lights and traffic signals; sidewalk, curb, and gutter removal and replacement; tree trimming and removal; weed control; storm drain maintenance; water and sewer line installation and repair; and freshwater well operation. Develop and implement goals, objectives, policies, procedures, schedules, and work standards for assigned program areas. Participate in budget preparation and administration; prepares cost estimates for budget recommendations; submits justifications for needed personnel, supplies, materials and equipment; monitor and control expenditures. Evaluate operations and activities of assigned programs; recommends improvements and modifications; prepares various reports on operations and activities; and develops new programs related to areas of responsibility. Answer questions and provides information to the public; investigates complaints and take corrective action as necessary to resolve complaints. Establish and maintain effective working relationships while providing for the evaluation and training of assigned staff. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Ensure the adherence to safe work practices by assigned staff. Work cooperatively with others. Coordinate maintenance service programs with other City departments and divisions and with outside agencies. Perform other and related duties as assigned.

QUALIFICATIONS

Knowledge of:

Methods, materials, and procedures used in the maintenance and repair of public works facilities. Regulations, codes and restrictions related to assigned program areas. Principles of organization, administration, budget, and personnel management. Safety principles, practices, procedures and precautions necessary for maintenance work. Practical elements of civil engineering as they relate to maintenance and repair of public works infrastructure. Operations and programs of a personal computer.

Skill to:

Plan, assign and implement a comprehensive program of maintenance and repair work for public works infrastructure. Evaluate operations, procedures and policies, and recommend improvements. Supervise, train and evaluate subordinates. Establish and maintain cooperative working relationships with co-workers and those contacted in the course of work. Operate computers and related software. Familiarity with maintenance management software.

Ability to:

Conduct studies, prepare comprehensive reports and determine cost effective ways for constructing and maintaining public works infrastructure. Communicate clearly and concisely, orally and in writing and using computerized presentation materials.

Minimum Education and Experience:

Education:

Associate's Degree from an accredited college or university with major coursework in engineering, construction management, business or public administration or a closely related field. Bachelor's degree is highly desirable.

Experience:

Four years of increasingly responsible public works experience in the assigned area of responsibility (utilities or right-of-way) or closely related field, including at least two years in a supervisory capacity.

License or Certificate:

Required upon hire, possession of a valid California Driver's License.

Council Action: July 18, 2006

City of Woodland

LABORATORY SUPERVISOR

DEFINITION
Supervise, plan and coordinate the functions of the Laboratory, Industrial Wastewater Pretreatment Program (WPP), and related environmental compliance programs Performs and reviews analysis of potable water, wastewater, stormwater and related materials. Ensures sampling, monitoring, testing, reporting, WPP, and other environmental compliance programs comply with Federal, State and local requirements for potable water, wastewater and stormwater utilities.

SUPERVISION RECEIVED AND EXERCISED
General supervision is provided by the Water Pollution Control Facility (WPCF) Superintendent. Exercises direct supervision over Lab Technicians I/II, Environmental Compliance Specialist, and indirect supervision over Environmental Compliance Inspector I/II. Exercises discretion and independent judgment with respect to assigned duties.

EXAMPLES OF DUTIES
The following are typical illustrations of duties encompassed by the job class but are not an all-inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS:
Plan, program and supervise monitoring, sampling, and testing to ensure WPCF processes, potable water production, potable water distribution, and stormwater runoff comply with State and Federal standards. Supervise and coordinate laboratory quality assurance and quality control programs; develop new methods of laboratory analysis consistent with Federal and State guidelines. Work with and direct outside labs or environmental firms on water quality matters. Plan, program and supervise the goals and objectives of the Industrial Wastewater Pretreatment program. Coordinate pretreatment program activities for the Sanitary Sewer Management Plan and Stormwater NPDES Phase II permit. Review and approve quarterly and annual pretreatment reports. Interpret and enforce regulations related to pretreatment, wastewater collection and stormwater collection. Prepare detailed draft budgets, assist in preparation of final budgets and administer adopted budgets. Monitor legislation and make recommendations concerning compliance issues related to potable water, wastewater, stormwater, pretreatment and related programs. Compile, sign and submit monitoring and compliance reports to appropriate State and Federal Agencies. Perform advanced analysis on data to provide information for decision making. Represent the City on routine basis with State and Federal agencies, and other public bodies. Participate in professional groups and committees and with the general public regarding potable water, wastewater and stormwater, pretreatment and related programs. Participate in the hiring, training, supervision and evaluation of subordinates. Regular and consistent attendance.

OTHER JOB FUNCTIONS
Assist with studies to audit and improve plant operations; conduct and assist with tours and regulatory inspection; respond to questions and requests from the general public. Ensure laboratory and pretreatment shop are maintained in a safe, clean and orderly condition. Ensure that maintenance, repair and calibration of laboratory and pretreatment equipment complies with process safety manual and manufacture recommendations. Observe safe work methods, practices and precautions; use appropriate safety devices and equipment in accordance with laboratory and pretreatment standard operating procedures. Plan safety and training programs and ensure that safety precautions and regulations are adhered to by subordinates. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

State and Federal and local rules and regulations governing potable water, wastewater, stormwater, industrial pretreatment and related programs. Principles of supervision and training. Principles and practices of potable water production, wastewater treatment, stormwater management, industrial pretreatment and related environmental compliance programs. Chemistry and microbiology as applied to potable water, wastewater, stormwater, industrial pretreatment and related environmental compliance programs. Methods and techniques of advanced data manipulation and analysis used in quantitative and statistical analysis of laboratory data. Occupational hazards and necessary safety precautions.

Ability to:

Supervise, train, and evaluate personnel. Prepare a wide variety of reports and records. Communicate clearly and concisely, both orally and in writing. Participate in public presentations of technical issues. Analyze and interpret laboratory test results, understanding nuances of testing protocols upon results. Maintain accurate and complete records. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Minimum Education and Experience:

Education:

Bachelor of Science degree with major course work in chemistry and biology or a closely related field.

Experience:

Two years of experience conducting chemical or biological laboratory analyses including two years of experience performing laboratory analysis of water, wastewater or stormwater. Two years of increasingly responsible experience in pretreatment and environmental compliance desirable.

License and Certificate

Required upon hire, possession of a valid California Driver's License.
Possession of a current California Water Environment Association Grade II
Laboratory Analyst certificate within 18 months of appointment.
Possession of a current California Water Environment Association Grade I Environmental Compliance Inspector certificate is desirable.

Council Action: June 17, 2008

City of Woodland

LABORATORY TECHNICIAN I/II

DEFINITION

To collect and examine water, wastewater, stormwater and related materials. Performs a variety of standardized and complex tests and analysis of such samples. Maintains and calibrates laboratory equipment, prepares glassware, mixes reagents and media. Prepares reports, performs special studies, analyzes results and works with a variety of outside labs.

SUPERVISION RECEIVED AND EXERCISED

Laboratory Technician I

This is the entry-level classification in the flexibly staffed Laboratory (Lab) Technician series. Positions at this level are distinguished from the Lab Technician II level by providing a narrower range of duties, usually of a less complex nature in the treatment plant laboratory. Incumbents learn and perform a variety of clearly defined duties involved with cleaning and maintaining laboratory material and equipment and performing routine testing and analysis in the laboratory. Laboratory Technician II provides lead supervision and training as needed to the Laboratory Technician I.

Laboratory Technician II

This is the journey level classification of Lab Technician series. Positions at this level are distinguished from the entry level by performing complex testing and analysis in the treatment plant laboratory. Incumbents are thoroughly familiar of defined duties involved with calibrating and maintaining sophisticated laboratory equipment. Provides lead direction to Lab Technician I in addition to performing NPDES required analyses in the laboratory and the more complex laboratory analysis. The Laboratory Analyst provides direct supervision.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class but are not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Lab Technician I - Collects and prepares water, wastewater, receiving waters and related samples for analysis. Conducts standard physical, chemical and biological analysis of such samples. Makes mathematical calculations and statistical analysis for test results. Prepares and maintains a variety of logs, records and reports related to the

work performed. Performs complex sampling techniques. Prepares lab supply and equipment order lists. Regular and consistent attendance.

Lab Technician II – All of the essential functions listed above and: Prepares standardized reagents and media used in laboratory analysis. Samples, schedules and ships samples to outside laboratories. Performs analysis on quality assurance samples for compliance with State Health Department to maintain laboratory certification. Participates in the laboratory quality assurance program by reviewing and verifying records and reports for the NPDES permit requirements. Schedules laboratory and maintenance work, ordering of materials, and maintains records as directed by the Environmental Plant Manager or designee. Ensure proper maintenance and repair work on all laboratory equipment.

OTHER JOB FUNCTIONS

Cleans and prepares laboratory equipment and glassware. Maintains laboratory in a clean and orderly condition. Observes safe work methods, practices and precautions; uses appropriate safety devices and equipment in accordance to laboratory standard operating procedures. Perform related duties as assigned.

QUALIFICATIONS

Lab Technician I:

Knowledge of:

Principles and practices necessary in the operation of a Water Pollution Control Facility and related programs and facilities. Hazardous chemicals associated with wastewater treatment. Chemistry and microbiology. Mathematics. Standard physical, chemical and biological properties of treated and polluted water, potable water and domestic wastewater. Methods and techniques used in standard quantitative laboratory analysis. Standard laboratory equipment and its use and care. Methods for preparation of standardized reagents and media. Methods of cleaning glassware and equipment used in laboratory analysis. Occupational hazards and necessary safety precautions. Computer operation and software as related to a wastewater facility. Basic principles and practices as they relate to wastewater treatment and related programs.

Ability to:

May provide functional work direction and training to lower level personnel. Wear and use SCBA units as regulated by Cal/OSHA. Prepare variety of basic reports and records. Operate and implement changes to the plant computer system. Communicate clearly and concisely, both orally and in writing. Perform standard physical, chemical and biological tests on treated and polluted water, potable water, and domestic wastewater and related materials. Correctly analyze and interpret standard laboratory test results. Maintain accurate and complete laboratory records. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Minimum Education and Experience:

Education:
High School Diploma or equivalent supplemented by related college level coursework.

Experience:
One year of work experience in a laboratory or related position is desirable.

License and Certificate:
Required upon hire, possession of a current California Driver's license. Possession of a current California Water Environment Association Grade I Laboratory Analyst certificate within eighteen (18) months of appointment. Grade I Wastewater Treatment Plant Operator certificate is desirable.

Lab Technician II
In addition to the qualifications for Lab Technician I:

Knowledge of:
State and Federal water pollution control rules and regulations governing the treatment and disposal of wastewater and related programs. Principles of supervision and training.

Ability to:
Supervise and train assigned personnel. Work independently making appropriate decisions in critical situations. Perform complex physical, chemical and biological tests on treated and polluted water, potable water, and domestic wastewater and related materials. Analyze and interpret complex laboratory test results. Prepare standardized reagents and media. Repair and calibrate instrumentation as related to the operation of the laboratory.

Minimum Education and Experience:

Education:
High School Diploma or equivalent is required. Completion of one year of related college level coursework is preferred.

Experience:
Two years of general laboratory experience is preferred.

License and Certificate:
Required upon hire, possession of all certifications required of the Laboratory Technician I and possession of a current California Water Environment Association Grade II Laboratory Analyst certificate within eighteen (18) months. Grade II Wastewater Treatment Plant Operator certificate is desirable.

Council Action: June 20, 2006

City of Woodland

LIGHT EQUIPMENT MECHANIC

DEFINITION

To service, maintain and repair automotive and other power-driven and mechanical equipment.

SUPERVISION EXERCISED AND RECEIVED

This is a journey level class in the Equipment Mechanic series. General supervision is provided by the Fleet and Facilities Manager or his/her designee. May exercise technical or functional supervision over subordinate personnel.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the position, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Inspect, diagnose and locate mechanical difficulties on automobiles, light trucks and a variety of maintenance, lawn care and construction equipment. Road test and diagnose vehicles, determine needed repairs or maintenance attention and schedule repairs. Inspect and diagnose all mechanical, hydraulic, electrical systems. Inspect operational and appearance of vehicles and recommend repair action. Respond to emergency road calls, field diagnose the problem and make field repairs as necessary. Perform welding and brazing, fabricate and modify parts, equipment, miscellaneous structures and attachments. Inspect lawn maintenance equipment, overhaul engines, transmissions, differentials, and hydraulic components. Do component change-out of same on automotive equipment. Adjust and repair air and hydraulic brakes, perform complete brake system overhauls. Diagnose and repair/replace electrical systems components. Service and repair small gasoline engines, lawn mowers and lawn mower decks. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Participate in division safety program. Maintain shop and equipment in a safe, clean and orderly condition. Maintain a variety of maintenance, repair and inventory records on the computerized fleet maintenance system. Clean, repair and replace fuel pumps, strainers, fuel lines, gas/diesel tanks, and gauges. Handle hazardous materials and store or dispose as needed. Perform other duties as required.

QUALIFICATIONS

Knowledge of:
Tools, equipment and procedures used in the service, maintenance, repair and overhaul of automotive and other gas and diesel-powered equipment. Use of a variety of hand and power tools and equipment. Operating and repair characteristics of City-owned light vehicles and equipment. Operation and care of internal combustion engines, hydraulics and electrical components. Safe working practices. Diagnostic equipment and computerized engine components. Maintain a variety of maintenance and inventory records on the computerized fleet maintenance system.

Skill to:
Perform journey level equipment mechanic work. Inspect gas and diesel-powered equipment to locate difficulties and estimate the cost of time and repairs. Perform minor and major mechanical work on vehicles and mechanical equipment. Use a variety of tools and equipment. Work independently in the absence of supervision, exercising initiative. Diagnose and repair computer controlled engine components and replace/repair as necessary. Maintain a variety of maintenance, repair and inventory records. Understand and carry out both oral and written instructions.

Ability to:
Establish and maintain effective work relationships with those contacted in the performance of required duties.

Minimum Education and Experience:

Education:
High school diploma or equivalent. Specialized training or coursework in the maintenance and repair of gas and diesel-powered equipment is desired.

Experience:
Two years of increasingly responsible experience in the area of vehicle and equipment repair and maintenance performing duties comparable to those of an Equipment Service Worker in the City of Woodland.

License and Certificates:

Licenses
Required upon hire, possession of a valid Class C California Driver's License.
Required prior to permanent appointment and maintained during employment, possession of a valid California Commercial Class A Driver's License with Tank Endorsement.

Certificates

Required upon hire and maintained during employment, possession of a minimum of two valid ASE certifications, one of which must be either A5 Automotive Brakes or T4 Heavy Duty Truck Brake Certification.

Required prior to permanent appointment and maintained during employment, possession of a valid Air Conditioning Refrigerant Recovery and Recycling certificate similar to ASE or MACS.

Council Action: February 1, 2011

Supplemental Questionnaire **must** be submitted with the application to be considered

PRINCIPAL UTILITIES CIVIL ENGINEER
OPEN

City of Woodland

HUMAN RESOURCES 300 FIRST STREET (530) 661-5811
(530) 661-5813

Final Filing Date: First 25 qualified applicants
First Review: July 16, 2013
Posting Date: June 21, 2013 **Tentative Panel:** Week of July 22, 2013

THE CITY OF WOODLAND INVITES YOUR APPLICATION FOR PRINCIPAL UTILITIES CIVIL ENGINEER – FT

Salary: $8,035.57 – $9,767.28 mo. w/excellent benefits

The City is seeking an experienced utility engineering professional with excellent management, communication and leadership skills. The ability to work effectively with a broad range of City officials, employees, and community organizations and the public is a particularly important quality. The ideal candidate will be approachable, resourceful, and creative. The selected candidate will be a proactive and solution-oriented individual who can demonstrate a history of creative problem solving and effective planning for the future.

The selected candidate will oversee the City's water, wastewater, storm and flood programs including the following projects:

- Woodland's participation in the $245 million Woodland Davis Surface Water Project including the implementation of associated local water projects and the future construction of Aquifer Storage and Recovery (ASR) wells
- $15 million Sewer treatment plant aeration upgrade as well as an additional $14 million in wastewater improvements over the next 5 years
- Continued work towards completion of the Cache Creek Feasibility Study and future implementation of a flood solution for the north side of Woodland

The position will supervise a Senior Civil Engineer, an Associate Civil Engineer, a Senior Engineering Assistant and an Engineering Technician

ESSENTIAL JOB FUNCTIONS

Conduct and implement the most complex and technical engineering studies and projects related to, utilities, water supply, water distribution, water treatment, wastewater treatment, storm water, flood and wastewater collection structures and facilities projects. Research, analyze and make recommendations regarding major technical methodologies, practices and problems; research and prepare reports recommending the improvement of services and measures to improve efficiency of operations. May serve as the City Engineer, when assigned. Plan, develop, and oversee work of staff involved in activities related to assigned areas of responsibility. Evaluate operations and

activities of assigned areas of responsibility; determine priorities; develop short and long range plans; implement improvements and modifications; prepare various reports on operations and activities. Participate in budget preparation and administration for assigned areas of responsibility. Oversee the selection and management of consultant contracts related to assigned areas of responsibility. Manage and/or participate in the preparation of complex engineering studies and reports related to assigned areas of responsibility; oversee coordination of assigned areas of responsibility activities with other City departments, divisions, and sections, outside agencies, citizens, consultants, and developers. Provide staff support to a variety of City boards, City Council, commissions, committees, and industry specific boards, including making presentations and ascertaining direction, when appropriate, for implementation of approved recommendations. Participate in the selection of staff; coordinate staff training; conduct performance evaluations; recommend discipline; implement discipline procedures as directed. Answer questions and provide information to the public; investigate complaints and recommend corrective action as necessary to resolve complaints. Build and maintain positive working relationships with co-workers, City employees, other public agencies, and the public using principles of good customer service. Regular, predictable, consistent and timely attendance is an essential function of the position, in that the failure of such attendance undermines the City's ability to provide critical services to employees, department and the public.

OTHER JOB FUNCTIONS

Interpret and apply relevant codes, ordinances, rules, and regulations. Ensure compliance with CEQA, the Public Contract Code, and all applicable State, Federal, and local regulations codes, and standards related to assigned areas of responsibility. Stamp plans for in-house design work related to assigned areas of responsibility. Check plans for accuracy, suitability, and completeness; and direct revisions. Conduct special engineering studies relative to assigned area of responsibility; prepare appropriate reports and analysis. Manage development of infrastructure master plans. Prepare, write and present general correspondence, technical reports, statistical reports and Council Communications. Supervise, train, mentor and evaluate assigned staff. Serve as staff to a variety of City, County, regional and outside commissions, boards and committees as assigned. Perform related duties as assigned.

QUALIFICATIONS

Education:

Bachelor's degree from an accredited college or university with major coursework in civil engineering is required.

Experience:

Five (5) years of increasingly responsible and varied civil engineering experience including significant supervisory responsibilities, with at least two (2) years experience specifically related to water supply, water distribution, water treatment, wastewater treatment, storm water, flood and wastewater collection.

License or Certificate:

Possession of a valid certificate of registration as a Professional Civil Engineer in the State of California and possession of a valid California Driver's License, required upon hire.

APPLICATION

Apply with a City of Woodland application by visiting www.cityofwoodland.org/employment or the Human Resources Office, City Hall, 300 First Street, Woodland, CA 95695. Supplemental questionnaire **must** be submitted with application to be considered. Résumés and cover letters are encouraged but will not be accepted in lieu of the application form. Postmarks will not be accepted.

This recruitment will close when the first 25 qualification applications are received.
The first review of applications is scheduled for July 16, 2013.
A panel interview is tentatively scheduled for the week of July 22, 2013.

Review Process: Based on the information provided in the application documents, the best qualified applicants will be invited for further examination. All applicants meeting the minimum qualifications are not guaranteed advancement through any subsequent phase of the examination. Depending upon the number of applications received, the examination may consist of an application screening, written and/or practical exam, oral interview or any combination thereof.

Applicants will be required to take and pass a medical examination by a City of Woodland physician to insure their physical suitability to perform the assigned duties. If you have a disability that requires accommodation during the selection process, please notify Human Resources at least seven days prior to the event.

BENEFITS

Retirement:	CalPERS Retirement System (2% @ 60 Formula for current CalPERS members and 2% @ 62 Formula for new CalPERS members) **The City does not participate in social security**
Deferred Comp:	Choice of deferred compensation plans. City will match up to 2% of employee's base salary
Medical:	CalPERS Medical Insurance Plans, including HMOs & PPOs City gives an allowance toward the cost of insurance
Dental/Vision:	City paid Delta Dental and Medical Eye Services
STD/LTD:	City paid wage protection for short and long term disabilities
Life Insurance:	City provides $50,000 life insurance policy
Vacation:	7 hours per month during first 3 years of service
Sick Leave:	8 hours per month
Administrative Leave:	96 hours of leave time given each fiscal year
Holidays:	12.5 paid holidays (including two floating holidays)
Prof. Growth Incentive:	$625/yr for additional educational or professional activities

City of Woodland

PRINCIPAL UTILITIES CIVIL ENGINEER
SUPPLEMENTAL QUESTIONNAIRE

The purpose of this supplemental application is to obtain enough job-related information to select the best qualified applicants to continue in the selection process. Completion of this form is a required part of the selection process and must be submitted with your employment application by the final filing date. **Candidates who do not complete this supplemental application will be eliminated from further consideration**. Content, clarity and completeness of answers are factors which will be considered in the evaluation process. Omitted information cannot be considered or assumed. Please limit your responses to no more than one page per question and do not provide any additional information or materials other than the information requested herein. Attach the answers to this supplemental application and number each answer accordingly. Please answer the following questions:

1. Please share examples of how you have managed/supervised:
    a) Engineering projects
    b) Engineering programs
    c) People (including lead worker experience)

2. Please provide years of experience working with:
    a) Water projects
    b) Waste Water projects
    c) Storm Water projects
    d) Flood projects

I certify that the information I have provided is accurate and completed to the best of my knowledge. I understand that any falsification may cancel any terms, conditions, or privileges of employment with the City of Woodland.

NAME (Please Print): _____DATE: _____

SIGNATURE:_____

City of Woodland

SENIOR EQUIPMENT MECHANIC

DEFINITION

To perform skilled maintenance and repair of vehicles and equipment; and to assist in administrative duties of the division. Provide technical and functional oversight over assigned skilled and semi-skilled personnel in the Equipment Services Division.

SUPERVISION RECEIVED AND EXERCISED

This is the lead supervisor class in the Mechanic series. Positions at this level are distinguished from other classes within the series by the level of responsibility assumed, and complexity of duties assigned. Employees perform the most difficult and responsible types of technical duties assigned to classes within this series, including performing technically complex maintenance and repair duties and/or providing technical and functional supervision over assigned staff. Employees at this level are required to be fully trained in all technical aspects of assigned area of responsibility. General supervision is provided by the Fleet and Facilities Manager. Responsibilities include providing lead supervision and technical training for skilled and semi-skilled personnel.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the position, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Plan, schedule, prioritize and assign maintenance and repair work in consultation with the Fleet and Facilities Manager; communicate status of repairs to appropriate personnel in other City departments and divisions, working cooperatively to schedule repairs in accordance with established priorities and special operational priorities. Oversee and review the work of employees assigned to troubleshoot, overhaul, repair, and maintain heavy and light gasoline and diesel-powered vehicles and equipment; participate in performing routine maintenance and repair work. Inspect and evaluate equipment; estimate time and material requirements; provide technical assistance to assigned equipment maintenance personnel; review and monitor completed work. Perform difficult, technical, and complex equipment repair and maintenance tasks, including locating and diagnosing complex mechanical defects; fabricate special bodies, parts, and essentials as necessary. Inspect and evaluate to ensure quality control standards are met. Work cooperatively with others. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Recommend special work required or necessary equipment maintenance; obtain estimates for required services and materials as directed. Train employees in work methods, use of tools and equipment, and relevant safety precautions. Ensure the proper maintenance, repair and storage of all shop tools and equipment. Ensure a clean and safe work environment for all division employees; recommend corrective action to the Fleet and Facilities Manager when necessary. Order needed supplies; ensure maintenance of an adequate inventory to accomplish assigned jobs. Maintain required labor, equipment and material records and submits reports as directed; assists in developing budget figures for the division. Provide input into performance evaluations and disciplinary matters. Drive vehicles and operates a wide variety of equipment. Respond to emergency situations as necessary. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Principles, practices, techniques, methods, materials, tools and equipment used in the repair, overhaul, servicing and preventive maintenance of heavy and light gasoline and diesel-powered equipment, CAL/OSHA requirements, and other relevant codes and regulations. Use of flat rate manuals. Federal and State inspection requirements and procedures for heavy road equipment. Safe work methods and safety practices pertaining to the work. Operation and maintenance of a wide variety of equipment, hand, shop, and power tools used in the work. Lead supervision and basic principles of training.

Skills to:

Enter data into Fleet Management system. Locate and diagnose engine and other operating defects; use electronic and mechanical shop diagnostic equipment; make extensive repairs, and proper testing and adjustments. Operate a wide variety of power hand tools in a skillful manner. Use computer diagnostic equipment. Conduct safety inspections and establish safe procedures; inspect the work of others and maintain established quality control standards.

Ability to:

Plan, schedule, and oversee activities of an equipment maintenance program. Read and comprehend schematics, fabricate special bodies, parts and essentials as necessary. Identify and implement effective course of action to complete assigned work. Estimate needed materials and labor and secure sufficient quantities. Understand, follow and train others in proper and safe work procedures. Work effectively without immediate supervision. Understand, carry out and issue clear oral and written instructions. Prepare and maintain a variety of accurate records and reports. Establish and maintain cooperative and effective relationships with those contacted in the course of work.

Minimum Education and Experience:

Education:
High school diploma or equivalent, supplemented by technical or college level training in the automotive maintenance and repair field.

Experience:
Three years of journey level work in automotive and heavy equipment maintenance and repair, with broad exposure to a variety of trucks, diesels, specialized road equipment, and hydraulic systems. Prior lead work experience desirable.

License or Certificate:

Licenses

Required upon hire, possession of a valid Class C California Driver's License.

Required prior to permanent appointment and maintained during employment, possession of a valid California Commercial Class A Driver's License with Tank Endorsement.

Certificates

Required upon hire and maintained during employment, possession of a minimum of six valid ASE certifications, one of which must be A5 Automotive Brakes or T4 Heavy Duty Truck Brake Certification.

Required prior to permanent appointment and maintained during employment, possession of a valid Air Conditioning Refrigerant Recovery and Recycling certificate similar to ASE or MACS.

Possession of Fire Equipment Mechanic Certification and additional ASE certification is desirable.

COUNCIL ACTION: February 1, 2011

City of Woodland

MANAGEMENT ANALYST I
MANAGEMENT ANALYST II
SENIOR MANAGEMENT ANALYST

DEFINITION

Provides staff assistance to a City Administrative official; performs responsible professional and technical administrative and analytical duties. Duties involve budgets, policies, procedures, organization, planning, contracts, facilities, systems, equipment, supplies, special projects, etc., depending on the job assignment, all or some of the following duties and qualifications may be invoked at the discretion of the Department Director.

SUPERVISION RECEIVED AND EXERCISED

Direction is provided by high level administrative and management positions. Responsibilities may include direct or indirect supervision of clerical and technical positions.

DISTINGUISHING CHARACTERISTICS

Management Analyst I - This is the entry level class in the Management Analyst series. Positions at this level are distinguished from the II level by the performance of less than the full range and complexity of duties as assigned to the journey level class within the series. Incumbents at this level typically have limited related work experience and are unfamiliar with the functions, operations and procedures of assigned department or office. This class, therefore, is typically used as a training class within the series.

Management Analyst II - This is the full journey level class of the Management Analyst series. Positions at this level are distinguished from the Management Analyst I level by the performance of the full range and complexity of duties as assigned with minimal assistance or direction. Incumbents are thoroughly familiar with the operating procedures of the department or office to which assigned, and possess technical expertise related to assigned program responsibilities. Positions in this class are flexibly staffed and are normally filled by advancement from the I level.

Senior Management Analyst – This is the advanced journey level in the Management Analyst series. Positions at this level are distinguished from the II

level by the breadth of experience and knowledge gained by working at the City of Woodland or other municipal agencies on a wide variety of projects. Positions in this class are flexibly staffed and are always filled by advancement from the II level.

EXAMPLES OF DUTIES

Duties include, but are not limited to, the following:

ESSENTIAL JOB FUNCTIONS:

Compiles data and assists in developing recommendations on the formulation of policy, procedure, staffing, and organizational changes; participates in the installation of new and revised programs, systems, procedures and methods of operation.

Conducts surveys and performs research and statistical analyses on administrative, fiscal, personnel, and/or operational problems.

Assists in the process of identifying City wide or Department-wide information system needs, including computer hardware/software and training programs.

Researches and/or assists in the preparation, analysis, and administration of the department operating and/or capital budget.

Researches, develops, reviews, and prepares grant applications including monitoring existing programs for compliance with regulations.

Represents the City in intra-departmental, community, and professional meetings.

Development of budget documents. Track expenses to ensure compliance with the budget.

Responsible for managing contracts within the City. This includes developing Request for Quotations (RFQ), monitioring for compliance and budget.

Compiles materials and prepares and/or assists in the preparation of reports, manuals, and publications.

Assists in the coordination of departmental activities with departmental divisions, other City departments and outside agencies.

Assists in the design and implementation of systems and forms for use in a City department or administrative office including, but not limited to, City wide information systems.

Regular, predictable, consistent and timely attendance is an essential function of the position, in that the failure of such attendance undermines the City's ability to provide critical services to employees, department and the public.
Performs related duties as assigned.

QUALIFICATIONS:

Management Analyst I:

May supervise, train and evaluate assigned personnel.

Knowledge of:

The principles of public administration.

The basic principles and methods of administrative analysis and/or personnel and fiscal management.

Budget preparation and control

Accounting; statistical methods

Current social, political, economic, and scientific developments and trends.

Planning functions and methods.

Contract negotiation, preparation and monitoring. Current technology relating to departmental operations.

Management Analyst II:

In addition to the qualifications for Management Analyst I:

Ability to:

Communicate effectively, orally and in writing.

Analyze organizational and administrative problems; create, recommend and implement an effective course of action.

Analyze and interpret factual data while applying a high degree of independent judgment.

Establish and maintain effectively working relationships with employees and the public.

Coordinate and/or manage a departmental program and/or activity.

Procedures and process of City budget preparation and maintenance

Interpret and make decisions in accordance with rules, regulations and policies.

Make recommendations regarding use of technology to improve departmental efficiency.

Supervise, train and evaluate assigned staff.

Senior Management Analyst:

In addition to the qualifications for Management Analyst II:

Ability to:

Prepare complex administrative, financial, organizational, and management recommendations.

Effectively delegate authority

Use initiative and sound judgement in making complex decisions.

Use discretion with confidential materials and information.

Minimum Education and Experience:

Management Analyst I:

Education

Bachelor's degree from an accredited college with major coursework in public administration, business administration, or a closely related field.

Experience
One year of administrative, budgetary, or other management analysis or similar experience desired. May be obtained through internships, full or part-time employment, or volunteer work.

Management Analyst II:

In addition to the Minimum Education and Experience for Management Analyst I

Education

Bachelor's degree from an accredited college with major coursework in public administration, business administration, or a closely related field.

Experience

Two years of experience comparable to that of a Management Analyst I in the City of Woodland.

Senior Management Analyst:

In addition to the Minimum Education and Experience for Management Analyst II

Experience:

Six years of experience as a Management Analyst II or comparable position with at least two (2) of these years with the City of Woodland as a Management Analyst II. Direct supervisory responsibility may substitute for one year of the six years of required experience.

Education

Bachelor's degree from an accredited college with major coursework in public administration, business administration, or a closely related field. A Master's Degree from an accredited college or university in Public Administration, Business Administration or a closely related field may substitute one year of experience

ADA COMPLIANCE

Physical Ability: Positions in this class typically require climbing, balancing, stooping, kneeling, crouching, reaching, standing, walking, pushing, pulling, lifting, fingering, grasping, talking, hearing, seeing, and repetitive motions.

Heavy Work: Exerting in excess of 50 pounds of force occasionally, and/or in excess of 20 pounds of force constantly to move objects.

Other Requirements:

Sensory Requirements: Requires the ability to recognize and identify similarities and differences between shade, degree or value of colors, shapes, sounds, forms, textures or physical appearance associated with objects and people.

Environmental Factors: May be subjected to moving mechanical parts, electrical currents, vibrations, fumes, odors, dusts, gases, poor ventilation, chemicals, oils, extreme temperatures, work space restrictions, intense noises, and environmental dangers.

Council Action: May 7, 2013

City of Woodland

TREATMENT PLANT MECHANIC

DEFINITION

To perform a variety of skilled tasks necessary to maintain the equipment and structures of the Water Pollution Control Facility.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the Water Pollution Control Facility Superintendent or designee. The Treatment Plant Mechanic is the journey level position.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job series, but are not an all inclusive or limiting list.

ESSENTIAL JOB FUNCTIONS

Performs a variety of preventative maintenance on equipment and facilities to include lubricating, cleaning, and painting. Performs corrective maintenance on plant equipment and process systems such as parts replacement, equipment changes, cleaning of tanks and basins. Maintains equipment and structures on remote sites, including pumps, wet wells, and lift stations, which may require the use of self contained breathing apparatus. Maintains accurate maintenance and repair records. Prepares specifications and procures parts and equipment. Evaluates the cost effectiveness of repair versus replacement. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Follow all safety precautions and regulations. Work weekends and holidays as assigned. Serve in a stand-by status after regular working hours and respond to emergency call-outs. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Maintenance of pumps, motors, piping and control systems found in wastewater treatment plants and related facilities. Mechanical, electrical and hydraulic principles. Operation of water treatment plant equipment and facilities. Safe work practices.

Ability to:
Operate and perform maintenance work on water and wastewater system equipment. Diagnose and repair mechanical problems. Work independently in the absence of specific instructions. Maintain accurate records. Communicate effectively and follow oral and written directions. Work effectively with co-workers and supervisors.

Minimum Education and Experience:

Education:
High School diploma or equivalent.

Experience:
Two years experience in the maintenance of pumps, motors, piping and wastewater treatment plant operations.

Licenses and Certificates:
Required upon hire, possession of a valid California Driver's license and a current Grade I Wastewater Treatment Plant Operators certificate, issued by the California State Water Resources Control Board. Possession of Grade I CWEA Mechanical Technologist certificate, prior to permanent appointment.

Council Action: June 17, 2008

City of Woodland

UTILITIES MAINTENANCE SUPERVISOR

DEFINITION

To plan, organize, and supervise the work of maintenance employees involved in utility related construction, maintenance and repair. To perform a variety of technical tasks relative to the division and to be responsible for the safety and training of subordinates.

SUPERVISION RECEIVED AND EXERCISED

Direction is provided by an Infrastructure Operations and Maintenance Manager/Superintendent. Responsibilities include direct and indirect supervision of assigned personnel

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Plan, organize, and, supervise the work of Utilities Maintenance Workers in a branch of the Public Works Department. Assign work daily for multiple workers or crews; check on work programs throughout the day; maintain time sheets, cost reports, etc. Submit requests for materials, tools, equipment, and other supplies needed by the branch; prepare equipment specifications; assist in maintaining expenditure records for materials and service. Comply with, and insure implementation of Department Injury and Illness Prevention Program within assigned area of responsibility. Instruct subordinates in proper work techniques, use of equipment, and safety precautions and requirements. Assist with and perform a variety of personnel actions including selection, training**,** promotions, performance evaluations, disciplinary actions, and dismissals. Perform the most difficult and technically complex work of assigned branch. Provide general information to the public, other city departments, and vendors pertaining to area of assignment; investigate and respond to citizen inquiries and complaints regarding area of assignment. Work cooperatively with others, including other City departments and outside agencies as necessary. Assist in preparation and monitor budget execution; prepare cost estimates for work to be performed; submit justification for equipment. Operate telemetering and flow monitoring equipment. Drive vehicles and equipment as required. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Assist in the inspection of work of private contractors engaged in maintenance work for the City. Prepare and maintain a variety of records and reports on materials,

equipment, service calls and personnel. Evaluate operations and activities of assigned branch; recommend improvements and modifications. Respond to emergency situations after regular working hours. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Methods, materials and procedures used in public works maintenance with specialized knowledge in water system, sewer system, and/or storm drainage. Purposes and uses of a variety of vehicles, hand tools, power tools and equipment. Safe work practices. Budgeting practices and principles of supervision, training, discipline, and performance evaluation. Modern office procedures, computer equipment and various software such as spreadsheets, word processing, and maintenance management programs. Methods of estimating time, materials and equipment needed to perform assigned work. Basic construction and repair methods, including carpentry, pipe fitting, painting and cement work. City codes, specifications, and standards for AWWA, California Department of Health requirements of water and sewer standards and regulations, CAL-OSHA and the Environmental Protection Agency regulations.

Skill to:

Direct semi-skilled and skilled maintenance, construction and repair work in the area of work assigned. Plan, assign, supervise, discipline and evaluate the work of subordinates. Evaluate branch operations and recommend improvements. Read and interpret blueprints and mechanical schematics. Communicate effectively, both orally and in writing. Interact effectively and courteously with the public. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Lead, organize and review the work of maintenance staff in the area of work assigned. Perform heavy manual labor. Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of goals. Interpret and apply City and department policies, procedures, rules and regulation. Gather data and prepare reports as necessary on issues related to area of assignment. Develop and maintain accurate and concise reports.

Education and Experience:

Education:

High School Diploma or equivalent supplemented by course work from an accredited college/university or trade school in construction and maintenance or closely related field.

Experience:

Four years of experience at the advanced journey level in assigned area of responsibility or a closely related field, one of which was in a lead capacity.

License and Certificate:

Water Production/Distribution assignment – requires possession of a Grade IV Water Distribution Operator certificate issued by the California Department of Public Health and a Grade I Wastewater Collections System Maintenance certificate issued by California Water Environment Association. Cross Connection Control Specialist certificate and a Grade I Water Treatment certificate is desirable.

Wastewater Collections/Stormwater assignment – requires possession of a Grade I Water Distribution Operator certificate and a Grade III Wastewater Collections System Maintenance certificate issued by California Water Environment Association. Grade IV Wastewater Collection System Operator certificate is required within 24 months of hire. Grade I Water Treatment certificate is desirable.

Both assignments require possession of a valid California Class B Driver's License. Confined Space Certification, Competent Person Certification, and valid First Aid and CPR certifications are required prior to permanent appointment.

Council Action: December 6, 2011

City of Woodland

UTILITIES MAINTENANCE WORKER I/II

DEFINITION
To perform a variety of semi-skilled and skilled tasks in the construction, maintenance, and repair of water lines, sewers, storm drains, and pump stations.

SUPERVISION RECEIVED AND EXERCISED
Immediate supervision is provided by the Utilities Supervisor. Technical or functional supervision is also provided by higher level utilities personnel. For the Utilities II position, assignments may require lead responsibilities over less experienced personnel and/or temporary workers as assigned.

Utilities Maintenance Worker I:
This is the entry level class in the Utilities Maintenance Worker series. Positions in this class will usually perform most of the duties required of Utilities Maintenance Workers I and II; however, as compared to the Utilities Maintenance Worker II, is not expected to function at the same skill level and will usually exercise less independent discretion and judgment on matters related to work procedures and methods.

Utilities Maintenance Worker II:
This is the journey level in the Utilities Maintenance Worker series. This class differs from Utilities Maintenance Worker I in that incumbents perform more complex maintenance duties, including the requirement to meet all Standby Program requirements, take standby duty, to work any shift, weekends, and holidays, to work independently, exercise judgment, and operate the full range of tools and mechanical equipment related to a specific assignment. This incumbent Utilities Maintenance Worker II may also be expected to assist in the oversight and training of less experienced personnel. Positions in this class are flexibly staffed and are normally filled by advancement from the I level, or when filled from the outside requires prior work experience.

EXAMPLES OF DUTIES:
The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS:
Operate a variety of light and moderately heavy construction and maintenance equipment including such pieces as a loader, dump truck, water truck, steel rollers, small backhoe (Dig-It), High Velocity Vacuum Cleaner (HVVC), sewer cable machine,

mole trencher, and rubber-tired tractor with all attachments in order to perform a variety of routine construction and maintenance operations. Operate fork lift as assigned and trained. Assist in changing chlorine and sulfur dioxide tanks as assigned and trained. Perform general maintenance and repair on water distribution and wastewater collection facilities; flush sewer laterals and mains; assist in water and sewer tap installations. Install, test, and backfill water and sewer service laterals. Clean storm drain lines and catch basins. Install, remove, and repair water meters, hydrants, service valves, and mainline valves; take water meter and gauge readings; accurately maintain records and reports. Operate equipment and vehicles with possession of all necessary licenses and certificates. Utilize proper safety precautions related to all performed work. Comply with the policies and procedures in the Department IIPP. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Respond to inquires from the general public. Operate backhoe as assigned. Prepare field designs, as builds, when required to convey information to engineering for drawing documentation. Check water meters for proper operation; troubleshoot registers and repair. Initiate and discontinue water service to customer accounts. Assist in maintaining and repairing freshwater pumping facilities including the lubrication and painting of equipment. Operate telemetering and flow monitoring equipment. Work cooperatively with others. Perform related duties as assigned.

QUALIFICATIONS

Utilities Maintenance Worker I:

Knowledge of:

Basic methods, tools, materials, and equipment used in general construction maintenance work. Uses and purposes of general construction tools and equipment. Safe work practices and the Department Injury & Illness Prevention Program.

Skill to:

Use the hand and power tools required in general construction and maintenance work. Perform unskilled and semi-skilled tasks in a variety of construction and maintenance activities. Understand and carry out both oral and written directions. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:

Perform heavy manual labor. Learn to operate various construction maintenance equipment and machinery. Identify possible public safety hazards.

Minimum Education and Experience:

Education:

High School Diploma or equivalent.

Experience:
One year of experience in construction or related field.

License and Certificate:
Water Production/Distribution /Wastewater Collections/Stormwater assignments

Both assignments require possession of a Grade I Water Distribution Operator certificate issued by the California Department of Health Services prior to permanent appointment. Grade I Wastewater Collections System Maintenance certificate issued by California Water Environment Association is desirable.

Both assignments require possession of a valid California Driver's License. Class B permit and DMV Medical Certification are required within three months of hire. Must obtain a valid Class B driver's license, Completion of Work Zone Safety certification issued by the International Municipal Signal Association, First Aid and CPR Certifications, Competent Person Certification and Confined Space Certification prior to permanent appointment.

Utilities Maintenance Worker II
In addition to the qualifications for Utilities Maintenance Worker I:

Knowledge of:
Methods, techniques and tools and the operational characteristics of mechanical equipment used in the construction and maintenance of sewers, and storm drains. Traffic laws, ordinances, and rules involved in truck and equipment operations. Policies and procedures contained in the Department Illness and Injury Prevention Program. Applicable codes, regulations and safety orders. Safety precautions in the use, general cleaning and maintenance of equipment including light power equipment.

Skill to:
Operate a variety of vehicular and stationary mechanical equipment in a safe and effective manner. Work independently in performing semi-skilled and skilled maintenance work. Use and operate hand tools, mechanical equipment, and power tools and equipment required for the work in a safe and efficient manner. Read and interpret basic maps and blueprints. Assist in the supervision and training of less experienced personnel. Maintain written records and reports.

Ability to:
Perform skilled maintenance, construction and repair in the area of work assigned. Operate a variety of vehicular and stationary mechanical equipment in a safe and effective manner in routine situations. Apply good judgment and practical knowledge to resolve unusual or irregular problems in the area of work assigned.

Minimum Education and Experience:

Education:
High School Diploma or equivalent.

Experience:
One year of experience performing duties comparable to those of a Utilities Maintenance Worker I.

License and Certificate:
Water Production/Distribution assignment – requires possession of a Grade II Water Distribution Operator certificate issued by the California Department of Health Services and a Grade I Wastewater Collections System Maintenance certificate issued by California Water Environment Association.

Wastewater Collections/Stormwater assignment - requires possession of a Grade I Water Distribution Operator certificate issued by the California Department of Health Services and a Grade II Wastewater Collections System Maintenance certificate issued by California Water Environment Association.

Both assignments require possession of a valid Class B California Driver's License with Tank and Air Brake Endorsement.

Council Action: June 20, 2006

City of Woodland

UTILITIES MAINTENANCE WORKER III

DEFINITION
To perform a variety of semi-skilled and skilled tasks in the construction, maintenance and repair of the City's storm drainage systems, water distribution and sewage collection facilities.

SUPERVISION RECEIVED AND EXERCISED
General supervision is provided by higher level personnel. Responsibilities may include providing functional and technical supervision to lower level maintenance personnel. This is the advanced journey level of the Utilities Maintenance Worker series. It is distinguished from the Utilities Maintenance Worker II classification in that positions assigned to this class are expected to perform the most complex and highly skilled maintenance duties of the division assigned, including highly skilled heavy equipment operation under minimal supervision.

EXAMPLES OF DUTIES
The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS
Operate a variety of moderately heavy and heavy construction and maintenance equipment including such pieces as a backhoe, dozer, High Velocity Vacuum Cleaner (HVVC), loader, grader, roller, crane, three-axle truck and truck with trailer. Perform a variety of construction and maintenance operations requiring a high level of skill and expertise involving water distribution, storm drainage, and sewage systems and related facilities. Use concrete cutting equipment, operate a jackhammer; pour and finish concrete; construct concrete forms and perform rough carpentry work; make water and sewer taps. Act as a leadworker for a crew of maintenance workers on assigned projects. Comply with policy and procedures in the Department Injury and Illness Prevention Program. Utilize proper safety precautions and set a proper example for others. Operate telemetering and flow monitoring equipment. Prepare field designs as-builts when required to convey information to engineering for drawing documentation. Regular and consistent attendance.

OTHER JOB FUNCTIONS
Provide general information to the public, other city departments, and vendors pertaining to area of assignment. Perform duties in the general maintenance and repair of water distribution and sewage collection facilities; install, test and backfill water and

sewer service laterals; install, remove, and repair water meters, hydrants, and valves. Repair and maintain storm drains, pipes and catch basins. Meet stand-by program requirements and serve in a stand-by status after regular working hours and respond to emergency call-outs. Requisition of materials and supplies for assigned facilities and projects. Work cooperatively with others. Drive vehicles and equipment as required. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
Operational characteristics of heavy mechanical equipment used in the construction and maintenance of sewers and storm drains. Methods, tools, and materials used in storm drains, water and sewer facilities construction, maintenance and repair. Hazards associated with the assigned work and proper safety precautions including appropriate traffic control devices. Traffic laws, ordinances and rules involved in truck and heavy equipment operations. City codes, specifications, and standards for AWWA, California Department of Health requirements of water and sewer standards and regulations, CAL-OSHA and the Environmental Protection Agency regulations.

Skill to:
Perform highly skilled maintenance, construction and repair work in the area of work assigned. Operate a variety of vehicular and stationary heavy mechanical equipment in a safe and effective manner. Act as leadworker for a small crew of maintenance personnel; assist in the training and supervision of others in the safe operation of equipment; oversee and monitor the work of others. Understand and carry out both oral and written directions in an independent manner. Use and operate hand tools, mechanical equipment and power tools and equipment required for the work in a safe and efficient manner. Assist in preparation of performance appraisals. Maintain written records and reports. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Ability to:
Read and interpret basic maps and blue prints. Operate and maintain machinery and equipment related to the maintenance, repair and alterations of public works operations. Maintain and repair light power equipment. Perform heavy manual labor. Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Minimum Education and Experience:

Education:
High School Diploma or equivalent. Specialized coursework in construction or related field is highly desirable.

Experience:
Three years of experience performing duties comparable to those of a Utilities Maintenance Worker II.

License and Certificate:
Water Production/Distribution assignment – Requires possession of a Grade II Water Distribution Operator certificate and possession of a Grade I Wastewater Collections System Maintenance certificate issued by California Water Environment Association. Requires possession of a Grade III Water Distribution Operator certificate issued by the California Department of Health Services prior to permanent appointment. Grade I Water Treatment certificate is desirable.

Wastewater Collections/Stormwater assignment – Requires possession of a Grade II Wastewater Collections System Operator certificate issued by the California Department of Health Services and possession of a Grade I Water Distribution Operator certificate. Requires possession of a Grade III Wastewater Collections System Maintenance certificate issued by the California Water Environment Association prior to permanent appointment. Grade I Water Treatment certificate is desirable.

Both assignments require possession of a valid Class B California Driver's License with Tank and Air Brake Endorsements. Must possess a valid Class A driver's license within six months of hire. Confined Space Certification, Competent Person Certification, valid First Aid and CPR certifications, acquire or possess Forklift Certification and a Work Zone Safety certificate from the International Municipal Signal Association prior to permanent appointment.

Council Action: June 20, 2006

City of Woodland

Water Pollution Control Facility Superintendent

DEFINITION

To plan, organize and manage the Water Pollution Control Facility Plant Operations, Laboratory Operations and the Industrial Pretreatment Program. Ensures the City's Water Pollution Control Facility Plant Operations are in compliance with applicable Federal, State and Local regulations which include the Water Pollution Control Facility NPDES discharge permit.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by the Director of Public Works or designee. Provides direct or indirect supervision of all assigned personnel. Exercises discretion and independent judgment with respect to assigned duties.

EXAMPLES OF DUTIES

The following are typical illustrations of duties encompassed by the job class but are not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Ensure the proper management, operation, and maintenance of wastewater and selected stormwater treatment facilities, including the Wastewater Treatment Plant, as well as, additional City properties assigned to the Water Pollution Control program. Work in a coordinated effort with the co-permittee for the City's industrial wastewater disposal site. Develop and implement goals, objectives and priorities. Monitor and make recommendations concerning legislation and compliance issues related to wastewater NPDES issues. Ensure the proper management of the Laboratory, the Industrial Pretreatment Program, and other programs assigned to Laboratory and Industrial Pretreatment staff. Represent the City on routine basis with State and Federal agencies, and other public bodies. Participate in professional groups and committees and the general public regarding wastewater, stormwater treatment, pre-treatment, and related programs. Coordinate maintenance operations and contract activities with vendors, contractors, and with other City Divisions as needed. Prepare and administer the annual budget for assigned program areas. Hire, train, supervise and evaluate personnel. Develop and review progress of projects and work assignments with assigned personnel and assist them in organizing resources. Compile, sign, and submit monitoring and compliance reports to appropriate State and Federal agencies. Works in coordination with or in the absence of the Chief Plant Operator. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Comply with applicable guidelines regarding the purchase of equipment. Develop or assist in developing equipment specifications and requisition of supplies and materials. Plan safety and training programs and ensure that safety precautions and regulations are adhered to by personnel assigned to the branch and those working at sites under the purview of this position. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

Principles and practices necessary in operation and maintenance of a Class V 10.4 MGD Tertiary Wastewater Treatment Facility. State and Federal water pollution control rules and regulations governing the treatment and disposal of wastewater, laboratory operations, and industrial pretreatment programs. Handling, use, storage and disposal of hazardous materials associated with treatment and analysis of water and wastewater. Occupational hazards and safety precautions related to the collection, treatment, reuse, and disposal of wastewater. Basic understanding of chemical, biological and physical laboratory testing methods and procedures. Basic understanding of municipal storm water NPDES requirements, specifically construction site runoff control and post construction requirements. Work safety and accident prevention programs. Budget development and expenditure control, including development of capital improvement plans. SCADA control systems and the data management needed for evaluating treatment plant efficiency and overall performance. Personnel principles and practices including supervising, training, and performance evaluation. Principles and practices of leadership, motivation, team building and conflict resolution.

Skill to:

Develop, interpret and implement Department policies. Plan, organize, and implement a comprehensive program for the maintenance and operations of the Water Pollution Control Facility, Industrial Waste Water Treatment Site, and Storm Water Treatment Facilities. Read, write, and provide critical review of technical reports. Read and understand legislative and legal text of laws and permits which must be complied with in the operation of the facilities assigned to this position. Read and interpret blueprints and plans. Prepare and present clear, concise, and competent reports, both orally and in writing. Manage, coordinate, and evaluate the work of assigned personnel.

Ability to:

Manage and direct a 10.4 MGD Class V Wastewater Tertiary Treatment Facility, Laboratory Operations and the Industrial Pretreatment Program. Use a variety of computer software to control plant process and prepare a variety of reports, spreadsheets and records. Work independently making appropriate decisions in fast paced, high-pressure situations. Communicate clearly and concisely, both orally and in writing. Supervise and train assigned personnel. Establish and maintain effective work relationships with those contacted in the performance of required duties.

Minimum Education and Experience:

Education:
Associates degree in a technical field related to wastewater plant operations or closely related field, such as engineering, mechanical science, chemistry or biology. A Bachelors degree is desirable.

Experience:
Five years of work experience involving the maintenance and operation of a water pollution control facility, including laboratory, with at least three years of supervisory experience.

License and Certificate:
Required upon hire: possession of a valid California Driver's License. Possession of a current Grade V Wastewater Treatment Plant Operators Certificate by the State of California Water Resources Control.

Council Action: June 17, 2008

City of Woodland

WATER POLLUTION CONTROL OPERATOR III

DEFINITION

To perform complex Wastewater Plant operations and maintenance assignments involving plant process and control, preventative maintenance to include equipment repairs, laboratory procedures.

SUPERVISION RECEIVED AND EXERCISED

General supervision is provided by the Water Pollution Control Facility Superintendent or designee. The Water Pollution Control Operator III is the advanced journey level position in the Water Pollution Control Operator series. Acts as a shift supervisor, as defined by Title 23 of the California Code of Regulations, overseeing and directing the operation or a phase of operation of a waste water treatment plant during a specific work period. Provides work direction, leadership and training to subordinate personnel.

EXAMPLE OF DUTIES

The following are typical illustrations of duties encompassed by the job class, but are not all inclusive or limiting.

ESSENTIAL JOB FUNCTIONS

Operate the Water Pollution Control Facility, to ensure compliance with State Regulations. Interpret alarms, meters, gauges, SCADA system and test results to determine process and control criteria. May perform required laboratory tests, analyses, and record the results. Perform maintenance and repair work on pumps, valves, Ultra Violet Disinfection equipment, filtration equipment, laboratory equipment and storm water pumping stations. Participate in ongoing preventative maintenance program and accurately maintain and compile records and reports. Operate a personal computer to retrieve data from the SCADA system and then makes adjustments to plant operations; and create spreadsheets and word processing documents. Train and provide work direction to subordinate personnel. Work weekends and holidays as assigned. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Participate in the department safety program and follow all safety precautions and regulations. Serve in a stand-by status after regular working hours and respond to emergency call-outs as assigned. Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:
State and Federal water pollution control rules and regulations, governing the treatment and disposal of wastewater and related programs. Principals and practices necessary in the operation of a Water Pollution Control Facility and related programs and facilities. Wastewater Treatment Plant equipment maintenance procedures. Advanced wastewater treatment plant operations, to include tertiary treatment equipment. Hazardous chemicals associated with wastewater treatment. Chemical and bacteriological wastewater characteristics. Standard methods of sampling and analyzing wastewater. Hydraulics, measuring devices, pumps and other wastewater related equipment. Repair and calibration of equipment. Occupational hazards and necessary safety precautions. Computer operation and software as related to a wastewater treatment facility, to include Microsoft Word and Excel.

Ability to:
Lead and train new and semi-skilled personnel and work independently while making appropriate decisions. Read and interpret blue prints and plans. Wear and use SCBA units as regulated by Cal/OSHA. Communicate clearly and concisely, both orally and in writing. Operate and implement changes to the plant SCADA computer system. Repair and calibrate instrumentation as related to operations. Establish and maintain effective work relationships with those contacted in the performance of required duties. Work independently making appropriate decisions in critical situations.

Minimum Education and Experience:

Education:
High School diploma or equivalent, supplemented by training or coursework in the areas of chemistry, biology or related wastewater operations.

Experience:
Three years of experience in work involving the maintenance and operation of a water pollution control facility and/or related facilities and programs.

License and Certificates:
Required upon hire, possession of a valid California Driver's License and a current Grade III Wastewater Treatment Plant Operators certificate, issued by the California State Water Resources Control Board.

Council Action: June 17, 2008

City of Woodland

WATER POLLUTION CONTROL OPERATOR IV

DEFINITION

To perform and supervise the most complex work involving process control, plant operations, laboratory procedures, repair and maintenance of the City's Water Pollution Control Facility (WPCF) Tertiary Treatment Plant.

SUPERVISION RECEIVED AND EXERCISED

General direction is provided by the Water Pollution Control Facility Superintendent or designee. Acts as a "supervisor" as defined by Title 23 of the California Code of Regulations (oversees and directs the operation of the plant, inspects the performance of other operators, and reports to the Superintendent). The Operator IV provides direct supervision and training for the semi-skilled and skilled operations and maintenance personnel. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of a Class V treatment plant.

EXAMPLES OF DUTIES

The following are typical duties performed by the job class, not an all inclusive or limiting list.

ESSENTIAL FUNCTIONS

Monitors and maintains the operation of wastewater treatment plant pumps, motors, headworks, oxidation ditches, filters, disinfection process, and pump stations. Learns all phases of the plant operations and makes or supervises necessary operating changes and adjustments. Maintains and updates accurate logs of the plant operations, preventative maintenance and safety programs. Assists in the establishment and supervision of procedures, maintenance schedules and methods for assigned areas of operation. Assigns and supervises work for subordinate WPCF operators and plant mechanic, while checking on the work progress throughout the day. Assists the WPCF Superintendent in a variety of personnel actions including; selection, training, promotions, performance evaluations, and disciplinary actions. Monitors and interacts with the automated plant computer/SCADA systems. Interprets data and information received by SCADA then makes adjustments to plant operations. Implement and supervise proper safety precautions that are followed by all staff members. Work on standby rotation to include working on weekends and holidays. Oversees collection of a variety of samples for laboratory tests and on occasion performs basic laboratory testing and analysis. Regular and consistent attendance.

OTHER JOB FUNCTIONS

Review data, analyze results and prepare reports as required. Coordinate with other environmental services programs, such as, the laboratory or pretreatment, ensuring tests and analysis are complete and a record of results are available for use. Respond to inquiries or concerns from citizens and other departments or agencies. Assist in budget preparation and monitoring of expenditures. Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:

Principles, methods, materials, tools, and equipment used in wastewater treatment plant operations, servicing, and maintenance. Principles of various wastewater treatment processes, to include, adjustment procedures for wastewater treatment plant equipment, repair and preventative maintenance procedures. Safe work practices. Principles of supervision and training. Advanced wastewater treatment operations, to include oversight and direction of all tertiary treatment processes and equipment. Hazardous chemicals associated with wastewater treatment. Chemical and bacteriological wastewater characteristics. Standard methods of sampling and analyzing wastewater. Hydraulics, measuring devices, pumps and other wastewater related equipment. Computer operation and software as related to a wastewater treatment facility, to include Microsoft word and Excel.

Ability to:

Provide work direction, scheduling, supervision and evaluations of assigned staff. Read and interpret gauges and other recording devices reflecting plant operations and make operating adjustments based upon recorded data. Maintain accurate logs and records. Work collectively as a team member. Communicate clearly and concisely, both orally and in writing. Work independently making appropriate decisions in critical situations. Wear and use SCBA units as regulated by Cal/OSHA.

Minimum Education and Experience:

Education:

High School diploma supplemented by college, trade school or advanced course work in wastewater technology, laboratory, and chemistry.

Experience:

Four years of increasingly responsible work experience in the operation and maintenance of a wastewater treatment plant, including some lead or supervisory experience.

License and Certificate:

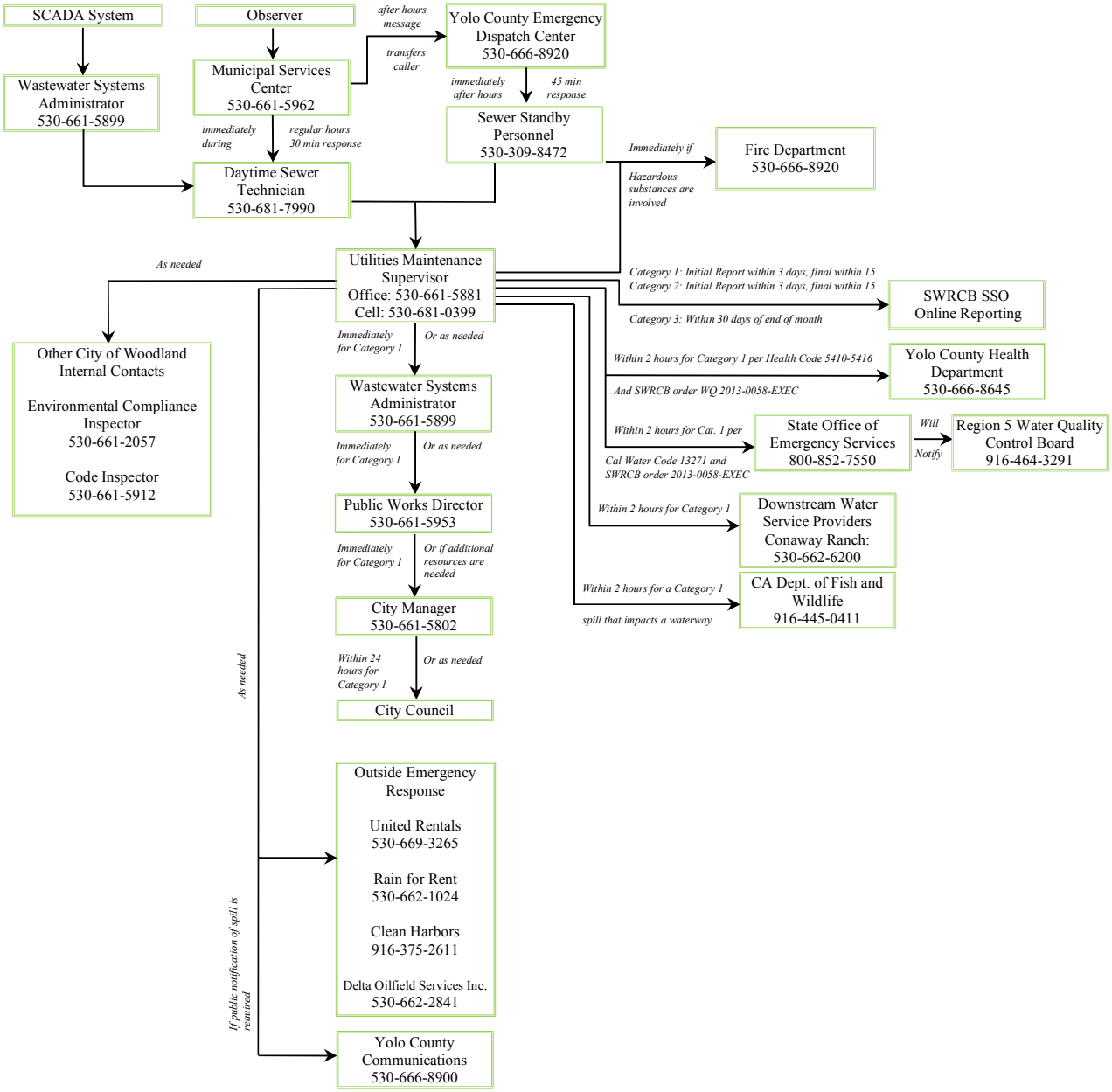
Required upon hire, possession of a valid California Driver's License and a current Grade IV Wastewater Treatment Plant Operators Certificate, issued by the California State Water Resources Control Board

Council Action: June 17, 2008

Attachment ii-5

SSO Reporting Chain of Communication

City of Woodland Sanitary Sewer Overflow Reporting Chain of Communication



iii Legal Authority

SWRCB Requirement:

*Each Enrollee must demonstrate, through sanitary **sewer system use ordinances**, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:*

- *(a) Prevent **illicit discharges** into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);*
- *(b) Require that sewers and connections **be properly designed and constructed**;*
- *(c) **Ensure access** for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;*
- *(d) Limit the discharge of **fats, oils, and grease** and other debris that may cause blockages, and*
- *(e) **Enforce any violation** of its sewer ordinances.*

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006 ammended through 2013-0058-Exec.

Background

The authority of the City of Woodland to control its wastewater collection and treatment system is described in the City's Municipal Code. The Municipal Code defines properties which must connect to the sewer system, requires permits and fees for connection, limits discharges into the system, requires standards for construction of new system components, ensures access to City employees to properly maintain any system component, and prescribes enforcement measures for violations. The Municipal Code provides the basis upon which the City can effectively manage and maintain its system. This section fulfills the requirements of the GWDR SSMP mandatory element iii.

Element iii. Legal Authority

iii-a. Authority to prevent illicit discharges

Requirement

Possess the necessary legal authority to prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.)

Discussion

Public Sewer Requirement

Municipal Code Sections 23C-6-1 and 19-4-1 provide the City with the legal authority to prevent illicit discharges to land and water by requiring connection to the City collection system for *any* disposal of sewage, with the exception of approved septic systems described in Section 23C-6-2.

Permits

Municipal Code Section 23C-6-3 prohibits any connections to or modifications of the public sewer collection system without an authorized permit from the City and the payment of any applicable fees. Municipal Code Section 19-4-2 requires Categorical and Significant industrial users (CIUs and SIUs) to obtain industrial wastewater discharge permits from the City before discharging any industrial wastewater to the collection system. This section of the Code also provides the City the discretion to require any user that is not considered to be a CIU or SIU that may discharge a pollutant of concern to obtain a pollution prevention permit before discharging wastewater to the collection system. The contents of industrial wastewater and pollution prevention permits are described in Code Sections 19-4-5 and 19-4-6 respectively. Because permits are issued at the discretion of the City Pretreatment Program Director per Section 19-4-2, the City has the legal authority to create its own framework to govern the permit program, which consists of the City established "Wastewater Industrial Pretreatment Program" (WIPP) and Pollution Prevention Program" (PPP) (see **Attachment iii-1**). These documents were created in compliance with EPA regulation 40 CFR Part 403.

Connection Charges and Service Fees

Municipal Code Section 23C-6-11 requires the payment of a connection charge, the amount of which is decided by a connection-specific City Council resolution, when a connection to the collection system is made from a new property. Sections 23C-6-12 and 19-3-1 require the payment of monthly service fees for connection to the collection system as decided by City Council resolution. Fees may be determined by user-type, by volume according to potable water usage, or by other special

considerations. Section 23C-6-12 allows the City to require the installation of a sewage meter on any connection if the City desires. Section 19-3-2 also allows the City to impose fees to cover the cost of administrating programs such as enforcement, industrial pretreatment, permit processing, and monitoring.

Prevent Illicit Discharges

General

Municipal Code Section 19-2-1 specifically prohibits discharge of the following: chlorine demand, corrosive substances, dilution water, discoloration, flammable or explosive substances, insecticides, medical wastes, noxious substances, excessive BOD, slug discharges, substances causing a public nuisance, radioactive wastes, solids or viscous matter, storm water, cooling water, sulfides, excessively hot or cold water, toxic substances, hauled matter, petroleum, or otherwise unsuitable wastes. Section 23C-6-7 specifically prohibits the connection of any drainage features to the public sewer system, including roof downspouts, foundation drains, or any other sources of surface or groundwater drainage.

Industrial Pre-Treatment Program

Municipal Code Section 19-2-5 presents a list of maximum allowable concentration limits for specific pollutants discharged by industrial users, with the reservation that more strict federal regulations supersede those presented in the Municipal Code, such as those present in the Federal Pretreatment Standard 40 CFR Chapter adopted by Code Section 19-2-3. Section 19-2-9 requires all industrial users to pre-treat wastewater to the established standards at the user's expense and to submit detailed plans on the treatment process for review and acceptance. The City identifies industrial users that have the potential to discharge wastewater with pollutant concentrations in excess of the maximum allowable limits through its Industrial User Survey, which is conducted in conjunction with the business license and building permitting process. Section 19-2-8 forbids dilution of wastewater as a substitute for pre-treatment. Section 19-3-3 allows the City to enter into special contracts with industrial users producing wastewaters of "unusual strength" to treat the water under specified conditions and at special costs. Sections 19-5-1 and 19-5-3 require industrial users to submit baseline monitoring reports identifying industrial and pre-treatment processes, wastewater flow rates, pollution concentrations, and applicable environmental permits. Section 19-5-4 requires industrial users to submit reports describing future actions to ensure compliance, and 19-5-5 requires semi-annual submission of the

results of self-monitoring. Sections 19-5-6 through 19-5-8 also require the submission of reports regarding changes in discharge or pre-treatment processes, episodic discharges, and discharges of hazardous wastes.

Related Documents

- Refer to City of Woodland Wastewater Industrial Pretreatment Program – Administrative Procedures Handbook
- Refer to City Code on the City's website at http://www.cityofwoodland.org/gov/depts/cd/bldg/standards/municode.asp
- Attachment iii-1: City of Woodland Pollution Prevention Program Framework

Plan & Schedule

No further efforts are projected for this element at the present time.

Element iii. Legal Authority

iii-b. Authority to properly design and construct sewer

Requirement	Possess the necessary legal authority to require that sewers and connections be properly designed and constructed.
Discussion	Municipal Code Section 23C-6-5 requires the submission of plans, profiles, and specifications with applications for permits to connect to the collection system to be reviewed and accepted by the City Engineer. Section 23C-6-7 requires the proper design and construction of new sewer system components according to the City Standard Specifications and Details, and the Uniform Plumbing Code. This section requires testing and inspection of system components by the City, including private laterals, and the submission of as-built drawings before the acceptance of any work. This section places the responsibility for maintaining sewer laterals from the property line to the building on the property owner. During the plan check process, the City may require specific sizing of collection system facilities consistent with the latest version of the Sewer System Master Plan. If the Master Plan requires a developer to install facilities that are sized to serve future developments or will otherwise provide an increased level of service to existing customers, the City will contribute funds towards the project per the Major Projects Financing Plan (MPFP). The MPFP is a framework for determining the "fair share" that the City will contribute towards collection system infrastructure required to be installed by developers.
Related Documents	o Refer to City Code on the City's website at: http://www.cityofwoodland.org/gov/depts/cd/bldg/standards/municode.asp o Refer to the latest edition of the City of Woodland Major Projects Financing Plan (MPFP)

Element iii. Legal Authority

Plan & Schedule	Task	Responsible Party	Scheduled Date
	Update City Major Projects Financing Plan	Principal Utilities Civil Engineer	Continuously

Element iii. Legal Authority

iii-c. Authority to ensure access

Requirement

Possess the necessary legal authority to ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency.

Discussion

Municipal Code Section 23C-6-7 includes a provision requiring at minimum a 10 foot wide easement for components of the sewer system located outside the public right-of-way. This easement allows for access by public employees to construct and maintain those portions of the system. Section 23C-6-4 limits work on the sewer system to the owner of private property doing his own house sewer work on his private property

Related Documents

- Refer to City Code on the City's website at: http://www.cityofwoodland.org/gov/depts/cd/bldg/standards/municode.asp

Plan & Schedule

Task	Responsible Party	Scheduled Date
Find sewer utilities that are on private property but have no City easement	GIS Analyst	Continuously
Conduct a legal review of City's Code to change language to allow City access to all sewer utilities in the collection system	Principal Utilities Civil Engineer	2016 - 2017

iii-d. Authority to limit FOG

Requirement	Possess the necessary legal authority to limit the discharge of fats, oils, and grease and other debris that may cause blockages.
Discussion	Municipal Code Section 19-2-1 lists fats, oils, and grease as prohibited substances that may not be disposed of in the sewer collection system by any user. Section 19-2-5 sets the maximum allowable concentration of oil and grease at 159 mg/l. Municipal Code Section 19-2-2 allows the City Engineer to require any user to install an interceptor or trap on that property's building sewer in order to trap grease, oil, flammable substances, grit, or other harmful substances. This Section requires submission of plans to the City Engineer prior to installation, and that all records of cleaning, waste removal (by a licensed waste hauler), inspection, repairs, and cost are kept and made available to the City Engineer for review. Interceptors, traps, or other pretreatment devices operated by categorical or Significant Industrial Users (SIUs) are permitted under the WIPP and any other interceptors or traps are permitted under the PPP.
Related Documents	o Refer to City Code on the City's website at: http://www.cityofwoodland.org/gov/depts/cd/bldg/standards/municode.asp
Plan & Schedule	No further efforts are projected for this element at the present time.

Element iii. Legal Authority

iii-e. Authority to enforce any violation

Requirement	Possess the necessary legal authority to enforce any violation of its sewer ordinances.
Discussion	City Municipal Code Sections 23C-3-1 and 23C-3-2 discuss penalties for non-payment of sewer utility bills and methods of enforcing collection of delinquent payment. Section 23C-3-7 allows for criminal prosecution for any tampering or vandalism of the public sewer system. Section 23C-6-15 places the responsibilities for all other enforcement actions aside from fee collections on the City Engineer. This section allows the Engineer to issue warnings to users in violation of the Code and disconnect those users if they do not promptly rectify illegal discharges. The Engineer is also reserved the right to disconnect any users in the event of an emergency during which disconnection is necessary to prevent the WPCF from violating its NPDES permit. The section also allows charges to be issued by the Engineer to any user whose waste discharges cause damage to the collection system, public property, or the environment. Fines for illegal discharges are confined to a range of $100-$10,000 dollars per day. Section 19-6-1 requires the City to annually publish in the newspaper a list of significant industrial non-compliant dischargers as a measure to deter illegal discharges. Section 19-6-2 requires that any user who is issued a violation warning must submit to the City a technical report explaining the violation and describing a plan to prevent further similar discharges within 30 days. Additionally, the City may require any user who has caused a significant violation to attend a "show cause" hearing to describe why a specific enforcement action should not be carried out. Section 19-6-3 allows the City to issue cease-and-desist orders that require the user to halt all activities causing an illegal discharge. Section 19-6-4 prohibits the continued habitation of any building which has suspended sanitary sewer service, and allows the City Attorney to seek compensation for damages caused by illegal discharges.
Related Documents	o Refer to City Code on the City's website at: http://www.cityofwoodland.org/gov/depts/cd/bldg/standards/municode.asp
Plan & Schedule	No further efforts are projected for this element at the present time.

Attachment iii-1:

City of Woodland Pollution Prevention Program Framework

CITY OF WOODLAND
POLLUTION PREVENTION PROGRAM FRAMEWORK

2015

Summary
In 2006, the State issued the Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Agencies which required the City of Woodland (City) to submit a Sanitary Sewer Management Plan (SSMP). One important component of the SSMP is a FOG Control Program. The City implements the control of fats, oils and grease through a Pollution Prevention Program, which is a component of our Industrial Pretreatment Program. In addition to the permitting and inspection activities outlined below, PPP activities also include public outreach events such as *From the Pan to the Can* which stresses the importance of keeping residential cooking oil and grease from going down the drain, the annual *Holiday Cooking Oil Recycling Event* which encourages FOG recycling, and *No Drugs down the Drain* which included a prescription drug take-back event.

The Pollution Prevention Program focuses on commercial and industrial dischargers that are not regulated under the City's Industrial Pretreatment Program (IPP) but whose wastewater discharges are of concern to the City. PPP regulated businesses are divided into three major groups: Businesses of Concern (BOCs), Food Service Businesses (FSBs), and Automotive Related Businesses (ARBs).

Businesses of Concern (BOCs)

Background
Businesses of Concern are commercial businesses that have the potential to cause problems for the WPCF or the collection system. The IPP also uses this classification to permit and monitor businesses because of complaints or chronic collection system maintenance problems. There are 11 businesses of concern currently permitted in the PPP. See Table 1, below.

Current BOC Permits and Permit Conditions
Each PPP permit issued contains both General and Special Permit Conditions. General Permit Conditions require the discharger (permit holder) to comply with provisions of the Code of the City of Woodland, Chapter 19, Section 19-2-1, General Discharge Prohibitions. This section prohibits discharges that could interfere with the operation or performance of the WPCF or could cause the WPCF to be in violation of its NPDES Permit. Section 19-2-1 also lists specific wastewater discharges and practices that are prohibited. An inspection by PPP staff is required at least once a year. Special Permit Conditions tailored to each BOC identify specific actions that the BOC must make to comply with Chapter 19 requirements and when more frequent inspections by PPP staff are required. Special Permit Conditions for permitted BOCs are presented in Table 2.

City of Woodland
Pollution Prevention Program Framework
2015

Table 1: Businesses of Concern Permitted Under the Pollution Prevention Program as of 1/2015

Permit Number	Business Name and Street Address	Nature of Business	Reasons for Inclusion in PPP
P001	**Target Distribution Center** 2050 E. Beamer Street	Warehousing and transferring merchandise	Wastewater from truck washing, container washing, and forklift battery washing.
P004	**Prime Conduit** 1776 E. Beamer Street	Manufactures polyvinyl chloride conduit	Flow and pH values of process wastewater.
P005	**Rite Aid Distribution Center** 1755 E. Beamer Street	Warehousing and transferring merchandise	Wastewater from truck washing and container washing.
P006	**Woodland Healthcare** 1325 Cottonwood Street	115 bed hospital and surgical center	Flow. Discharges approximately 11,000 gallons per day.
P007	**Pacific Coast Producers** 1376 Lemen Avenue	Tomato processing and canning	Potential for the discharge of high BOD process wastewater to the sanitary sewer.
P009	**Walgreen's Distribution Center** 2370 E. Main Street	Warehousing and transferring merchandise	Wastewater from truck washing and container washing.
P010	**Interpac Technologies** 260 N. Pioneer Avenue	Culinary oil packaging and distribution	Potential for the discharge of culinary oils to the sanitary sewer.
P011	**Cache Creek Foods** 411 N. Pioneer Avenue	Tree nut product manufacturing and packaging	Potential for the discharge of cooking oils used in the manufacturing process to the sanitary sewer.
P012	**La Tourangelle Inc.** 1253 Commerce Avenue	Culinary oil packaging and distribution	Potential for the discharge of culinary oils to the sanitary sewer.
P013	**Bunge Milling Inc. dba Pacific International Rice Mills** 845 Kentucky Avenue	Rice processing	Potential for the discharge of rice washing process to the sanitary sewer.
P014	**Yolo County Fairgrounds** 1125 East Street	Fairgrounds/Exhibits	Potential for the discharge of animal wastes to the sanitary sewer.

City of Woodland
Pollution Prevention Program Framework
2015

Table 2: Special Permit Conditions for Businesses of Concern

Permitted Business Name	Special Permit Conditions
Target Distribution Center	Wastewater from forklift battery washing is discharged to a lime pit for pH neutralization and to an oil and sand separator before final discharge to sanitary sewer The lime pit for pH neutralization is to be maintained pursuant to manufacturer's specifications and the oil and sand interceptor shall be properly maintained. Annual inspection.
Prime Conduit	Permittee is required to monitor flow and pH values on a weekly basis. Inspections occur annually. Annual inspection.
Rite Aid Distribution Center	Requires that all truck and container washing take place on the contained wash pad only. The wastewater is discharged to an oil and sand separator. Prohibits discharge of wash water to storm drain. Requires pre-treatment of all drainage from truck washing area before discharge to sewer. Requires record keeping on operation and maintenance of wash water pretreatment system. Annual inspection
Woodland Healthcare	Inspection annually for changes in operations.
Pacific Coast Producers	During canning season, process wastewater is trucked to drying ponds for land disposal. However, the cannery does maintain a connection the City sewer. This connection is valved off and used only in emergencies. The permit prohibits discharge from the waste separator to City sewer through the connection pipe, except with City permission. Annual inspection.
Walgreen's Distribution Center	Requires that all truck and container washing take place on the contained wash pad only. The wastewater is discharged to an oil and sand separator. Prohibits discharge of wash water to storm drain. Requires pre-treatment of all drainage from truck washing area before discharge to sewer. Requires record keeping on operation and maintenance of wash water pretreatment system. Annual inspection
Interpac Technologies	Requires sewer waste management device (Myers grinder pump) be maintained and cleaned sufficiently such that it operates properly at all times. Follow Best Management Practices for spill cleanup, container cleaning, and storm drain protection. Annual inspection.
Cache Creeks Foods	Requires sewer pretreatment equipment (two hydromechanical grease traps) be maintained and cleaned sufficiently such that they operate properly at all times. Follow Best Management Practices for spill cleanup, container cleaning, and storm drain protection. Annual inspection.

La Tourangelle Inc.	Requires sewer pretreatment equipment (one hydromechanical grease traps) be maintained and cleaned sufficiently such that they operate properly at all times. Follow Best Management Practices for spill cleanup, container cleaning, and storm drain protection. Annual inspection.
Bunge Milling Inc. dba Pacific International Rice Mills	Requires proper sanitization of sewer waste management device (Amerivap dry steam vapor sanitizing machine) be maintained and cleaned sufficiently such that it operates properly at all times. Follow Best Management Practices for spill cleanup, container cleaning, and storm drain protection. Annual inspection.
Yolo County Fairgrounds	Prohibits the discharge of animal waste to the City's sewer system and requires daily cleaning when animals are present. Animal waste has to be removed and deposited in appropriate containers. The City monitors that the plugs are in place at the seven (7) locations that have been identified as illicit connections to the City's storm system. Additionally, prohibits the discharge of cooking fats, oils, and grease to the City's sewer system from the exhibit hall kitchens. Several inspections performed during events, especially during the County Fair. Annual inspection.

Food Service Businesses

Background

The intention of permitting FSBs is to reduce the amount of fats, oil and grease (FOG) entering the sanitary sewer system from food preparation and clean-up. Certain sections of sanitary sewer have historically required frequent cleaning due to solidified oil and grease blockages. FSBs in these problem areas are now permitted by the PPP and have installed pretreatment devices. The resulting reduction in FOG has led to a decrease in oil and grease related problems, such as sanitary sewer overflows, fouling of the WPCF head works, and measurable oil & grease in WPCF effluent. At many FSBs, oil and grease that was once poured down sanitary drains is now recycled or disposed of as solid waste. Through the implementation of this program awareness of oil and grease sources and the proper handling of this waste has increased among FSB owners/managers and City staff as well.

FSB Permit Requirements

FSBs permitted under the PPP are required to comply with City's Wastewater Discharge Ordinance and Special Permit Conditions which include but are not limited to the following: Best Management Practices, accurate record keeping of oil and grease recycling and disposal and if appropriate, installation of pretreatment devices to remove oil and grease from food service wastewater discharges. Permit conditions also require PPP staff to inspect FSBs regularly with an objective of quarterly inspections. Permits are renewed every five years at a minimum.

- BMPs include, but are not limited to, proper handling of FOG, spill prevention and spill cleanup.

- Pretreatment devices required are either oil and grease traps or hydro-mechanical grease interceptors. The type of device required depends on the type of food served and the food service volume (amount of food prepared and/or served per day).

- Pretreatment devices are required to be properly maintained and records of all waste hauled off site are retained on site for review by the PPP.

FSB Permit Status
There are over 150 permitted FSBs currently operating in the City of Woodland. All are inspected regularly with a target of quarterly inspections.

Automotive related Businesses
Background
The intention of permitting ARBs is to reduce or eliminate the introduction of solvents, oils and other hazardous waste fluids related to automotive repair and service to the sanitary sewer system, to lessen the potential to cause interference, upset, or pass-through at the City's WPCF and to enhance the safety of WPCF personnel by reducing the discharge of hazardous materials to the treatment system. ARBs that discharge to the City's sanitary sewer must be connected to an oil/sand separator; those that are not must not have floor drains (except those in restrooms) connected to the sanitary sewer. PPP staff also works with ARBs to educate them on proper storage and management of hazardous wastes.

ARB Permit Requirements
ARBs permitted under the PPP are required to comply with City's pretreatment ordinance and Special Permit Conditions which include but are not limited to the following: Best Management Practices, keeping accurate records of the operation and maintenance of oil/sand separators and if appropriate, installation of pretreatment devices. The permit holder is required to plug all floor drains connected directly to the sanitary sewer except for those located in restrooms. Permit conditions also require PPP staff to inspect the ARB at least once a year; permits are renewed every five years.

- BMPs include but are not limited to the proper handling and disposal of hazardous waste; and chemical use, spill prevention and spill cleanup.

- Pretreatment devices are required to be properly maintained and records of all waste hauled off site are retained on site for review by the PPP.

ARB Permit Status
There are over 40 permitted ARBs currently operating in the City of Woodland. All are inspected regularly with a target of quarterly inspections.

City of Woodland
Pollution Prevention Program Framework
2015

PUBLIC OUTREACH

- Since 2009, the Pollution Prevention Program has been a sponsor of Hometown Green, a radio campaign on KUIC, 95.3 FM. KUIC airs daily outreach/educational spots promoting environmentally friendly activities such as: green waste minimization, storm water pollution prevention and best management practices for reducing the discharge of household fats, oils and grease (FOG). In 2014, KUIC broadcast approximately 300 Hometown Green radio announcements.

- The PPP also held 2 "on location" radio promotion events with KUIC 95.3 FM during which KUIC aired live pollution prevention messages onsite at the City's Water Pollution Control Facility.

- In 2014, the PPP distributed its "Pan to the Can" FOG brochures, FOG can lids, and "Wipes Clog Pipes" pens, at several community events such as the City of Woodland Recreation Expo, City of Woodland Pharmaceutical Take Back event, the Spring Sidewalk Sale & Craft Fair, Earth Day, the Hot Rod Reunion, Community Resource Fair, and the Yolo County Fair.

- The PPP assisted City of Woodland Environmental Services staff at public outreach events such as Woodland's annual pharmaceutical disposal event (in which unwanted pharmaceuticals were collected for proper disposal and kept out of the sanitary sewer system) and at the Yolo County Fair. Handouts and information stressing pollution prevention were distributed. Public outreach is a continuous and ongoing effort.

- The PPP held its fifth annual holiday cooking oil and grease recycling event in an effort to keep cooking oil and grease out of the City's sanitary sewer system. Since the first event in 2010, the PPP has maintained a permanent cooking oil collection site. In 2014, the PPP collected approximately 110 gallons of cooking oil and grease from Woodland community members. Event outreach was provided via promotional flyers (English/Spanish), a promotional banner (English/Spanish) at the entrance to the City's Wastewater Pollution Control Facility, a large display (English/Spanish) inside Woodland's City Hall, local newspaper press releases and news articles, local newspaper advertisements (English/Spanish), retail and grocery store displays (English/Spanish), and radio public service announcements.

- The PPP placed over 50 pollution prevention outreach/education advertisements in 3 local news and community publications. Topics included FOG reduction and recycling, proper disposal of so-called flushable wipes, and proper disposal of pharmaceuticals.

- For National Pollution Prevention Week, the PPP issued a press release for publication in the local newspaper and created a large display at Woodland City Hall to promote awareness and pollution prevention.

- The PPP promotes pollution prevention on social media sites, including Facebook and Twitter. Pollution Prevention messages are also posted on the City's "EnviroWoodland" page and Facebook web site advertisements were purchased to promote pollution prevention.

- The PPP utilized the City's web site to advertise and promote Pollution Prevention activities and outreach.

- The PPP partnered with the local hospital to distribute our "Wipes Clog Pipes" brochures as part of the information packet they handout to all new parents when they leave the hospital.

- The PPP partnered with the local food bank to distribute our "Don't Be a Turkey" FOG recycling event information to everyone who received a turkey for the holidays.

- The PPP partnered with the local Salvation Army to distribute both our "Wipes Clog Pipes" brochures and our "Don't Be a Turkey" information to their clients throughout the year.

PROGRAM EFFECTIVENESS

PPP effectiveness is demonstrated by the following:

- Frequent inspection of ARBs and FSBs increased awareness of the PPP and ensured that all pretreatment devices are being properly maintained. For example, over 450 PPP inspections were conducted in 2014.

- An updated BMP information sheet was distributed to ARBs (permitted and non-permitted) and FSBs to ensure good housekeeping practices are in place.

- PPP permits issued to food service businesses help reduce the oil and grease discharged to the City's sanitary sewer system and the WPCF. Permitting of FSBs is an ongoing process.

- PPP permits issued to automotive related businesses help reduce the discharge of automotive related waste to the City's sanitary sewer system and WPCF. Permitting of ARBs is an ongoing process.

- Continued to monitor collection system crew work orders to determine trouble areas (grease buildup) in the sanitary sewer system, this information is useful in tracking the effectiveness of our FOG control program.

City of Woodland
Pollution Prevention Program Framework
2015

For additional information concerning the City of Woodland Pollution Prevention Program, please contact:

Mark Severeid
Laboratory & Environmental Compliance Manager
City of Woodland
Wastewater Operations Division
42929 County Road 24
Woodland, CA 95776

530-661-2065
mark.severeid@cityofwoodland.org

iv Operation and Maintenance Program

SWRCB Requirement:

The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

*(a) Maintain an **up-to-date map** of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;*

*(b) Describe routine **preventive operation and maintenance** activities by staff and contractors, including a **system for scheduling regular maintenance** and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;*

*(c) Develop a **rehabilitation and replacement plan** to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and **TV inspections** of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a **capital improvement plan** that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for **developing the funds** needed for the capital improvement plan;*

*(d) Provide **training** on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained; and*

*(e) Provide **equipment and replacement part inventories**, including identification of critical replacement parts.*

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.

Background

This SSMP section describes various aspects of the City's operation and maintenance program, which plays a vital role in meeting the City's goals outlined in section i of the SSMP. The City's approach to implementing an effective O&M program is to plan strategic observation of the entire collection system and streamline the transfer of field data into GIS, CMMS, and CA&CIP modules that will facilitate proper record keeping and informed scheduling and funding decisions regarding preventative maintenance and repair activities. This section fulfills the requirements of GWDR SSMP mandatory element iv.

Element iv. Operation and Maintenance Program

iv-a. Maintain an up-to-date system map

Requirement

Maintain an up-to-date map of the sanitary sewer system showing all gravity segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities.

Discussion

The City of Woodland currently possesses maps of the sewer collection system on three media (hard copy, AutoCAD, and GIS). Accurate system maps are essential to effectively manage the sewer collection system. Knowledge of the location of assets and the information associated with those assets is key to activities such as routine preventative maintenance, capital improvement planning, rehabilitation / replacement design, etc. It is important that system maps geographically represent assets as well as contain the necessary data for those assets. The City's hard copy and electronic system maps contain the following information:

- Sewer Manholes (ID, size, rim elevation, invert elevation, install date)
- Sewer Gravity Piping (ID, size, material, length, downstream & upstream invert elevations, slope, install date)
- Lift stations (ID)
- Force Mains (ID, size, material, length)
- Valves (ID, type, size)
- Geographical features (street names, waterways, parcels)
- Storm Drain Inlets (ID, size, rim elevation)
- Storm Drain Manholes (ID, size, rim elevation, invert elevation, install date)
- Storm Drain Gravity Piping (ID, size, material, length, downstream & upstream invert elevations, slope, install date)
- Storm Drain Outlets (receiving waterway)

GIS maps are maintained by the GIS Analyst in the IT Division under the Administrative Services Department. Hard copy and AutoCAD mapshare maintained by the Utilities Engineering and Utilities Maintenance Divisions under the Public Works and CDD Departments. Changes to the collection system maps occur in one of four ways, namely:

1) new development
2) completion of capital projects
3) rehabilitation or replacement work
4) revisions based on field inspection

It is important that these changes are quickly and efficiently incorporated into the system maps. The following outlines the general process by which updates to centrally available maps are made.

New Development / Capital Improvement Project / Rehabilitation & Replacement Project Map Updates

To assist in keeping the maps as up-to-date as possible, the City requires that surveyors or engineers submit electronic as-built drawings of new development or capital improvement projects under City Municipal Code Section 21-16-5 – "Digital graphics file submittal required":

> The city shall require the surveyor or engineer preparing a map or plan to submit to the city, in addition to the material concurrently being submitted for map checking and recordation purposes, a digital graphics file of the map(s) and/or plan(s). At the completion of the project a digital file of the map(s) and/or plan(s) shall be submitted as-built. The digital graphics format and version shall be determined by the city engineer. (Ord. No. 1378, § 3 (part).)

All engineering plans for site / civil improvements are reviewed by theCity Engineering Department. The City's Standard Specifications andDetails, Section 2, defines the process for approval of improvement plans.This process requires the submittal of both hard copy and AutoCAD plans before approval for construction, and the submittal of both hard copy and AutoCAD as-built plans before final inspection, acceptance, or issuance of a certificate of occupancy. Both the hard copy and electronic as-built files are sent from the Engineering Department to the EngineeringTechnician in the Utilities Engineering Division of the Engineering Department. The Engineering and GIS Technician is responsible for initiating the following process (see **Attachment iv-1**):

1. File hard copy and AutoCAD plans appropriately.
2. Update the master sewer collection system AutoCAD map using the AutoCAD plans received from the Engineering Department.
3. Export an updated shape file for any layers which have been updated in the master AutoCAD map and GIS.
4. Forward the any missing utilities to the GIS Tech for GPS and coordinate with the inspector on the job site for opportunity to GPS utilities, including any new asset data in the field for updating the GIS shapefiles. The GIS Tech/Analyst will make updates to the Cityworks and CowGIS maps.

In the event that civil improvement plans are not required to be submitted for a simple asset rehabilitation project (i.e. CIPP lining, etc.), the Principal Utilities Civil Engineer will email ISAC with the project information for the GIS Tech to execute the steps outlined above.

Field Revisions of Master Sewer Collection System Mapping

Electronic versions of the sewer collection system GIS map are available to City staff through the City computer network. Field staff have access to electronic versions of the City maps that they can view and edit in the field based on field inspections using the redline process. The redline process has been developed to allow field staff to submit recommended additions and corrections to GIS features.

Utility Maintenance Workers can make redline changes to the GIS maps by marking changes on a pdf map and submitting into a designated network location. Redline changes are stored in their ownGIS layer that tags which field crew member submitted the redline, when the redline was created, when the GIS Tech made the correction or addition, and a hyperlink to the original submitted pdf map. The GIS Tech is responsible for viewing the redline changes. Only the GIS Tech/Analyst has the ability to integrate the proposed redline changes into the live geodatabase for the central sewer collection system GIS map. The Utilities Supervisor is able to review all redlined features through a QC process for final approval of addition.When redlines are received, the GIS Tech is responsible for initiating the following process:

1. Change the status of the QC field in the redline layer to "Unapproved", which flags the Utilities Supervisor to approve redline changes.
2. Utilities Supervisor reviews redline changes and makes any necessary comments.
3. GIS Tech/Analyst makes any required changes to the redline mark-ups per Utilities Supervisor review comments.
4. Utilities Supervisor changes QC status to "Approved". When QC status is set to approved, redlines changes are automatically incorporated into production version of GIS geodatabase.
5. Annually, the GIS Tech/Analyst completes a shapefile export for each feature class which is sent to the Engineering Technician for incorporation into the AutoCAD mapping system.

Completion of redline mark-ups can be reviewed using the data available in the redline GIS layer attribute tables, and is also tracked using performance indicators.

Related Documents

- Refer to City of Woodland Map Book
- Refer to City of Woodland Standards and Specifications, Section 2
- Attachment iv-1: CAD/GIS Project Workflow Map

Plan & Schedule

Task	Responsible Party	Scheduled Date
Ensure completion of GIS mapping of stormwater infrastructure.	GIS Analyst	Ongoing
Obtain updated aerial photography to supplement GIS mapping.	GIS Analyst	Bi-Annually
Update system maps to include new developments, capital improvement projects, and field corrections.	GIS Analyst/ Civil Engineers/ Engineering Tech.	Continuously

Element iv. Operation and Maintenance Program

iv-b. Routine preventative O&M activities

Requirement

Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The preventative maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders.

Discussion

Currently Practiced Preventative O&M Activities

Video Inspection of Sewer Lines

A specialized video camera is passed through the pipes to identify problems (cracks, breaks, roots, etc.) and to develop planned, proactive schedules for maintenance. The City's goal is to video inspect the entire sewer collection system (excluding laterals) every 7 years. The City's CCTV crews are also responsible for cleaning and inspecting the storm drain facilities, and are only available for approximately 9 months a year to inspect the sewer collection system.

Pipes that have experienced SSOs, are known to be structurally deficient, or are known to suffer from consistent buildup of debris may be scheduled for CCTV inspection at shorter intervals (less than 7 years) as deemed necessary by the City. Some high-priority pipes are also visually inspected on a weekly basis (see **Attachment iv-2**). CCTV inspections of infrastructure serving new developments are done during final project inspection and again during the 11th month warranty inspection. Protocols for CCTV inspection are documented in the City's written "Video Inspection Program".

High-Velocity Cleaning of Lines

Pipelines are flushed to remove obstructions, maintain flow capacity, and prevent blockages. The work requires specialized equipment to clean the line back to a manhole and then vacuum the debris out. System capacity issues, odors, and blockages are likely to occur, and vectors can be drawn to the area if lines are not cleaned. The City's goal is to clean the entire sewer collection system (excluding laterals) every 5 years. The actual frequency of cleaning for each pipe will depend on CCTV inspection observations and SSO / emergency event data, with priority pipes receiving more frequent cleanings. Maintenance crews currently have a weekly sewer main cleaning list and a quarterly cleaning list for priority pipelines subject to debris accumulation or blockages (see **Attachment iv-3** and **Attachment iv-4**, respectively).

Typically, any pipeline that experiences an SSO or blockage is placed on the quarterly cleaning list. Pipelines may also be placed on either the weekly or quarterly cleaning lists at the discretion of Utility Maintenance Workers based on field observations or work order data. Pipes may be removed from cleaning lists if Utility Maintenance Workers observe minimal debris being removed from the lines during consecutive cleanings over the period of one year with supervisor approval. Protocols for sewer flushing are documented in the "City of Woodland Public Works HVVC Best Practices Manual" and Utility Maintenance Workers are mentored by the Senior Utility Maintenance Worker.

Dye Testing

A non-toxic dye is introduced to a water source that is suspected to be infiltrating the sanitary sewer collection system. The downstream manhole in the collection system is monitored for dye. If the dye is observed in the downstream manhole, it indicates an unwanted connection or infiltration of the system. Dye testing is performed as needed if CCTV inspection cannot pinpoint sources of identified inflow and infiltration.

Flow Monitoring

The WPCF Chief Plant Operator oversees the collection of flow data at the City's two lift stations (Gibson Ranch and Spring Lake) and at the headworks of the plant. Flow monitoring data is compared to estimates of sanitary flow produced by all collection system connections to generally quantify overall infiltration and inflow rates. Flow monitoring is also performed (typically by consultants) across the collection system every 5-10 years or in conjunction with a sewer system Master Plan update. Refer to SSMP section viii-a for more information regarding flow monitoring.

Sewer Main Line Repairs / Replacements

Sewer main line repairs and replacements are done in response to video inspection and emergency call data. Video inspection results are reviewed by the Superintendent, Supervisor and Principal Civil Engineer. A list of rehabilitation and replacement projects are developed by the Superintendent and Principal Civil Engineer utilizing the City's Condition Assessment and Capital Improvement Planning Module (CA&CIP Module). This software module uses a combination of CCTV data and GIS data to prioritize rehabilitation and repair of sewer collection system assets based on a quantitative "risk of failure" assessment generated by the module. The structural condition, location, and accessibility of the pipe determine whether assets are repaired in place or replaced completely. Marginal asset repairs in areas that are ready for street reconstruction or slurry-sealing are commonly

performed in advance of these projects if possible. The City uses GIS information available from other City departments to coordinate sewer repairs and replacements with other City infrastructure projects where feasible.

Sewer Lateral Repairs

The City owns the portion of the sewer lateral from the back of the sidewalk to the mainline of the sewer collection system, and the customer owns the portion of the lateral from the connection to their building to the back of the sidewalk. Laterals are inspected in conjunction with street overlay projects, and any laterals that are either found to be structurally deficient, do not have cleanouts, or are constructed of Orangeburg are removed and replaced with cleanouts according to current City standards during re-construction of the street. Repairs of laterals are also performed in response to emergency calls.

The City is currently in the process of developing a program that will start slip-lining laterals that are at risk of root intrusion instead of the current foaming of laterals that is a quarterly preventative maintenance task for staff to negate root intrusion but doesn't have a lasting impact as the slip-lining would have on laterals which would reduce lateral SSOs in the City.

Manhole Inspection and Repair

Manholes are inspected frequently in conjunction with periodical preventative maintenance, as well as with every crew-performed HVVC and CCTV inspection. Minor structural deficiencies are repaired by Utility Maintenance Workers, and large problems are addressed by nomination to the City CIP list. Manhole repairs may also be included and scheduled in the operation and maintenance budget for any given year. Typically, manhole repairs will be completed during rehabilitation or replacement of adjacent pipelines.

Root Control

Tree roots growing into the main lines and blocking the wastewater flow are killed with industry-standard chemicals. This work is typically attended to by the City maintenance crew, although isolated cases are contracted out. Problem areas are identified by CCTV inspection and the frequency of root control treatments are set based on observations made during inspections, the occurrence of blockages due to root buildup, or contractor recommendations.

Clean-out Program

A City clean-out installation program was implemented in 1996 in response to problems of sewage backing up in homes and businesses. Sewer lateral clean-outs are installed in response to customer complaints on the City's lateral on an as-needed basis and the City clean out is only installed on a PUE or City property. Clean-outs are routinely installed in conjunction with street overlayand reconstruction projects.

Sewer Lift Station Inspection and Maintenance

The City's two sanitary sewer lift stations (Gibson Ranch and Spring Lake) are continuously monitored by the WPCF SCADA system. Alarm set points are set up in the event a station malfunctions or a power failure occurs. The SCADA will call the on-call WPCF Operator to respond to the alarm condition. On a daily basis the WPCF Operators inspect the lift station pumps and control panels, and in the case of Spring Lake lift station, inspect the back-up generator as well. Gibson Ranch lift station will be served by a portable generator in the event of a sustained power failure.

Semi-annually, the electric shop thoroughly inspects the electrical control panels and replaces worn electrical components as needed. The submersible pumps are inspected semi-annually and repaired as called out in the O&M manuals. The Spring Lake O&M manuals are stored on-site and at the WPCF. The Gibson Ranch lift station O&M manuals are stored at the WPCF. Each lift station has one pump on bench stock. In the event of a pump failure the failed pump can be removed and the new pump put in its place the same day. The pumps at the lift stations are schedule for replacement on 11 year cycles. The Gibson Ranch lift station pumps were replaced in 2007 and the Spring Lake lift station was brought online in December 2005.

Lift station maintenance work is documented in the Cityworks CMMS to track past maintenance and scheduled preventative maintenance work. Also, log books are kept on-site and signed by the WPCF Operator during the daily inspections. An example lift station maintenance log is included in **Attachment iv-5**.

Cityworks CMMS

All preventative maintenance activities are scheduled with asset-specific frequencies determined by condition assessment data from CCTV inspections or historical field data, as described in SSMP section iv-c. Regular sewer flushing and CCTV work is scheduled manually during annual updates to the City's written flushing and CCTV programs, in order to maintain the City's goal of a 5-year flushing and 7-year CCTV

inspection cycle. Regular visual inspection and flushing of pipes subject to debris accumulation are also scheduled and updated manually using spreadsheets. However, IT staff is working on providing a PM scheduler within Cityworks to meet the needs of O&M staff to maintain a PM program. Completion of new COW PIE scheduled for Winter of 2015.

Utility Maintenance Workers use the following strategy to schedule and document preventative maintenance work:

1. Maintain annual scheduling spreadsheets for the following regular preventative maintenance activities:
   - Regular CCTV Inspection (approximately 10% of total system per year, in addition to inspections of any assets with scheduled increased frequency inspections)
   - Regular Flushing (approximately 15% of total system per year)
   - Weekly Priority Pipe Sewer Main Inspections
   - Weekly Priority Pipe Sewer Main Flushes
   - Quarterly Priority Pipe Sewer Main Flushes
   - Root Control
2. When preventative maintenance work is performed, open and close work orders for the work on the same day it is completed. Also record completion dates manually on the scheduling spreadsheets as work is performed.
3. As field work is performed and observations are made, manually add or remove assets from regularly scheduled maintenance spreadsheets as necessary.
4. Quarterly, review the scheduling spreadsheets to determine areas where more focus may be required to complete scheduled work.
5. Semi-annually, run a Crystal Report against the CMMS database to identify any assets with more than two work orders in the past year, and review the report to determine if any of the identified assets are not on a regular preventative maintenance schedule. Add identified assets to regular preventative maintenance lists as appropriate.
6. Annually, file electronic and paper copies of PM scheduling spreadsheets for documentation.

The CMMS is also used to document all un-planned service calls and spill responses. In addition, all CCTV inspection report data can be accessed via the CMMS database and the COWGIS portal.

Related Documents

- Refer to City of Woodland Video Inspection Program Manual
- Refer to City Public Works HVVC Best Practices Manual
- Attachment iv-2: Example Weekly Sewer Main Inspection List
- Attachment iv-3: Example Weekly Sewer Main Flush List
- Attachment iv-4: Example Quarterly Cleaning Route
- Attachment iv-5: Example of Lift Station Maintenance Log

Plan & Schedule

Task	Responsible Party	Scheduled Date
Create a Lateral Repair Program including plans and protocols for inspecting and repairing private laterals, including a mandatory lateral inspection program required at the time of property sale.	Principal Utilities Civil Engineer	January 2015 - December 2015
Run Crystal Report to identify assets with more than 2 work orders in the past year that may need to be placed on increased frequency PM schedules.	Engineering Technician	Semi-Annually
Conduct or contract out scheduled preventative maintenance activites	Utility Supervisor / Utility Maintenance Workers	Continuously
Enter all work orders in CMMS.	Utility Supervisor	Continuously
Update preventative maintenance activity schedules and frequencies by asset based on field observations, CCTV inspections, and "risk of failure" evaluations (SSMP section iv-c).	Utility Supervisor	Continuously

Element iv. Operation and Maintenance Program

iv-c. Prioritization program for impaired sewer collection system assets

Requirement

Develop a rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan.

Discussion

CCTV Inspection

As discussed in SSMP section iv-b, the City has a 7 year cycle for CCTV inspection of its entire sewer collection system. The City's Video Inspection Program includes a schedule that divides the collection system into 29 sub-basins. The City has a schedule running from 2008 through 2015 that details which basins will be inspected each year, and creates a specific weekly segment inspection schedule at the beginning of each year. In addition to inspections conducted on the 7 year cycle, more frequent inspections may be scheduled for pipes with a high "risk of failure" as determined by analysis of condition assessments. Currently, the City owns a van equipped with the ITPipes inspection software system. ITPipes can be configured to produce inspection reports using NASSCO PACP methods. The City transfers reports produced using ITPipes by the CCTV crew in the field into the City's CMMS. All City staff involved with the CCTV inspection process are NASSCO trained and certified. The City maintains standards for CCTV inspections in the City Standard Specifications and Details, 2010 Section 18.

Pipeline Condition Assessment Protocol

The City uses its CA&CIP Software Module to assign an overall quantitative "risk of failure" rating to every asset in the sewer collection system that has been inspected by the CCTV crew. The risk rating represents a combination of the "criticality of failure" and the "probability of failure" of the asset. Assets that pose the greatest risk of failure to the City are those that are considered most likely to fail in the near future (high probability of failure) and will result in the most costly response (high criticality of failure). Assets with the highest risk ratings are given the highest priority in terms of preventative maintenance or rehabilitation / replacement activities.

Criticality of Failure Criteria and Rating

The "criticality of failure" of each pipe is determined by the three factors of potential spill volume, proximity to a waterway, and public impact of a potential asset failure.

Output from the City's sewer system hydraulic model is used to determine peak wet weather flow rates for each asset, and a "spill volume" rating (1-5) is applied to each asset based on the flow rate. Pipes with larger peak flow rates have the potential to cause larger spills and will receive higher spill volume ratings. If peak wet weather flow data is not available for a particular asset from the City's hydraulic model, a peak flow estimate is made using Manning's Equation and the City's standard Manning's roughness coefficient (based on the pipe material), the maximum depth-to-diameter value (according to the City design standard) , and the minimum pipe slope (based on the pipe size).

The "proximity to waterway" rating (1-5) is assigned to each asset using a series of "select by location" queries in GIS. The rating is assigned manually using queries that select assets based on their proximity to storm drain inlets and waterways. Assets located closest to waterways present the highest risk of a Category 1 SSO should a spill occur. Spills to waterways may cause more significant cleanup costs, public health issues, fines, and enforcement responses from the SWRCB than spills that do not reach waterways.

The "public impact" rating (1-5) is also assigned to each asset using a series of "select by location" queries in GIS. The rating is assigned manually using queries that select assets based on their proximity to public facilities (i.e. schools, hospitals) and location with respect to major transportation routes. Public impact ratings may also be assigned manually based on the potential construction cost associated with repairing failed assets that are difficult to access, such as those constructed under buildings, highways, or waterways. Assets that would result in more significant public impacts in the case of an unexpected failure such as the disruption of public facility operation, disruption of traffic, or high emergency repair costs present a higher risk to the City.

Once a numerical spill volume, proximity to waterway, and public impact rating is assigned to each asset, an overall criticality of failure score is determined as the weighted total of these ratings. The City may adjust the weighting factor for each of the three components of the criticality of failure score during the condition assessment process to calibrate results. Finally, a criticality of failure rating (1-5) is assigned based on the calculated score.

Probability of Failure Criteria and Rating

The "probability of failure" for each pipe is determined by the four factors of structural integrity, O&M status, maintenance history, and hydraulic capacity.

A "structural integrity" and "O&M status" rating (1-5) is calculated for each asset based on CCTV condition assessment results using NASSCO PACP methodology and a customized algorithm. The algorithm calculation routine used by the City within the CA&CIP Software Module is described below:

1. Every observation made during a CCTV inspection using NASSCO PACP methodology is classified as a structural, O&M, or miscellaneous observation. Additionally, every structural or O&M observation code is associated with a 1-5 "grade". A grade 1 observation represents less severe defect types, and a grade 5 observation represents the most severe defect types. For each CCTV inspection, a database of all recorded structural and O&M defects and the associated grades of each observation is generated by ITPipes. The CA&CIP Module automatically queries CCTV inspection databases created by ITPipes to obtain data.2. An "equivalent" structural and O&M grade is calculated for each observation. For point defects, the equivalent grade is equal to the structural or O&M grade (1-5). For continuous defects, the equivalent score is equal to the structural or O&M grade multiplied by the length of the continuous defect divided by 5.
3. The total structural score is calculated as follows:

   EQUATION 1: *Total Structural Score = Highest Structural Grade x 100 +Sum of Equivalent Structural Grades*

   *+ Sum of Equivalent Structural Grades / Pipe Length * 100*
4. The O&M score is calculated as follows:

   EQUATION 2: *Total O&M Score = Highest O&M Grade x 100 +Sum of Equivalent O&M Grades*

   *+ Sum of Equivalent O&M Grades / Pipe Length * 100*
5. A structural and O&M rating (1-5) is assigned to each inspection based on the calculated structural and O&M scores. The City determines ranges of structural and O&M scores that fall into the 1-5 overall structural and O&M rating categories.

Pipes that are in deteriorated structural condition (i.e. cracks, corrosion, collapse, etc.) and / or have O&M-related defects (i.e. FOG buildup, root intrusion, etc.) are more likely to experience a structural or service failure that results in an SSO, and therefore present a higher risk to the City.

The City also calculates risk scores for assets that have not yet been CCTV inspected. For assets without completed inspections, a "structural integrity" rating is assigned based on the age of the asset. Older assets are generally more likely to be in a more deteriorated structural state. Additionally, an "O&M status" rating is assigned based on the pipe material. Based on the experience of City staff, pipelines of specific construction materials have required more frequent preventative maintenance and resulted in higher levels of call-outs and SSOs in the past. The City can identify specific pipe materials with the CA&CIP Module Software and automatically assign an "O&M status" rating based on the material in lieu of available CCTV data by which the rating can be assigned.

A "maintenance history" rating (1-5) is assigned to each asset based on the number of work orders associated with the asset in the past 5 years in the City's CMMS. A high number of past work orders is an indicator of the possibility of future maintenance requirements, possible SSOs, and elevated risk to the City associated with the asset.

A "hydraulic capacity" rating (1-5) is assigned to each asset based on the depth-to-diameter ratio of the current peak wet weather flow as determined by the City's hydraulic model. Assets that have little to no available hydraulic capacity are more likely to cause an SSO if a blockage or structural failure occurs.

Once a numerical structural integrity, O&M status, maintenance history, and hydraulic capacity rating is assigned to each asset, an overall probability of failure score is determined as the weighted total of these ratings. The City may adjust the weighting factor for each of the four components of the probability of failure score during the condition assessment process to calibrate results. Finally, a criticality of failure rating (1-5) is assigned based on the calculated score.

Overall Risk of Failure Rating

The overall risk of failure rating (1-5) is determined using a matrix that is based on the overall criticality of failure and probability of failure ratings. The City uses the risk of failure rating to prioritize capital improvement projects that are included in the capital improvement plan. Assets that receive high risk of failure ratings that have not had formal condition assessments completed are scheduled for condition assessment on a more rapid timeline. The City completed a thorough evaluation of the "risk of failure" using the methodology described above for its Beamer Street and 48" sewer trunk lines, after a CCTV condition assessment was completed in

2008. These trunk lines are unlined RCP pipes that are located directly upstream of the City's water pollution control facility. The evaluation was completed in order to help prioritize the rehabilitation of these trunk lines which were deteriorated due to hydrogen sulfide corrosion. The methodology used in the evaluation mirrors the calculations that are completed automatically by the City's CA&CIP Module Software, and described above, to help prioritize capital improvement projects identified by the condition assessment program.

Manhole Condition Assessment Protocol

The City completes manhole inspections on a 10-year cycle in conjunction with CCTV inspection. Utility Maintenance Workers document manhole condition assessment using the standard ITPipes manhole inspection form which employs NASSCO Manhole Assessment and Certification Program (MACP) methodology. The data captured in ITPipes can be stored in the CMMS database and linked to manhole assets. Typically, unless severe manhole condition issues are identified, manhole repairs are either conducted as needed internally by City crews, or scheduled for repair as part of pipeline rehabilitation or replacement projects. Flat bottom (no channelization) and brick manholes are priorities for repair. In the case that significant manhole repairs are required based on condition assessment results apart from pipeline projects, a capital improvement project will be generated and prioritized based on MACP condition rankings and case-specific issues with pipeline projects using the risk of failure prioritization process.

Preventative Maintenance & Capital Improvement Plans

The City constantly updates its CA&CIP Module as new field data is received. The Superintendent and Principal Utilities Civil Engineer analyze inspected collection system assets according to the calculated risk of failure rating to produce both a preventative maintenance and capital improvement plan which will strategically utilize available funding to remedy the assets in the system that pose the highest risk in terms of public safety and potential cost of failure. The City reviews condition assessment results on a case-by-case basis, and will reference CCTV inspections captured in the ITPipes software to determine the appropriate timeline and method of repair. The Superintendent and Principal Utilities Civil Engineer use the CA&CIP Module to methodically review condition assessments in a prioritized manner, and document repair methods and capital improvement project scheduling decisions based on quantitative condition and risk assessments.

The Superintendent and Principal Utilities Civil Engineer use the CA&CIP Module to create a ten year capital improvement plan which strategically "bundles"together necessary rehabilitation or replacement projects. Projects may be bundled by risk, for example the highest risk assets may be bundled into the first year of the capital improvement plan. Projects may also be bundled by geographic proximity, construction methodology, or ease of coordination with other City projects. The Superintendent and Principal Utilities Civil Engineer organize these bundles into a ten year schedule which will be updated annually based on condition assessment work completed and new field data.

The CA&CIP Module and review of CCTV condition assessments is also used to identify O&M issues and recommend preventative maintenance schedules by asset. The Superintendent utilizes his maintenance crew to perform preventative measures at a frequency which will prevent potential SSOs and delay the deterioration of specific medium to low risk assets. Preventative maintenance may also be assigned in the short term to prevent SSOs for assets scheduled for rehabilitation or repair in future years.

The Superintendent and Principal Utilities Civil Engineer also incorporate capacity deficiency driven projects (identified in the latest sewer system Master Plan)into the capital improvement plan, described in section viii of the SSMP.Typically, the timeline for construction of sewer system improvements associated with development is coordinated with the construction schedule for associated development projects, and funding is tied to development impact fees. Any improvements identified by the sewer system Master Plan or hydraulic model that are required under existing peak wet weather conditions to prevent capacity related SSOs are addressed immediately on a rapid timeline regardless of the overall risk of failure rating determined bythe CA&CIP Module algorithm.

Major lift station repairs and improvements are typically included in the capital improvement plan on timelines according to lift station O&M manual recommendations or WPCF Operator recommendations regarding equipment condition and service life. Lift stations are not included in the quantitative 1-5 risk rating prioritization process and are repaired solely based on Operator recommendations.

Fund Development

The Superintendent and the Principal Utilities Civil Engineer annually submit a list of capital improvement projects, project descriptions, and cost estimates to the City Manager, Finance Officer, and Director of Public Works, who make up the Capital Projects Committee. Projects are reviewed, and if

approved, they are incorporated into the overall City capital improvement plan (CIP). The City capital improvement plan is updated annually and lists projects ten years into the future. Each year, the Superintendent also submits an operation and maintenance budget, which estimates the funding required to support staffing levels and retain the equipment necessary to perform regularly scheduled maintenance activities. The O&M budget also projects O&M costs ten years into the future based on knowledge of infrastructure expansions identified by the sewer system Master Plan.

As discussed in section 0 of the SSMP, funding for the sewer collection system comes from the utility enterprise fund (fund 220). Funds are allocated to support O&M activities and capital improvement projects. The CA&CIP Module is capable of producing planning level cost estimates for both O&M activities and rehabilitation / replacement projects. The Superintendent or Principal Utilities Civil Engineer calculates the projected costs of performing increased frequency O&M activities on at-risk assets that are scheduled for repair or replacement in the future, and incorporates those costs in the overall consideration of project scheduling with respect to budgeting constraints. The Superintendent and Principal Utilities Civil Engineer evaluate and estimate available funding, and strategically schedule project bundles so as to best coordinate with funding projections. The Superintendent and Principal Utilities Civil Engineer use the CA&CIP Module to produce reports presenting condition data, cost estimation data, O&M activity schedules, and rehabilitation / replacement schedules to justify requests for funding.

The implementation of the CA&CIP Module (2009) and the availability of extensive condition assessment data coincides with the shift by the City Financing Department to a performance-based budgeting system.The CA&CIP Module was upgraded in 2013 with more GIS assets and hydraulic model information. The CA&CIP module is used to track the overall condition and risk of failure rating of the collection system to help justify the funding required to maintain an acceptable level of risk so as to produce a desired level of service now and into the future. The latest rate study, produced in 2013, took into consideration a detailed list of necessary rehabilitation and replacement projects identified by the Superintendent and Principal Utilities Civil Engineer. Including the O&M budget for repair/replacement of sewer infrastructure by City staff.

GASB-34 Reporting / System Valuation

Currently the City's Finance Department calculates and reports GASB-34 compliant infrastructure asset and expense reports. The City has calculated the initial cost of constructing all sewer collection infrastructure it currently owns, which is reported as a net asset. Operation, maintenance, and repair costs are also capitalized. Depreciation of infrastructure is reported as an expense, and is estimated based on assumed service lives for each asset type within the collection system.

A long term goal of the Utility Maintenance Division is to assess the condition of all sewer collection system assets with CCTV inspection and the CA&CIP Module, and set a goal baseline average system condition rating that is consistent with level of service objectives. The CA&CIP Module will be used to plan for capital improvement projects so as to maintain the goal baseline condition rating. This strategy may allow the City to utilize the modified infrastructure cost reporting method accepted by GASB-34. This method requires only reporting of capital assets based on historical construction cost, and reporting of preservation costs (O&M and capital improvement) to maintain the infrastructure at the baseline condition. Asset depreciation calculations are not required using the modified reporting method.

Related Documents

- Refer to the City of Woodland Video Inspection Program
- Refer to City of Woodland Standard Specifications and Details, 2010 Section 18
- Refer to "Beamer Street & 48" Trunk Sewer Line Rehabilitation Project Preliminary Design Technical Memorandum", Kimley-Horn & Associates, 2008
- Refer to the City of Woodland Comprehensive Rate Study, 2013
- Refer to the City of Woodland MPFP, 2008
- Refer to "Condition Assessment and Capital Improvement Planning Software Module Conceptual Design Technical Memorandum", WaterWorks Engineering, 2013
- Refer to City of Woodland CA&CIP Module Software
- Refer to current City of Woodland Capital Improvement Plan

Plan & Schedule

Task	Responsible Party	Scheduled Date
Upload all CCTV, CMMS, hydraulic model output, and GIS data into the CA&CIP module and obtain risk ratings for all assets	GIS Tech/Analyst	Continuously
Train staff on the use of the CA&CIP Module.	Engineering Technician	Continuously
Update near-term CCTV inspection and flushing schedule to maintain 7-year system-wide CCTV inspection and 5-year system wide flushing frequencies.	Utility Superintendent / Senior Utility Maintenance Worker	Annually
Complete scheduled condition assessments and upload data into the CA&CIP Module.	Senior Utility Maintenance Worker	Continuously
Work to obtain the funds necessary to support the preventative maintenance and capital improvement budgets by producing and presenting data that justifies funds needed to maintain acceptable system "risk".	Utility Superintendent / Principal Utilities Civil Engineer	Continuously

iv-d. Training

Requirement

Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained.

Discussion

Certification

The City requires current CWEA certification of all staff involved with the operation and maintenance of the sewer collection system. Required levels of certification are identified within the job descriptions of each position. The City requires staff to regularly attain continuing education units or contact hours to maintain certification. The Public Works Department tracks the certification of all employees. The requirements and certifications held for each position are included in **Attachment iv-6**.

Yearly Performance Reviews

Newly hired employees must undergo a one-year probation period, after which they are evaluated annually using a standard performance evaluation form, which is included in **Attachment iv-7**. Performance reviews are used to identify individuals who have obtained skill sets required to fill positions requiring higher levels of qualification and to quantify bonuses.

Training Activities

The City provides the following types of training activities:

- tailgate discussions
- periodic drills
- critique of recent large projects
- mentoring of new staff

Training is provided in the following areas:

- Safety
- Confined space entry
- Record keeping
- Traffic control
- SSO/Emergency response
- Trench/Shoring
- Equipment use
- Standard O&M operating procedures

The Utility Maintenance Division has monthly training meetings and weekly tailgate discussions. A training schedule is established at the beginning of each year on a 12 month horizon. The 2014 training schedule topic list is included in **Attachment iv-8**. The weekly tailgate meeting typically includes a presentation, a discussion, and a review of material safety data sheets for various chemicals and products used by O&M employees. The material for the presentation and discussion is obtained from AWWA training programs. For 2013, the Utility Maintenance Division used the "Let's Talk Safety" program, which includes 52 discussion outlines and power point presentations on various topics ranging from equipment and chemical safety to tips on how to handle workplace violence.

Documentation of Training

The Public Works Department uses the Training Management System (TMS) software produced by Collaborative Quality Systems (CQS) to document employee training. According to the CQS website (http://www.coqusys.com/TMS.htm), "The Training Management system organizes the user's training information into basic categories: Personnel, Job Profiles, Job Requirements, Departments, and Specifications. Once this base information is entered, training requirements are easily identified by employee, by department, and by specification. As training is completed, information on the training class is entered along with the attendees." The TMS provides the utility the following functionality:

- Meets ISO9001/2000 requirements.
- Ability to produce employee training records on demand.
- Ability to generate "Training Needed" reports by Employee, by Specification, and by Department
- Ability to maintain and print Job Profiles with training requirements.
- Ability to View, Print or Email any Report.
- Manages revisional training and annual certification training.

The TMS software is managed by the Administrative Clerks, who are in charge of inputting training data for all employees. The database stores information on training topics, training administrators, dates, # of hours, etc. Every year, the Clerk prints "Training Needed" reports for each employee and distributes them as a reminder if any training is required per the schedules established in the TMS software to maintain certifications. Continuing education credits to maintain certification are obtained by attendance at various conferences, held by agencies such as CWEA, AWWA, ASCE, etc. An example TMS employee training history log is included in **Attachment iv-9**.

The Director of Public Works has expressed interest in switching to a new training management software in the future, Target Solutions.

Required Contractor Training

The City is responsible for the quality of work performed on the sewer collection system. Because the quality of work must be at a consistent and high level, contractors who perform work on the system must be as equally trained as City staff. This applies to contractors who perform routine maintenance, rehabilitate or replace portions of the system, construct new facilities or assets, etc. Under Municipal Code Section 23C-6-4, contractors are required to hold a professional contractor's license issued by the State of California.

Training requirements for contractors are specifically defined within the standard City contract documents for public works projects. Section E of the standard contract documents, entitled "Legal Relations and Responsibility" includes contractor training requirements. An outline of the training requirements included in the contract documents is provided below:

General Safety

Section E-12.a clearly states that the contractor is solely responsible for jobsite safety, and for enacting safety provisions that "conform to all applicable Federal, State, and local laws, ordinances, and codes, and to the rules and regulations established by the California Division of Industrial Safety, and to other rules of low applicable to the work". Section E-12.b.ii states that the contractor is responsible for providing the necessary safety equipment and instruction for all employees involved in the work, and shall have in place an Injury and Illness Prevention Program as required by California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 7, Group 1, 3203.

Traffic Control

Section E-11.h states that "flaggers and guards, while assigned to traffic control, shall perform their duties and shall be provided with necessary equipment in accordance with CalTrans' current 'Instructions to Flagmen.' Training of flaggers and other traffic control personnel must be documented in accordance with California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 4, Article 11, 1599."

Trenching and Shoring

Section E-12.c requires the submission of a shoring and trenching safety plan as directed by Section 832 of the California Civil Code. Section E-12.d requires contractors to submit a trench safety plan including design drawings prepared by a registered civil or structural engineer if the plans vary from the Construction Safety Orders established by the California Department of Industrial Relations (California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 4, Article 6). This section also requires that a competent person as defined by California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 4, Article 2, 1504 be on-site at all times to fulfill the duties described in Article 6. Finally, this section requires a Cal/OSHA trench permit for any excavation in excess of 5 ft per Article 6.

Lock-out / Tag-out Training

Section E-12.a requires contractors to comply with 29-CFR-1910.147 regarding equipment, procedures, employee training, and documentation of lock-out / tag-out work.

Confined Space Entry

Section E-12.a requires contractors to comply with California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 7, Group 16, Article 108 regarding required confined space identification, permitted entry, training, and operational procedures.

First Aid / CPR Training

Section E-12.a requires contractors to comply with California Code of Regulations, Title 8, Division 1, Chapter 4, Subchapter 4, Article 3, 1512 regarding emergency medical procedures, equipment, and training.

Related Documents

- Refer to "Let's Talk Safety", AWWA 2013
- Refer to City Standard Contract Document Language Section E: Legal Relations and Responsibility
- Attachment iv-6: Collections Sewer/Storm Certifications and Requirements
- Attachment iv-7: Example Performance Review Evaluation Form
- Attachment iv-8: Example 2014 Training Schedule
- Attachment iv-9: Example TMS/CQS Employee Training History Log

Element iv. Operation and Maintenance Program

Plan & Schedule

Task	Responsible Party	Scheduled Date
Create and distribute "Training Needed" reports.	Administrative Clerks	Annually
Develop annual monthly training topic schedule, and maintain documentation of schedules from past years.	Utility Supervisor	Annually
Conduct and document scheduled training.	Wastewater Systems Administrator / Utility Supervisor / Utility Maintenance Workers	Continuously
Execute decision to change city-wide employee training software	Director of Public Works	January 2016

iv-e. Identify equipment and critical replacement parts

Requirement

Provide equipment and replacement part inventories, including identification of critical replacement parts.

Discussion

Maintenance Fleet Equipment

The fleet equipment inventory includes items such as trucks, vactor equipment, backhoes, pumps, etc. Fleet Services staff currently uses the FASTER Asset Solutions fleet management system to schedule and document maintenance, repairs, component specification details, and cost data for these vehicles and equipment. The designated code "SSMP" is used to identify equipment managed by FASTER that is used to operate and maintain sewer collection system infrastructure.

The City has an equipment maintenance parts inventory that is tracked by the Equipment Services Clerk through the Fleet Software System. All fleet equipment and replacement parts are stored at the City's Corporation Yard. The inventory is automatically managed through minimum/maximum order quantities based on a set preventive maintenance schedule which is also tracked through the Fleet Software System. If and when replacement parts show a trend of failure, those parts are considered "critical replacement parts" and become a standard stocked item in order to prevent anticipated equipment failure and minimize downtime.

The City has also identified suppliers for equipment either not stocked by the City, or as a backup supplier for existing critical units which may be needed during emergency situations that may occur during all hours. The City has established contact with the following equipment provides that are available 24 hours a day in the case of an emergency:

- Bypass pumping – Rain For Rent
  Woodland Office Located at 390 West Kentucky : (530)-662-1024
- Generators & Heavy Construction Equipment – United Rentals
  Woodland Office Located at 2086 East Main Street : (530)-669-3270

In addition, the City has agreements with local government fleets in Davis, [contact is Dan Doolan at (530) 757-5653], and Yolo County [contact is Scott Murphy at (530) 666-8438], to borrow equipment as available and necessary.

Sewer Collection System Infrastructure (Pipelines and Lift Stations)

The City keeps replacement parts available to make point repairs for force main, gravity pipeline, and manhole repairs at the City's Corporation Yard. An equipment and replacement parts inventory list has been developed for the items necessary to make these repairs.

The City keeps some replacement parts for lift stations in stock to make routine and emergency repairs. Each lift station has redundant pumping capacity and a replacement pump on bench stock. Replacement parts for lift stations are kept at the water pollution control facility.

Equipment and inventory lists have been developed separately for pipeline / manholes repairs and lift station repairs (see **Attachment iv-10** and **Attachment iv-11** respectively). The City conducted an analysis of each replacement part to determine the criticality of the part. The following three criteria were used to identify a "critical" part:

- Complete asset failure will result if the equipment or replacement part is not available (i.e. pipeline / manhole cannot be effectively repaired, or lift station could go out of service)
- The equipment or part cannot be purchased and obtained in less than 2 hours at all times
- The asset or assets that the equipment or replacement part is used to repair do not have a backup that can easily be put into service if a failure occurs

If a piece of equipment or replacement part meets all of the above requirements, it is considered a "critical" replacement part because its failure will result in a situation where the restoration of service in an emergency situation would not be expedient. With regard to replacement parts, the City maintains stock of items that may reasonably be expected to fail at a time interval that is significantly less than the service life of the parent equipment or asset. It is not economical or necessary for the City to keep replacement parts for every component of every asset owned by the City. The replacement part lists included in this section of the SSMP were created based on an analysis of components that are expected to be replaced at some regular interval, or are known to fail based on Operator experience.

The City verifies stocked quantities of all equipment and replacement parts on the pipeline, manhole, and lift station lists every 6 months, and orders additional stock as needed. Particular attention is paid to stocked quantities of "critical parts", and critical parts are typically re-ordered as they are used.

Element iv. Operation and Maintenance Program

Related Documents

- Refer to SSMP Fleet Unit Parts Usage Listing (available electronically through Transman)
- Refer to SSMP Fleet Unit Equipment Inventory Report (available electronically through Transman)
- Attachment iv-10: Pipeline / Manhole Equipment & Replacement Part Inventory
- Attachment iv-11: Sewer Lift Station Equipment & Replacement Part Inventory

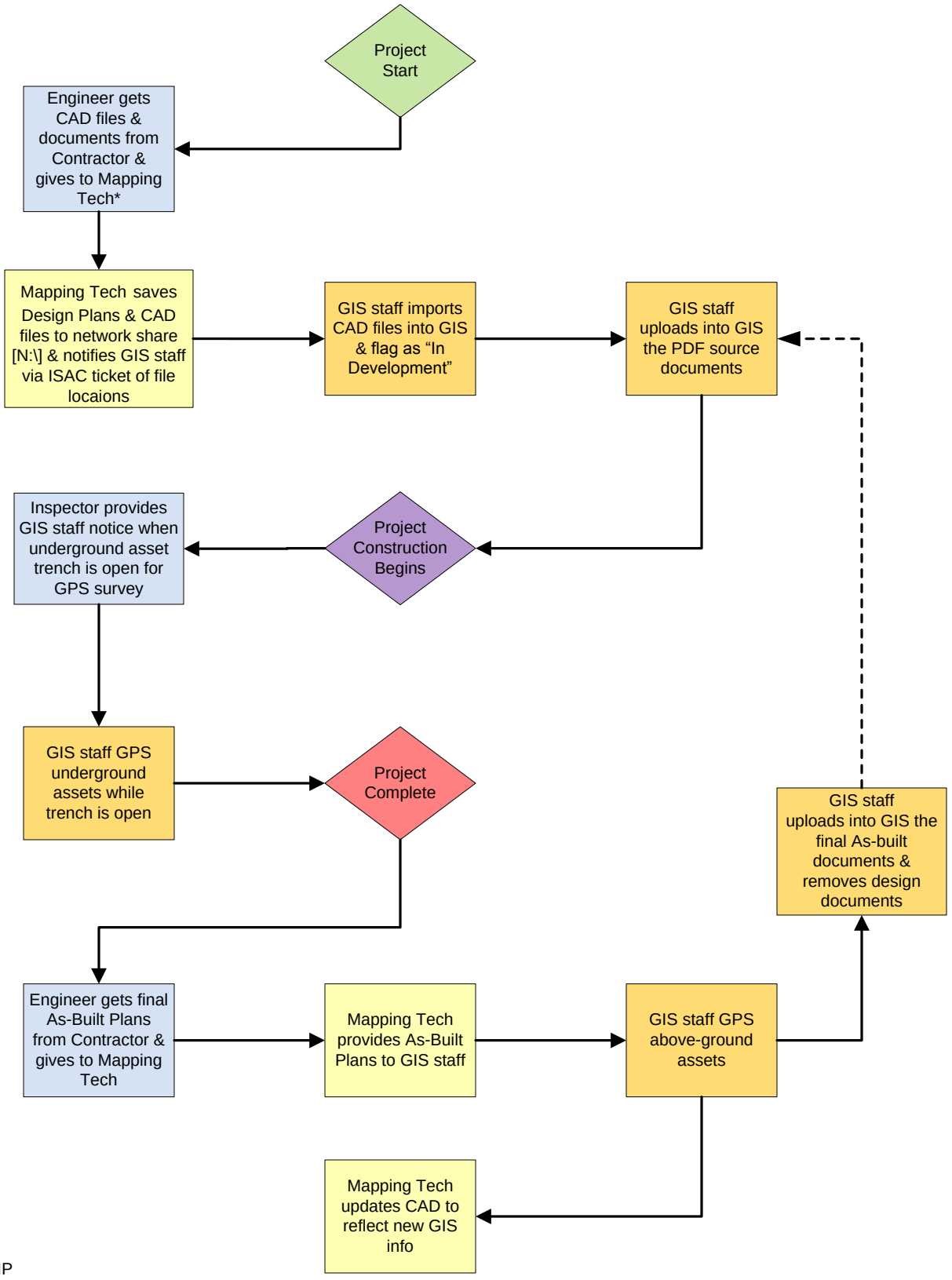
Plan & Schedule

Task	Responsible Party	Scheduled Date
Ensure that "SSMP" designated fleet equipment has a set preventive maintenance schedule and that it is appropriately entered into Fleet Software system.	Equipment Services Clerk	Continuously
Complete pipeline, manhole, and lift station equipment and replacement part inventory lists.	Utility Maintenance Worker / Water Pollution Control Operator	Continuously
Order fleet parts per minimum/maximum inventory status and add any parts to regular inventory that show a trend of recurring failure.	Equipment Services Clerk	Ongoing / Semi-Annual Inspections
Verify stocked quantities of pipeline, manhole, and lift station equipment and replacement parts.	Utility Maintenance Worker / Water Pollution Control Operator	Semi-Annually

Attachment iv-1:

CAD/GIS Project Workflow Map

CAD / GIS Workflow



* at award for CIP
OR
at plan signature for Development

Attachment iv-2:

Example Weekly Sewer Main Inspection List

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN INSPECTION LIST

Check Box If Inspected	NORTHSIDE LOCATIONS	MANHOLE NUMBERS	COMMENTS

1.		Mid-block on Fortna Avenue			SMH936	Flows east	
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
2.		Mid-block on Commerce Avenue			SMH982	Flows east	
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
3.		Matmor Road at Cannery Road			SMH979	Flows north	
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
4.		Donnelly Circle			SMH2099		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
5.		Case Place			SMH974	Top of the line- flows east	
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
6.		Pioneer Avenue at Case Place			SMH884	Flows north	
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
7.		Alley, E Street to A Street			SMH1010 - A	Flows west	
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
		Alley, E Street to A Street			SMH1009 - B		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
		Alley, E Street to A Street			SMH1008 - C		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN INSPECTION LIST

Check Box If Inspected	NORTHSIDE LOCATIONS	MANHOLE NUMBERS	COMMENTS

8.		Wayfarer Center alley between Fourth Street and Fifth Street			SMH2152		Top of the line – flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
9.		Fifth Street at North Street			SMH621		Flows north
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
10.		Fifth Street at Grafton Street			SMH613		Flows north & west
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
11.		Elliot & Walnut			SMH598		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
12.		Mid-block on Sutter Street			SMH743		Flows south
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
13.		Bliss Avenue at Keystone Avenue			SMH754		Flows south
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
14.		Keystone Avenue at Pershing Avenue			SMH752		Top of the line – flows south
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
15.		Second Street at Clover Street			SMH631		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN INSPECTION LIST

Check Box If Inspected	NORTHSIDE LOCATIONS	MANHOLE NUMBERS	COMMENTS

16.		Alley behind the Kraft Brothers			SMH638		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
17.		Elliot Street at Elm Street (3 manholes)			SMH595		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
		Elliot Street at Elm Street (3 manholes)			SMH596		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
		Elliot Street at Elm Street (3 manholes)			SMH597		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
18.		North Street at Cleveland Street			SMH605		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
19.		Purity Plaza			SMH_02376		Flows west
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
20.		California Street at West Elliot Street			SMH1425		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
21.		Coral Drive at Verde Place			SMH1509		Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
22.		Modoc Place			SMH1517		Flows south
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN INSPECTION LIST

Check Box If Inspected	NORTHSIDE LOCATIONS	MANHOLE NUMBERS	COMMENTS

23.		Inyo Place				SMH1541	Flows south
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
24.		Mariposa Street at Stone Way				SMH1437	Flows south
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
25.		West Woodland Avenue at Nevada Street				SMH1398	Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
26.		West Woodland Avenue at Maryland Street				SMH1395	Flows east
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
27.							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
28.							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
29							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
30.							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN INSPECTION LIST

Check Box If Inspected	NORTHSIDE LOCATIONS	MANHOLE NUMBERS	COMMENTS

Have you been trained in the operation of the **Tetra CROWCON** Personal Multigas Monitor atmosphere reading meter: Yes ☐ No ☐

* Note: If you have not been trained in the use of a personal multigas monitor you are not authorized to perform activities that require the use of one*

Bump Test Passed: Yes ☐ No ☐ Signed: _____

Note: If bump test did not pass, **Tag it Out of Service**. Unit will need to be turned into our electrical staff for repairs.

Attachment iv-3:

Example Weekly Sewer Main Flush List

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN FLUSH LIST

Check Box If Inspected	LOCATIONS	Manhole Numbers	COMMENTS

1.	Barnard ST (Denny's)				SMH _02669		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM PM		**Ft.**	**%**	**%**	**ppm**	**ppm**	
2.	120 N. Cottonwood St. (SCO on SW corner of N. Cottonwood and W. Woodland Ave.)				SCO14916		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM PM		**Ft.**	**%**	**%**	**ppm**	**ppm**	
3.	Modoc PL. (off of Chestnut St.)				SMH1517		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM PM		**Ft.**	**%**	**%**	**ppm**	**ppm**	
4.	Verde Pl. (Off of Coral Dr.)				SMH1509		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM PM		**Ft.**	**%**	**%**	**ppm**	**ppm**	
5.	Elliot St. & Walnut				SMH598		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM PM		**Ft.**	**%**	**%**	**ppm**	**ppm**	
6.	Hanson Way Easement				SMH1768		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM PM		**Ft.**	**%**	**%**	**ppm**	**ppm**	
7.	Alley off Railroad (between Elliot & Clover)				SCO???		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM PM		**Ft.**	**%**	**%**	**ppm**	**ppm**	

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN FLUSH LIST

Check Box If Inspected	LOCATIONS	Manhole Numbers	COMMENTS

8.	Oak Ave. at Youngmark's Nursery				SMH453		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
9.	120 Main St.				SCO _15270		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
10	Cleveland St. at Oak Ave.				SMH447		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
11	421 Pendegast St.				SSL13477		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
12	Dog gone Alley between College St. and Elm St.				SMH525		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
13	Manhole South in Alley of SMH525				SMH527		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
14	Martin Way.				SCO222		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
15	Laurel ST. between Second St. and College St. (2 Manholes)				SMH721		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN FLUSH LIST

Check Box If Inspected	LOCATIONS	Manhole Numbers	COMMENTS

16	Laurel ST. between Second St. and College St. (2 Manholes)				SMH722		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
17	Third ST. between Pendegast St. and Marshal Ave.				SMH260		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
18	Third ST. between Pendegast St. and Marshal Ave.				SMH261		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
19	Lawson Ln.				SMH287		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
20	1025 Second St. at Hays (In the Driveway)				SCO_11929		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
21	Fourth St. at Cottage Dr.				SMH331		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
22	Fifth St. at Pendegast St. (football clean-out)				SCO13		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
23	Pendegast St. at Pacific St.				SMH307		
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	

Inspection Date: _____ Inspected By: _____

WEEKLY SEWER MAIN FLUSH LIST

Check Box If Inspected	LOCATIONS	Manhole Numbers	COMMENTS

24							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
25							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
26							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
27							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	
28							
Time		Depth	Oxygen	L.E.L.	H^2S	CO	Initials
AM	**PM**	**Ft.**	**%**	**%**	**ppm**	**ppm**	

Have you been trained in the operation of the Tetra Crowcon Personal Multigas Monitor atmosphere reading meter: Yes ☐ No ☐

* Note: If you have not been trained in the use of a personal multigas monitor you are not authorized to perform activities that require the use of one*

Bump Test Passed: Yes ☐ No ☐ Signed: _____

Note: If bump test did not pass, **Tag it Out of Service**. Unit will need to be turned into our electrical staff for repairs.

Attachment iv-4:

Example Quarterly Cleaning Route

City of Woodland
Quarterly Cleaning, North Side Locations

Work Order#:_____ **Date Started:**_____ **Date Finished:**_____

Modoc Pl. from Chestnut St. to Cul de Sac (Grease) **Size: 8”**

1. Chestnut St. (SMH1519) to Cul de Sac (SMH1517) ID: SGM1560 Length: 405 ft.

West St. through Purity Plaza Easement (2 Runs, Grease) **Size: 8”**

1. Purity Plaza (SMH_02376) to Easement (SMH2124) ID: SGM1983 Length: 520 ft.

2. West St. (SMH1667) to Purity Plaza (SMH_02376) ID: SGM1983 Length: 250 ft.

Dead Cat Alley from Elm St. to Walnut St. (Low Pressure) **Size: 8”**

1. Elm St. (SMH1672) to Walnut St. (SMH1670) ID: SGM3061 Length: 550 ft.

Elm St. from North St. to Court St. (Grease) **Size: 6”**

1. North St. (SMH645) to Court St. (SMH1403) ID: SGM3583 Length: 400 ft.

Plug lateral on 203 Elm St when this line is cleaned.

Elliot St. from Locust St. to College St. (4 Runs, Flat Bottoms, Grease) **Size: 6”**

1. Elm St. West (SMH596) to Locust St. (SMH597) ID: SGM2286 Length: 215 ft.

2. Elm St. East (SMH595) to Elm St. West (SMH596) ID: SGM2285 Length: 105 ft.

3. College St. (SMH563) to Elm St. East (SMH595) ID: SGM2283 Length: 350 ft.

Plug lateral on 147 Elm St when this line is cleaned.

Clover St. from College St. to Fourth St. (4 Runs, Grease, Bellies) **Size: 8”**

1. First St. (SMH634) to College St. (SMH_02373) ID: SGM2119 Length: 450 ft.

2. Second St. (SMH631) to First St. (SMH634) ID: SGM2120 Length: 370 ft.

3. Third St. (SMH630) to Second St. (SMH631) ID: SGM2118 Length: 335 ft.

4. Fourth St. (SMH627) to Third St. (SMH630) ID: SGM2857 Length: 415 ft.

Fourth St. from Dead Cat Alley to Main St. (Flat Bottom, Grease) **Size: 10”**

1. Dead Cat Alley (SMH1177) to Main St. (SMH1178) ID: SGM3553 Length: 250 ft.

Hope Ln. from Fifth St. to Top of Line (Bellies, Grease) **Size: 6”**

1. Fifth St. (SMH2151) to Top of Line (SMH2152)	ID: SGM3445	Length: 430 ft.

Fifth St. from Hope Ln. to Beamer St. (7 Runs, Grease all the way)		**Size: 6”**
1. North St. East (SMH623) to Hope Ln. (SMH2151)	ID: SGM3448	Length: 200 ft.
2. North St. West (SMH624) to North St. East (SMH623)	ID: SGM3451	Length: 70 ft.
3. Mid-Block (SMH621) to North St. West (SMH624)	ID: SGM2389	Length: 220 ft.
4. Elliot St. (SMH219) to Mid-Block (SMH621)	ID: SGM2385	Length: 210 ft.
5. Clover St. (SMH616) to Elliot St. (SMH619)	ID: SGM2517	Length: 490 ft.
6. Grafton St. (SMH613) to Clover St. (SMH616)	ID: SGM2107	Length: 440 ft.
7. Beamer St. (SMH996) to Grafton St. (SMH613)	ID: SGM2106	Length: 410 ft.

Bliss Ave. from Beamer St. to Keystone Ave. (Flat)		**Size: 8”**
1. Beamer St. (SMH_02368) to Keystone Ave. (SMH754)	ID: SGM2512	Length: 685 ft.

Pioneer Ave. from Case Pl. to Main St. (Grease)		**Size: 8”**
1. Case Pl. (SMH884) to Main St. (SMH2292)	ID: SGM3745	Length: 300 ft.

Muir St. (Grease)		**Size: 8”**
1. N. Cottonwood (SMH1362) TO Mid-Block (SMH1357)	ID: SGM2864	Length: 399ft.
2. Mid-Block (SMH1357) TO Mariposa St. (SMH1356)	ID: SGM2838	Length: 404ft

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Mariposa St. (Grease)		**Size: 8”**
1. Glacier St. (SMH1431) To Utah Ave. (SMH1358)	ID: SGM2841	Length: 306ft.
2. Utah Ave.(SMH1358) ToSchuler Ranch Dr.(SMH1359)	ID: SGM3404	Length: 174ft.
3. Schuler Ranch Dr.(SMH1359) To Muir St.(SMH1356)	ID: SGM3405	Length: 197ft.
4. Muir St. (SMH1356) TO W. Kentucky Ave.(SMH1350)	ID: SGM2839	Length: 432ft.

Comments **Do not run east on Clover SGM2123 from SMH615 without plugging the lateral at 101 5th St. Failure to do so could result in disciplinary action…**

Attachment iv-5:

Example Lift Station Maintenance Log

Spring Lake Pump Station Daily Log										Apr-15			
Initials	Date	Time	Lead Start Level SP 8.0 ft	Lead Stop Level SP 3.5 ft	Lag Start Level SP 9.5 ft	Lag Stop Level SP 6.0 ft	Flow Total Meter A	Flow Daily Meter A	Flow Total Meter B	Previous Day Flow Meter B	Pump 1 Hours Total/Daily	Pump 2 Hours Total/Daily	Pump #1 VFD
	4/1/2015												
	4/2/2015												
	4/3/2015												
	4/4/2015												
	4/5/2015												
	4/6/2015												
	4/7/2015												
	4/8/2015												
	4/9/2015												
	4/10/2015												
	4/11/2015												
	4/12/2015												
	4/13/2015												
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	4/20/2015												
	4/21/2015												
	4/22/2015												
	4/23/2015												
	4/24/2015												
	4/25/2015												
	4/26/2015												
	4/27/2015												
	4/28/2015												
	4/29/2015												
	4/30/2015												

Attachment iv-6:

Collections Sewer/Storm Certifications and Requirements

Collection System Employee License and Certificate Requisites

UTILITIES MAINTENANCE WORKER I/II

Water Production/Distribution /Wastewater Collections/Stormwater assignments:

Both positions require possession of a Grade I Water Distribution Operator certificate issued by the California Department of Health Services prior to permanent appointment. Grade I Wastewater Collections System Maintenance certificate issued by California Water Environment Association is desirable. Utilities Maintenance Worker IIs are required to have Grade II certifications for Water Distribution Operation and Wastewater Collections Systems Maintenance, as well.

Both positions require possession of a valid California Driver's License. Class B permit and DMV Medical Certification are required within three months of hire. Must obtain a valid Class B driver's license, Completion of Work Zone Safety certification issued by the International Municipal Signal Association, First Aid and CPR Certifications, Competent Person Certification and Confined Space Certification prior to permanent appointment.

UTILITIES MAINTENANCE WORKER III

Water Production/Distribution assignment – Requires possession of a Grade II Water Distribution Operator certificate and possession of a Grade I Wastewater Collections System Maintenance certificate issued by California Water Environment Association. Requires possession of a Grade III Water Distribution Operator certificate issued by the California Department of Health Services prior to permanent appointment. Grade I Water Treatment certificate is desirable.

Wastewater Collections/Stormwater assignment – Requires possession of a Grade II Wastewater Collections System Operator certificate issued by the California Department of Health Services and possession of a Grade I Water Distribution Operator certificate. Requires possession of a Grade III Wastewater Collections System Maintenance certificate issued by the California Water Environment Association prior to permanent appointment. Grade I Water Treatment certificate is desirable.

Both assignments require possession of a valid Class B California Driver's License with Tank and Air Brake Endorsements. Must possess a valid Class A driver's license within six months of hire. Confined Space Certification, Competent Person Certification, valid First Aid and CPR certifications, acquire or possess Forklift Certification and a Work Zone Safety certificate from the International Municipal Signal Association prior to permanent appointment.

SENIOR UTILITIES MAINTENANCE WORKER

Sanitary Sewer and Storm Drainage Systems- Required upon hire, possession of a current California Water Environment Association (CWEA), C-3 Collections certificate; valid Class B California Driver's License with a Tank and Air Brake Endorsement. Required prior to permanent appointment (completion of probation): possession of a valid Class A California driver's license; Hazardous Waste Operations and Emergency Response (HAZWOPER) training certificate or equivalent (level of training dependent on Departmental need); First Aid, and CPR certifications. A California Department of Public Health, Water Distribution Operator, Grade 3 certificate is highly desirable.

UTILITIES MAINTENANCE SUPERVISOR

Water Production/Distribution assignment – requires possession of a Grade IV Water Distribution Operator certificate issued by the California Department of Public Health and a Grade I Wastewater Collections System Maintenance certificate issued by California Water Environment Association. Cross Connection Control Specialist certificate and a Grade I Water Treatment certificate is desirable.

Wastewater Collections/Stormwater assignment – requires possession of a Grade I Water Distribution Operator certificate and a Grade III Wastewater Collections System Maintenance certificate issued by California Water Environment Association. Grade IV Wastewater Collection System Operator certificate is required within 24 months of hire. Grade I Water Treatment certificate is desirable.

Both assignments require possession of a valid California Class B Driver's License. Confined Space Certification, Competent Person Certification, and valid First Aid and CPR certifications are required prior to permanent appointment.

Attachment iv-7:

Example Performance Review Evaluation Form

CITY OF WOODLAND
EMPLOYEE PERFORMANCE APPRAISAL AND DEVELOPMENT

Name:_____ **Department:** **Public Works**

Classification:_____ **Appraisal Period:** **From:**_____ **To:** _____

PURPOSE: ☐ Regular ☐ Special ☐ Merit Eligibility

☐ Probationary ☐ 1st Quarter ☐ 2nd Quarter ☐ 3rd Quarter ☐ Probation Completed

GENERAL INFORMATION

There are a number of purposes for the evaluation process. First and foremost, the primary purpose is to motivate each individual to work at his or her peak capacity by clarifying what is expected, establishing job standards and objectives, reviewing the employees' progress toward achieving those goals, and providing both the employee and the supervisor an opportunity to express concerns and make positive suggestions. Another purpose is, of course, to provide an opportunity for recognizing individual employees' achievements and also to identify individuals whose performance needs improvement or is unacceptable. In the latter case, the employee would have been notified well in advance of the full appraisal process. This type of appraisal should never come as a surprise. The appraisal process will also identify training needs and outline a course of action by which those training needs can be met.

COMPLETING THE APPRAISAL

This appraisal is divided into four primary areas: First, "Performance Factors", with the supervisor marking the block that best describes the person being evaluated in each of the job performance factors; second, "Job Duties and Performance", with the supervisor detailing the three most essential functions of the job and rating each performance in that function; thirdly, "Comments", to allow the supervisor to provide general comments on the employees performance; finally, "Future Development", detailing three primary goals for the employee in the coming evaluation year.

The supervisor should provide the employee an opportunity to participate in the appraisal process by requesting the employee complete the attached Employee Input Sheet. This sheet is an important communication tool, and much of the information provided by the employee on this form can be included in the final appraisal. The supervisor should allow sufficient time for the employee to complete this form, if necessary.

Once the supervisor has received and reviewed the employee's input, the appraisal can be completed. Keep in mind:

- All ratings other than "Fully Successful" require specific written comment to justify the rating.
- The completed performance appraisal must be reviewed by your supervisor prior to discussing it with the employee. Feel free at any time to discuss the appraisal, if necessary, with Human Resources.

- Finally, all documentation of areas discussed in the appraisal must be attached to the performance appraisal. Documentation includes written communication between you and the employee, memos and letters about the employee from others, and work samples.

RATING GUIDELINES

Employees perform at different levels and should be recognized relative to their contribution. This requires that different levels of performance be identified and documented in the performance appraisal process. Among a group of employees who are all performing well, some will perform at a level overall that is higher or lower than others. It is perfectly normal for an employee who is performing well to perform better in some performance dimensions than in other dimensions. In order for the appraisal to be valid, it is imperative for the rater to honestly and objectively evaluate the employee's performance. The overall performance of each employee should be assigned one of the following definitions:

EXCEEDS EXPECTATIONS -- Exceptional and distinguished performance in the most important and significant factors of the job. Employee produces superior work in a minimum amount of time and consistently exceeds position requirements. Performance demonstrates excellent skill levels in all critical areas. Employee continually makes contributions to the City/department which are both significant in value and measurable in terms of results. "Exceeds Expectations" ratings require written comment.

FULLY SUCCESSFUL -- Fully successful performance in all assigned factors of the job. Employee generally produces high quality work within allotted time frames and meets assigned objectives in a fully satisfactory manner. Performance demonstrates strong job-related skills in the most critical areas of work. Employee exhibits a positive contribution to the City/department which has resulted in improvements in organizational effectiveness.

NEEDS IMPROVEMENT -- Performance needs improvement when it is marginal or limited in critical areas of responsibility. Additional time, training and/or development may improve (or is expected to improve) performance. This category requires additional comments, and recommendations to improve performance must be noted.

UNACCEPTABLE -- Performance is not satisfactory in most of the critical areas of job assignments and, therefore, does not meet minimum requirements of the job. Employee sometimes produces work which requires re-evaluation and/or is behind schedule a significant amount of the time. Performance may demonstrate fair skill level of job requirements, but employee seldom makes constructive contributions to assigned departments of the City. In all cases, an unacceptable evaluation requires comment. An overall unacceptable evaluation means all efforts at improvement have failed and must be accompanied by a recommendation for disciplinary, salary and/or probationary action.

I. PERFORMANCE FACTORS

Check the box which most appropriately fits the level of performance for the factor under appraisal. Written remarks can be made in each case to substantiate the rating under each factor on the reverse side of this form.

FACTORS	Exceeds Expectations	Fully Successful	Needs Improvement	Unacceptable	COMMENTS
QUANTITY OF WORK (output, speed, amount completed)	☐	☐	☐	☐	
JOB KNOWLEDGE (knowledge of application of all phases of this job)	☐	☐	☐	☐	
DEPENDABILITY (reliability, confidence, capability to perform in job with minimum supervision	☐	☐	☐	☐	
WORK HABITS (use of time, care of equipment, safe work practices)	☐	☐	☐	☐	
CREATIVITY (Develop of innovative strategies, increase efficiencies)	☐	☐	☐	☐	
DECISION MAKING ABILITY (consider extent employee applies good judgment and draws sound conclusions)	☐	☐	☐	☐	
CUSTOMER SERVICE (courtesy, tact, enthusiasm and sincerity as they affect fellow workers and the public)	☐	☐	☐	☐	
ORGANIZATIONAL ABILITY (success in organizing work in order to complete assignments on schedule)	☐	☐	☐	☐	

ATTENDANCE: ☐ Excellent ☐ Acceptable ☐ Poor

PUNCTUALITY ☐ Excellent ☐ Acceptable ☐ Poor

II. JOB DUTIES AND PERFORMANCE

List three critical performance areas of job responsibilities for appraisal period and rate each one.

1.

☐ Exceeds Expectations ☐ Fully Successful ☐ Needs Improvement ☐ Unacceptable

Comments:

2.

☐ Exceeds Expectations ☐ Fully Successful ☐ Needs Improvement ☐ Unacceptable

Comments:

3.

☐ Exceeds Expectations ☐ Fully Successful ☐ Needs Improvement ☐ Unacceptable

Comments:

III. WRITTEN REMARKS

Written remarks are required for all ratings except "Fully Successful". In general, remarks should address the basis for the rating, including a discussion of the information and documentation used to determine the rating, along with proposed actions to correct any performance needing improvement.

FACTOR	Exceeds Expectations	Needs Improvement	Unacceptable	Not Applicable
	☐	☐	☐	☐

Comments:

IV. SUMMARY

Overall performance rating considers the results obtained against the established job performance. The rating is as follows:

☐ Exceeds Expectations ☐ Fully Successful ☐ Needs Improvement ☐ Unacceptable

Comments:

V. FUTURE DEVELOPMENT

Employee goals for the coming year:

VI. CERTIFICATION

This appraisal report is based on job related performance and I acknowledge this report was discussed with me.

☐ When checked, this employee is eligible and is approved for a merit increase to Step_____of the salary range.

Interview conducted with: _____ (employee)

By _____ (supervisor) Date: _____

Signature of Employee: _____ Date: _____

Signature of Supervisor _____ Date: _____

☐ I disagree with certain ratings within this report and wish to discuss it with the next supervisory level.

_____
Signature of Employee Date

Comments:

_____

_____

_____

_____
Division Head (if applicable) Date

_____
Department Director Date

EMPLOYEE INPUT SHEET
(Optional)

TO THE EMPLOYEE: Before meeting with your supervisor to discuss your performance appraisal, write out answers to the following questions:

1. List those things you feel most positive about in this past evaluation year (accomplishments, results of work programs, new skills learned, problems resolved, etc.).

2. List the most important aspects, functions, or duties of your job.

3. What help would you like your supervisor to give you? Any areas you feel need further improvement (work skills, relationship with employees or subordinates, knowledge of work, dealings with public, etc.).

4. What specific goals would you like to pursue within the next evaluation year? What would you like to do in the future? How can you prepare for it?

5. What changes, if any, would you like to see made with regard to your job, work procedures, or organization which would help you to improve your performance? Indicate anything you feel that could make you more effective in your job (work process or rule changes, communication, training, etc.).

Attachment iv-8:

Example 2015 Training Schedule

Utility Safety Meeting Schedule

Collections Group 2015

JANUARY	FEBRUARY	MARCH	APRIL
January 2- Safety Tailgate "Cold Stress" January 9- Equipment Training "Lateral Camera" January 16- Safety Tailgate "Back Safety" January 23, Safety Tailgate "PPE" January 30, SSO Review	February 6, Safety Tailgate "Injuries" February 13, Equipment Training, "Rodding" February 20, Safety Tailgate "Slips, Trips and Falls" February 27, SSO Review	March 6, Safety Tailgate "Trenching and Shoring" March 13, Equipment Training, "Ridged Locater" March 20, Safety Tailgate Flagging March 27, SSO Review	April 3, Safety Tailgate, "Driving Safety" April 10, Equipment Training "Confined Space Equipment" April 17, Safety Tailgate "Eye Protection" April 24, SSO Review
MAY	**JUNE**	**JULY**	**AUGUST**
May 1, Safety Tailgate "Fire Extinguishers" May 8, Equipment Training, "Vac-Con" May 15, Safety Tailgate "Heat Illness" May 22, SSO Review May 29, Safety Tailgate "Foot Safety"	June 5, Safety Tailgate "Hand Safety" June 12, Equipment Training "Pole Camera" June 19, Safety Tailgate "Haz-Mat" June 26, SSO Review	July 3, Safety Tailgate "Health and Wellness" July 10, Equipment Training "Walk Behind Saw" July 17, Safety Tailgate "Hearing Protection" July 24, SSO Review July 31, Safety Tailgate "Housekeeping"	August 7, Equipment Training, "Chainsaws" August 14, Safety Tailgate "Ladder Safety" August 21, Safety Tailgate "Lock Out Tag Out" August 28, SSO Review
SEPTEMBER	**OCTOBER**	**NOVEMBER**	**DECEMBER**
September 4, Safety Tailgate "Sexual Harassment" September 11, Equipment Training "Cut Off Saw" September 18, Safety Tailgate "Substance Abuse/Drug Free Workplace" September 25, SSO Review	October 2, Safety Tailgate "Respirator Safety" October 9, Equipment Training, "Snap Cutter" October 16, Safety Tailgate "Night Work Safety" October 23, Equipment Training, "Vac-Con" October 30, SSO Review	November 6, Safety Tailgate "Back Safety" November 13, Equipment Training, "Jack Hammer" November 20, Safety Tailgate "Atmospheric Testing" November 27, SSO Review	December 4, Safety Tailgate "Backhoe Safety" December 11, Equipment Training, "Whacker" December 18, Safety Tailgate "Hazwopper Awareness" December 26, SSO Review

Attachment iv-9:

Example TMS/CQS Employee Training History Log

Employee Training History

Badge/Emp#	Job Code	Shift	Job Title	Department	Supervisor	Site
					Tim Lloyd	MSC

Specification	Spec#	Current Revision	Trained to Revision	Trainer	Date	Length	Class#
Tailgate Meetings	**Tlgt**	**1**	**1**	Rigging	2/7/2012	0.5	3014
CA Driver's License	**CDL**	**1**	**1**	CA DMV	2/16/2012	0	3054
Illness and Injury Prevention Program	**IIPP**	**1**	**1**	City of Woodland	2/16/2012	0	3053
Supv Reasonable Suspicion & Substance Abuse Training	**RSSA**	**1**	**1**	YCPARMIA	5/15/2012	2	3119
Supv Reasonable Suspicion & Substance Abuse Training	**RSSA**	**1**	**1**	CDT	5/18/2012	0	3221
Introduction to the Incident Command System/required of everyone	**ICS100**	**1**	**1**	Emergency Mgmt Institute	6/27/2012	0	3168
Introduction to the National Incident Management System/everyone	**NIMS700**	**1**	**1**	Emergency Mgmt Insitute	8/17/2012	0	3248
All Hands training sessions	**AH**	**1**	**1**	Evacuation Training	1/17/2013	0.25	3366
National Response Framework, An Introduction	**IS-0800.B**	**1**	**1**	Emergency Mgmt Institute	1/30/2013	0	3384
Tailgate Meetings	**Tlgt**	**1**	**1**	Trenching & Shoring	2/15/2013	1	3416
Class B CA Driver's License	**BCDL**	**1**	**1**	CA DMV	8/8/2013	0	3637
DOT Reasonable Suspision & Substance Abuse Training	**DRSSA**	**1**	**1**	CDT, Inc	2/11/2014	0	3842
National Response Framework, An Introduction	**IS-0800.B**	**1**	**1**	Emergency Mgmt Institute	3/5/2014	0	3802
Advanced Incident Command System-Complex Incidents	**ICS400**	**1**	**1**	Texas A&M Engineering Ext	3/19/2014	14	3827
Tailgate Meetings	**Tlgt**	**1**	**1**	Heat Illness Prevention	4/30/2014	0	3853

Total Hours: 17.75

Attachment iv-10:

Pipeline / Manhole Equipment & Replacement Part Inventory

PIPE MATERIAL INVENTORY LIST

Quantity	Item	Max Shelf	Minimum	Comments
70	VCP 4" Pipe 5ft B/S			
8	VCP 4" Pipe 2ft			
58	VCP4"pipe 1 ft			
34	VCP Wye 4" No Hub			
77	VCP Wye 4"B/S			
36	VCP 1/8 4"Bend B/S			
20	VCP 1/8 Bend 4 "No Hub			
17	VCP 1/16 Bend 4" No Hub			
2	VCP T 4"B/S			
6	VCP 90 bend 4" B/S			
49	VCP 1/16 Bend 4" B/S			
44	VCP 6" Pipe5ft B/S			
10	VCP 6"x 4" Wye NoHub			
7	VCP 6"x6" Wye 2ft			
6	VCP 6"x4" reducers			
4	VCP 6" 1/8 bend			
4	VCP 6" 1/16 bend			
1	VCP 8" Pipe 5ft			
14	VCP8" 1/8 bend B/S			
3	VCP 8" 90Bend B/S			
2	VCP Wye 8"x4"x3ft			
3	VCP T's 8"x6"x2ft			
3	VCP T's 8"x6"x3ft			
3	VCP Wye 8"x6"x3ft			
1	VCP 8"x6" Reducer			
18	VCP 10"pipe 5ft			
1	VCP T 10"x6"x3ft			
3	VCP Wye 10"x6"x3ft			
4	VCP 10"x8" Reducers			
2	VCP 10" 90 Bend B/S			
9	VCP 12"Pipex5ft			
2	VCP 12"1/8Bend B/S			
2	VCP 12" 90Bend B/S			
3	VCP Wye 12"x6"x3ft			
3	VCP T's 12"x6"x3ft			
1	VCP Wye 15"x4"			

PIPE MATERIAL INVENTORY LIST

7	ABS 4" Pipe 20ft			
3	ABS3" Pipe 20ft			
20	**ABS 4"Wye**			
21	ABS 4" 1/8 St Bend			
9	ABS 4" 1/8 HxH			
7	ABS 4" 1/16 HxH			
20	ABS 4" FEM Adapter			
114	Couplers			
28	ABS 3"x4" Reducers			
17	ABS 4x3 Bushings			
17	SDR-26 4"x14ft			
13	SDR-26 Wye 4"			
12	SDR-26 1/8 Bend 4"			
10	SDR-26 1/16 Bend 4"			
9	SDR-26 Cap4"			
21	DI Pipe 4"x18ft			
35	DI Pipe 6"x18ft			
4	DI Pipe 8"x18ft			
13	DI Pipe 10"x18ft			
11	RCP 12"x8ft			
1	RCP15"x8ft			
1	RCP 18"x8ft			
	10/2/2014			

MAN HOLE MATERIAL INVENTORY LIST

Quantity	Item	Max Shelf	Minimum	Comments
12	Storm drain castings 5 1/4	12		
6	Sewer casting 5 1/4		5	
5	Storm castings 2 1/2	5		
2	Sewer Casting 2 1/2		1	
10	Temp Lids	7		
7	Pamrex M/H covers 5 1/4	2		
2	Pose Pamerex M/H Square 5 1/4		7	
19	Lids Storm/Sewer		18	
5	Plastic Grade rings 4"	5		
6	Plastic Grade rings 2.5"		7	
46	Plastic Grade rings 1.5"		45	
6	48" x 12" RCP M/H Rings	6		
4	48" x 24" RCP M/H Rings	4		
3	48" x 36" RCP M/H Rings	3		
7	48" x 4' RCP M/H Rings	7		
1	Base Strait Tru	1		
1	4 way channel M/H Base	1		
1	48" x 18" Cone RCP	1		
3	48" x 30" x 24" Con RCP	3		
2	48" x 24" x 8" Flat tops RCP	2		
1	3" Grade Ring RCP	1		
6	6" Grade Ring RCP		2	
3	2' x 4' x 12" Santa Rosa lids		2	missing concrete lids
3	24" Concrete lid w/iron ins			
				Last updated on August 22/2012
		updated on 8/22/2012		

C:\Users\mmiller\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\PMMKFKJ8\Pipe Inventory 10-2-20147.xlsx

RODDER TIPS INVENTORY LIST

Quantity	Item	Max Shelf	Minimum	Comments
1	Balloon	1		
2	Penetrating Tip	2		
7	2" Cutter	7		
6	Spring retriever	6		
3	3" root saw	3		
9	4" cutter	13		
5	2" root saw	5		
3	4" root saw	3		
1	4" cutting ball	1		
7	3" cutter	20		
	updated on 8/24/2012			

ROOT TREATMENT INVENTORY LIST

Quantity	Item	Max Shelf	Minimum	Comments
2	Root Foamer			
1	30' Foaming hose reel			
4	Bladder hoses			
1	Bicylce pump			
6	5 gallon chemical jugs			

SHEAR BANDS INVENTORY LIST

Quantity	Item	Max Shelf	Minimum	Comments
14	4" Clay/Clay		7	ordered on 8/2/2012
26	Clay/D1, C1, AC		12	ordererd on 8/23/2012
31	Clay/Plastic		12	ordererd on 8/23/2012
44	Plastic/Plastic		33	ordered on 8/23/2012
21	AC, D1/Plastic		9	ordered on 8/23/2012
	updated on 8/23/2012			

VAC-CON INVENTORY LIST

Quantity	Item	Max Shelf	Minimum	Comments
6	U-DO-89 Hose Guide 3"			
4	U-LH1X20 Leader Hose 3000 PSI			
3	U-LH3/4x20 Leader Hose 3000 PSI			
24	U-UE1121 3/4" Male end Poly			
24	U-UE1122 3/4" Mender Poly			
24	U-UE1161 1" Male end poly mend			
24	U-UE1162 1" Hose mender polyme			
24	U-UEM1010FS Female swivel 1"			
23	U-UEM7575FS 3/4" Female swivel			
11	U-UEMP630-200 1"X200' Pirahna			
2	3/4" x 20' Leader hose 5500			
2	1" x 20' Leader hose 5100			
	3/4" x 800' Pirahna 3000 PSI			
	1" x 600' Pirahna 3000 PSI			
VAC-CON TIPS				
1	Injector 1"			
7	1" Granads			
1	1" Grease Cuter			
1	1" Warthog			
1	1" Bull Dog w/8" skid			
1	1" Sled w/cage			
1	1" Dredge			
3	1" Skids			
1	1" Penetrator			
1	1" Flounder			
1	3/4" Bull Dog			
1	3/4" Dredge			
1	3/4" Sled			
1	3/4" Granads			
1	3/4" Penetrato			
1	1" Bull Dog w/skid			

SPILL SUPPLIES INVENTORY LIST

Quantity	Item	Max Shelf	Minimum	Comments
26	Spill King Absorbent			Located in wood crate next to deliniators
26	Natures Absorbent			located in wood crate next to deliniators
4	Environmentaly Safe			
48	Pig 3x10 oil only booms			
7	Pig 5x20 oil only booms			
7 cases/200 ea	Pig oil only mat pads			200 count
2 cases/6 ea	Pig Skimmer Socks			
5	Pig mat roll 30'x150'			
3	Pillows			
1	Pig kit 283			Blue canvas bags
3	Pig kit 201			Blue canvas bags
2	Green mat pads			
1 case/200 ea	Pig oil only mat mads 16"x20"			
1	Oil absorbent snake			Located In 33 gal, paper barrel
4	Boxes of tough guy can liners			100 in each box
3	boxes of Tyvek white jump suits			
	updated on 8/24/2012			

Attachment iv-11:

Sewer Lift Station Equipment & Replacement Part Inventory

City of Woodland Sewer Collection System (Sewer Lift Stations) - Equipment / Replacement Parts Inventory

List

Item	Description / Model	Lift Station Name	If the equipment is not availiable for use could the failure mode the equipment is used to remedy cause an SSO if not	Can the equipment be purchased or obtained in less than 2 hours if not initially available?	If a lift station malfunction has occurred, can it be corrected without this piece of equipment?	Critical Part Status	Required Quantity	Storage Location
1	Xylem 3127 spare pump	Gibson Ranch	Yes	No	No	CRITICAL	1	Inside Station
2	8" backup pump	Gibson Ranch	Yes	Yes	Yes	NON CRITICAL	1	Inside Station
3	6" backup pump	Gibson Ranch	Yes	Yes	Yes	NON CRITICAL	1	Inside Station
4	8" backup pump	Spring Lake	Yes	Yes	Yes	NON CRITICAL	1	Inside Station
5	6" backup pump	Spring Lake	Yes	Yes	Yes	NON CRITICAL	1	Inside Station
6	Whisper Watt 300 portable generator	Gibson Ranch	Yes	Yes	Yes	NON CRITICAL	1	inside Ranch station
7	Standby Generator	Spring Lake	Yes	Yes	Yes	NON CRITICAL	1	Inside Lake Station
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		

Replacement Part Inventory

Item	Description / Model	Lift Station Name	Is failure of the part likely to cause the lift station to malfunction resulting in an SSO?	Can the part be purchased or obtained in less than 2 hours if not initially available?	Can a backup be easily put into service to restore the lift station if the part fails?	Critical Part Status	Required Quantity	Storage Location
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		
						NON CRITICAL		

v Design and Performance Provisions

SWRCB Requirement:

> *(a)* ***Design and construction standards and specifications*** *for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and*
>
> *(b) Procedures and standards for* ***inspecting and testing*** *the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.*
>
> *Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006 amended through 2013-058-Exec.*

Background

This SSMP section summarizes the content of the City's current design and construction standards and specifications with respect to sewer collection system infrastructure. The City standards are in place to ensure that all construction is performed in a manner known to the City to produce high quality and uniform results. The maintenance and enforcement of the City standards will ensure the maximum lifecycle for sewer collection system infrastructure and that maintenance crews can efficiently perform O&M or repair activities on similar system-wide components. The standards enforce acceptance criteria for new construction which helps to ensure that no sub-standard components are introduced to the system that will negatively affect future performance. This section fulfills the requirements of the GWDR SSMP mandatory element v.

Element v. Design and Performance Provisions

v-a. Design and construction standards and specifications

Requirement

Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems.

Discussion

The City maintains an extensive Standard Specifications and Details manual. The most recent update was completed in 2011. The City manual consists of three major components, which include engineering design standards, standard construction detail drawings, and standard materials and construction methods. Each of these components is summarized with respect to the wastewater collection system below.

Engineering Design Standards

Section 2: Development Maps and Construction Plans

The City maintains a list of all information and formatting that must be included on a plan set for submission to the City Engineer for review and approval. The City requires that plan sets include any improvements outlined in the applicable City Master Plans (such as the sewer system Master Plan) to ensure that all new construction is harmonious with previously identified future improvements. The standards also require submission of record drawings from contractors in paper and electronic (AutoCAD DWG) format at the completion of each project. This section of the standards also outlines the plan submission and approval process, including the submission of record drawings.

Section 5: Sanitary Sewer System Design

The City provides a list of standard unit wastewater flow rates from common land use elements for use in pipe capacity calculations. The City requires application of standard infiltration and inflow rate per mile of pipe to all design flow calculations. The City uses Manning's formula to determine pipe capacity. The standards set different limits for the depth-to-diameter ratio for pipes 12" inch diameter or less and pipes greater than 12" in diameter, not to be exceeded when carrying the design flow. The City specifies minimum pipe slope based on pipe diameter, required pipe materials, typical trench cover and separation distances from other

utilities, alignment location in streets, and the installation of cleanouts in new lateral services. The city also specifies requirements for maintenance hole spacing and internal drops within the maintenance holes.

Section 6: Wastewater Pump Station Design

The City requires the submission of detailed architectural, structural, utility, mechanical, electrical, and wastewater level control plans to be submitted with wastewater pump station design drawings. The City reviews and imposes specific design standards on calculations including pump cycling, minimum and maximum water levels in wells, wastewater retention time, and system / pump head-capacity curves. Required features such PVC lined wet wells, backup pumps, equipment accessibility requirements, in-place equipment hoists, backup generators, emergency fuel storage, and stubbed piping for integration of portable pumps ensure redundancy and efficient use of lift stations. The City maintains a comprehensive specification for pumps and motors to ensure longevity and proper functionality over the range of flow conditions that may be experienced at lift stations. The City also maintains design standards for integration into the SCADA system for remote supervision of lift stations.

Standard Details

The City maintains the following standard detail drawings pertaining to the sanitary sewer collection system:

Utility Trenching

- Trench Terminology
- ASTM C 12 VCP Bedding Details
- Pipe Bedding and Trench Backfill in Existing Paved Areas
- Pipe Bedding and Trench Backfill in Unpaved Areas
- Narrow Trench
- Trench Repair for Streets Under Moratorium
- Pipe Boring and Jacking

Sanitary Sewer System

- Sewer Service Lateral
- Special Sewer Service Lateral
- Residential Service Lateral Trench
- Special Sewer Lateral and Cleanout
- Standard Sewer Lateral and Cleanout (Joint Trench Under Walk)

- Temporary Mainline Cleanout
- Standard Sewer Maintenance hole
- Inside Sanitary Sewer Drop Maintenance hole
- Sewer Line Taps

Materials and Construction Methods

Section 8: Underground Pipeline Construction

The City standards specify maximum trench widths and lengths, and require the submission of trenching / shoring design calculations at the discretion of the City engineer. The standards require the submission of a CAL-OSHA Annual Excavation Permit, as well as a job-specific Trench Safety Plan prior to excavation work. Specific requirements for utility bedding, backfill, and compaction are provided. The standards specify trench plate sizes and thicknesses for covering trenches during off-hours.

The City Standards provide basic requirements for trenchless "tunneling, boring, and jacking" that include the following; submission of all applicable permits and orders required to execute trenchless construction (Caltrans, Railroad, Private Property, etc.), minimum conduit casing diameter and minimum casing thickness, the placement of support skids or spacers within the conduit casing, material used to fill void spaces between the conduit and the casing, and the video inspection of all other utility facilities located within 2 ½ feet of trenchless construction activities.

Section 10: Sanitary Sewer Collection System

The City standards specify the use of vitrified clay pipe (VCP), and provides polyvinyl chloride (PVC) pipe material requirements in case the use of VCP is not possible or not recommended. Polymer-lined ductile iron pipe is required where a cover of less than 18" is available. The City specifies the use of compression fittings, and details methods for joining and laying pipe segments. The installation of cleanouts is required for all individual connections. The city also details ASTM requirements and installation instructions for both pre-cast and cast-in-place maintenance hole construction, and requires the installation of T-lock PVC liners as directed by the City engineer to protect from corrosion.

Updating Procedure for City Standards and Specifications

A major review and update to the City Standards and Specifications is completed every 5 years. The latest update to the standards was completed in the 2010. The latest version of the Standards and Specifications is circulated to all public work employees, and a period of time is set within which employees may make mark-ups and redlines to the standards and submit their changes to the City Engineer. The City Engineer reviews the changes and produces the final version, which must be approved by the City Council before adoption. Minor updates to the standards are made upon request of public work employees, and also must be approved by City Council before adoption.

Development and Adoption of Standards for Trenchless Technologies

The City is constantly expanding its library of design and construction standards for trenchless technologies. Within the 2010 Standards and Specifications, there is a specification for "Tunneling, Boring, and Jacking". In conjunction with the Beamer Street and 48" Trunk Line Rehabilitation Project (2008), specifications were developed for the following trenchless construction methods:

- Cured-In-Place Pipe (CIPP)
- Slip Lining
- Spiral Wound Lining
- Spray-Applied Cementitous Liner for Maintenance Hole Rehabilitation

As the City continues its rehabilitation and replacement capital improvement program, civil engineering consultants will be utilized to recommend appropriate trenchless rehabilitation methods for deteriorated assets identified by the CCTV condition assessment program. As part of the scope of services for consultants, specifications for trenchless construction methods that have been selected and have not been used in the City of Woodland previously will be provided, and may be officially adopted into the City's Standards and Specifications during the next review and update period, as deemed necessary by the City Engineer. This approach will ensure that the City's trenchless design and construction standards and specifications are always up-to-date and evolving as changes in the industry occur.

Related Documents

- Refer to City of Woodland Standard Specifications and Details, 2010

Element v. Design and Performance Provisions

Plan & Schedule

Task	Responsible Party	Scheduled Date
Circulate City Standards and Specifications, receive comments on proposed updates, review and adopt changes.	Principal Utilities Civil Engineer	Every 5 Years
Adopt newly acquired trenchless design and construction standards within the City Standard Specifications, where appropriate.	Wastewater Systems Administrator / Principal Utilities Civil Engineer	Every 5 Years

Element v. Design and Performance Provisions

v-b. Procedures and standards for inspecting and testing

Requirement

Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

Discussion

The City Standard Specifications and Details manual describe acceptance tests and criteria for new sanitary sewer infrastructure components. These acceptance criteria are summarized below.

Materials and Construction Methods Section 18: CCTV Inspections

The City requires the usage of NASSCO procedures for the general completion of CCTV inspection work. The city requires that all lines are hydraulically cleaned before inspection. The City requires video, audio, and written presentation of pipe data including pipe footage, condition, root intrusion, internal defects, location of infiltration sources, and location of service connections. The City imposes requirements on video quality and camera operation to ensure that visual data can be accurately collected and recorded.

Materials and Construction Methods Section 9: Sanitary Sewer Piping and Maintenance Holes

Before installation, sewer pipe must be certified by the manufacturer to have passed ASTM flattening, pipe stiffness, and joint tightness tests. CCTV inspection certifying that new pipes are free from defect is required before acceptance by the City directly after installation and during the 11th month of the warranty period. The standards place limits on the depth of standing water that may be observed in a pipe during CCTV inspection before re-construction is warranted. Sewer piping must also pass a low-pressure test to ensure proper pipe jointing and minimal infiltration by groundwater. In areas of high groundwater, an infiltration test may also be required. Flexible conduits are required to pass a mandrel test to verify maximum deflection. Following completion of construction, all maintenance holes are vacuum tested for any leakage.

Engineering Design Standards Section 6: Sanitary Sewer Lift Stations

Pumps installed in City sanitary sewer lift stations are not accepted without completion and documentation of successful factory pump tests and field tests performed by the manufacturer. Pumps must be furnished along with a list of required replacement parts specified by the City. Completed lift stations are not accepted for ownership by the City without submission of a

complete operation and maintenance guide which lays out the necessary tasks to be completed by City maintenance crews. The City also requires submission of an emergency response plan from contractor or engineer that details the procedures that must be followed in the case of a range of malfunctions of lift station equipment.

Development and Adoption of Standards for Trenchless Technologies

As described in section v-a of this SSMP, standards are constantly being developed by civil engineering consultants in conjunction with trenchless rehabilitation projects, and adopted by the City. Inspection and testing standards for various trenchless technologies are included within the specifications provided by the consultants, and enforced by construction inspectors during completion of the projects.

Related Documents

- Refer to City of Woodland Standard Specifications and Details, 2010

Plan & Schedule

Task	Responsible Party	Scheduled Date
Adopt newly developed trenchless construction inspection and testing standards within the City Standard Specifications, where appropriate.	Utility Superintendent / Principal Utilities Civil Engineer	Every 5 Years

vi Overflow Emergency Response Plan

SWRCB Requirement:

Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:

*(a) Proper **notification procedures** so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;*

*(b) A program to ensure an **appropriate response** to all overflows;*

*(c) Procedures to ensure **prompt notification** to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;*

*(d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are **appropriately trained**;*

*(e) Procedures to address **emergency operations**, such as traffic and crowd control and other necessary response activities; and*

*(f) A program to ensure that all reasonable steps are taken to **contain and prevent** the discharge of untreated and partially treated wastewater to waters of the United States and to **minimize or correct** any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.*

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.

Background

This section of the SSMP outlines the elements of the City's Overflow Emergency Response Plan (OERP). The OERP provides communication and notification procedures, SSO containment and mitigation procedures, contact information, training procedures, and document performance review and update procedures. The OERP is in place to ensure that SSOs are reported and responded to quickly and efficiently so as to limit the potential for exposure of the public to raw sewage and to rapidly decontaminate the affected environment. The OERP is organized into 8 sections outlining: Purpose and Goals, Distribution, Acronym and Term Definitions, SSO Response Procedures, SSO Reporting Timeframes, Group Telephone Guide, OERP Procedures Training, and OERP Performance Review. This section fulfills the requirements of the GWDR SSMP mandatory element vi.

Element vi. Overflow Emergency Response Plan

vi-a. Proper notification procedures

Requirement

Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner.

Discussion

SSMP section ii contains the SSO Response Chain of Communication, which outlines how the proper response personnel are notified, including contact information. Sub-section II-B of the "SSO Response Procedures" section of the OERP (**Attachment vi-1**) prescribes that the initial observer of the incident initiate the Chain of Communication. The initial observer can be either a Utility Maintenance Worker who discovers a spill, the Operator at the MSC front desk during normal business hours, or the Operator at the Yolo County Communications desk after normal business hours. The OERP section entitled "SSO Reporting Timeframes" provides external agency reporting timelines and requirements to ensure compliance with MRP No. 2006-0003-DWQ.

Related Documents

- Refer to SSO Response Chain of Communication (see SSMP section ii-c)
- Attachment vi-1: City of Woodland OERP

Plan & Schedule

Task	Responsible Party	Scheduled Date
Update phone numbers and contacts in the three call groups as necessary in the OERP.	Wastewater Systems Administrator	Annually

Element vi. Overflow Emergency Response Plan

vi-b. A program to ensure appropriate response

Requirement	A program to ensure an appropriate response to all overflows.
Discussion	The "SSO Response Procedures" section of the OERP describes a 10 step process that is followed. The 10 steps describe: I. Overflow Detection Methods II. SSO Chain of Communication III. Initial Investigation Response IV. Traffic Control / Hazardous Materials V. SSO Containment VI. Location and Correction of SSO Cause VII. Clean Up VIII. Final Investigation IX. Reporting X. Special Circumstances SSO containment, correction, and clean-up procedures (sub-sections V, VI, and VII) are described for overland spills, spills to storm drains, spills in private residences, spills at pumping stations, contamination of surface waters or natural habitat, and spills containing hazardous material.
Related Documents	o Refer to City of Woodland Public Works HVVC Best Practices Manual o Attachment vi-1: City of Woodland OERP
Plan & Schedule	No further efforts are projected for this element at the present time.

Element vi. Overflow Emergency Response Plan

vi-c. Procedures to ensure prompt notification to regulatory agencies and other potentially affected entities

Requirement

The OERP must include procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with the MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification.

Discussion

Notification Groups and Reporting Timelines

The OERP section entitled "SSO Reporting Timeframes" includes deadlines for reporting of Category 1, Category 2, Category 3, and Private Lateral SSOs to all applicable regulatory agencies per the MRP. Three "Call Groups" are established in the OERP section entitled "Group Telephone Guide", which are broken down into required contacts for Category 1 SSOs (Call Group 1), required contacts for both Category 1, 2, and 3 SSOs (Call Group 2), and as-needed contacts (Call Group 3).

Call Group 1 includes the RWQCB, California OES, Yolo County Health Department, and CDFG who should be contacted no later than 2 hours after recognition of a Category 1 SSO that affects a drainage channel or surface water (per SWRCB Order WQ-2008-0002-EXEC). Call Group 2 includes appropriate City employees, who are contacted within 30 minutes after recognition of any SSO to ensure an appropriate response. Call Group 3 includes auxiliary response agencies that can be contacted if necessary, such as the Fire Department, Police Department, by-pass pumping contractor, standby emergency response contractors, generator / heavy construction equipment rental agencies, and Underground Service Alert. Call Group 3 also includes downstream water users who are contacted if potentially affected by an SSO, and the Yolo County Communications Desk who is contacted incase public notification of an SSO is required. Select entities within Call Group 3 are contacted within 1 hour of an SSO if the Supervisor or On-Call Crew deems it necessary.

Notification of Downstream Utilities

Woodland's WPCF discharges to the Tule Canal, which ultimately discharges into the Yolo Bypass. The only major water consumer along the Tule Canal downstream of the City of Woodland is Conaway Ranch, which

withdraws water from this canal for irrigation. If a spill occurs from the City's sewer collection system that reaches this canal, Conaway Ranch is contacted. Other than the Tule Canal, the only other significant "Water of the United States" that a spill in the City sewer collection system could reach is Cache Creek, which has no direct water users downstream of Woodland prior to discharging into the Yolo Bypass. The State OES would handle notification of water users and utilities on the Sacramento River in the case of a large spill that had the potential of reaching the Yolo Bypass.

SSO Report Form and Online Reporting

The OERP section entitled "SSO Response Procedures", sub-section IX requires that the Utility Supervisor fill out an SSO Report Form in the field following mitigation of the spill. An example of this form is included as an appendix to the OERP. This form requires entry of all data required for submission when filling out an official report through the CIWQS system, according to the MRP. All official SSO reports are completed and certified by the Wastewater Systems Administrator, and submitted using the CIWQS system within the timelines required by the MRP.

For Category 1 SSOs which affect surface waters, the Utility Supervisor or On-Call Crew must ensure that the appropriate information is relayed to the Supervisor or Superintendent, who must fax a certification form to the RWQCB within 24-hours of the initial report of an SSO confirming that all required 2-hour notifications were made per SWRCB Order WQ-2008-0002-EXEC. This 2-hour notification certification form is also included as an appendix to the OERP. Alternatively, the certification of 2-hour notifications may be made using the CIWQS system.

Related Documents

- Attachment vi-1: City of Woodland OERP

Plan & Schedule

No further efforts are projected for this element at the present time.

vi-d. Distribute OERP to all likely users and train

Requirement

The OERP must include procedures to ensure that appropriate staff and contractor personnel are made aware of proper procedures and are appropriately trained.

Discussion

SSO Response Training

The OERP section entitled "OERP Response Procedures Training" requires annual field training for Sewer Utility Maintenance Crews to ensure that they are capable of successfully performing all 10 steps of the "SSO Response Procedures". This section includes a list of 11 training objectives associated with execution of OERP procedures. The City conducts training on each of these objectives annually, in order to ensure staff can perform each activity efficiently and are trained on any procedures that have been recently updated. Training on these objectives is rolled into the regular training program discussed in section iv-d of the SSMP, and is included on the training schedule produced every year.

OERP Performance Reviews, Updates, and Modifications

The OERP section entitled "OERP Response Procedures Training" also requires an annual meeting or conference call involving the Utility Maintenance Division, Fire Department, Police Department, and Yolo County Health Department. At this meeting, an updated copy of the OERP will be distributed and a general review of responsibilities and response timelines for all responders will be conducted. The OERP section entitled "OERP Performance Review" specifies that within 1 month of a Category 1 SSO, the Superintendent, Supervisor, and involved Maintenance Workers will meet to review response performance and document any suggestions for an improved response. Additionally, future regular maintenance strategies to prevent an SSO in the same location due to a similar cause will be formulated and documented. Annually, before the meeting with auxiliary response agencies, the Superintendent reviews documented meeting notes from the post-SSO meetings and make updates to the OERP for distribution.

Every month, an "SSO & Illegal/Illicit Review Committee" meeting is held. The Committee is co-chaired by the Wastewater Systems Administrator and the Utilities Maintenance Supervisor their designees. Members of the committee include key representatives of both the Utility Maintenance and Environmental Operations Divisions. The purpose of the meeting is to coordinate the preventative maintenance and incident response activities of the Utility Maintenance Division with the inspection and enforcement activities of the Environmental Operations Division (see meeting SOP in

Attachment vi-2). Typical topics addressed at the committee meetings are:

- Stormwater program
- SSMP activities (Baseline water quality monitoring, FOG program)
- Review of recent illicit discharge / connection incidents or SSOs
- Enforcement actions

If a Category 1 SSO has occurred in the month prior to the scheduled committee meeting, the committee meeting serves as the required post SSO follow-up meeting. A standard committee meeting agenda template is included in **Attachment vi-3**, and a meeting minute summary / action item log is included in **Attachment vi-4**.

Related Documents

- Attachment vi-1: City of Woodland OERP
- Attachment vi-2: Meeting Minutes SOP for SSO & Illegal/Illicit Review Committee
- Attachment vi-3: SSO & Illegal/Illicit Committee Agenda Template
- Attachment vi-4: Sample SSO & Illegal/Illicit Review Committee Meeting Minute Summary and Action Item Log

Plan & Schedule

Task	Responsible Party	Scheduled Date
Plan and execute SSO response training for all O&M Workers.	Utility Maintenance Supervisor	Annually
Set up joint annual meetings (including a first annual roll-out meeting) to distribute the updated OERP and review response procedures with the Utility Maintenance Division, Fire Department, Police Department, and Yolo County Health Department.	Wastewater Systems Administrator	Annually
Assess SSO response review notes and update OERP to improve response techniques.	Wastewater Systems Administrator	Annually

Element vi. Overflow Emergency Response Plan

vi-e. Procedures for emergency operations (traffic and crowd control…)

Requirement	Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities.
Discussion	Special emergency operations are conducted by the Police Department, Fire Department, Yolo County Health Department, and standby emergency response contractors. When called to respond, these agencies are responsible for the case-specific implementation of emergency procedures. The Police Department maintains its own traffic and crowd control protocols. The Fire Department maintains its own emergency response protocols. The Yolo County Health Department, specifically the Hazardous Materials Emergency Response Team, also maintains its own list of protocols for dealing with a range of hazardous materials releases. The OERP does not reproduce or modify the protocols maintained by these agencies. The City of Woodland has established on-call availability with contractors, as needed. The integration of the procedures followed by these auxiliary emergency response agencies with the response procedures of O&M Workers is reviewed and clarified at the annual coordination meeting.
Related Documents	o Attachment vi-1: City of Woodland OERP
Plan & Schedule	No further efforts are projected for this element at the present time.

vi-f. Program to ensure steps are taken to contain/prevent and/or minimize/correct effects from discharge to waters of the US

Requirement

A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

Discussion

OERP Procedures for SSOs Affecting Waters of the US

Sub-sections V through VII of the "SSO Response Procedures" section of the OERP describe procedures for containment and clean-up for SSOs. Utility Maintenance Workers will be acquainted with temporary spill diversion, storage, and clean-up techniques including the usage of appropriate storm drain cover and plugging equipment. Rapid response times ensured by the SSO Response Chain of Communication and the availability of 24/7 Sewer On-Call Personnel will minimize the volume of sewage that reaches waters of the United States.

In the event that sewage enters a water of the United States, the Yolo County Hazardous Materials Response Team, or standby emergency response contractor will handle mitigation and clean-up, if City staff is unavailable. City Collections Workers are trained in cleanup of Category 2 spills but may need further assistance by the environmental contractors as needed. Sub-section VIII of the "SSO Response Procedures" section of the OERP requires that the Environmental Resource Analyst and Lab Analysts work with the Hazardous Materials Emergency Response Team to conduct water quality monitoring if deemed necessary tovalidate posting or discontinuation of health warning advisories. The Environmental Compliance Division has established detailed "Sampling Procedures for Spills and Illegal Discharges", which is included as an appendix to the OERP.

Existing Condition Surface Water Quality Sampling Procedures

Overview

The City has implemented a program to regularly collect existing condition water samples at specifically identified "waterways of concern". Waterways of concern are major drainage features within the City that could be subject to receiving sanitary sewage flow in the event of an SSO. The purpose of conducting existing condition sampling is to have baseline sampling results available to compare against in the event of an SSO, so that it may be

determined if the spill truly had an effect on the waterway or if a "contaminated" sample collected after an SSO was typical for that waterway. Existing condition sampling allows the City to present a clear picture of the effect a spill actually has on a waterway to the State or Regional Board.

Waterways of Concern

The City has developed an Existing Conditions Water Quality Sampling Plan (see **Attachment vi-5**) which identifies a list of the water quality sampling points which were developed by the Wastewater Systems Administrator. The selection of these specific waterways and locations was based on institutional knowledge of areas where sewer collection system infrastructure is positioned such that sewage from SSOs may easily and quickly flow into them, as well as reviews of GIS mapping. The Existing Condition Water Quality Sampling Plan includes a map of water quality sampling points throughout the City and a brief description of each sampling location.

Overview of Sampling Procedure

The waterways of concern are sampled quarterly. Additional sampling is done on an as needed basis

The Existing Conditions Water Quality Sampling Plan includes identification of both "standard" and "critical" sampling locations. All "standard" sampling locations are sampled as described above every three years. All "critical" sampling locations are sampled every year. Standard sampling locations are located so as to collect data from all major drainage canals throughout the City. Critical sampling locations represent the confluence of major drainage canals, or transitions into larger drainage systems, such as the Tule Canal's discharge to the Yolo Bypass.

The following samples are collected on each day of sampling:

- pH
- conductivity
- dissolved oxygen
- total suspended solids
- total dissolved solids
- 2-hour chemical oxygen demand
- total coliform as E. coli 24-hour

- BOD
- nitrate
- boron
- selenium
- total coliform
- E. coli
- total oil and grease

Sample Collection, Analysis, and Data Use

Utility Maintenance Workers collect samples, and deliver them to the water quality lab at the City's WPCF. After each sampling lab results are forwarded to the Utility Maintenance Division for review and documentation.

In the event that an SSO occurs and a specific request is made by either the State or Regional Board, WPCF Lab Analysts will collect surface water samples at the location of the spill per the "Sampling Procedures for Spills and Illegal Discharges". Lab Analysts will produce a report comparing the SSO test results to existing conditions water quality parameters for the season in which the spill occurred. The report will be included as an attachment to the SSO Report Form filed for Category 1 spills.

Related Documents

- Attachment vi-1: City of Woodland OERP
- Attachment vi-5: Existing Conditions Water Quality Sampling Plan

Plan & Schedule

No further efforts are projected for this element at the present time.

Attachment vi-1:

City of Woodland Overflow Emergency Response Plan

City of Woodland

Table of Contents

Purpose and Goals

The purpose of this Overflow Emergency Response Plan (OERP) is to define procedures for the Public Works Department to follow in response to sanitary sewer overflows (SSOs) to ensure that all regulatory requirements are met. The procedures defined herein should be followed to make certain that appropriate regulatory agencies and other potentially affected entities such as local health agencies, State / Regional Water Boards, or water suppliers are notified in a timely manner when an SSO occurs. The procedures provide steps to follow when a spill does occur and outlines measures to be taken on how to contain, correct, and initiate cleanup of the spill in order to minimize any adverse impact on the environment resulting from the spill. This document includes a program and schedule for distribution to and appropriate training of all agencies and staff involved in SSO response procedures.

Goals and Objectives:

- Protect public health and safety
- Prevent adverse impacts to the environment
- Achieve timely response to reports of all potential SSOs, with a 30 minute response time during normal working hours and a 45 minute response time after normal working hours
- Ensure established and effective action is taken when responding to SSOs

Approved by:

Greg Meyer Director of Public Works	Signature	Date
Tim Lloyd Wastewater Systems Administrator	Signature	Date
Shane Carlson WPCF Chief Operator	Signature	Date
Angela Weeks Environmental Compliance Inspector	Signature	Date

Distribution

T

he most up-to-date copies of this OERP should be kept available at the following locations:

- Water Pollution Control Facility
- Utility Superintendent's Office
- Utility Supervisor's Office
- MSC-Municipal Service Center
- Sewer Utility Stand-by Vehicle
- Appendix to the SSMP
- City Police Department
- City Fire Department
- Yolo County Emergency Dispatch Center
- Yolo County Hazardous Materials Emergency Response Team Office

Acronym and Term Definitions

CDFG - California Department of Fish and Game

CIWQS - California Integrated Water Quality System SSO online data base

MRP - Monitoring and Reporting Program No. 2006-0003-DWQ and as amended by Order No. WQ 2008-0002-EXEC

MSC - Municipal Service Center

RWQCB - Regional Water Quality Control Board

SSO - Sanitary Sewer Overflow

SWRCB - State Water Resources Control Board

WPCF - Water Pollution Control Facility

Online CIWQS SSO Database - Online spill reporting system that is hosted, controlled, and maintained by the State Water Resources Control Board. The web address for this site is: http://www.swrcb.ca.gov/ciwqs/

Surface Water - A surface water is any "waters of the United States," including all waters that are or could be used for such purposes as recreation, fishing, swimming, agriculture, industry, etc. Lakes, streams, tidal waters, estuaries, and other waters that flow on the surface of the land are included, even if they flow only part of the year. Wetlands are also included.

Sanitary Sewer Overflow - A sanitary sewer overflow is any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs include:

A. Overflows or releases of untreated or partially treated wastewater that reach waters of the United States.
B. Overflows or releases of untreated or partially wastewater that does not reach waters of the United States.
C. Wastewater backups into buildings and on private property that are caused by flow blockages within the publicly owned portion of a sanitary sewer system.

According to the MRP established by the SWRCB, SSOs are classified into three categories defined by the following:

Category 1
Major Spill - All discharges of untreated or partially treated wastewater from a sanitary sewer system of any volume resulting from an enrollees sanitary sewer system failure or flow condition that:

A. Reaches surface water and/or reaches a drainage channel tributary to surface water.

B. Reaches a municipal separate storm system and are not fully captured and returned to the Sanitary sewer system or not captured and disposed of properly.

Category 2
Minor Spill – Discharges of untreated or partially treated wastewater of **1000 Gallons or greater** resulting from an enrollees sanitary sewer system failure or flow condition that **do not** reach surface water, a drainage channel, or a municipal separate storm system unless the entire SSO discharged to the storm drain system is fully recovered and disposed of properly.

Category 3

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

Private Lateral Sewage Discharges
Sewage discharges that are caused by blockages or other problems within a privately owned lateral, and less than 1,000 gallons.

SSO Response Procedures

The following response procedures were developed by the Public Works Department to facilitate the containment, clean-up, and reporting of SSOs. These procedures are to be followed to ensure that all regulatory agencies and appropriate City personnel are notified of the spill within the specified timeframes per the MRP, and that the Public Works Department provides a response appropriate to each specific SSO event. Personnel identified in parenthesis denote the key staff person(s) for each task.

I. Overflow Detection Methods:

A. Lift station alarm (WPCF Plant Operator)
B. WPCF alarm (WPCF Plant Operator)
C. Utility Maintenance Crew observation
D. Phone calls
   i. During working hours - MSC front desk: 530-661-5962.

ii. After working hours -Yolo County Communications (911) or 530-666-8900.
iii. On-call Staff is checked in with County Communications at the beginning of the shift.

II. SSO Chain of Communication (All SSO Responders)

A. The initial observer (Sewer Maintenance Crew) or receiver of an SSO call (MSC front desk or Yolo County Dispatcher) should use a standard SSO Report Form (see **Appendix 1)** and attempt to collect the following information:
   - Time and date call is received
   - Specific location of SSO
   - Description of the problem
   - Time possible SSO was noticed by observer
   - Observer / caller's name and phone number
   - Observations made (e.g. odor, duration, estimated volume, damage)
   - Other relevant information that will enable the responding investigator and crews, if required, to quickly locate, assess, and stop the overflow.

B. Once an SSO has been reported, the SSO should be communicated according to the SSO Reporting Chain of Communication, included in **Appendix 2.** The Utility Superintendent or On-Call Crew will dispatch resources to the site of an SSO as deemed necessary based on the initial incident report information available.

III. Initial Investigation Response (Sewer Utility Supervisor / On-Call Personnel)

The Sewer Utility Supervisor or On-Call Personnel must perform a quick investigation of the overflow upon arrival, which includes:

A. Make note of time of arrival.
B. Isolate the scene with cones or caution tape.
C. Perform SSO flow estimation (use **Appendix 3:** SSO Flow Estimation Procedures).
D. Briefly take pictures of the SSO and surrounding areas to document the extent of the overflow and damages.
E. Decide if the SSO constitutes a Category 1, Category 2, Category 3 or Private Lateral spill.
F. Determine if additional SSO response resources are needed, and call them in if necessary (per SSO Reporting Chain of Communication).
G. The Utility Superintendent, Supervisor, or On-Call Personnel report the incident to both internal City contacts as well as external agencies as required by the MRP. The SSO will be reported as described in the "SSO Reporting Timeframes" section of this document, and as noted on the SSO Reporting Chain of Communication.

H. Initial 2-hour reporting (by phone, as required by Order No. WQ 2008-0002-EXEC) to the State OES (800) 852-7550, RWQCB (916) 464-4660 and Yolo County Health Department (530) 666-8646, which is required for all SSOs that affect a surface water may be completed by the Utility Supervisor or On-Call Maintenance Crew if the Utility Superintendent is not immediately available within 2-hours of the initial report of the incident.

I. The Maintenance Crew should focus on containing the SSO and stopping the cause of the spill prior to filling out a detailed SSO Report Form or "24-Hour Certification of 2-Hour Notification" Form. The information for these report forms may be gathered once the SSO has been appropriately mitigated as described below.

IV. Traffic Control / Hazardous Materials (Sewer Utility Supervisor)

If spill cleanup assistance and/or additional traffic control is needed to protect the public or City employees while containment and cleanup of the spill is ongoing, appropriate entities listed in Call Group 3 should be contacted to assist.

A. For traffic and crowd control contact the City of Woodland Police Department.

B. If the spill is toxic and/or an injury occurs, contact the City of Woodland Fire Department and the Yolo County Health Department if necessary. The Yolo County Health Department is capable of dispatching their Hazardous Materials Emergency Response Team to the scene.

C. If the Yolo County Hazardous Materials Emergency Response Team is not capable of responding adequately to the scene, the Supervisor or On-Call Crew may contact other response agencies for which the City has Standby Emergency Response Agreements in place (see **Appendix 4).**

V. Contain SSO (Utility Maintenance Workers)

When Utility Maintenance Workers arrive on the scene of an SSO, the first step is always for Workers to put on the proper safety equipment such as eye protection, gloves, a hard hat, etc. If a hazardous substance is clearly involved in the spill, identified by the smell of gas or other toxic / flammable substance, the Fire Department, Police Department, County Health Department, or Standby Emergency Response Contractor should be contacted to handle clean-up. If no hazardous materials are present at the spill site, the Utility Maintenance Worker may proceed with the following:

A. Procedure for containing overland SSOs

i. If the spill has not yet reached a catch basin or storm drain inlet, place rubber mats over or sandbags in front of any that are nearby to prevent future infiltration into the storm drain system

ii. Dig a trench or build a dirt berm to channel sewage into the nearest downstream maintenance hole if sewage is flowing.
iii. If it is not possible to divert flow to a maintenance hole, consider plugging the outlet from a nearby storm drain catch basin and diverting flow into the sump for temporary storage and later removal.
iv. If possible, use a Vac-Con truck to remove flowing or standing sewage.

B. Procedure for containing overflow in a building
i. Advise the property owner to obtain the services of a certified clean-up contractor to assist with containment and restoration of the area. The City does not provide these services.
ii. Make the customer aware that if the backup is determined to have occurred due to blockage of the lateral on the customer's property, cleanup is at the customer's expense. If the blockage is determined to have occurred within the publicly owned portion of the lateral or within the main service line, the customer may file a claim which will result in payment of damages by the City.

C. Procedure for containing overflow that reaches a storm drain
i. Determine visually or through use of the City mapping system the outfall point of the affected area in the storm drain system and plug all outfalls.
ii. If drainage ditches or channels are conveying sewage, block them with berms or sand bags if necessary to prevent further migration of sewage downstream.

D. Required containment equipment
i. See **Appendix 5:** SSO Response Equipment List

VI. Locate the Cause of Overflow (Utility Maintenance Workers)

A. Locate the cause of the overflow
i. Sewer main
a. Check flow in maintenance holes.
b. Blockage should be between maintenance hole with sluggish flow and maintenance hole with very little or no flow.
ii. Service sewer lateral
a. Check flow in cleanout. If cleanout does not have flow, stoppage is located on private property and is not the City's responsibility.
b. If there is no existing cleanout, notify property owner to call a plumber to clear the stoppage and run the service line from the house to the main line.
c. Be sure to collect data required for Private Lateral SSOs on the SSO Report Form so that the event may be reported using CIWQS, if desired by the Utility Superintendent.

d. Contact the Environmental Compliance Division to inspect the property if necessary (use appropriate inspection request form).

iii. Pump station

a. Check alarm system for indication of problem. Many alarms are telemetered by the SCADA system to the WPCF.
b. Call a WPCF Operator to the pump station for a visual inspection of the facility
c. If power failure has occurred, determine if pump station has an emergency generator and if emergency generator is operating.
d. Check flow meters and pressure gauges to determine if pumps are operating within normal ranges.

B. Correct the problem (Utility Maintenance Workers / WPCF Operators)

i. Within sewer main

a. If necessary, set up bypass pumping. Measure the distance from the upstream maintenance hole where flow is backing up to the nearest downstream maintenance hole where flow is clear to determine the length of pipe needed. Use a gravity flow slide calculator to estimate the flow rate in the blocked pipeline based on the estimate of the pipe size, slope, and 100% full flow. The gravity flow rate may also be available from printed maps of the City's hydraulic model results.
b. If appropriate bypass pumping equipment is not available at the MSC, the appropriate equipment rental agency (Rain for Rent or other) should be contacted to provide the necessary equipment.
c. Clear line from dry maintenance hole if possible with high pressure cleaning or rodding equipment according to City standard operating procedures (HVVC Best Practices).
d. Determine cause of blockage if possible during cleaning.

ii. Within lateral service line

a. Maintenance Worker to determine cause and location of blockage through visual inspection if possible.
b. Initiate CCTV inspection of service lateral if necessary using lateral TV camera to determine the cause and location of the blockage. This may not be possible depending on conditions at the cleanout, if one exists.
c. Clear the blockage if it has occurred within the publicly owned portion of the lateral.
d. If a plumber is required to clear blockages in the privately owner portion of the lateral, Utility Maintenance Worker will follow up with the plumber to determine the cause of the blockage and append that data to the SSO Report Form.

iii. At pump station

a. If pump station does not have power, connect portable emergency generator. Electricians are needed to connect a portable emergency generator to the pump station if an electric plug connection is not provided.
b. Check fuel for emergency generator.
c. If a pump is not operating, have an Electrician troubleshoot the pump.
d. Set up bypass pumping if necessary. If appropriate bypass pumping equipment is not available at the MSC, the appropriate equipment rental agency (Rain for Rent or other) should be contacted to provide the necessary equipment.
e. If the pump cannot be repaired in place, have an Electrician and Maintenance Worker remove the malfunctioning pump and install one of the available backup pumps.
f. Have the Utility Maintenance Crew investigate the force main for possible damage or blockage.
g. Refer to the emergency response plan provided by the pump station contractor / engineer to respond to other specific problems, which is available on-site at each pump station.
h. Make other repairs as necessary.

VII. Clean-Up (Utility Maintenance Workers)

A. Storm drain clean-up
   i. Pump out wastewater and take to WPCF.
   ii. Remove debris.
   iii. Wash concrete thoroughly with pressure washer and contain wash water.
   iv. Pump out wash water, clean contaminated storm lines (through use of Vac-Con or other means) and take to WPFC.
   v. Remove contaminated soil and dispose of according to applicable sludge disposal regulations (coordinate with WPCF Superintendent).
   vi. Remove all plugs / dams used to contain overflow.
B. Street clean-up
   i. Remove debris.
   ii. Wash pavement and contain wash water.
   iii. Remove wastewater to WPCF.
   iv. Disinfect contaminated area with 10 parts water and 1 part bleach spray, followed by a second rinse. Contain and dispose of wash water at WPCF.

C. Natural habitat / surface waters
   i. For minor spills in natural habitat that is not considered a surface water; remove debris, rinse the area thoroughly and contain wash water. If sewage has thoroughly penetrated the soil, determine on a case-by-case basis if excavation and disposal of the soil as sludge is necessary. Coordinate with the WPCF Superintendent as needed.
   ii. If deemed necessary by the Environmental Compliance Inspector, the Yolo County Health Department Hazardous Materials Response Team or Standby Emergency Response Contractor will be called in to clean up extensive contamination of surface waters or other natural habitats.

D. Private property clean-up
   i. Property owner to hire a specialized clean-up contractor to mitigate damage. Payment to be made by City for blockages in the publicly owned portion of the sewer collection system and property owner to make payment for private lateral blockages.
   ii. Environmental Compliance Inspector to monitor progress and close-out of the clean-up procedures.

VIII. Final Investigation (Sewer Utility Supervisor)

Once the SSO has been isolated and the cause has been mitigated, the Supervisor must perform a final investigation to determine if additional reporting is required.

A. Estimate final overflow volume.
B. Use a CCTV camera to inspect the pipeline segment in which the blockage occurred. A CCTV inspection should be conducted even if the probable cause of the SSO has been determined during spill mitigation activities, such as during hydroflushing to clear the blockage.
C. Work with the Yolo County Health Department and Environmental Compliance Inspector to determine if health warnings must be posted.
D. If necessary, work with the Yolo County Hazardous Materials Emergency Response Team, Standby Emergency Response Contractor, Environmental Resource Analyst, and WPCF Laboratory Analyst to determine the locations and continued future schedules of water samples that should collected to determine the impact of a spill that has affected a waterway, or to confirm the discontinuation of any posted health warnings.
E. If an SSO enters a body of water, samples must be taken from contaminated area at entry point, and downstream of overflow location according to the established "Sampling Procedures for Spills and Illegal Discharges" (see **Appendix 6).**
F. The MRP requires the following be recorded for all samples taken:
   - The date, exact place, and time of sampling measurements.
   - The individual(s) who performed the sampling or measurements.

G. If an SSO enters a body of water, the Utility Supervisor or On-Call Crew should ensure that the "24-Hour Certification of 2-Hour Notifications" Form (see **Appendix 1)** is filled out and faxed to the RWQCB within 24-hours of the event being reported to fulfill the requirements of Order No. WQ 2008-0002-EXEC.

IX. Reporting (Sewer Utility Supervisor / Superintendent)

All Category 1 and 2 SSOs must be reported regardless of volume. It is at the Superintendent's discretion to report Private Lateral Spills.

A. The Supervisor is responsible for the collection of all the mandatory information to be included in online reports according to the SWRCB established MRP. The Supervisor should completely fill out the SSO Report Form (see **Appendix 1)** at the scene of the event to ensure all of the necessary data is accurately collected. If the Supervisor is not available when the SSO has been mitigated and it is time to thoroughly document the event, the SSO Report Form can be completed by On-Call Personnel.
B. The completed SSO Report Form shall be kept on file. The SSO Report Form shall be reviewed and submitted to the Superintendent by the Supervisor.
C. The Superintendent must review the report, and complete and certify the final online report through the CIQWS system as described in the "SSO Reporting Timeframes" section of this document.

X. Special Circumstances (Sewer Utility Supervisor / On-Call Crew)

A. After hours, weekend, and holiday response
   i. At least one Maintenance Worker is on-call and available 24 hours a day, 365 days a year to initiate the SSO Reporting Chain of Communication and direct SSO response activities.
B. Heavy traffic
   i. City Police will respond to any SSO that affects street travel and will implement a proper traffic control plan to prevent public exposure to sewage and protect the safety of SSO responders.
C. SSOs near schools, hospitals, etc.
   i. The Utility Supervisor or On-Call Crew will immediately contact school principals, hospital directors, and other public facility administrators by phone if an SSO poses a threat of exposure and properly isolate the spill area from public contact.
D. Major repairs required
   i. Circumstances may arise when the City of Woodland could benefit from the support of private-sector construction assistance. This may be true in the case of large diameter pipes buried to depths requiring shoring and dewatering should excavation be required. If a pipeline failure requiring excavation for repair has occurred, the Supervisor or Superintendent will contact Underground Service

Alert (USA) as soon as possible to begin the process of utility location so that repairs may be made rapidly. The Superintendent or Supervisor will initiate the process of implementing a strategy to repair the damaged pipeline, which may include contacting engineering consultants and contractors.

SSO Reporting Timeframes

The Public Works Department has developed the following procedures for the reporting of SSOs. These procedures are to ensure that all regulatory agencies and City departments are notified within the timeframes specified in the MRP and that all regulatory requirements are met when reporting SSOs. These SSO reporting steps should be followed by the Sewer Utility Superintendent, Supervisor, or On-Call Crew immediately upon notice of an SSO event.

A. Major Spills Category 1

i. First responder contacts Call Group 2 as soon as possible after arriving on the scene and assessing the situation, within 30 minutes of arrival.

ii. Call selected departments in Call Group 3 as needed within 1 hour of arrival.

iii. If the SSO has impacted a drainage channel or surface water, the City is required to report the SSO to the RWQCB, State OES, and Yolo County Health Department (Call Group 1) within 2 hours of the initial report of the incident by telephone, voicemail, or by fax.

iv. If the SSO impacts any body of water, the City is required to report the SSO to the CDFG within 2 hours. The City Environmental Resource Analyst should also be contacted to coordinate surface water sampling (Call Group 1). The Supervisor or Superintendent will make the decision to contact any affected downstream water suppliers based on an assessment of the spill with respect to wells or spills to surface waters with intake points downstream (Call Group 3). This notification will also be made within 2 hours.

v. The Utility Superintendent must fax the "24-Hour Certification of 2-Hour Notification" Form to the RWQCB, or may use the CIWQS system to certify to the RWQCB that the State OES and Local Health Department were contacted within the required 2 hour window. This certification must be submitted within 24 hours of the spill occurrence.

vi. Initial reporting must be made through the CIWQS system as soon as possible but no later than 3 business days after being made aware of the SSO.

vii. A final certified report must be completed through the CIWQS system within 15 days of conclusion of the SSO event.

viii. Submit an incident report to the Deputy Director of Public Works within 3 business days after being made aware of the SSO.

ix. Submit laboratory analysis results when available, but no later than 20 business days after the SSO event (if water quality samples were taken).

Official SSO reports submitted to regulatory agencies may need to be updated with laboratory analysis results.

B. Minor Spills Category 2
   i. First responder contacts Call Group 2 as soon as possible after arriving on the scene and assessing the situation, within 30 minutes of arrival.
   ii. If the volume of sewage spilled is significant (more than 1000 gallons), the Yolo County Health Department should be contacted for cleanup instructions.
   iii. Reporting must be made to the CIWQS system within 30 days after the end of the calendar month in which the spill occurs (e.g. all spills occurring in the month of January must be entered into the database by March 1st).
   iv. Submit an incident report to the Deputy Director of Public Works within 20 business days after being made aware of the SSO.

C. Private Lateral Spills
   i. Reporting may be made to CIWQS system based upon the Utility Superintendent's discretion. If a spill is reported through CIWQS, the spill must be identified as caused by a private property owner and the responsible party must be identified.

D. "No Spill" Reporting
   i. If there are no SSOs during the calendar month, a report is submitted within 30 days after the end of the calendar month as a statement through the CIWQS system certifying that there were no SSOs during the designated month.

Group Telephone Guide

Group 1: Contacts for Major Spills (Category 1)

Office of Emergency Services (OES).....1-800-852-7550 or 916-845-8911
Regional Water Quality Control Board
Phone 916-464-4660
Fax 916-406-4645
Yolo County Health Department.....530-666-8646
If spill impacts any local stream / waterway call:
State of California Department of Fish and Game 916-653-7664
If spill reaches the storm drain call:
Environmental Resource Analyst 530-406-5110
Local Government Officials (City Council).....530-661-5806

Group 2: Contacts for Major and Minor Spills (Category 1 and 2)

1st Utilities Maintenance Supervisor…….530-681-0399
2nd Senior Utilities Maintenance Worker……..
3rd Wastewater Administrator……530-681-7989
4th Deputy Director of Public Works…….530-681-0608
WPCF Superintendent (For Pump Station Failures) 530-908-4309
Environmental Compliance Inspector 530- 661-2057

Group 3: As-Needed Contacts

Yolo County Communications 530-666-8920
Woodland Fire Department 530-661-5860
Woodland Police Department..... 530-661-7800
Additional By-pass pumping (Contractor)
Rain for Rent 530-662-1024
United Rentals (Generators, Heavy Construction Equip)..... 530-669-3270
Conaway Ranch (downstream agricultural water user)..... 530-662-1484
Clean Harbors Environmental Services..... 916-375-2611 or 916-302-6265
Underground Service Alert (USA.) 1-800-227-2600

OERP Response Procedures Training

The Department of Public Works will ensure that all staff involved in the SSO response procedures are properly trained by conducting the following training, which will be included as part of the regular weekly tailgate discussions and monthly training meetings:

A. Minimum annual overflow mitigation training / review for Utility Maintenance Workers including field review and demonstrations of:

i. Overflow diversion using berms and ditches
ii. Storm sewer covering and plugging procedures
iii. Vacuum truck usage
iv. Rinsing, rinse containment, and disinfection procedures for SSO cleanup
v. Hydraulic cleaning methods (hydro-jet, rodding, etc.)
vi. CCTV inspection of plugged pipes
vii. Location of SSO response supplies
viii. Rodding of customer laterals
ix. Customer service techniques
x. Safety measures, including identification of hazardous materials
xi. Conduct bypass setups at lift stations and between maintenance holes

B. Minimum annual joint meeting or conference call with Police Department, Fire Department, and Yolo County Health Department to review communication and response procedures including SSO cleanup, traffic / crowd control, and hazardous materials handling.
   i. Meeting minutes are to be kept and distributed to all meeting attendees within 1 week of meeting.

OERP Performance Review

A. Within one month after every Category 1 SSO, the Utility Superintendent, Supervisor, and Maintenance Workers shall hold a mandatory review meeting to discuss the success of the response efforts. Additionally, any necessary new preventative maintenance strategies that should be employed to prevent an SSO from occurring in the same location due to similar causes should be discussed and documented. Any preventative maintenance strategies agreed upon should be incorporated into regular maintenance schedules. A list of meeting notes will be created and filed.
B. The Utility Supervisor shall document response times on each SSO Report Form of key responders such as Utility Maintenance, Fire, Police, and County Health Workers and present the results at each mandatory SSO review meeting for discussion.
C. Annually, the Utility Superintendent will collect and review the filed SSO response review notes and consider making changes or updates to the OERP to be distributed and introduced each year at the annual Maintenance Worker and Police / Fire / Health Department OERP procedure review meetings

Appendix 1

Standard SSO Reporting Form and 24-hour Certification of 2-hour notification for surface water reaching SSO

City of Woodland
PUBLIC WORKS

SSO REPORT FORM

Date:

CIWQS ID #

Cityworks:

SR# WO#

☐ CATEGORY 1 (3 BUSINESS DAYS)
☐ CATEGORY 2 (3 BUSINESS DAYS)
☐ CATEGORY 3 (30 CALENDAR DAYS)
☐ CITY
☐ PRIVATE

*Estimated spill volume: gallons Estimated current spill rate: gallons/per/minute

*Did spill discharge to drainage channel and/or surface water? ☐ YES ☐ NO

*Did spill reach a storm drainpipe? ☐ YES ☐ NO

*If spill reached drainpipe, was spill fully captured / returned to sanitary sewer system? ☐ YES ☐ NO ☐ N/A

*Was spill a private lateral spill? If YES provide contact information ☐ YES ☐ NO

Property owner or responsible party information:

Name

Address

Phone #

*Final spill destination: Surface water ☐ Street/curb/gutter ☐ Unpaved surface ☐ Storm drain ☐

☐ Other Explanation, if other:

Physical Location Details~

*Spill location name: Private clean out ☐ City clean out ☐ Manhole ☐ Other ☐

Explanation, if other:

*Latitude of spill location: 38 degree minutes seconds

*Longitude of spill location: 121 degree minutes seconds

Street number: Street direction:

Street name: Street type:

Cross street: Street type

City: **Woodland** *County: **Yolo** Regional Water Quality Control **Region 5S-Sacramento**

*Estimated spill start date/time:

*Estimated date / time sanitary sewer system agency was notified of or discovered spill:

*Estimated Operator arrival date/time:

*Estimated spill end date/time:

Spill cause

Diameter of sewer pipe at the point of blockage or spill cause (if applicable): inches

Material of sewer pipe at the point of blockage or spill cause (if applicable):

Estimated age of sewer pipe at the point of blockage or spill cause (if applicable):

Description of terrain surrounding the point of blockage or spill cause (if applicable): FLAT

*Spill response activities: Pictures taken ☐

Notification Details~ **(Required for Category 1)**

*OES Called Date/Time *OES Control Number

*Yolo County Environmental Health notified date/time

*Regional Water Quality Control Board notified date/time

*COW Environmental Compliance notified date/time

Other Agency Notified:

Was any of this spill report information submitted via fax/email to the RWQCB? ☐ YES ☐ NO

If YES, date and time spill report information was submitted via fax/email to the RWQCB

Is there an ongoing investigation? ☐ YES ☐ NO

Water quality samples analyzed for;

Explanation:

Water quality sample results reported to: ☐ County Health Agency ☐ RWQCB

COW Personnel Signatures/Date

Collections/Storm Supervisor Responding Public Works Crew

OES	1-800-852-7550	Environmental Compliance Specialist	1-530-661-2058
County Health	1-530-666-8645	NPDES-State Storm Water	1-916-464-4798
Regional Water Quality Board (RWQCB)	1-916-464-4623	CA Fish & Game (Steve Jimenez)	1-530-682-7088
Yolo Co Communications	1-530-666-8920	Conway Ranch	1-530-662-1484 or 1-916-718-8463

CITY OF WOODLAND DEPARTMENT OF PUBLIC WORKS
UTILITY MAINTENANCE DIVISION
(530) 661-5962

24-Hour Certification of 2-Hour Notification for Sanitary Sewer Overflow Reaching a Surface Water

NOTIFICATION

(to be completed by Maintenance Worker, Utility Supervisor, or WPCF Operator responding)

DATE: _____
LOCATION: Address
Nearest Intersection
City/County _____

TYPE OF INCIDENT:

Pump Station Failure Other

Manhole Overflow

Estimated Spill Volume to Waterway

Affected Waterway

Time Maintenance Crew notified Time of arrival

Time City notified _____

Current Status of Response Effort

Time stoppage relieved _____

AGENCY NOTIFICATION - CONTACT BY PHONE WITHIN 2 HOURS OF SUPERVISOR/CREW NOTIFICATION

PUBLIC HEALTH DEPARTMENT	INITIAL DATE & TIME		FOLLOW-UP DATE & TIME		Operator No.	
O.E.S	INITIAL DATE & TIME		FOLLOW-UP DATE & TIME		Operator No.	
RWQCB	INITIAL DATE & TIME		FOLLOW-UP DATE & TIME			

SIGN AND FAX TO RWQCB @ (916) 464-4645 BY 8 A.M. THE NEXT BUSINESS DAY

Time of departure

I certify that the Public Health Department, O.E.S, and the RWQCB have been notified as documented above, in accordance with State Water Resources Control Board Order No. WQ 2008-0002-EXEC.

Certified by:

Signed by Utility Supervisor, Crew Leader, or WPCF Operator Responding Date

TELEPHONE NUMBERS TO USE

Yolo County Public Health Department (530) 666-8646 **Contact within 2 hours of Supervisor/Crew notification**

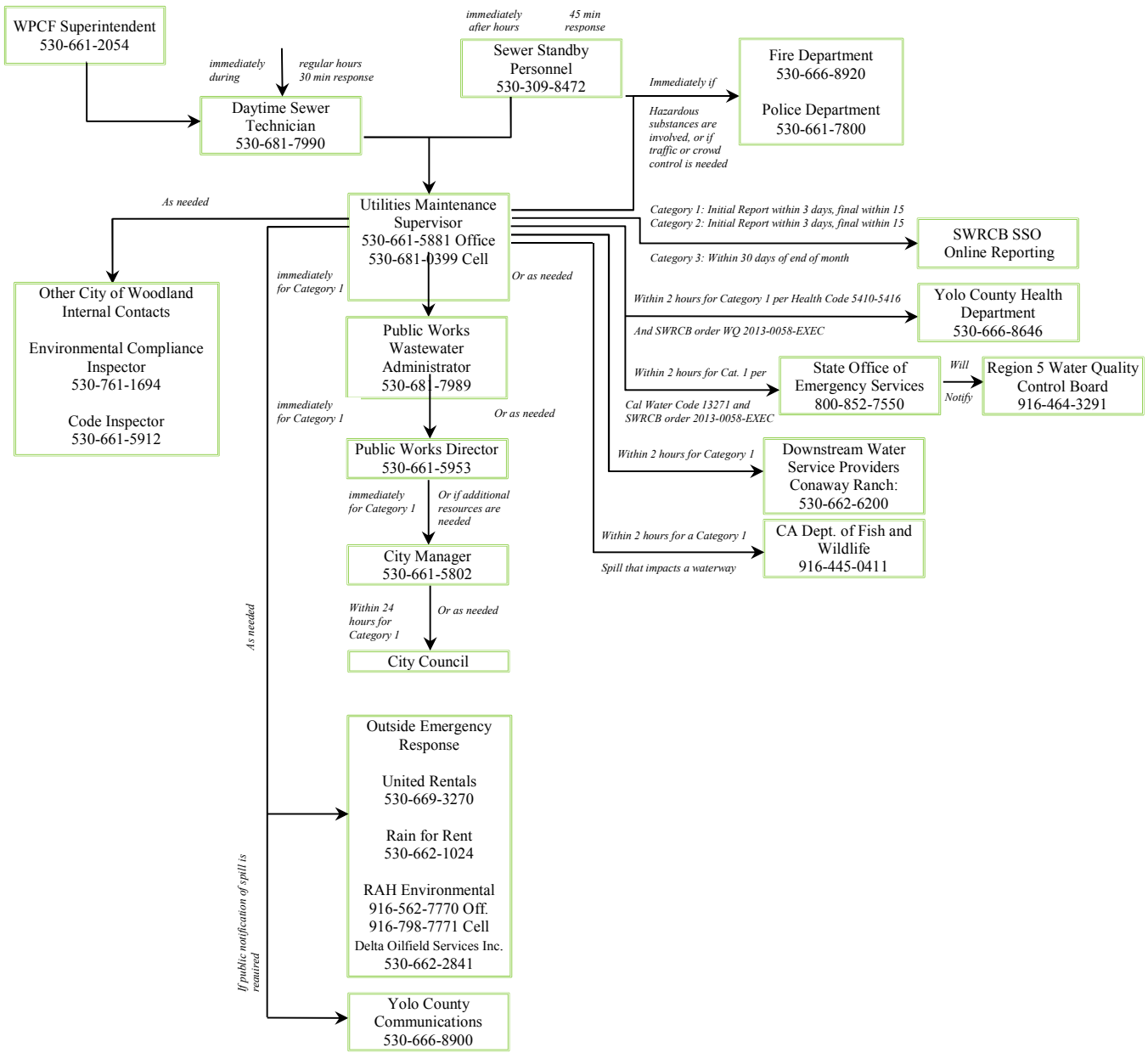
State Office of Emergency Services (800) 852-7550 **Contact within 2 hours of Supervisor/Crew notification**

Central Valley Regional Water Quality Control Board (916) 464-3291 **Contact within 2 hours of Supervisor/Crew notification**

Appendix 2

SSO Reporting Chain of Communication

City of Woodland Sanitary Sewer Overflow Reporting Chain of Communication



Appendix 3

SSO Flow Estimation Procedures

Attachment D - Sample Templates for SSO Volume Estimation

TABLE 'A'

FST1MATFP SSO FLOW OUT OF M/H WITH COVER IN PLACE

24" COVER

Height of spout above M.'H rim H in inches	S S O F L O W rr HH	n M/^n	Min. Sewer size in which these flows arp possible
1/4	1	0 001	
1/2	3	0 004	
3/4	6	0.008	
1	9	0 013	
1 1/4	12	0.018	
1 1(2	16	0024	
1 3/4	21	0.030	
2	25	0.037	
2 1/4	31	0.045	
2 1/2	38	0.054	
2 3/4	45	0.065	
3	54	0.077	
31/4	64	0 092	
3 1/2	75	0.107	
3 3/4	87	0125	
4	100	0.145	
4 1/4	115	0 166	
4 1/2	131	0189	
4 3/4	148	0.214	
S	166	0.240	
5 1/4	185	0 266	
5 1/2	204	0294	
5 3/4	224	0 322	6"
6	244	0 352	
6 1/4	265	0.382	
6 1/2	266	0412	
6 3«	308	0.444	
7	331	0.475	
7 1/4	354	0.509	
7 1/2	377	0.542	
7 3/4	401	0.578	3"
6	425	0 612	
8 1/4	451	0 549	
3 1/2	476	0 66c	
8 3/4	502	C.72:	
5	525	0.76	

36" COVER

Height of spill above M/H rim H in Wrhes	S S O F L O W q in nrti	n wen	Min. Sewer size in which these flows aro ncsethlo
1/4	1	0.002	
1/2	4	0.006	
3/4	8	0 012	
1	13	0 019	
1 1/4	18	0.026	
1 1/2	24	0.035	
1 3/4	31	0.044	
2	37	0.054	
21/4	45	0.065	
2V2	55	0.079	
2 3/4	66	0.095	
3	78	0.113	
31/4	93	0134	
31/2	109	0.157	
3 3/4	127	0 183	
4	147	0.211	
4 1/4	169	0243	
4 1/2	192	0.276	
4 3/4	217	0 312	S"
5	243	0.350	
5 1/4	270	0 339	
5 12	299	0.430	
5 3/4	327	0.471	
6	357	0.514	
5 1/4	337	0.558	8"
6 12	419	0.603	
6 3/4	451	0.649	
7	4e3	0.695	
7 1/4	517	0.744	
7 1/2	551	0 794	
7 3/4	587	0.845	10"
5	622	0 8=5	
8 1/4	659	0.949	
8 1.2	597	1.C0	
8 3/4	734	1 057	
9	773	' 113	

Disclaimer;

This sanitary sewer overflew table was developed by td Euyen. Civil Engineer. F t. No. 33S55 California, for County Sanitation District 1. This table is provided as an example Other Agencies may war.: to csvslop their cv/n estimating tables.

The formula used to develop Table A measures the maximum height of the water coming out of the maintenance hole above the rim. The formula was taken from hydraulics and its application by A.H. Gibson (Constable & Co. Limited).

Example Overflow Estimation:

The maintenance hole cover is unseated and slightly elevated on a 24" casting. The maximum height of the discharge above the rim is 5 % inches. According to Table A, these conditions would yield an SSO of 185 gallons per minute.

JELQMIQUT OF M/H INJELACE **WITH COVER**

Height to be measured

This sanitary sewer overflow drawing was developed by Debbie Myers. Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.

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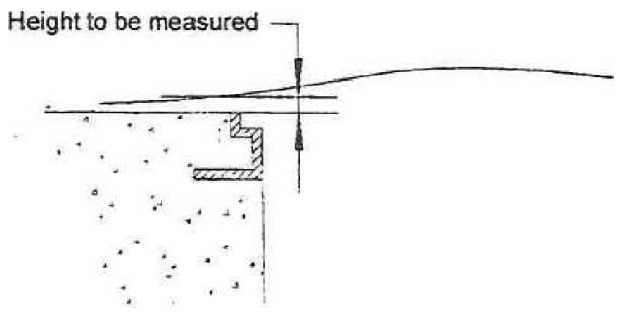
The formula used to develop Table B for estimating SSO's out of maintenance holes without covers is based on discharge over curved weir - bell mouth spillways for 2" to 12" diameter pipes. The formula was taken from hydraulics and its application by A.H. Gibson (Constable & Co. Limited).

Example Overflow Estimation:

The maintenance hole cover is off and the flow coming out of a 36" frame maintenance hole at one inch (1") height will be approximately 660 gallons per minute.

FLOW OUT OF M/H WITH COVER REMOVED (TABLE "B")



This sanitary sewer overflow drawing was developed by Debbie Myers, Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.

TABLE 'C

ESTIMATED SSO Fl ow ni IT OF MIU P\C.K MO> F

Height of spout above M/H cover H in inrho^	SSO FLOW a
5 1/8	62
5 1/4	6.3
5 3/8	6.3
5 1/2	6.4
5 5/8	6.5
5 3/4	S.S
5 7/3	6.6
S	6.7
61/8	6.8
6 1/4	6.8
6 3/8	6.9
6 1'2,	.. 7 0
6 5/3	7.0
6 3/4	7.1
6 7/6	7.2
7	7.2
7 1/8	7.3
7 1/4	74
7 3/3	7 4
7 1/2	7.5
7 5/3	76
7 3/4	76
7 7/8	77
8	7.7
8 1/3	78
8 V4	79
8 3/3	7.3
8 1/2	3.0
8 5/5	3.0
8 3/4	3.1
8 7/3	8.1
9	3.2
9 1/3	33
9 1/4	8.3
8 3/6	3.4
9 1/2	B.4
9 5/3	3.5
9 3/4	85
9 7/3	85
IS	..

Height o 1 spout above V/H cover H in inr-ipe	SSO FLOW Q
1/B	1.0
1/4	1.4
3/B	1.7
1/2	1.9
5/6	2 2
3/4	2.4
7/8	2.6
1	2.7
1 1/8	25
1 1/4	3.1
1 3/8	3.2
1 1/2	34
1 5/8	3.3
1 3/4	3.5
1 7/8	37
2	3.9
2 1/8	4.0
2 1/4	4.1
23/8	4.2
2 1/2	43
2 5/3	4 4
2 3/4	4.5
2 7/8	4.5
3	4.7
31/8	48
3 "4	4.9
3 3/3	5.0
31/2	5 1
3 5/3	5.2
3 3/4	33
3 7'B	5.4
4	5.5
4 1/8	55
4 1/4.	55
4 3/5	57
4 1/2	53
4 5/8	59
4 3/4	50
4 7/5	50
5	51

Note: This chart is based on a 7/8 inch diameter pick hole

Disclaimer: This sanitary sewer overflow table was developed by Ed Euyen, Civil Engineer. P.E. No. 33955. California, for County Sanitation District 1. This table is provided as an example. Other Agencies may want to develop their own estimating tables.

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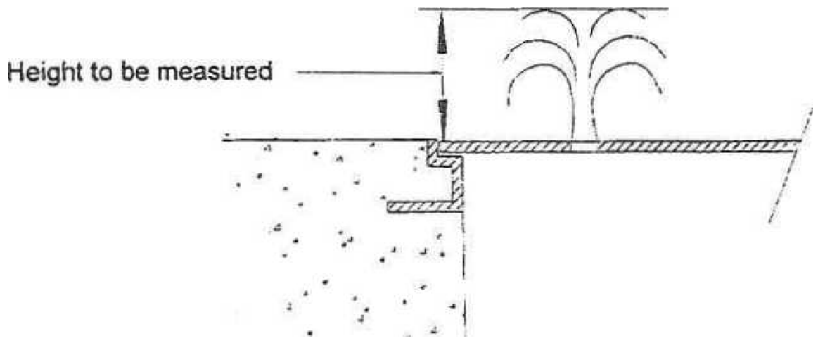
The formula used to develop Table C is Q=CcVA, where Q is equal to the quantity of the flow in gallons per minute, Cc is equal to the coefficient of contraction (.63), V is equal to the velocity of the overflow, and A is equal to the area of the pick hole.^{2} If all units are in feet, the quantity will be calculated, in cubic feet per second, which when multiplied by 448.8 will give the answer in gallons per minute. (One cubic foot per second is equal to 448.8 gallons per minute, hence this conversion method).

Example Overflow Estimation:

The maintenance hole cover is in place and the height of water coming out of the pick hole seven-eighths of an inch in diameter (7/8") is 3 inches (3"). This will produce an SSO flow of approximately 4.7 gallons per minute.

FLOW OUT OF VENT OR PICK HOLE (TABLE "C")



This sanitary sewer overflow drawing was developed by Debbie Myers, Principal Engineering Technician, for Ed Euyen, Civil Engineer, P.E. No. 33955, California, of County Sanitation District 1.

Velocity for ihe purposes of this formula is calculated by using the formula h = v squared / 2G. where h is
equal to the height of the overflow, v is equal to velocity, and G is equal to the acceleration of gravity.

'Jt.-ryn **; :C02** 05 **Ci**'icraj 'W***»n** *ttunti*

Appendix 4

Standby Emergency Response Agreements (SERA)

CITY TO INSERT UPON AVAILABILITY

Appendix 5

SSO Response Equipment List

SSO Response Equipment and Storage Locations

Equipment	Use	Storage Location(s)
Rubber Mats	SSO Containment	MSC Long-term
Sand Bags	SSO Containment	MSC Long-term
Plastic Sheets	SSO Containment	MSC Long-term
Inflatable Pipe Plugs	SSO Containment	MSC Long-term
Digital Camera	SSO Documentation	Service Pickup Trucks
Portable Lighting	After Hours SSOs	MSC Long-term
Repair Clamps	Spot Repairs / SSO Mitigation	MSC Long-term
Traffic Cones / Barricades	Crowd / Traffic Control	MSC Long-term
Protective Gloves	Personal Safety	Service Pickup Trucks
Safety Glasses / Goggles	Personal Safety	Service Pickup Trucks
Disposable Protective Plastic Suits	Personal Safety	Service Pickup Trucks
Vac Con High Velocity Combination Truck	SSO Mitigation / Cleanup	MSC
High Velocity Cleaner	SSO Mitigation / Cleanup	MSC
CCTV Inspection Van	SSO Cause Investigation	MSC
Case 280 Backhoe	Spot Repairs / SSO Mitigation / Cleanup	MSC
Dig it Backhoe	Spot Repairs / SSO Mitigation / Cleanup	MSC
10, 5, and 3 Yard Dump Trucks	Spot Repairs / SSO Mitigation / Cleanup	MSC
Low Bed Trailer	SSO Mitigation / Cleanup	MSC
500 Gallon Cab Over Water Truck	SSO Mitigation / Cleanup	MSC
Lateral T.V. Camera	SSO Cause Investigation	MSC Long-term
Gas Monitors	Personal Safety	MSC Collections Trailer
6" Peabody Bypass Trash Pump	SSO Mitigation	WPFC
8" Gorman Rup Bypass Trash Pump	SSO Mitigation	WPFC
Trench Shoring	Spot Repairs / SSO Mitigation	MSC Long-term
Bleach and Disinfectant Spray Bottles	SSO Cleanup	MSC Storeroom

Appendix 6

SSO Surface Water Sampling Procedures

City of Woodland

Sampling Procedures for
Spills & Illegal Discharges

1. Wear appropriate personal protective equipment (PPE), including safety gloves, eye protection, uniform and/or lab coat.
2. Never attempt to collect samples from locations in which personal safety is at risk.
3. Use the sample kit or sample bottles which have been assembled prior to the sampling event. Consult the Sampling Procedures Table for the proper container and preservative for each type of sample.
    - Three sets of samples are collected from each incident: upstream, entry point and downstream.
    - As far as practical, collect upstream and downstream samples no less than 100 feet from the entry point. Record the distance.
    - All samples are grabs and are collected 6 inches below the surface.
    - Measure Dissolved Oxygen, pH and Temperature at each sample point.
    - At minimum, collect samples for BOD and COD at each sample point.
    - At each sample point, collect an additional sample in an unpreserved, 1000 ml amber-glass bottle.
    - Label each bottle with sampling point, date and time of collection, analysis requested, and sample collector name or initials.
4. Use poles or dippers for hard to reach sample points.
5. Once opened, the inside surface of the sample bottle or lid should not be touched.
6. Face upstream of the spill and lower the bottle below the water surface (6"), then sweep the bottle upstream and out of the water. Be careful not to disturb any bottom sediments which may be present.
7. Take care not to wash any sample preservative from the bottle.
8. Avoid sampling debris or scum from the surface. The surface may need to be agitated or cleared before sampling.
9. Leave a bit of air space at the top of the sample bottle. For Coliform samples, fill the bottle to the line marked on the bottle.
10. Replace the lid securely and shake gently to homogenize the sample with the preservative.
11. Complete sample bottle label.
12. Place samples in a cooler packed with blue ice and deliver to the laboratory within 4 hours of collection.
13. Completely fill out a chain of custody document.
14. Notify laboratory of the event as soon as possible in order to ensure that lab personnel are available to receive and set-up the samples for analysis.
15. For sampling questions, contact the WPCF Laboratory at (530) 406 - 5103 or the Laboratory Analyst at (530) 681 - 2344.

City of Woodland
Sampling Procedures

Sample Type	Analyses	Sample Volume	Container Type	Holding Time	Chemical & Other Preservation Method	Analytical Method
Sanitary Wastewater; (SSO)	Biochemical Oxygen Demand (BOD), 5-Day	1000 ml	Amber Glass	48 hrs.	Sulfuric Acid, Cold, 4^{O}C	SM 5210
Sanitary Wastewater; (SSO)	Total & Fecal Coliform	100 ml	Sterile bottle with $Na_2S_2O_3$	6 hrs.	Cold, 4^{O}C	SM 9221
Sanitary Wastewater; (SSO)	Ammonia	500 ml	32 oz. plastic	28 days	Sulfuric Acid, Cold, 4^{O}C	SM 4500
Total Petroleum Hydrocarbons (TPH, Gasoline)	Benzene Toluene Xylenes TPH MTBE	40 ml	VOA vial	14 days	Hydrochloric Acid, Cold, 4^{O}C	EPA 8020
Total Petroleum Hydrocarbon, (Diesel/Motor Oil)	TPH, Diesel	500 ml	Amber Glass	14 days	Hydrochloric Acid, Cold, 4^{O}C	EPA 8020
Pesticides	Pesticides	1000 ml	Amber Glass	24 hrs	$Na_2S_2O_3$ Cold, 4^{O}C	EPA 608/625
Organic Materials/ Industrial Wastewater (i.e. tomato waste)	BOD pH Temperature EC	1000 ml 16 oz 16 oz 16 oz	Amber Glass Plastic Plastic Plastic	48 hrs. NA NA 28 days	Cold, 4^{O}C Test Immediately Test Immediately Cold, 4^{O}C	SM 5210 SM 2510
Groundwater	Electrical Conductivity (EC)	16 oz	Plastic	28 days	Cold, 4^{O}C	SM 2510
Street Maintenance Corrosives (lime, acid)	pH	16 oz	Plastic	None, Test Immediately	None, Test Immediately	
Swimming Pool Water	Chlorine Residual	16 oz	Plastic	None, Test Immediately	None, Test Immediately	HACH 8021

City of Woodland

Environmental Operations Division

Environmental Spill Sample Collection SOP

PURPOSE AND TYPES

GENERAL CONSIDERATIONS

This document sets forth standard operating procedures (SOPs) for spills, sanitary sewer overflows (SSOs) and illicit discharges which impact City's storm drain system in which City staff collects samples.

- In all cases, it is the City's responsibility to ensure that sample collection activities are conducted in accordance with accepted scientific procedures.
- The City has the option to select and adapt these protocols to best suit the particular situation and the resources available.

PURPOSES FOR SAMPLING

There are three main purposes for which the City might collect samples.

- Information. These are situations in which a sample is collected solely to provide information to help with response and not to be used as evidence in an enforcement action. For example, the City may collect a sample for field or laboratory tests that indicate the material's hazard to responders or suggest a containment strategy. Such sampling entails the least stringent procedures and does not require adherence to rules for handling evidence.
- Disposal. This is sampling intended to determine how to dispose of a material. Depending on the situation it may resemble informational sampling, but it is generally more stringent. The most common scenario is the collection of a sample to be sent to a contractor for initiating disposal arrangements. Since the contractor is required to follow certain quality assurance (QA) procedures, it is appropriate to ensure the City also follows the correct QA procedures, including the use of proper containers, chain-of-custody, etc. The aim is to ensure that the sample is truly representative of the waste and to minimize the potential for error.
- Enforcement. These are samples that are collected for administrative, civil, and/or criminal enforcement action. Standards for sampling procedure, documentation, and security are stringent. Although cases may never proceed to a trial, City employees must be prepared from the start to provide testimony, if required, to defend sampling activities. Therefore, whenever possible, standard sample collection and handling procedures should be followed.

TYPES OF SAMPLES

The most common types of samples that the City might collect include:

- Illicit Discharges
- Spills. This type of sampling draws material from container spills, vehicle accidents, illegally dumped materials, etc.
- SSOs.

TYPES OF CHEMICALS

The identity and hazard of a material generally fall into one of three categories:

- Known. These are materials in which there is a high level of confidence that the nature and identity of the material is known. Many incidents fall into this category. For example, fuel spilled from a labeled tanker or a vehicle's fuel tank, or a chemical spilled from a labeled raw material container at a facility or in transit. A sample may be collected for field tests to verify its identity and to learn more about its properties (e.g., in preparation for proper disposal) or it may be collected in anticipation of enforcement action.
- Partially Known. These are materials whose identity or nature is incompletely known or is known but with uncertain confidence. Confirmation is required through further investigation, field-testing, or laboratory analyses, depending upon the circumstances.
- Unknown. These are materials whose identity or nature is nearly or entirely unknown. Many abandoned materials are unknown, at least initially, until a sample is collected. Unknowns are presumed to be hazardous materials until determined otherwise. An unknown becomes a partially known or a known material as further information is obtained.

SAFETY CONSIDERATIONS

City staff should only collect samples when the proper safety guidelines and applicable state and federal regulations are followed -- generally, when conditions for sampling are safe and when the necessary personal protective equipment is available. City staff must not put themselves in danger just to collect a sample of a material.

RECORD MANAGEMENT

This section discusses the records that need to be made and kept for various types of sample collection activities, including labeling and chain-of-custody requirements.

FIELD NOTES

Maintain a daily record of significant events, observations, and measurements during field investigations and sampling activities. These field notes are intended to provide a record that is sufficient to reconstruct events and activities that occur during projects and to refresh memory (e.g., if called to give testimony during enforcement actions). They should be kept as permanent records. If referred to in a legal proceeding, field notes are admissible as evidence and subject to cross-examination. They therefore must be maintained in a professional manner.

Field notes for sampling activities must include

- Date and time of sampling,
- Name of the sampler and (if evidentiary) witness
- Sample number (or other identification),
- Address or location (latitude and longitude, GPS),
- Source of material,
- Sample type and description,
- Suspected hazards in sample,
- Results of any field tests,
- Description of how the sample was taken and equipment used,
- Disposition of the sample, and
- Other pertinent details.

All notes are to be written in waterproof ink. If an error is made, make a correction by crossing out the error and entering the correct information. Errors should never be obliterated. Instead, they should be corrected, initialed, and dated by the individual who made the original entry.

SAMPLE LABELS

Sample labels must be placed on each container. Use the label that accompanies the new container or another label with sufficient space for identifying the sample. Each sample or set of containers from that sample should have a unique identification number.

The information on a sample label should include

- Number,
- Date and Time,
- Location,
- Sampler's name,
- Sample type (composite, grab, etc.)
- Preservatives used.

To provide for the safety of others that will be handling the sample, it is a good idea to identify any suspected hazards.

SAMPLE CUSTODY

A sample is under custody if one or more of the following criteria are met:

- The sample is in the sampler's possession.
- It is in the sampler's continuous view after being in possession.
- It is secured in a locked area to prevent tampering.
- It is in a secure designated area.

CHAIN-OF-CUSTODY FORM

Chain-of-Custody (COC) forms are documents that describe each sample and track the transfer of a sample from the point of collection to its final destination -- typically a laboratory or evidence locker. The form shows the name, date, time, signature, and organization of each transfer as well as the name of the sampler and a witness. The COC is a legal document and is the most important paperwork item in any sampling event. It is required for any sample that will be sent to a laboratory.

- Any chain-of-custody record can be used, but a form has been specifically designed for the City's use. It contains space for information that is likely to be relevant.
- All chain-of-custody forms should be written in waterproof ink.
- Any errors should be handled exactly as errors in the field notes: they should be crossed out and the correct information entered, initialed, and dated. Erroneous information should never be obliterated.

TRANSFERING SAMPLES

When a sample is transferred, the individual relinquishing and the individual receiving it should sign, date, and note the time on the form. The method of shipment and other pertinent information should be entered in the "Remarks" section. If the samples are split with a potential responsible party, that event -- including the name of the person taking the split - should also be noted. A separate chain-of-custody record must accompany the potential responsible party's samples, too. A witness to the delivery should be obtained.

PHOTOGRAPHS
For all photographs taken, record the date, time, and photographer's name. The photographer should review photographs or slides and compare them to the field notes, to assure that the notes and photographs match.

SAMPLING EQUIPMENT

A supply of basic sampling equipment must be readily available. These items should be in sufficient quantities to perform the necessary tasks and be stored in a secure site until needed.

COLLECTION EQUIPMENT
A variety of equipment should be available, as suggested below. For QA, safety and to minimize cleaning, most of the equipment should be disposable. Additional items may be added as needed.

Items for Collecting Samples of Solids:
- Hand Shovels - stainless steel & disposable plastic
- Stainless Steel Scoop/Spoon

Items for Collecting Samples of Liquids:
- Sample Rods and Contaminated Liquid Waste Samplers - both glass and disposable plastic
- Pipettes and Droppers - disposable plastic
- Bailers - disposable plastic and Teflon
- Rope and Stout String
- Stainless Steel or Polypropylene Dipper

Sample Jars and Containers.
An assortment should be readily available. To eliminate possible contamination or reaction of future samples, new sample containers should be used each time, and each should be used only once. Glass containers should have Teflon-lined lids.
Recommended sample containers include:
- 40 ml VOC Vials - both clear & amber
- Wide Mouth Glass Jars - 8 & 16 ounce
- Regular Glass Jars - 8 ounce & 1 liter
- Plastic Jars - assorted sizes

CLEANING GUIDE
In general, use pre-cleaned sampling materials. This will eliminate the need to handle, store, and use cleaning materials. Nevertheless, it will eventually be necessary to clean some sampling supplies. For most purposes, the following minimum-purity cleaning materials can be used:
- Lab detergent
- Deionized water
- 10% nitric acid
- Spectral-grade isopropanol or acetone.

Do not reuse cleaning materials, and dispose of all wastes and wastewaters properly.

CLEANING PROCEDURES

All cleaning should be done under a fume hood or outdoors. Since nitric acid is a corrosive oxidizer, and isopropanol and acetone are flammable, be careful! After cleaning an item, handle and store it in a manner that prevents contamination. Items should be wrapped in new aluminum foil or in a new sealable plastic bag.

Glass Items

1. Wash with lab detergent and rinse with tap water.
2. Rinse with nitric acid if metals are a parameter, if not, go to #4.
3. Rinse with tap water.
4. Rinse with deionized water.
5. Rinse twice with solvent and allow to air dry.
6. Package to prevent contamination.

Stainless Steel Equipment

1. Wash with lab detergent and rinse with tap water.
2. Rinse with deionized water.
3. Rinse twice with solvent and allow to air dry.
4. Package to prevent contamination.

Plastic or Teflon

1. Wash with lab detergent and rinse with tap water.
2. Rinse with nitric acid if metals are a parameter, if not, go to #4.
3. Rinse with tap water.
4. Rinse with deionized water and allow to air dry.
5. Package to prevent contamination.

Note: Plastic pipettes or droppers should not be cleaned due to the difficulty of cleaning and drying them. Use only as new in box.

SAMPLE COLLECTION

This section describes how to collect various types of samples. City staff may alter these procedures, as appropriate, on a case-by-case basis. But regardless of the specific sampling method or equipment used, some basic sampling and handling principles apply:

GENERAL SAMPLING PROCEDURES

- Preserve health and safety! Before commencing collection of samples, thoroughly evaluate the site. Observe landmarks, hazards, reference and possible sample points.
- Record pertinent observations in your field notes. Include a sketch, when appropriate, identifying sample points.
- Prepare all sampling equipment and sample containers properly prior to entering the site.
- Have aluminum foil handy to provide protective wrapping, if necessary.
- Have absorbents handy to control spills.
- Place containers for receiving samples on a flat, stable surface.
- Collect samples first from those areas that are suspected to be the least contaminated and work to areas of most contamination, thereby minimizing the risk of cross contamination.
- Collect samples and securely close containers as quickly as feasible.

- Where possible, record field observations at a safe on-site location rather than from the sampling point itself.
- If a sampling plan has been used, follow the plan in every detail. Document all steps in the sampling procedures. This is especially important in the event of an enforcement action.
- For potentially hazardous samples, be sure to clean the outside of the sampling containers prior to packaging them for transportation.
- Label all sample containers with the date and collector's initials.
- Complete all chain-of-custody documents and record information in the field notebook.
- Sampling equipment that is reused should be decontaminated between samples.

Spill Sampling

1. Approach spills in compliance with the *ER Site Safety and Health Plan.*
2. Depending on the type of material spilled, choose the appropriate sample collection tool and container.
3. Use a pipette or dropper, scoop, bailer, or another sample jar to collect the spill material. (Alternately, rather than using transfer tool, dip the sample container directly into the pooled material. This will require decontaminating the outside of the sample container to remove any potentially hazardous residue. This alternative is not recommended for unknowns or extremely hazardous materials.) To minimize volatilization when VOCs are a parameter, carefully pour the sample down the side of the sample container. When working with a solid or a sludge exposed to air, it is best to remove carefully the first 1-2 cm of material prior to collecting the sample.
4. Depending upon the nature of the spill, it may be advisable to composite material from several locations within the spill area. Use a Teflon or stainless steel bowl or tray for mixing the composites.
5. Fill the sample container with a stainless steel spoon, scoop or spatula with the desired amount of sample.
6. If the material is aqueous and VOCs are to be a parameter, use a VOC vial and fill it completely. If the material has a significant percentage of solvent, fill the container to approximately 90% capacity to allow for vapor pressure.
7. Check that the Teflon liner is present in the cap. Secure the cap tightly and label the container.
8. Place the sample in a shipping container for transportation.

Surface Water Sampling

Often, spilled materials (especially liquids) find their way into bodies of water. The resulting behavior of the material depends on its physical and chemical properties. Materials that are lighter than water will form pools atop calm pockets or float downwind/downstream of the spill site. Materials that are heavier than water will sink and collect in the greatest depths. Material that is water-soluble will diffuse throughout the water column. Hence, sampling must be suited to the material spilled and its behavior after it enters the water.

1. Approach spills in compliance with the *ER Site Safety and Health Plan.*
2. Select the appropriate sampling equipment and containers for the material spilled and the target parameters.

3. Use a pipette, dropper, bailer, weighted-bottle sampler, or sample container to collect the material or water sample. Samples from shallow depths can be collected by merely submerging the sample container. Simply position the container mouth so that it faces upstream. To avoid stirring up sediment, the sampler should be positioned downstream. Of course, the outside of the sample container must be cleaned before packing.
4. Fill the sample container with the desired amount of sample. It may be necessary to use multiple containers to get enough.
5. Check that a Teflon liner (if required) is present in the cap, close, and label the sample container.
6. Place the sample in a shipping container for transportation. Water samples for VOCs, cyanide and low-level inorganics must be cooled to $4^{o}C$ with ice. (Do not use ice when shipping dioxin samples.)

OTHER SAMPLING CONSIDERATIONS

Sampling Hazardous Materials

Handling these materials requires specialized equipment and training. City staff should normally avoid handling such material. When these materials are present or suspected, contact the Woodland Fire Department & the Yolo County Health Department for assistance.

Sample Security

When conducting sampling activities the sampler must ensure the security of each sample. Tampering, accidental mixup, or improper handling must be prevented.

- Samples should be closed immediately upon collection to prevent any contamination, volatilization, spillage, or other effects.
- Each sample must be kept in the sampler's possession until it is completely packaged for transport to a secure area.
- The sampler must not hand the sample to another person without recording it on a chain-of-custody form. Otherwise the legal chain-of custody and security is broken.
- The sample must not be left unlocked while the sampler goes to another area for any purpose.
- Be sure to mark the container with a sample number or other identification as soon as possible, or use a pre-numbered container prior to sampling to prevent a mix-up when collecting more than one sample.
- Unless absolutely necessary, avoid opening samples after they are sealed.

OTHER SAMPLES

The size and number of samples to collect mainly depends on the type of analysis to be conducted but also on the type of material and number of duplicate samples needed. It is generally better to have too much sample than not enough, especially since obtaining additional sample material may be difficult, or even impossible.

Duplicate Samples

Duplicate samples that are found later to be unneeded are easily disposed. A good rule of thumb to use -- especially if you are unsure whether a duplicate will be needed -- is to collect a duplicate 8 ounce minimum for each waste stream. Duplicate samples that are found later to be

unneeded are easily disposed. Duplicate samples need to follow the same collection procedures, security and chain-of-custody as other samples

Background Samples

Background samples are valuable in verifying the completion of cleanup activities or for enforcement actions.

- A background sample can be collected to show that the background soil or surface water is as clean or cleaner than the incident site.
- A background sample should be collected for enforcement cases in general, unless other evidence eliminates the need.

Sample Blanks

Sample blanks are samples of deionized or distilled water that are treated in the same manner as the unknown sample. They are analyzed to identify possible sources of contamination during collection, preservation, shipping, handling, or analyses. (Obviously, sample blank containers should be the same type and cleanliness as that of the samples.) Sample blanks are recommended for enforcement cases that entail samples of water or other dilute types.

SAMPLE PRESERVATION

The purpose of preservatives is to keep the sample's target parameters as they were at the time of collection -- to prevent unintended changes such as precipitation, chemical or bacteriological degradation, absorption into the walls of the container, oxidation/reduction, etc. The sampling table at the end of this SOP gives some suggested preservatives. Always check the pH of the preserved sample to ensure the pH meets the EPA criteria. If it is not possible to use a preservative for logistical, time or any other reason, then the proceed with the sampling with knowledge that the analyses could be incorrect.

Cooling

The most common preservative measure for emergency response sampling is to cool the samples with ice packs or cold packs to $4^{o}C$.

- Never use ice to cool materials that are known or suspected to be water reactive.
- Whenever possible, dilute aqueous samples should be cooled, especially in preparation for low- or medium- level organic analysis and low-level inorganic analysis.
- VOC vials of dilute aqueous samples should also contain an appropriate preservative.
- All cyanide samples must be shipped on ice.

ANALYSES

Selection of Parameters

Parameters are the target analytical chemicals or characteristics for which a sample will be analyzed. Due to the time and costs involved in laboratory analyses, the selection of parameters needs to be carefully considered. The choice of parameters also affects the sampling procedures and equipment used. The selection of parameters and testing can be minimized through the use of field tests, visual observation, experience, applicable label information (if accurate), sampling compositing (where appropriate), estimating parameters (where possible instead of using laboratory tests), and other means.

FIELD TESTING

PURPOSE OF FIELD TESTING

A field test is basically an analytic procedure that is conducted outside of the laboratory using portable instruments, kits, or other testing materials. Field testing can be used to Gain real-time information for making health and safety decisions for first responders, estimate the extent of contamination and refine sampling plans. It is recommended that all samples be evaluated for pH, temperature and dissolved oxygen.

Attachment vi-2:

Meeting Minutes SOP for SSO & Illegal/Illicit Review Committee

SOP for taking minutes at SSO & Illegal/Illicit Review Committee

1. The Review Committee meets once a month on the second Thursday of every month. It is important that this meeting is not cancelled as this makes the timely review of all incidents difficult.

2. The Committee is co-chaired by the Wastewater Systems Administrator and the Environmental Resource Analyst or
their designees. Co-chairs are currently Tim Lloyd (Wastewater Systems Administrator) and Roberta Childers (Environmental Resource Analyst). Note taker is Sue Parker (Admin Clerk III) with Elizabeth Torres (Admin Clerk III) as backup.

3. Currently the members of this Committee are as follows; Tim Lloyd (Wastewater Systems Administrator) Roberta Childers (Environmental Resource Analyst), Alex Truitt (Utilities Maintenance Supervisor) Mark Hedington (Street Maintenance Supervisor), Mark Severeid (Lab/Environmental Compliance Manager), Angela Weeks (Environmental Compliance Inspector), Sue Parker (Admin Clerk III) & Elizabeth Torres (Admin Clerk III).

4. Agendas are provided by the Co-Chair to all members via email one week prior to the next scheduled meeting date. The meeting begins with the approval of last month's minutes which will be provided to all members of the Committee by the Note Taker via email one week prior to the meeting date.

5. Members are encouraged to review the minutes, all agenda items and documentation that they are responsible for reporting on prior to this meeting to facilitate the efficiency of the review process.

6. This Committee will be classified as an informal meeting, these practices will be followed;

   - A record of attendees will be kept
   - Meeting will be recorded to facilitate accurate notes
   - Agenda items will be recorded in order in which they are discussed.
   - The minutes will be written in a concise, accurate manner, taking care not to include any sort of subjective opinion
   - The focus will be on capturing and communicating all important actions that took place, responsible parties and deadlines to accomplish these actions

7. There are several recurring items on the agenda. These are;
   - Stormwater updates (Environmental Resource Analyst),
   - Sewer updates (Utilities Maintenance Supervisor),
   - Review Incidents (Illegal connections/Illicit discharges and SSO'S)

8. Any additional agenda items submitted by members.

9. Electronic copies of the minutes will be at Q:\PubWorks\2008_2009 SSO Discharges\FY_08_09

10. An End of Year Report on SSO & Illicit/Illegal discharges will be made by first meeting in July. Report will include these items;

Incident	Yearly Total	Type	Cause	Amount of Spill	Action Items
Illicit / Illegal					
SSO					

Attachment vi-3:

SSO & Illegal/Illicit Review Committee Agenda Template

Illicit/Illegal & SSO Review Committee

AGENDA

Date

Time

Location

* Call to Order
< Roll Call
* Approval of Previous Meeting Minutes
<* Storm Water
  - Updates (Roberta Childers)
- SSMP
  - Baseline Monitoring Results (update)
* Review Incidents
  - Illicit/Illegal (Mark Severeid)
  - SSO (Alex Truitt)
* Other Agenda Items
  - Enforcement (James Carr)
    - ♦ Code Violations
    - ♦ Monetary Citations
  - Other new business
<* Calendar-next meeting
* Adjournment

Attachment vi-4:

Sample SSO & Illegal/Illicit Review Committee Meeting Minute Summary and Action Item Log

cn£>		**Date:**	
		Time:	
		Location:	
Meeting called:	Every 2nd Thursday	**Type of meeting:**	SSO and Illicit/Illegal Review Committee
Co-Chair:	Tim Lloyd	**Note taker:**	Susan Parker
Co-Chair:	Roberta Childers		
Memhers of Committee	Tim Lloyd, Alex Truitt Mark Hedington, Sue Parker, Roberta Childers, Mark Severeid Angela Weeks, Elizabeth Torres		
Members Present:			
Please read:	Last month's minutes for review/approval		
Please bring:	Any background documents to aid in review.		

Minutes

Agenda item:		**Presenter:**	
Discussion:			
Conclusions:			

Action items	**Person responsible**	**Deadline**
S		
S		
S		
S		

Agenda item:		**Presenter:**	
Discussion:			
Conclusions:			

Action items	**Person responsible**	**Deadline**
S		
S		
S		
S		

Agenda item:		**Presenter:**	
Discussion:			
Conclusions:			

Action items	**Person responsible**	**Deadline**
V		
V		
V		
V		

Agenda item:		**Presenter:**	
Discussion:			
Conclusions:			

Action items	**Person responsible**	**Deadline**
V		
V		
V		
V		

Other Information

Observers:	
Resources:	
Special notes:	

Attachment vi-5:

Existing Conditions Water Quality Sampling Plan

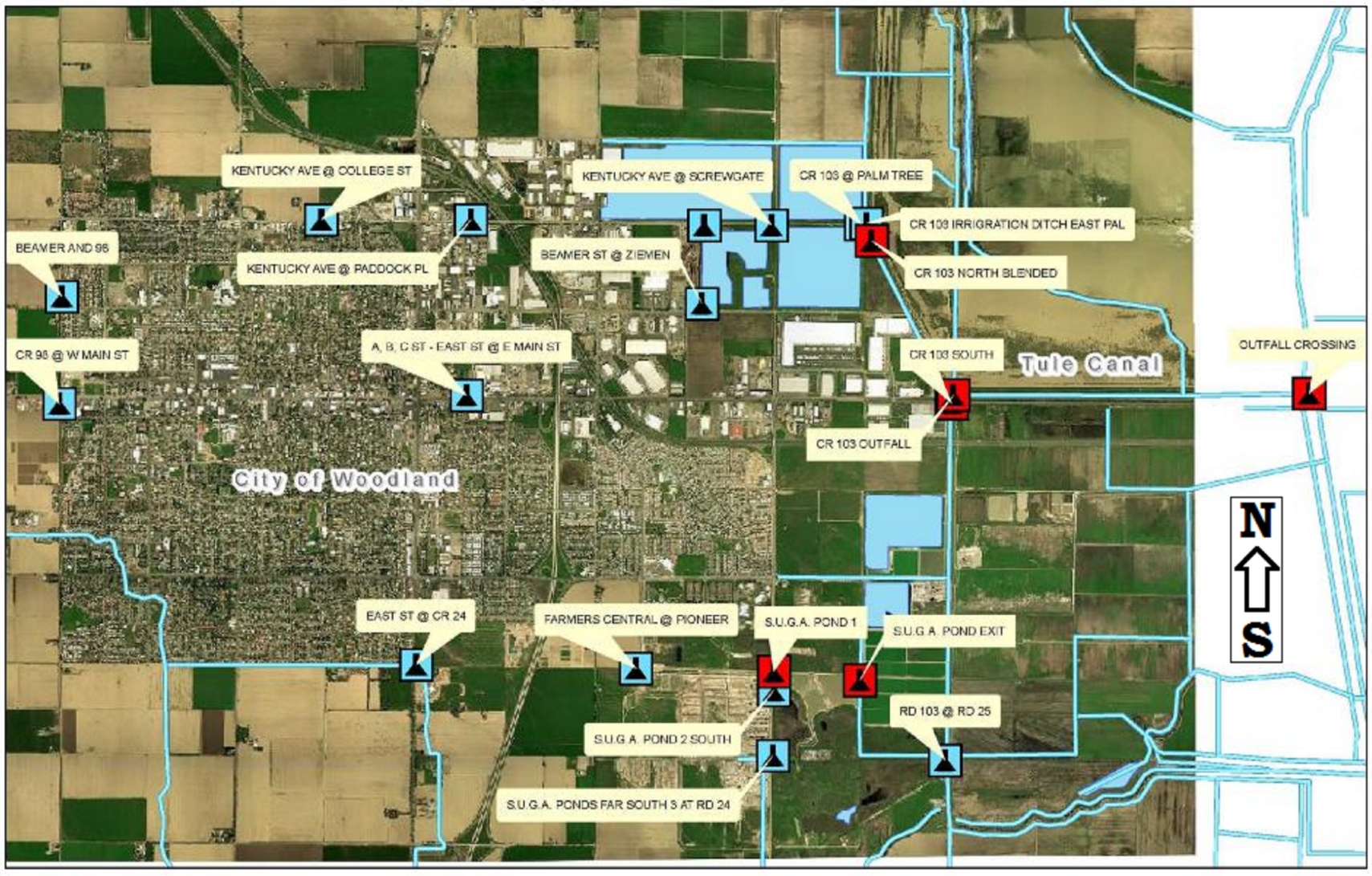
TO BE INSERTED BY CITY

Surface Water Existing Conditions Sampling Locations

Legend

Critical Sampling Location

Standard Sampling Location



City of Woodland
Wastewater Operations Laboratory

Storm Water Baseline Monitoring Project

Existing Conditions Water Sampling Results

Revised 2/2009

Date Sampled	Time Sampled	Sample Description	Temperature °C	pH	EC µs/cm	DO mg/L		COD mg/L		Estimated BOD mg/L		NH_3 mg/L	Turbidity NTU	Comments
10/3/2008	1017	103 Outfall	N/A	8.4	1200	N/A		N/A				N/A	N/A	10/3/08 samples collected and tested by BSK labs
10/31/2008	1512	103 Outfall	N/A	7.4	634	4.7		184				N/A	N/A	
1/21/2009	1018	103 Outfall	N/A	8.3	1452	10.2	<	1				N/A	N/A	
4/8/2009	1218	103 Outfall	16.6	7.7	321	8.0		N/A			<	1.0	50.8	
7/7/2009	949	103 Outfall	21.4	8.4	1174	9.1		14				N/A	N/A	
3/10/2010	956	103 Outfall	12.9	7.9	1239	9.6		8			<	0.1	13.6	
6/8/2010	1030	103 Outfall	21.7	8.3	1336	8.3		13				0.2	24.6	
10/13/2010	937	103 Outfall	19.2	8.1	1142	7.6		19			<	0.1	19.7	
6/6/2011	845	103 Outfall	17.8	8.3	686	8.6		9		3.0	<	0.1	N/A	
5/2/2014		103 Outfall						11		2.2	<	0.1	12.2	
8/1/2014	750	103 Outfall					<	1	<	2.0	<	0.1	10.3	
10/7/2014	1405	103 Outfall	22.3	7.9	1203	7.9		15		3.0		0.2	3.23	
3/11/2015	900	103 Outfall	15.6	8.3	636	9.1		57		10		0.5	50.50	Post-rain event

10/3/2008	1330	103 North Canal	N/A	8.5	1100	N/A		N/A				N/A	N/A	10/3/08 samples collected and tested by BSK labs
10/31/2008	1524	103 North Canal	N/A	7.1	415	2.6		196				N/A	N/A	
1/21/2009	1043	103 North Canal	N/A	8.8	3310	17.0	<	1				N/A	N/A	
4/8/2009	1245	103 North Canal	16.3	7.8	286	6.8		N/A			<	1.0	47.5	
7/7/2009	1000	103 North Canal	20.9	8.9	1039	12.3		14				N/A	N/A	
3/10/2010	1007	103 North Canal	11.8	8.2	1311	8.8		6			<	0.1	14.1	
6/8/2010	1039	103 North Canal	23.5	8.4	1353	6.9		16				0.4	7.6	
10/13/2010	946	103 North Canal	17.4	8.9	1199	14.6		38			<	0.1	22.2	
6/6/2011	900	103 North Canal	16.5	8.2	849	6.1		15		2.5		0.2	N/A	
5/2/2014		103 North Canal						10		2		0.14	6.81	

8/1/2014	800	103 North Canal						57		11.4	<	0.10	41.1	
10/7/2014	1412	103 North Canal	26.3	8.7	1059	13.2		56		11.2	<	0.10	20.4	
3/11/2015	850	103 North Canal	16.6	8.1	1726	7.9								Post-rain event

10/3/2008	1132	103 South Canal	N/A	8.3	1600	N/A		N/A				N/A	N/A	10/3/08 samples collected and tested by BSK labs
10/31/2008	1542	103 South Canal	N/A	7.3	867	2.1		302				N/A	N/A	
1/21/2009	1101	103 South Canal	N/A	8.3	1325	11.5		13				N/A	N/A	
4/8/2009	1230	103 South Canal	16	7.7	182.6	6.0		N/A			<	1.0	32.6	
7/7/2009	1013	103 South Canal	19.3	7.8	1063	6.5		23				N/A	N/A	
3/10/2010	942	103 South Canal	9.4	8	647	10.1		18			<	0.1	46.0	
6/8/2010	1014	103 South Canal	21.3	8.1	1414	7.1		32				0.2	24.4	
10/13/2010	1003	103 South Canal	16.3	8.4	1147	6.3		23				0.1	36.8	
6/6/2011	912	103 South Canal	15.9	8.7	557	5.7		24		2.7		0.1	N/A	
5/2/2014		103 South Canal						24		4.8		0.18	46.4	
8/1/2014	725	103 South Canal						11		2.2		0.17	36.7	
10/7/2014		103 South Canal	N/A	N/A	N/A	N/A		N/A				N/A	N/A	Dry
3/11/2015	830	103 South Canal	14.7	7.8	2163	5.0								Post-rain event

5/2/2014		DIP-00817						10		2	<	0.10	0.426	
8/1/2014	817	DIP-00817						5	<	2	<	0.10	0.55	
10/7/2014	1425	DIP-00817	22.7	7.7	1451	4		16		3.2		0.57	2.54	
3/11/2015	920	DIP-00817	15.2	8.3	1733	9.3								Post-rain event

vii FOG Control Program

SWRCB Requirement:

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

*(a) An implementation plan and schedule for a **public education outreach** program that promotes proper disposal of FOG;*

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

*(c) The **legal authority to prohibit discharges** to the system and identify measures to prevent SSOs and blockages caused by FOG;*

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

*(e) Authority to **inspect grease producing facilities**, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;*

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

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

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.

Background

The accumulation of fats, oils, and grease (FOG) within the City's sewer collection system has historically been a cause of problems such as SSOs. The City determined that a FOG control program is necessary and established a program under the direction of the Laboratory & Environmental Compliance Manager. This section fulfills the requirements of the GWDR SSMP mandatory element vii.

Element vii. FOG Control Program

vii-a. FOG public outreach program

Requirement

An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG.

Discussion

Under the direction of the Laboratory and Environmental Manager, the position of the Laboratory & Environmental Compliance Manager within the Operation and Maintenance Division has been identified as the responsible party for managing and directing the City's FOG control program. The FOG control public outreach program aims to educate, inform and encourage the public to properly handle and dispose of FOG. An integral component of a successful FOG program is a public outreach program effectively targeted at the largest contributors of FOG to the collection system. Sources of FOG are identified within the City sewer collection system through periodic surveys. These sources are food service establishments (FSE), and automotive related businesses (ARB). For additional details on the process by which FOG sources are identified, refer to SSMP section vii-g.

Industrial / Commercial FOG Disposal Education

As part of its Industrial Pretreatment Program (IPP) described in SSMP sections iii-a and vii-c, the City has a business outreach program described in IPP chapter 11. This outreach program, like the IPP in general, is focused toward significant industrial users (SIUs) and does not address the minor contributors such as small businesses, FSEs and residential users. The outreach program for FSEs and ARBs is handled primarily through the visits made during inspections conducted under the City's Pollution Prevention Program. During these visits, permit requirements,including best management practices (BMPs) are reviewed and informational materials (i.e. laminated flyers, etc.) are distributed (see **Attachment vii-1** for examples). For additional details on FOG inspections, refer to SSMP section vii-e.

Residential FOG Disposal Education

General education of residential users for the proper disposal of FOG is conducted at large public events. Every year, the Pollution Prevention Program sponsors informational tables at events such as:

- Hot Rod Reunion and Custom Motorcycle Show at the Yolo County Fair Grounds, held in early June
- The Yolo County Fair at the Yolo County Fair Grounds, held in mid August

Additionally, general educational ads or press releases are run in the newspaper, on television, or distributed in utility bill inserts. Large scale public outreach is typically conducted during the holiday season when grease production is the highest. Example flyers, ads, activity descriptions, and other materials used during these public outreach activities are documented and filed appropriately as they occur. Public outreach efforts are documented as work orders using the Cityworks CMMS. In addition, the City has developed a Pollution Prevention Program web page which describes oil and grease disposal best management practices for residential users.

In addition to general public education, targeted public education is conducted at select locations that have been identified by Utility O&M Workers as potential heavy FOG sources based on the problem pipes list. The Environmental Compliance Inspector typically makes contact with the owner of the homes or apartment complexes and distributes notices that describe the problems being encountered by sewer O&M staff, the potential for continued improper disposal of FOG materials to cause sewer blockage and backup into residences, and methods and options for proper disposal. Other materials that may be distributed during these visits include:

- Grease scraping tools
- Door hangers
- Grease cans
- Informational magnets
- Fact sheets (Top Ten BMPs)

For large multi-family areas, the Inspector typically asks the property managers to distribute the materials to their tenants. The Inspector may make repeat efforts to distribute information or even request a public presentation if O&M Workers continue to report problems with FOG buildup in downstream sewer lines.

Related Documents

- Attachment vii-1: Flyers – "Grease Trap Maintenance Guidelines" and "Vehicle Service Facilities – BMPs"

Element vii. FOG Control Program

Plan & Schedule

Task	Responsible Party	Scheduled Date
Establish a hard copy file of public outreach materials used.	Environmental Compliance Inspector	On-going, updated as needed
Provide information on the City website that instructs residents on how to properly collect and contain grease and where it can be disposed.	Environmental Compliance Inspector / IT Technician	On-going, updated as needed
Conduct FOG public outreach activities and maintain records of all activities as work orders in CMMS.	Environmental Compliance Inspector	Continuously

vii-b. FOG disposal

Requirement	The FOG control program shall include a plan and schedule for the disposal of FOG generated within the sanitary sewer system service area.
Discussion	Ensuring the proper disposal of fats, oils, and grease is key to preventing it from entering the sanitary sewer collection system. The City requires that food service establishments regularly clean grease traps and interceptors and properly dispose of the grease per their Pollution Prevention Program (PPP) permit, described in SSMP section vii-c. The BMPs outlined in each PPP permit outline the frequency for the cleanings and refer the permit holder to contractors that provide professional grease trap or interceptor cleaning services. The City also distributes a list of waste haulers and grease renderers that provide service in the area when they conduct site visits or inspections (see **Attachment vii-2**). The BMPs also give recommendations for the proper disposal of the collected grease and outline the procedures to follow if grease should accidentally be disposed of improperly. For examples of a PPP permit and the BMPs referenced within the permit, refer to section vii-e of the SSMP. This information is provided to businesses as a resource to help ensure proper disposal of FOG. Currently the City has not officially licensed or certified a group of contractors to perform cleaning and grease removal. Residents are also instructed on the proper disposal of household grease through various public outreach efforts. Additional details on public outreach efforts are detailed in section vii-a of the SSMP.
Related Documents	o Attachment vii-2: List of Waste Haulers and Grease Renderers in the Woodland Area
Plan & Schedule	No further efforts are projected for this element at the present time.

Element vii. FOG Control Program

vii-c. Legal authority

Requirement

The legal authority to prohibit discharges to the system and identify measures to prevent SSOs and blockages caused by FOG.

Discussion

Prohibition of FOG Discharges

The City has legal authority to prohibit FOG discharges as described in the City Municipal Code Section 19-2-1 – "General discharge prohibitions":

> (b-14) Solids or Viscous Matter. Any solid or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the WPCF such as but not limited to: grease or fat, garbage with particles greater than one-half inch in any dimension, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, wastepaper, wood, plastics, gas, tar, asphalt residues, residues from refining, or processing of fuel or lubricating oil, mud, or glass grinding or polishing wastes.

FOG Discharge Control

The City has the legal authority to require grease removal devices and properly dispose of grease as described in the City Municipal Code Section 19-2-2 – "Interceptors required":

> (a) An interceptor shall be installed in a user's building sewer, when in the opinion of the director it is necessary for the proper handling of wastewater containing grease or oil in excessive amounts, any flammable wastes, sand, grit or other harmful ingredients; except that such interceptors shall not be required for buildings used solely for residential purposes; provided, however, that interceptors shall be constructed in any place or building having a capacity to serve group meals and in commercial and industrial cleaning facilities.
>
> Where the director requires the installation of an interceptor by a user who is neither a SIU nor a CIU, then that user shall also be required to obtain a pollution prevention permit. Common types of users requiring an interceptor and a pollution prevention permit include, but are not limited to, the following establishments: restaurants, cafes, lunch counter, cafeterias, bars and clubs; hotel, hospital, sanitarium, factory or school kitchens, equipment repair shops, service stations and other establishments where grease, oils, sand, or grit may be introduced into the WPCF in quantities that can cause line stoppage or hinder sewage treatment or private sewage disposal.
>
> (b) All interceptors shall be of a type and capacity approved by the director and shall be so located as to be readily and easily accessible for cleaning and inspection. 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, are gastight and watertight. All interceptors shall be maintained by the owner, at his expense, in continuously efficient operation

at all times.

(c) Each user shall regularly inspect, clean and repair interceptors owned by the user. Records of inspections, cleaning and repairs, and the costs associated with these actions shall be kept for three years and be made available for inspection by city personnel upon request. The debris from interceptors shall be disposed of through a licensed waste hauler. Waste disposal records, including receipts, shall be kept for three years and be made available for inspection by city personnel upon request.

(d) Standards for Interceptors. All interceptors shall comply with the standards of this subsection.

(1) Plans shall be submitted to and approval obtained from the director prior to the installation of any interceptor.

(2) All drains from kitchen areas including pre-wash, shall be connected to an interceptor. Toilets, lavatories and other sanitary fixtures shall not be connected to any interceptor.

(3) All fixtures discharging into an interceptor shall be individually trapped and vented in a manner approved by the director.

(4) Each interceptor shall be so installed and connected that it shall be at all times easily accessible for inspection, cleaning, and removal of the intercepted material.

(5) Interceptors shall be maintained in efficient operating condition by periodic removal of the accumulated materials. No such collected material shall he introduced into any drainage piping, public or private or discharged to the WPCF.

(6) Each interceptor shall be constructed of durable materials satisfactory to the director and shall have a full-size gastight cover which can easily and readily be removed.

(7) Interceptors required by this chapter shall not be installed until the type and/or model has been subjected to, and has fully complied with, tests acceptable to the director. Where existing conditions are found acceptable as determined by the director such facilities as presently exist will he allowed to remain in use. Whenever it shall come to the attention of the city that any Interceptor is no longer acceptable or does not comply with the provisions of this section, the director shall suspend or revoke such approval and require corrective measures. (Ord. No. 1271, § 1 (part).)

Authority to Enforce Penalties for Noncompliance

The City has the legal authority to enforce noncompliance as described in the City Municipal Code Section 19-6 – "Enforcement and Penalties". Refer to SSMP section vii-e for more information regarding enforcement authority for the FOG control program.

Industrial Pretreatment & Pollution Prevention Program

The City of Woodland implements the federally-mandated Pretreatment Program which was established to regulate the introduction of pollutants from non-domestic sources into Publicly Owned Treatment Works (POTW). The Industrial Pretreatment Program (IPP) covers those industries that meet the criteria to be classified as Significant Industrial Users (SIU).

The City established a Pollution Prevention Program (PPP) to supplement the IPP, which was instituted in compliance with EPA regulations (40 CFR Part 403). The PPP allows the oversight of businesses that may be of some concern to the sewer collection system or WPCF, but do not fall under the criteria that would make it subject to the IPP. Businesses such as restaurants, automotive repair shops, supermarkets, and schools are permitted as part of the PPP. Permits issued to businesses as part of the PPP authorize the City to monitor compliance and respond to non-compliance. It is through the PPP that the major sources of FOG are identified and source control measures are applied. A more detailed description of the FOG control program and its relationship to the PPP is provided in **Attachment vii-3**.

Pollution Prevention Program Implementation

The City's FOG control program is implemented in the following fashion to identify sources of FOG and apply the intended source control measures.

1. The City conducts a periodic review of the original Industrial User Survey as outlined in section 3 of the IPP Administrative Procedures Handbook. This process involves the review of data from water use records, the telephone book Yellow Pages, and Yolo County Office of Emergency Services Hazardous Materials Inventory. During this review, possible PPP candidates are identified. This survey is continually updated as the Community Development Department forwards new business license applications and building permit requests to the Environmental Compliance Division, which are reviewed and used to identify additional PPP candidates. Through this process, sources of FOG are made known to the FOG control program.
2. Businesses and industries identified in the Industrial User Survey are classified into one of four categories; 1) business of no concern, 2) business of concern under special circumstances, 3) potential PPP candidates, and 4) potential IPP candidates. Businesses likely to contribute FOG to the collection system are categorized as potential

PPP candidates.

3. Issue a PPP permit to identified businesses. An example PPP permit for grease traps is included in **Attachment vii-4**, and a PPP permit for grease interceptors is included in **Attachment vii-5**.
4. The Environmental Compliance Inspector explains the expectations associated with the source specific PPP permit to the business owner (e.g., required grease removal devices, BMPs, maintenance and inspection schedules, etc.).
5. The Environmental Compliance Inspector monitors compliance, and based on data collected from inspection results identifies cost effective approaches to minimize the amount of FOG entering the collection system.

Related Documents

- Refer to City Code on the City's website at https://www.municode.com/library/ca/woodland/codes/code_of_ordinances?nodeId=THCOWOCA_CH19WADITR_ARTIIDIRE
- Refer to City of Woodland Wastewater Industrial Pretreatment Program – Administrative Procedures Handbook
- Refer to the City of Woodland's most recent Industrial User Survey
- Refer to Pollution Prevention Program Framework (see SSMP section iii-a)
- Attachment vii-3: City Of Woodland Industrial Waste Pretreatment FOG Program
- Attachment vii-4: Example PPP Permit (Grease Trap)
- Attachment vii-5: Example PPP Permit (Grease Interceptor)

Plan & Schedule

No further efforts are projected for this element at the present time.

vii-d. Grease removal devices

Requirement

The FOG program shall include 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.

Discussion

Requirement to Install

The current pretreatment requirements are defined in the City of Woodland Wastewater Industrial Pretreatment Program – Administrative Procedures Handbook dated September 1994. The City has the authority to require grease interceptors under City Municipal Code Section 19-2-2 – "Interceptors required".

Design Standards

The City of Woodland complies with the design standards for grease interceptors set forth in the California Plumbing Code.

One disadvantage of grease traps is that they cannot provide adequate retention time to allow for connection to dishwashing machines. The high temperature and highly emulsified discharge from dish washing machines tends to "wash out" grease traps, and allow passage of grease out of the trap, which tends to precipitate and form blockages downstream once cooled. Where grease traps are installed, the design standard does not allow them to be connected to a dishwashing machine. In addition, the grease trap operator is required to use a "pre-rinse" procedure (included in **Attachment vii-6**) to remove food scraps and FOG materials prior to placing dishes in a dishwashing machine. The pre-rinse procedure requires the owner to scrape plates into the trash, and rinse plates without detergent in a pre-rinse sink that is plumbed to the grease trap. This procedure removes most FOG materials in the pre-rinse sink, which is captured in the grease trap. FOG discharge from the dishwashing machine, which is not connected to a grease interceptor as it would be at larger FSEs, is reduced and will not pose a significant threat to the collection system.

Maintenance Requirements

PPP permits outline the maintenance, self-monitoring and recordkeeping requirements for each business. Businesses that have grease trapsare required at a minimum to have them cleaned once every week, or at the frequency required to meet the City's local limit for oil and grease. Businesses using oil and grease interceptors are required to have them cleaned at least once every three months, or at the frequency required to meet the City's local limit for oil and grease.

Recording Keeping and Reporting Requirements

PPP permits require grease trap and interceptor owners to "maintain all records pertaining to the operation and maintenance of the interceptor / trap, including the time and date of all maintenance activities, and detailsregarding the recycling and disposal of all materials and wastes." Businesseswith PPP permits are required to make these records available uponinspections of traps or interceptors. Blank maintenance logs are provided bythe City to each business, and an example log is included in **Attachment vii-7**. This is done to document the cleaning frequency of permittedestablishments and ensure the proper disposal of grease.

The Environmental Compliance Inspector uses the City's GIS as a database to store information about PPP permit holders. The City has a points shape file that stores the following permit holder information:

- Name of Business
- Geographical Location
- Business Telephone #
- Name of Business Owner
- Business Owner Telephone #
- Mailing Address
- PPP Permit Contact Person Phone #
- Emergency Contact Name
- Emergency Contact Phone #
- Application Date
- Date Permit Issued
- Date Permit Expires

Grease interceptor or grease trap cleaning records that are submitted to the Environmental Compliance Division by PPP permit holders are stored in a hard copy file.

BMP Requirements

PPP permits for every applicable business also outline BMP requirements for the following areas:

- Oil and Grease Handling and Disposal
- Spill Cleanup and Pavement Cleaning
- Interceptor Installation
- Interceptor Maintenance

Related Documents

- Attachment vii-7: Hot Water Only Pre-Rinse Wash Procedures
- Attachment vii-8: Grease Removal Device Maintenance Record

Plan & Schedule

Task	Responsible Party	Scheduled Date
Inspection	Environmental Compliance Inspector	Continuously

Element vii. FOG Control Program

vii-e. Inspection

Requirement

Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance.

Discussion

An effective and efficient FOG control program must have good documentation of the sources contributing FOG to the system. Inspection of pretreatment measures at FOG sources (i.e., FSEs) is important to develop this data. Properly maintained and implemented pretreatment measures will greatly reduce the amount of FOG in the sewer collection system and the risk of blockages.

Legal Authority

As discussed in SSMP section vii-c, the City has the legal authority to inspect FSEs and enforce the provisions of the FOG control program as defined in the City's Municipal Code, through the following provisions:

- Inspection: Chapter 19 –"Wastewater Discharge and Treatment" Section 19-5-14 –"Inspection and Sampling"
- Enforcement: Chapter 19 –"Wastewater Discharge and Treatment" Section 19-6 –"Enforcement and Penalties"

Additionally, Federal and State regulations require each publicly owned treatment works (POTW) with an approved pretreatment program (e.g., WIPP) to develop and implement an enforcement response plan (ERP) (found in **Attachment vii-8**). The City of Woodland ERP does the following:

1. Describes how the POTW will investigate instances of noncompliance
2. Describes types of escalating enforcement responses the POTW will take in response to all anticipated types of violations and the time periods within which responses will take place
3. Identifies the official(s) responsible for each type of response
4. Adequately reflects the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards

FSE FOG Control Program Inspection Scheduling

The FSE inspection program begins with the issuance of a PPP permit, as described in SSMP section vii-c. Inspection schedules are established at the

time the PPP permit is issued to the business owner. The minimum inspection frequency is one time per permit period, which is typically 5 years. Unannounced inspections of PPP permitted businesses may be conducted by the Environmental Compliance Inspector. Inspections are composed of the following activities:

- Review log of all inspections, cleanings and repairs of the grease interceptor / grease trap
- Review log of all waste disposal records and receipts
- Visual inspection of grease interceptor / trap
- Interview to determine level of success of BMP implementation
- Completion of standard Pretreatment Inspection Form

Currently, the Environmental Compliance Inspector utilizes a master spreadsheet (see **Attachment vii-9**) of inspection and maintenance activity records to conduct unannounced inspections at business locations that are either lacking recent documentation, have not been inspected recently, or are located in areas of heavy FOG blockage identified by Maintenance Workers. Otherwise, there is no set schedule for inspections of all facilities other than the minimum required inspection once every permit period. The overall number of inspections conducted is dependent upon the availability of the Environmental Compliance Inspectors and the demands of other job responsibilities. A typical inspection SOP and illicit discharge "stop action" report are included in **Attachment vii-10** and **Attachment vii-11**.

Comprehensive Record Keeping and Inspection Scheduling

The Operations and Maintenance Division has implemented a program over the next 4 years that will accomplish the following tasks:

- Every 6 months, review record keeping data received from permit holders, file hard copy records, and identify establishments that have not submitted records or have submitted unsatisfactory records.
- Schedule and conduct inspections at the identified establishments over the following 6 month period.

Staffing

The City currently staffs two positions with responsibility for inspection of facilities as part of the pretreatment program.

Related Documents

- Refer to City Code on the City's website at: http://www.cityofwoodland.org/gov/depts/cd/bldg/standards/municode.asp
- Attachment vii-8: City Of Woodland Enforcement Response Plan
- Attachment vii-9: Example of Master FSE Inspection Scheduling Spreadsheet
- Attachment vii-10: FOG Program Inspection SOP
- Attachment vii-11: Example Illicit Connection / Illegal Discharge Stop Action Report

Element vii. FOG Control Program

Plan & Schedule

Task	Responsible Party	Scheduled Date
Track staff time spent implementing the use of Cityworks, reviewing maintenance record submissions, and conducting PPP permit holder inspections. Produce report summarizing FTEs required to support the established inspection schedule.	Laboratory and Environmental Compliance Manager	On-going
Collect semi-annual records from PPP permit holders. Review records, schedule inspections, and conduct inspections for non-reporting or under-reporting permit holders.	Environmental Compliance Inspector	Semi-Annually

Element vii. FOG Control Program

vii-f. Identification of sewer system sections subject to FOG blockages

Requirement

The FOG control program shall include an identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section.

Discussion

An integral part of the City's efforts to minimize the amount of sanitary sewer overflows from the sewer collection system is to first quantify where blockages are most likely to occur and direct an appropriate level of effort to reduce the risk of SSOs.

Scheduled Cleaning of Sewer Lines Impaired by FOG

Based on SSO records, CCTV surveys, inspection and maintenance records of grease removal devices, and institutional knowledge of employees, the City has identified a list and map of known areas in the sewer collection system that are subject to blockages. Sections of the system that have had or are prone to FOG-related problems are identified on the regularly scheduled pipeline cleaning list in the "Comments" column. There is also a GIS map of the regularly scheduled cleaning routes with symbolized layers for pipes that are cleaned at various frequencies, and are subject to documented FOG buildup (see **Attachment vii-12**). This list and cleaning schedule, as well as the GIS map reside on the City server so that it is accessible to both the Utility O&M and Environmental Operations Branches, since both work cooperatively to track and minimize FOG related problems. The list and map of hot spots contains the following pertinent information:

- Upstream manhole ID
- Downstream manhole ID
- Asset Information (pipe size, pipe material, pipe install date)
- Comments (cause of blockage, identified as FOG if applicable)

The City prescribes the following maintenance activities for hot spots in an effort to minimize the risk of SSOs in those areas:

- Weekly Sewer Main Visual Inspections – The City maintains a list of troublesome sewer mains that are visually inspected every week to ensure blockages are not imminent. The list has fields that contain the location, manhole numbers, comments, and a checkbox for when the inspection is completed.

- Weekly & Quarterly Sewer Main Flushing - The City maintains a list of problematic sewer mains that are to be flushed every week to clear FOG and debris that may cause blockages. There is also a list for mains that are flushed quarterly which experience consistent blockages but at a lesser rate than the lines on the weekly flushing list. Both lists contain fields for a description of the location, manhole numbers, comments, and a checkbox to indicate the flushing has been completed.
- Chemical Root Treatment Program - The City employs a chemical foam root treatment program cyclically. Grease tends to collect on roots, which increases the risk of grease-related blockages. Treating the sections of the collection system known to have root problems minimizes the risk of SSOs.
- CCTV Inspection - Apart from the regularly scheduled inspections described in section iv-b of the SSMP, the City inspects sewer mains immediately following SSOs to determine the cause of the blockage. Correctly identifying the cause is essential to allow continuous updating of the weekly and quarterly sewer cleaning routes.

The availability of GIS data for PPP permit holders and priority inspection and cleaning routes will help to increase the amount of data that is shared between the Environmental Compliance and Utility O&M Divisions. Additionally, this GIS map will be updated every 6 months with any changes to the cleaning / inspection routes or new PPP permit holder information.

Related Documents

- Attachment vii-13: Priority Cleaning / Inspection Route GIS Map
- Example Weekly Sewer Main Flush List (see SSMP section iv-b)
- Example Weekly Sewer Main Inspection List (see SSMP section iv-b)
- Example Quarterly Cleaning Route (see SSMP section iv-b)

Plan & Schedule

Task	Responsible Party	Scheduled Date
Update GIS maps of priority cleaning / inspection routes as changes to assets on the lists occur.	Utility Supervisor / GIS Network Specialist	Semi-Annually

Element vii. FOG Control Program

vii-g. Source control measures

Requirement

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

Discussion

Communication Protocol: Environmental Compliance and O&M Staff

The Environmental Compliance Inspector fills out a standard inspection form summarizing the results of all grease trap or grease interceptor inspections. An example of this form and the information collected is included in **Attachment vii-13**. One of the final check boxes on the form asks the Inspector "Is there reason to believe that any identified deficiencies of the pretreatment device is causing or may have caused in the past an excessive discharge of fats, oils, or grease to the sewer collection system?" The following question is "If yes, who in the O&M Division is this being delivered to?" If an Inspector conducts an inspection and finds that a grease trap or grease interceptor may have released excessive FOG to the system, the inspection report is forwarded by email to someone in the Utilities O&M Division. O&M Workers can conduct a follow-up investigation as a preventative measure to identify if FOG buildup has occurred downstream.

Additionally, the O&M Workers have an "Inspection Request Form" which can be forwarded by email to the Environmental Compliance Inspectors (see **Attachment vii-14**). This form is used if O&M Workers identify pipe segments that are being severely impaired by FOG blockage and feel that commercial or industrial dischargers may not be complying with their discharge permits. The O&M Worker may describe the location and type of blockage, and list PPP permit holders that are upstream according to GIS maps. Once the Environmental Compliance Inspectors receive the request and conduct the inspections, they will forward the completed inspection forms back to the O&M Worker who submitted the request so that they can see the results of the inspections and know if any corrective or enforcement actions were taken. This communication protocol helps to identify sources of excessive FOG discharges so that they may be controlled before they have the potential to cause SSOs.

New FOG problem areas are mainly identified during regular flushing and CCTV inspection activities. If an O&M Worker notices significant FOG problems within in a pipeline, identification of potential upstream FOG contributors and a request for inspection is initiated. Additionally, O&M

Workers will place such pipelines on appropriate regular flushing schedules depending on the severity of the problem encountered. Pipelines will also be added to the appropriate flushing schedule GIS layer for easy visual identification.

Related Documents

- Attachment vii-13: Sample Pretreatment Inspection Field Report
- Attachment vii-14: Sample Inspection Request Form

Plan & Schedule

No further efforts are projected for this element at the present time.

Attachment vii-1:

Flyers –

"Grease Trap Maintenance Guidelines"

and

"Vehicle Service Facilities – BMPs"

City of Woodland

CITY ORDINANCE NO. 1271 REQUIRES THAT GREASE TRAPS AND INTERCEPTORS BE MAINTAINED IN EFFICIENT OPERATING CONDITION BY THE PERIODIC REMOVAL OF ACCUMULATED GREASE.

The following guidelines are recommended for maintenance of grease traps:

GREASE TRAPS

- **On a monthly basis fax in your cleaning log to the Environmental Compliance Inspector. The fax number is 530-666-1266.**

- Prior to cleaning a grease trap, let ice melt into the sink connected to the device. This will cause the grease to congeal, and will make removal easier.

- **Clean weekly** using a 1 gallon plastic bottle cut into a scoop. Remove only the grease, and leave the water behind.

- **On a monthly basis** completely clean a grease trap by removing the grease, water and any accumulated sludge. Also remove the clean out at the end of a grease trap and flush with hot soapy water.

- Make sure the flow-directing baffles inside your grease trap are put back into the trap after each cleaning.

- Have a plumber clean your grease trap and sewer lateral at least annually. Ask for a written report on the condition of these devices.

- Use allen screws for securing the lid instead of the conventional Phillips or slotted screws which may strip.

- Keep an extra gasket for your grease trap's lid on site. This will prevent leaks and odors in the event of gasket failure. Gaskets are available from plumbing supply stores.

- **REMEMBER GREASE CANNOT BE DISCHARGED INTO THE SANITARY SEWER.**

- If you have any questions about your grease trap please call the Environmental Compliance Inspector at 530-406-5108.

VEHICLE SERVICE FACILITIES
BEST MANAGEMENT PRACTICES

CLEANING UP SPILLS

1. Immediately clean up all spills using kitty litter.
2. Sweep up any debris, and place in the garbage.
3. Mop area and dispose of dirty water down a sink or toilet.

CLEANING AND WASHING AUTO PARTS

1. Never wash auto parts in a sink.
2. Clean auto parts with solvent in a separate tub.
3. Reuse solvent or dispose of in a labeled waste drum.

STORING AND DISPOSING OF AUTO FLUIDS

1. Store all waste drums in a secure area and post labels as required by law.
2. Cover waste drums so rain does not get inside.
3. Store drums in an additional container.
4. Use an authorized waste hauler to dispose of auto fluids and keep shipping receipts.

CHANGING AUTO FLUIDS

1. Use a large drain pan when removing auto fluid.
2. Prevent leaks and spills by keeping a second drip pan under the vehicle.
3. Dispose of fluids in labeled waste drums.
4. Store all drain pans inside away from rainwater.

DISMANTLING CARS AND TRUCKS

1. Drain and collect all auto fluids before dismantling.
2. Dismantle cars and trucks in one protected area away from storm drains.
3. Cover all exposed engine parts.

STORING AUTO PARTS

1. Use Shelves or pallets to keep parts off the ground.
2. Cover outside storage areas to protect them from rain.

REMEMBER, STORMWATER DRAINS ARE FOR THE DISCHARGE OF RAIN WATER ONLY. ONLY RAIN DOWN THE STORM DRAIN!

For questions, or to report incidental discharges to the Sewer System or Storm Water Drainage System call the Pollution Prevention Program at (530) 661-2057.

Attachment vii-2:

List of Waste Haulers and Grease Renderers in the Woodland Area

WASTE HAULERS AND RENDERERS

FOR CLEANING AND DISPOSAL OF GREASE REMOVAL DEVICES

Business Name	Years of Experience in Woodland	City Business License #	Contractors License #	Phone Number
The City of Woodland recognizes the following businesses for participating in the City of Woodland Approach to Proper Grease Disposal Workshop held MM DD, YYYY.				
Frank Houser Septic Tank Service				(530) 666-0347
Frank's Septic Service				(530) 753-2815
North State Rendering Co.				(800) 351-4446
Yolo Pumping				(530) 662-5534
Sacramento Rendering Co.				(916) 363-4821
Modesto Tallow/Florin Tallow Co.				(800) 564-7204

Note: The intent of this document is to provide significant industrial users, businesses, restaurants, etc. with a list of licensed waste haulers and their contact information to ensure proper removal and disposal of grease. The City of Woodland in no way recommends or endorses any business listed and does not assume responsibility for the work product provided by any of the above-listed businesses. The above-listed businesses were found through the Cal FOG website (www.calfog.org/Hauler.html) and (www.calfog.org/GreaseFacilities).

Attachment vii-3:

City Of Woodland Industrial Waste Pretreatment FOG Program

CITY OF WOODLAND

INDUSTRIAL WASTE PRETREATMENT

FOG PROGRAM

Background

The City of Woodland implements the federally-mandated Pretreatment Program which was established to regulate the introduction of pollutants from non-domestic sources into Publicly Owned Treatment Works (POTW). Industrial Pretreatment Program cover those industries that discharge more than 25,000 gallons per day and are collectively known as Significant Industrial Users (SIU).

To address the environmental needs of businesses that discharge less than the SIU volume, the City added Pollution Prevention Program (PPP). It covers commercial types of businesses that include restaurants, automotive repair shops, and supermarkets. To keep PPP permit holders in compliance, especially with the common constituent – fats, oils and grease (FOGs), the City has a established a FOG program with the following goals:

- Develop and implement measures to prevent sanitary sewer overflows (SSO's) and to ensure proper notification should an SSO occur.

- Develop and implement best management practices (BMP's) for food service establishments to prevent as many fats, oils and grease (FOG) from entering the sewer system.

- Develop and implement an outreach to residents about how to control FOG and how to limit the amount that goes to the sanitary sewer.

- Implement a FOG control program that includes requirements for installing grease removal devices, design standards for the removal devices, maintenance requirements, recordkeeping, and the authority and adequate staffing to inspect FOG producing facilities and to enforce the FOG program.

Program Implementation

1. The City determines who generates the FOG by doing a FOG profile and asking for the source - Is the source from one of the following:

    - Residential
    - Apartments
    - Food Service Establishments
    - Somewhere else

2. The second step in the City's implementation of FOG program is to identify exactly the target business that needs our time. Targeting the wrong area or business is a waste valuable time and resources. Communicate the list of specific problem area(s) to the Utility Branch as soon as they are identified.

3. After we identify the problem area(s) we need to try and come up with a cost-effective approach and to come up with solutions to the problem area.

4. The identified businesses with FOGs in their discharge effluent will be issued a Pollution Prevention Permit that will spell out what equipment to install and other permit requirements.

5. When the business receive a PPP permit, the Environmental Compliance Inspector will explain to the business owner what is expected, e.g., regular clean-up of the grease trap and/or interceptor (weekly, monthly, quarterly), proper disposal of FOGs, BMPs so as not to let the FOGs enter the sanitary sewer collection system, etc.

Key Objectives of the FOG Program:
The overall goal is to minimize the amount of FOG entering our sewer system. We need to promote a City wide approach that is:

- Cost-effective- based on cause and effect analysis
- Equitable to all permit holders
- Provides a level playing field and had consistent requirements
- Phased-in – We need to do it in steps instead of all at once. How long will it take to get everyone on board and following the program? We would need a group consensus on this.

Key Elements of the FOG Program:
In addition to the permit conditions, and regulatory requirements FOG program has an educational and public outreach program to educate residential and commercial customers. As a priority, FOG program targets the high-risk areas first. The high risk areas are identified by staff from Environmental Compliance and the sanitary sewer crew.

Key Stakeholders in the Program
The stakeholders include, but are not limited to the following

1. City of Woodland
2. Other Collection systems (County)
3. Restaurants, deli, fast foods, supermarkets, bakery, etc

4. California Restaurant Association- Local Chapter

5. Environmental Health Department

6. Building Department

7. Grease Haulers & Renderers

8. SWRCB, RWQCB, and others

Residential Aspects of the FOG Program
The FOG program is not limited to commercial businesses. Since residences also dispose FOGS, a variety of outreach materials for residences could include the following:

1. Grease Scraper

2. Door Hanger

3. Grease Can

4. Magnet

5. Fact Sheet

6. Commercial/Advertisements

7. Press Releases

The City needs to identify and implement effective conduits to distribute educational materials. We need to develop broader outreach campaigns that may include:

1. Holiday advertising campaign which may include but is not limited to:

    a. Newspaper and food ads
    b. Utility bill inserts
    c. Press releases
    d. Focus on BMP's and proper disposal/ recycling options
    e. Facilitate turkey fryer oil recycling events

2. Display booths at community events

Commercial Aspects of the FOG Program

1. Needs Assessment- Meet with stakeholders throughout the process

2. Develop educational materials based on needs assessment (above)
3. Conduct training for various stakeholders

4. Develop necessary and appropriate regulatory measures

5. Leverage other resources to help, if necessary

6. Develop a variety of outreach materials

    a. Fact Sheets:
        i. Top Ten BMP's (Fact sheet and poster, if possible)
        ii. How to choose a reputable grease hauler (??)
        iii. How to operate and maintain your grease trap and/or interceptor
        iv. What are the requirements for a new or remodeled facility (??)

Identify and implement effective conduits to distribute educational materials.

1. Distribution of materials by Environmental Operations and Utility departments

2. Distribution of materials by other stakeholders (grease haulers, food safety training, plumbers, building department, etc)

3. Site visits of problem areas/ facilities (inspection, warnings and potential enforcement actions)

Identify and implement appropriate regulatory measures.

1. Grease trap/ interceptor requirements for new, remodeled and re-current problem facilities

2. Variance process

3. Penalty assessment and cost recovery authority

4. Evaluate need for increasing pumping/ cleaning requirements.

Projected Areas to Work On

1. Educate problem areas

2. Create website

3. Amend Ordinance(s)

4. Modify program as needed

5. Evaluate program effectiveness based on data

Attachment vii-4:

Example PPP Permit (Grease Trap)

CITY OF WOODLAND
Pollution Prevention Program

WASTEWATER DISCHARGE/POLLUTION PREVENTION PERMIT
FOR FOOD SERVICE BUSINESSES

NAME OF BUSINESS:

BUSINESS ADDRESS:

BUSINESS TELEPHONE NUMBER:

NAME(S) OF PERMITTEE (BUSINESS OWNERS):

PERMITTEE MAILING ADDRESS:

PERMITTEE TELEPHONE NUMBER:

NAME OF PERMITTING CONTACT PERSON:

PERMITTING CONTACT TELEPHONE NUMBER:

PERMITTING CONTACT E-MAIL ADDRESS:

NAME OF EMERGENCY CONTACT:

EMERGENCY CONTACT TELEPHONE NUMBER:

APPLICATION RECEIVED:

DATE PERMIT ISSUED:

DATE PERMIT EXPIRES:

PERMIT DURATION: Five (5) years

In compliance with Chapter 19 of the Code of the City of Woodland (Chapter 19), permission is hereby granted to Permittee to discharge commercial wastewater from the above listed business to the City's Water Pollution Control Facility (WPCF).

NOTICE:

1. Compliance with this Wastewater Discharge/Pollution Prevention Permit does not relieve the Permittee of responsibility for compliance with Chapter 19 and all applicable Federal and State Pretreatment Standards and Pretreatment Regulations, including those which become effective during the term of this Wastewater Discharge/Pollution Prevention Permit.

2. This Wastewater Discharge/Pollution Prevention Permit is issued only to the Permittee and only for a specific food service operation. This Permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation.

3. All charges and fees for use of the Water Pollution Control Facility are subject to amendment by the City Council

4. Civil and criminal penalties apply to any violation of Chapter 19 or the terms of this Permit or any applicable compliance schedule.

5. The Public Works Director may revoke a Wastewater Discharge/Pollution Prevention Permit OR require regulation by the Wastewater Industrial Pretreatment Program for good cause as specified in Chapter 19.

6. Terms used in this Permit shall have the meaning ascribed to them in Chapter 19.

7. This Permit may be modified, or alternatively, revoked or reissued prior to the expiration date in order to comply with any applicable requirements or guidelines approved under Chapter 19, if the requirements or guidelines so approved contain different conditions or additional requirements not provided for in this Permit.

8. In the event of a time lapse between this Permit's expiration date and the issuance of a renewed Permit, the Permittee remains responsible to continue to uphold the conditions of this Permit.

9. This Permit consists of 8 pages.

PERMIT ISSUED BY:

Title: Environmental Compliance Inspector

SIGNATURE:_____DATE: _____

WASTEWATER DISCHARGE/POLLUTION PREVENTION PERMIT
Conditions for Food Service Businesses

GENERAL PERMIT CONDITIONS

All discharged wastewater shall comply with the provisions of the Code of the City of Woodland Chapter 19 (Chapter 19), Section 19-2-1 regarding general discharge prohibitions and Section 19-2-5 regarding Local Limits. Permittee shall also comply with other pertinent sections of Chapter 19. A copy of the Code of the City of Woodland Chapter 19 is included for reference as Appendix A of this Permit.

Type of Device: Grease Trap

Location:

Definition: Grease Trap

For purposes of this Permit, grease Traps are defined as structures, with water capacity of 60 gallons or less and grease retention capacity of 150 pounds or less, designed to separate oil and grease from waste (drain) water resulting from food preparation and/or dish washing. Grease Traps have a single grease and oil retention compartment with a lid which covers the entire compartment. The separated oil and grease is retained at the top of the retention compartment for periodic removal and proper disposal. Grease Traps are usually placed indoors, often under the sink or sinks to which they are connected.

PRETREATMENT REQUIREMENTS

The Permittee is required to have grease Trap connected to the drains of the sinks for dish rinsing or dish washing, and the sinks used for washing of pots, pans and cooking utensils. The plumbing to the grease Trap and connection of fixtures to this grease Trap shall conform to the Uniform Plumbing Code (UPC), latest version. Flow restrictors and vents shall be installed on drains to grease Trap where required by the UPC.

Any subsequent changes in the grease Trap, plumbing, or method of operation shall be reported, and acceptable, to the Public Works Director prior to initiation of the changes.

Submittals of plans, drawings, and/or notification of changes, should be addressed to:

Pollution Prevention Program
City of Woodland - Public Works
WPCF - Wastewater Operations
42929 County Road 24
Woodland, Ca. 95776

All Oil and Grease Traps must be maintained and cleaned sufficiently such that they operate properly at all times. The City requires Oil and Grease Traps be **once per week**. More frequent maintenance may be required to meet the City's Local Limits for oil and grease. Less frequent maintenance may only be determined by City personnel.

No additional pretreatment devices are currently required for wastewater discharged to the sewer. Requirements may be added if necessary in the future.

GENERAL DISCHARGE PROHIBITIONS

Permittee shall not discharge to the WPCF substances identified in Section 19-2-1(b) of the City of Woodland Municipal Code. Permittee is prohibited from discharging the following to the WPCF:

1. Waste containing any gasoline, kerosene, naphtha, benzene, toluene, xylene, alcohol, or other flammable or explosive solid, liquid or gas with a flashpoint of below 140° F or 60 ° C;

2. Pollutants which will cause corrosive structural damage to the City's WPCF with pH below 5.0;

3. Waste containing noxious or malodorous solids, liquid, or gases capable causing a public nuisance; pollutants which create public nuisance or hazard to human life;

4. Any pollutant, including oxygen-demanding pollutants (BOD, etc.) released at a flow rate and/or concentration which will cause interference or pass through in the WPCF;

5. Waste containing solid or viscous substances which may cause obstruction to the flow in the sewer, including, but not limited to: grease or fat, feathers, ashes, cinders, sand, spent lime stone, marble dust, straw, shavings, metal, glass, tar, plastics, wood, paunch, paint residues or any other solids that interfere with the proper operation of the sewer system;

6. Heat in amounts which will inhibit the biological activity in the WPCF, or that raise the influent temperature above 40°C (104° F);

7. Waste containing toxic pollutants, gases, vapors or fumes which may interfere with any wastewater treatment process, cause acute worker health and safety problems. Toxic waste shall include, but is not limited to waste containing cyanide, chromium, cadmium etc;

8. Waste containing petroleum oil, any non-biodegradable cutting oil, or any amounts of products of mineral oil origin which may cause interference or pass-through;

9. Waste containing any substance that will cause the WPCF to be in non-compliance with sludge use or disposal criteria pursuant to the guidelines and regulations developed under Section 405 of the Federal Act, the Solid Waste Disposal Act (42 USC Section 6901et seq.), the Clean Air Act (42 USC Section 7401 et seq.), the Toxic Substances Control Act (15 USC Section 2601) or any other regulation or criteria for sludge management and disposal as required by the State;

10. Waste containing radioactive waste or isotope;

11. Waste containing any color which is not removed by treatment processes;

12. Any trucked or hauled pollutants, except at discharge points designated by this permit;

13. Waste containing any medical waste including, but not limited to infectious agents, human blood, sharps, surgical waste or potentially contaminated laboratory waste;

14. Waste that has been diluted as partial or complete substitute for adequate treatment for purposes of diluting wastes which would otherwise exceed limits contained in this permit;

15. Waste containing any rainwater, storm water, groundwater, street drainage, subsurface drainage, yard drainage, non-contact, single pass or uncontaminated water.

SPECIAL PERMIT CONDITIONS

The following Best Management Practices will be implemented by the Permittee:

Oil and Grease Handling and Disposal

1. Undiluted cooking oil, grease, or meat fat should not be dumped directly into a drain or a trash dumpster. Maintain a separate recycling container for all oils, greases and fats. See "Rendering Companies" or "Tallow" in the Yellow Pages for a list of oil and grease recyclers. (Most companies will pick up recyclable grease free of charge).

2. Do not place waste grease from grease Traps in oil recycling container(s), unless permitted by the company that recycles your used cooking oil and grease.

3. Never pour oily liquids (such as sauces or salad dressings) down a storm drain or into a dumpster. Such materials should only be poured into a sanitary drain with an operational grease Trap between drain inlet and sanitary sewer.

4. Regularly inspect and clean all grease Traps. The City requires cleaning out grease Traps a minimum of **once per week**. Less frequent maintenance may only be determined by City personnel. Grease Traps may be cleaned either by professional grease Trap cleaning service or by Food Service Business owners/employees. The recommended procedures for the two options are presented below:

   For cleaning by professional grease Trap cleaning services:

   - Set-up a regular schedule for cleaning visits. Check the Yellow Pages under "Grease Traps" or "Rendering Companies."
   - Oversee the cleaning and make sure: (1) all grease and oil is removed, (2) all solids are removed from bottom and (3) inlets and outlets are clean (free of any blockage).
   - Get a signed receipt from the contractor for the cleaning work performed.
   - Make sure grease is disposed of properly, i.e., not thrown directly in trash.

   For cleaning by Food Service Business owners/employees:

   - Perform cleaning on a regular basis. A minimum of once a week is required.
   - Make sure: (1) all grease and oil is removed, (2) all solids are removed from bottom, and (3) inlets and outlets are clean (free of any blockage). Replace cover properly.
   - Dispose of waste grease properly, as explained below.

5. Do not flush out oil and grease Traps with hot water and do not use drain cleaners, enzymes or bacteria agents in grease Traps.

6. If possible, recycle waste grease from grease Traps with recyclable cooking oil and grease. Inquire with the company that services your oil recycling dumpster (removes cooking oil and grease placed in your tallow bin), if you have one. If waste grease is not recycled it should be put in containers and disposed of as solid waste in a trash dumpster according to the enclosed instructions from Yolo County Department of Public Works.

Spill Cleanup and Pavement Cleaning

1. Stop any spill at its source.

2. Do not wash or hose oil and grease spills into a gutter or a storm drain.

3. Do not wash or hose oil and grease spills into a sanitary sewer drain unless the drain is attached to oil and grease interceptor.

4. If the spill could enter a storm drain (or a sanitary sewer drain without an attached interceptor), block the flow with sandbags, rags, absorbent, or dirt. Storm drains may be temporarily sealed with plastic sheeting.

5. Dry sweep, as much as possible, using rags and granular absorbents (e.g. cat litter) to absorb the spill. Sweep and dispose of used absorbent into garbage bags. Dispose of the garbage bags into a dumpster, if hazardous materials (e.g., waste oil, caustic/corrosive wastes, toxic materials, etc.) are not involved.

6. If wet cleaning (including high-temperature or high-pressure washing) is required, dry clean the surface first, then mop/wash the surface, and then collect the water. Dispose of water in sink or other indoor drain connected to an oil and grease interceptor, not into a storm drain.

7. When cleaning trash containers, first sweep debris from the trash container, then scrub with a hard bristle brush and non-toxic soap, and rinse off the residue into a sewer drain connected to an oil and grease interceptor, not into a storm drain or dumpster.

MONITORING REQUIREMENTS

Monitoring shall be performed when the facility is in full normal operation. Inspections and sampling will be conducted to verify that Permit requirements are being met with particular emphasis placed on those listed in the SPECIAL PERMIT CONDITIONS section of this Permit.

The City will perform the following inspections and monitoring:

Type	Frequency
Scheduled Inspection	At least one time per Permit period
Monitoring/ sample collection	As needed

Location for Monitoring

Samples for all monitoring required by this Permit shall be taken from the sampling location as described below:

The point of discharge from the grease Trap connected to the 3 compartment sink.

RECORD KEEPING REQUIREMENTS

In accordance with Chapter 19, Section 19-2-2(c), Permittee shall regularly inspect, clean and repair interceptors (Oil and Grease Traps) owned by the user. Records of inspections, cleanings, repairs, and

the costs associated with these actions shall be kept for three years and made available for inspection by City personnel upon request.

Submittal of all records shall be addressed to:

Pollution Prevention Program
City of Woodland - Public Works
WPCF - Wastewater Operations
42929 County Road 24
Woodland, Ca. 95776

NOTIFICATION

1. Notice of Changes in Volume or Nature of Wastewater

If any changes are made in the volume or nature of wastewater generated, or type of raw chemicals used, this information shall be reported by the Permittee to the City. The Permittee shall notify the City 90 days prior to the introduction of any new waste stream or pollutants, or any substantial increase or decrease in the volume or characteristics of existing waste stream discharge. The City shall have the right to deny or condition new or increased contributions of pollutants or changes in the nature of pollutants.

Written notification shall be addressed to:

Pollution Prevention Program
City of Woodland – Public Works
WPCF - Wastewater Operations
42929 County Road 24
Woodland, Ca. 95776

2. Notice of Spills and/or Slug Discharge

a. Telephone Notice: Permittee shall notify the WPCF immediately, by telephone at the numbers noted below, of any discharges, spills, or slug discharges (whether intentional or accidental) which could cause a problem in the sanitary sewer system or operation of the WPCF. The notification shall include location of discharge, type of waste, concentration, volume, time and date, and corrective action taken.

Telephone Contacts:		Monday through Friday:	
Environmental Compliance Inspector	(office)	(530) 661-2057	8 am to 5 pm
	(cellular)		8 am to 5 pm
Environmental Compliance Specialist	(office)	(530) 661-2058	8 am to 5 pm
	(cellular)		8 am to 5 pm
Pretreatment Manager	(office)	(530) 661-2065	8 am to 5 pm
	(cellular)	(916) 262-4970	24 hours

b. Written Notice: Within five working days following a spill or slug discharge, the Permittee shall submit to the Public Works Director a detailed written report describing the cause of the discharge and

the measures to be taken by the Permittee to prevent similar future occurrences. Such notification shall not relieve the Permittee of any expense, loss, damage, or other liability which may be incurred as a result of damage to the WPCF, fish kills, or any other damage to person or property, nor shall such notification relieve the user of any fines, civil penalties, or other liability which may be imposed by Chapter 19 or other applicable law.

COMPLIANCE SCHEDULE

1. The Permittee shall provide necessary wastewater treatment as required to comply with this Permit.

2. The Permittee shall implement the Best Management Practices and record keeping requirements as listed in this Permit within one (1) month from the date of the issuance of this Permit.

APPENDIX A

Chapter 19 of the Code of the City of Woodland (Ordinance No. 1271)

Approved November 7, 1995

Attachment vii-5:

Example PPP Permit
(Grease Interceptor)

CITY OF WOODLAND
Pollution Prevention Program

POLLUTION PREVENTION PERMIT
FOR FOOD SERVICE BUSINESSES

NAME OF BUSINESS: **XXX**

LOCATION OF BUSINESS: XXX

BUSINESS TELEPHONE: XXX

NAME OF PERMITEE (BUSINESS OWNER): XXX

PERMITEE MAILING ADDRESS: XXX

PERMITEE TELEPHONE: XXX

NAME OF EMERGENCY CONTACT: XXX

EMERGENCY CONTACT TELEPHONE: XXX

APPLICATION DATE: XXX

DATE PERMIT ISSUED: XXX

DATE PERMIT EXPIRES: XXX

PERMIT DURATION: XXX

In compliance with Chapter 19 of the Code of the City of Woodland (Chapter 19), permission is hereby granted to Permittee to discharge commercial wastewater from the business at the above location to the City's Water Pollution Control Facility (WPCF).

NOTICE:

1. Compliance with this wastewater pollution prevention permit does not relieve the Permittee of responsibility for compliance with Chapter 19 and all applicable Federal and State Pretreatment Standards and Pretreatment Regulations, including those which become effective during the term of this wastewater pollution prevention permit.

2. This wastewater pollution prevention permit is issued only to the Permittee and only for a specific food service operation. This permit may not be reassigned, transferred or sold to a new owner, new user, different premises, or a new or changed operation.

3. All charges and fees for use of the WPCF are subject to amendment by the City Council

4. Civil and criminal penalties apply to any violation of Chapter 19 or the terms of this permit or any applicable compliance schedule.

5. The Public Works Director may revoke a wastewater pollution prevention permit OR require regulation by the Wastewater Industrial Pretreatment Program for good cause as specified in Chapter 19.

6. Terms used in this permit shall have the meaning ascribed to them in Chapter 19.

7. This permit may be modified, or alternatively, revoked or reissued prior to the expiration date in order to comply with any applicable requirements or guidelines approved under Chapter 19, if the requirements or guidelines so issued contain approved conditions or additional requirements not provided for in this permit.

8. This permit consists of 7 pages.

PERMIT ISSUED BY: Environmental Compliance Specialist

SIGNATURE: _____ DATE: _____

APPROVED BY: WPCF Supervisor

SIGNATURE: _____ DATE: _____

Pollution Prevention Permit Conditions Begin On Next Page

POLLUTION PREVENTION PERMIT CONDITIONS for
FOOD SERVICE BUSINESSES

GENERAL PERMIT CONDITIONS

All discharged wastewater shall comply with the provisions of Chapter 19 of the Code of the City of Woodland (Chapter 19) Section 19-2-1, regarding general discharge prohibitions and Section 19-2-5 regarding local limits. Permittee shall comply with other pertinent Sections of Chapter 19. Copies of Sections 19-1-3, 19-2-1, 19-2-2, 19-2-5, 19-4-2 and 19-5-12 through 19-5-14 are included, for reference, in Appendix A of this permit.

Definition: Oil and Grease Interceptor

For purposes of this permit, an oil and grease interceptor (interceptor) is defined as a structure, with a water capacity of 750 gallons or more, designed to separate oil and grease from waste (drain) water resulting from food preparation and dish washing. The separated oil and grease is retained in the interceptor for removal and proper disposal.

SPECIAL PERMIT CONDITIONS

The following Best Management Practices will be implemented by the Permittee:

Oil and Grease Handling and Disposal

1. Undiluted cooking oil, grease, or meat fat should not be dumped directly into a drain or a dumpster. Maintain a separate recycling container for all oils, greases and fats. See "Rendering Companies" or "Tallow" in the Yellow Pages for a list of oil and grease recyclers. (Most companies will pick up recyclable grease free of charge.)

2. Do not contaminate recyclable oils, greases and fats in your recycling container with the waste grease from the grease interceptor.

3. Never pour oily liquids (such as sauces or salad dressings) down a storm drain or into a dumpster. Such materials should only be poured into a sanitary drain with an operational oil and grease interceptor between drain inlet and sanitary sewer.

4. Regularly inspect and clean all oil and grease interceptors. The City requires pumping any size interceptor a minimum of ***once every 3 months.*** More frequent pumping may be required to meet the City's Local Limit for oil and grease.

5. Do not flush out oil and grease interceptor with hot water and do not use drain cleaners, enzymes or bacteria agents in grease interceptors.

6. The recommended procedure for cleaning an oil and grease interceptor is as follows:
   - Contact a local grease removal company. Set-up a regular schedule for pumping visits. Check the Yellow Pages under "Grease Traps" or "Rendering Companies."
   - Be present when the maintenance work is being done.
   - Have entire contents of all chambers pumped clean.
   - Get a signed receipt from the contractor for the cleaning work performed.
   - Obtain verification from the contractor that the waste grease will be properly disposed.
7. For disposal of waste grease from grease interceptors and traps, see "Grease Traps" and "Septic Tanks" in the yellow pages. Most landfills will not accept grease or other liquid waste from businesses. It is in your best interest to ensure that your waste grease is properly disposed. Ask your waste grease hauler where your grease is disposed.

Spill Cleanup and Pavement Cleaning

1. Stop any spill at its source.
2. Do not wash or hose oil and grease spills into a gutter or a storm drain.
3. Do not wash or hose oil and grease spills into a sanitary sewer drain unless the drain is attached to oil and grease interceptor.
4. If the spill could enter a storm drain (or a sanitary sewer drain without an attached interceptor), block the flow with sandbags, rags, absorbent, or dirt. Storm drains may be temporarily sealed with plastic sheeting.
5. Dry sweep, as much as possible, using rags and granular absorbents (e.g. cat litter) to absorb the spill. Sweep and dispose of used absorbent into garbage bags. Dispose of the garbage bags into a dumpster, if hazardous materials (e.g., waste oil, caustic/corrosive wastes, toxic materials, etc.) are not involved.
6. If wet cleaning (including high-temperature or high-pressure washing) is required, dry clean the surface first, then mop/wash the surface, and then collect the water. Dispose of water in sink or other indoor drain connected to an oil and grease interceptor, <u>not</u> into a storm drain.
7. When cleaning trash containers, first sweep debris from the trash container, then scrub with a hard bristle brush and non-toxic soap, and rinse off the residue into a sewer drain connected to an oil and grease interceptor, <u>not</u> into a storm drain or dumpster.

Pretreatment Requirements

The Permittee shall comply with the following requirements for installation and maintenance of pretreatment technology and pollution control or containment devices:

1. Oil and Grease Interceptor Installation

   The Permittee is required to have oil and grease interceptor in accordance with the City of Woodland Oil and Grease Interceptor Standards No. 525A, 525B, 525C and 525D (Standards). These Standards are included as Appendix B of this permit. Note that the Standards state that "All interceptors shall be sized according to the UPC [Uniform Plumbing Code]. However the minimum size shall be 750 gallons."

   This interceptor is to treat wastewater flows from all plumbing fixtures likely to receive oil and grease, including, sinks and floor drains in the food preparation, food serving and dish washing areas, drains from food preparation and cooking equipment and drains from dishwashers and mop basins. Sanitary or restroom fixtures shall **not** be plumbed to this interceptor. The Permittee is required to demonstrate that the interceptor receives all appropriate wastewater flows.

   The oil and grease interceptor shall be operated and maintained at the Permittee's expense. Detailed plans showing the interceptor and operating procedures shall be submitted to the Public Works Director. The review of such plans will in no way relieve the Permittee from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the City under the provisions of this permit and the City's Sanitary Code. Any subsequent changes in the interceptor or method of operation shall be reported to and be acceptable to the Public Works Director prior to the Permittee's initiation of the changes.

2. Oil and Grease Interceptor Maintenance

   The interceptor must be maintained (cleaned) sufficiently to keep it operating at all times. The Permittee shall retain on-site, and make available for inspection and copying by the City, all records pertaining to the operation and maintenance of the interceptor.

MONITORING REQUIREMENTS

Monitoring shall be performed when the facility is in full normal operation. Inspections and sampling will be conducted to verify that permit requirements are being met with particular emphasis placed on those listed in the SPECIAL PERMIT CONDITIONS section of this permit.

The City will perform the following inspections and monitoring:

Type	Frequency
Scheduled Inspection	At least one time per permit period
Monitoring/ sample collection	As needed

Location for Monitoring

Samples for all monitoring required by this permit shall be taken from the sampling location as described below:

The sampling location will be determined upon submittal of interceptor design plans and of including plumbing to the interceptor.

RECORD KEEPING REQUIREMENTS

In accordance with Chapter 19, Section 19-5-12, Permittee shall retain records of all information obtained in any monitoring activities required by this permit and any additional information obtained in monitoring activities, undertaken by the Permittee, which are not required by the permit. These records shall be available for inspection and copying by the City.

Maintenance records will include the time and date of all maintenance activities, and details regarding the recycling and disposal of all materials and wastes.

NOTIFICATION

1. Notice of Changes in Volume or Nature of Wastewater

If any changes are made in the volume or nature of wastewater generated, or type of raw chemicals used, this information shall be reported by the Permittee to the City. The Permittee shall notify the City 90 days prior to the introduction of any new waste stream or pollutants, or any substantial increase or decrease in the volume or characteristics of existing waste stream discharge. The City shall have the right to deny or condition new or increased contributions of pollutants or changes in the nature of pollutants.

2. Notice of Slug Discharge

a. Telephone Notice: Permittee shall notify the WPCF immediately, by telephone at the numbers noted below, of any discharges, spills, or slug discharges (whether intentional or accidental) which could cause a problem in the sanitary sewer system or operation of the WPCF. The notification shall include location of discharge, type of waste, concentration, volume, time and date, and corrective action taken.

Telephone Contacts:			Monday through Friday:
Environmental Compliance Inspector	(office)	(530) 661-2057	8 am to 5 pm
	(cellular)		8 am to 5 pm
Environmental Compliance Specialist	(office)	(530) 661-2058	8 am to 5 pm
	(cellular)		8 am to 5 pm
Pretreatment Manager	(office)	(530) 661-2065	8 am to 5 pm
	(cellular)	(916) 262-4970	24 hours

b. Written Notice: Within five working days following a spill or slug discharge, the Permittee shall submit to the Public Works Director a detailed written report describing the cause of the discharge and the measures to be taken by the Permittee to prevent similar future occurrences. Such notification shall not relieve the Permittee of any expense, loss, damage, or other liability which may be incurred as a result of damage to the WPCF, fish kills, or any other damage to person or property, nor shall such notification relieve the User of any fines, civil penalties, or other liability which may be imposed by Chapter 19 or other applicable law.

COMPLIANCE SCHEDULE

1. The Permittee shall provide necessary wastewater treatment as required to comply with this permit.

2. The BMPs and Record Keeping requirements shall be implemented within two (2) months from the date of the issuance of this permit.

Attachment vii-6:

Hot Water Only Pre-Rinse Wash Procedures

CITY OF WOODLAND POLLUTION PREVENTION PROGRAM

HOT WATER ONLY PRE-RINSE WASH PROCEDURES

In an effort to control the discharge of fats, oils, and greases (FOG) in food service facilities where appropriately sized grease interceptors cannot be installed, the City of Woodland authorizes the Hot Water Only Pre-rinse Wash Procedure. The Hot Water Only Pre-rinse Procedure promotes more effective FOG removal by isolation and removal of detergents in the pre-rinse process.

City Official signature:_____

(Facility)_____ at (Location)_____is

authorized by the City of Woodland to use the Hot Water Only Pre-rinse Wash Procedure. This procedure is applicable to this site only and is not transferable to any other location, facility, or ownership.

WARE WASHING PROCEDURES USING PRE-RINSE SINK

1. Thoroughly scrape all dishes and other ware into solid waste container prior to pre-rinse.

2. Thoroughly pre-rinse all dishes and cookware in designated pre-rinse compartment using hot water only. No detergent used in this step.

3. Place dishes and cookware in dishwasher and wash in accordance to state restaurant sanitation rules.

Note 1: Hot water heater requirements may need to be altered to adhere to sanitation requirements.

Note 2: This procedure is only valid if pre-rinse sink is discreetly plumbed to a dedicated automatic hydromechanical grease trap. Dish/Pot machine must not be plumbed to grease trap when above plumbing configuration is used.

For information contact The City of Woodland Environmental Compliance Specialist at: 530-668-5909.

STATEMENT

I (Print)_____, understand and hereby agree to follow the Hot Water Only Pre-rinse Wash Procedure, and agree to train operator(s) of wash station(s) to follow and adhere to said wash procedure. As person in responsible charge of (Facility) _____, I understand and agree that it is my responsibility to control the discharge of fats, oils, and greases to the City of Woodland collection and treatment system.

(Signature)_____ (Date)_____

Attachment vii-7:

Grease Removal Device Maintenance Record

WEEKLY Grease Trap Cleaning Log
Registro SEMANAL de Limpieza de la Trampa de Grasa

Name of Food Service Business:
Nombre de negocio: _____

Address of Business:
Dirección de negocio: _____

Where is oil and grease disposed?
Donde se dispone el aceite y la grasa? _____

If cleaning is performed by a maintenance company, list the name and phone number of the maintenance company on the above line and fax or mail all cleaning receipts to the fax number or address below. Manager must verify that the maintenance company performed the cleaning properly. Civil or criminal penalties may apply to any violation of the terms of your Permit or any applicable compliance schedule.

Si la limpieza esta realizada por una compañía de mantenimiento, ponga el nombre y el número de teléfono de la compañía y los recibos de limpieza en la línea de arriba y enviarlo por fax o correo a la dirección abajo. El encargado debe verificar que la compañía realizo la limpieza correctamente. Las penas civiles o criminales podrán ser aplicadas a cualquier violación de los términos de su permiso o del horario de la conformidad.

When cleaning your grease trap(s), keep oil and grease separate from the water and sludge removed.
Al limpiar sus trampas de la grasa, mantenga el aceite y la grasa separada del agua y quite el sedimento.

	Date of Cleaning Fecha de la limpieza			Person Performing or Verifying Cleaning Persona que realiza o que verifica la limpieza	
	Month Mes	Date Fecha	Year Año	Name (printed) Nombre (impreso)	Signature Firma
Week One Semana 1					
Week Two Semana 2					
Week Three Semana 3					
Week Four Semana 4					
Week Five Semana 5					
FAX:	At the end of every month, fax completed cleaning log to: Al fin de cada mes, mande por fax el registro terminado al: 530-666-1266.			**OR MAIL:** Instead of faxing, at the end of every month you can mail the completed cleaning log to the address below. **O CORREO:** En vez de enviar por fax, al final de cada mes usted puede enviarlo a la dirección abajo.	

City of Woodland Public Works - Water Pollution Control Facility
42929 County Road 24, Woodland Ca. 95776
Telephone: 530-661-2057
FAX: 530-666-1266

Attachment vii-9:

City of Woodland Enforcement Response Plan

City of Woodland
Industrial Pretreatment Program

Enforcement Response Plan

I. Introduction

Federal and State pretreatment regulations, as well as Section VI(C)(5)(a) of Waste Discharge Requirements Order # R5-2014-0120 for NPDES Permit # CA0077950, City of Woodland Water Pollution Control Facility, require the City of Woodland (City) to take timely and effective enforcement actions against Industrial Users (IUs) and other businesses which hold wastewater discharge permits with the City for failure to comply with pretreatment standards and requirements. Federal and State regulations also require each publicly owned treatment works (POTW) with an approved pretreatment program to develop and implement an enforcement response plan (ERP). By regulation, this plan must:

- Describe in detail how the POTW will investigate and respond to instances of noncompliance.
- Describe the types of escalating enforcement actions the POTW will take in response to all anticipated types of violations and the time periods within which these responses will take place.
- Identify, by title, the official(s) responsible for each type of response
- Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards, especially those detailed in 40 CFR 403.8 (f)(1) and (f)(2).

The purpose of this enforcement response plan is to ensure compliance with Federal and State regulations, to ensure timely enforcement of pretreatment standards and requirements, and to ensure that all regulated industries are treated in a fair and equitable manner.

II. Enforcement Options Available to the City

Article VI of the City of Woodland's Sewer Use Ordinance gives the Director of Public Works authority to take a wide variety of enforcement actions against IUs and other businesses which hold wastewater discharge permits with the City for failure to comply with pretreatment standards and requirements. Remedies authorized by the sewer use ordinance include:

A. Revocation or Suspension of Permit, Section 19-4-13
B. Publication of Users in Significant Non-Compliance, Section 19-6-1
C. Correction Notice/Notice of Violation/Show Cause Hearing, Section 19-6-2
D. Cease and Desist Order/Compliance Directive, Section 19-6-3
E. Nuisance – Injunctive Relief – Recovery of Damages, Section 19-6-4
F. Administrative Civil Liability, Section 19-6-5
G. Judicial Petition for Civil Liability, Section 19-6-6
H. Criminal Penalties, Sections 19-6-8 & 19-6-9

III. Determination of Noncompliance

Pretreatment staff investigates permit compliance by performing onsite inspections, reviewing IU self monitoring data, and reviewing compliance monitoring data collected by the City. Common categories of permit noncompliance are discussed below.

A. Unauthorized Discharges

Unauthorized discharges such as discharge without a permit (including continuing to discharge after a permit has expired) , failure to renew a permit, discharge to a point in the collection system not identified in the permit, and discharge of wastes not authorized by the permit, are normally discovered during the inspection of the industry by pretreatment staff. The Environmental Compliance Specialist or Environmental Compliance Inspector performing the inspection is responsible for determining the significance of the violation.

B. Permit Noncompliance

Noncompliance with pretreatment permits usually falls into four areas: discharge violations, monitoring violations, reporting violations, and violations of other permit conditions.

1. Discharge Violations

All discharges by IUs must meet the provisions of Article II – Discharge Requirements – of the City Code. Discharges which exceed any of the numeric limits set forth in an IU discharge permit are considered violations.

It is the responsibility of the Environmental Compliance Specialist to evaluate compliance with pretreatment limitations each time data is received and also at the end of each reporting period. The severity of any violation is determined by the Environmental Compliance Specialist and reviewed by the Pretreatment Supervisor.

2. Monitoring Violations

Self-monitoring noncompliance occurs when an IU fails to conduct all of the self-monitoring required by its pretreatment permit. The severity of the violation(s) depends on how much of the self-monitoring was actually completed.

It is the responsibility of the Environmental Compliance Specialist to evaluate permit compliance each time a self-monitoring report is received from an IU. The severity of any violation is determined by the Environmental Compliance Specialist and reviewed by the Pretreatment Supervisor.

3. Reporting Violations

All reporting by IUs must meet the provisions of Article V – Reporting and Sampling Requirements – of the City Code. Reporting violations occur when a business fails to provide information which is required by the permit within the time period stated in the

permit or when the information is incomplete or false. Reports required by the permit can include, but are not limited to, self-monitoring reports, spill prevention plans, and baseline monitoring reports. In the case of late or incomplete reports, the severity of the violation depends on the length of time the report is late. Knowingly submitting false information is always considered a serious violation.

It is the Environmental Compliance Specialist's responsibility to track the report due dates included in the pretreatment permits and to evaluate compliance in terms of the tardiness and completeness of the submission. The severity of any violation is determined by the Environmental Compliance Specialist and reviewed by the Pretreatment Supervisor.

4. Violations of other Permit Conditions

Pretreatment permits issued by the City contain several conditions which do not fall into the category of discharge limits, monitoring requirements, or reporting requirements. For example, the permit may prohibit slug loads and require the business to properly operate its pretreatment facility. Violations of these conditions would normally be discovered as part of an inspection or in conjunction with another enforcement action.

The Environmental Compliance Specialist is responsible for evaluating compliance with these requirements and the severity of the violation is determined by the Environmental Compliance Specialist and reviewed by the Pretreatment Supervisor.

IV. Violations of Enforcement Orders

Violations of enforcement orders can include discharge violations (for interim limits), monitoring violations (when increased monitoring is required by the order) and reporting violations as described above. Failure to meet milestone dates and noncompliance with final limits are also considered enforcement violations. Once an IU has been issued an enforcement order, the City's initial response to violations of the enforcement order will be to notify the IU of the violation and to collect the stipulated penalty outlined in the order.

The Environmental Compliance Specialist tracks compliance with enforcement orders and notifies the Pretreatment Supervisor when penalties should be assessed. Once the Director is informed of noncompliance with an order, he will determine whether the violations are severe enough to warrant escalated enforcement.

V. Response to Noncompliance

Initial response for violations discussed in Sections III and IV is specified in the Enforcement Guide. Monetary penalties associated with each type of violation are listed in the Penalty Schedule. In order to ensure that the City is taking timely and effective enforcement action, the Environmental Compliance Specialist and the Pretreatment Supervisor are responsible for proper application of these guidelines.

City of Woodland
Industrial Pretreatment Program

Enforcement Guide

Use of This Guide

Determine the type of non-compliance and use appropriate table (e.g. Unauthorized Discharges) to identify the non-compliance circumstances. The Enforcement Response Options are listed from most lenient to most stringent, and the appropriate response should be based on the discharger's history and nature of the violation including but not limited to:

- good faith of the discharger
- compliance history
- effectiveness of past enforcement responses with discharger
- effect of violation on the environment, including public health
- effect of violation on treatment works

Definitions

- CA – City Attorney
- CE – Code Enforcement
- ECI – Environmental Compliance Inspector I/II
- ECS – Environmental Compliance Specialist
- PS – Pretreatment Supervisor
- PWD – Public Works Director

Reporting Violations

Non-Compliance	Circumstances	Enforcement Options	Responsible Official	SNC
Improper certification/signature	Isolated	- Correction Notice	ECS or ECI	No
	Repeated	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Administrative Citation	ECS or CE	No
Late Reports	Within 30 days	- Correction Notice	ECS or ECI	No
	After 30 days	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	No
	Repeated	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Administrative Citation	ECS or CE	No
	After 45 days	- Public Notice (required)	ECS	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Administrative Citation	ECS or CE	Yes
Failure to report violation, spill/slug, or changed discharge.	Isolated no known harm to environment or WPCF	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	No
	Isolated with harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	Yes
	Repeated no known harm to environment or WPCF	- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	No
	Repeated with harm to environment or WPCF	- Public Notice (required)	ECS	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	
		- Revocation of Permit	PWD	Yes

(continued on next page)

Reporting Violations (continued)

Non-Compliance	Circumstances	Enforcement Options	Responsible Official	SNC
Failure to accurately report non-compliance	Any	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	
		- Revocation of Permit	PWD	Yes
Incomplete or inaccurate Report, including not reporting additional monitoring	Isolated	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	No
	Repeated	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	No
Falsification of information or data	Any	- Criminal Citation	CA	
		- Revocation of Permit	PWD	No

Monitoring Violations

Non-Compliance	Circumstances	Enforcement Options	Responsible Official	SNC
Failure to monitor all parameters	Isolated	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	No
	Repeated	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	No
Improper sampling and/or analytical procedures	Isolated	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	No
	Repeated	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Administrative Citation	ECS or CE	No
	Evidence of intent or negligence	- Civil Citation	ECS or CE	
		- Criminal Citation	CA	
		- Termination of Service	PWD	No
Failure to resample	Isolated	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	No
	Repeated	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	No
Failure to install monitoring equipment, or provide a sample point	Within 30 days	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	No
	After 30 days	- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Termination of Service	PWD	No
Tampering with equipment or sample	Any	- Criminal Citation	CA	
		- Termination of Service	PWD	No

Discharge Violations

Non-Compliance	Circumstances	Enforcement Options	Responsible Official	SNC
Discharge exceeds permit limit	Isolated, no known harm to environment or WPCF	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	No
	Chronic, no known harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	Yes
	Isolated, with harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	Yes
	Chronic, with harm to environment or WPCF	- Public Notice (required)	ECS	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	
		- Termination of Service	PWD	Yes
Discharge exceeds limits in permit – Technical Review Criteria	No known harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	Yes
	Harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Compliance Directive	ECS	Yes
Slug discharge/Spill (failure to notify should result in more stringent enforcement options)	Isolated, no known harm to environment or WPCF	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	No
	Repeated, no known harm to environment or WPCF	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	No
	Isolated, with potential harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	Yes
	Repeated, with harm to environment or WPCF	- Public Notice (required)	ECS	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	ECS or CE	
		- Termination of Service	PWD	Yes

Unauthorized Discharges

Non-Compliance	Circumstances	Enforcement Options	Responsible Official	SNC
Discharge without permit	Unaware of permit requirement with:			
	No known harm to environment or WPCF	- Notice of Violation with permit application	ECS or ECI	No
	Harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	Yes
	Failure to apply for permit 45 days after notification by WPCF	- Public Notice (required)	ECS	
		- NOV with permit	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	Yes
Discharge of waste not authorized by permit	No known harm to environment or WPCF	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	No
	Harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	Yes
	Recurring, no known harm to environment or WPCF	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	
		- Termination of Service	PWD	No
	Recurring, harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	
		- Termination of Service	PWD	Yes

Other Violations

Non-Compliance	Circumstances	Enforcement Options	Responsible Official	SNC
Violation of Best Management Practices	Isolated	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	No
	Repeated	- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	No
	Harm to environment or WPCF	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Compliance Directive	ECS	
		- Civil Citation	CA	Yes
Failure to Meet Compliance Milestone	Within 30 days after compliance schedule date	- Correction Notice	ECS or ECI	No
	Within 60 days after compliance schedule date	- Correction Notice	ECS or ECI	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	No
	Within 90 days after compliance schedule date	- Public Notice (required)	ECS	
		- Notice of Violation	ECS or ECI	
		- Show Cause Hearing	ECS or PS	
		- Civil Citation	ECS or CE	
		- Criminal Citation	CA	
		- Termination of Service	PWD	Yes

SNC = Significant Non-Compliance (per 40 CFR 403.8(f)(2)(viii))

Penalty Schedule

The City of Woodland uses the following schedule to assess monetary penalties for discharge permit violations. Penalty assessment is determined on a case-by-case basis in accordance with the Enforcement Response Plan and the Enforcement Guide. Penalties are assessed within the proposed ranges taking into account the circumstances of each violation and the nature of the IUs response to previous enforcement actions.

Administrative Penalties (Per Violation)

Administrative Citation	Non - Significant Industrial Users	Significant Industrial Users
1st Incident	$50	$100
2nd Incident	$100	$200
3rd Incident	$250	$500
Subsequent Incidents	$250	$500

Fines shall be assessed in the amounts specified by resolution of the City Council, or where no amount is specified, fines shall be assessed in an amount not exceeding (City Code, Section 14A-7-3(d)):

(1) One hundred dollars for a first violation
(2) Two hundred dollars for a second violation
(3) Five hundred dollars for each additional violation of the same ordinance or permit within one year

Each and every day or portion thereof that a violation of the Woodland Municipal Code, its adopted codes, or applicable state codes exists constitutes a separate and distinct offense (City Code, Section 14A-7-3(b)).

Civil Penalties (Per Day)

Civil Citation	Non - Significant Industrial Users	Significant Industrial Users
Each Incident	$1000 – 2500 (or up to $10 per gallon)	$2000 – 5000 (or up to $10 per gallon)

Civil penalties may be imposed as follows (City Code, Section 19-6-5(e)):

(1) In an amount not to exceed two thousand dollars for each day for failure or refusal to furnish technical or monitoring reports.
(2) In an amount not to exceed three thousand dollars for each day for failure or refusal to timely comply with any compliance schedule established in a cease and desist order.
(3) In an amount not to exceed three thousand dollars for each day for discharges in violation of any waste discharge limitation, permit condition, pretreatment standard, or pretreatment requirement issued or adopted by the City relating to industrial wastewater or pretreatment.

(4) In an amount not to exceed ten dollars per gallon for discharges in violation of any suspension or termination of service, cease and desist order (other than compliance schedules thereof), or other orders or prohibitions issued or adopted by the city.

Criminal Penalties

Criminal Citation	Non - Significant Industrial Users	Significant Industrial Users
Each Incident	TBD	TBD

Violation of any of the provisions of City of Woodland Municipal Code Chapter 19, a wastewater discharge permit, or a pretreatment standard or regulation is unlawful and may be charged as a misdemeanor or infraction at the discretion of the City Attorney (City Code, Section 19-6-8).

Hearings

Hearing Fee	Non - Significant Industrial Users	Significant Industrial Users
Each Incident	TBD	TBD

Any hearing fee shall not exceed the reasonable cost to the City of holding such a hearing (City Code, Section 14A-7-9(a)).

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Attachment vii-9:

Example of the Food Service Businesses and Automotive Repair Businesses Inspection Scheduling Spreadsheet

Food Service Businesses
2015 - 1st Quarter

Business Name	#	Street	Device Type	Device Location	Tools Needed	Owner/Mgr Name Permit info.	Hours Phone #	Last Inspect	Last Cleanings	Information & Comments
Afridi Food Company	1250	Churchill Downs Suite D (Inside Carniceria La Bodega)	Trap	Inside off front entrance in room to the right, in floor under board. Watch out for spiders	Flatheads	Owner: Zafar "Alex" Afridi. Permit issued 2/19/09.	9a-5p Mon-Sun. 662-4298	03/12/15	02/16/15 SRC 11/10/14 SRC **2 mo. cycle**	3/12/15 Trap - 1" top mat, 1" sediment. No strainers in sinks - advised. (later found strainers, just washed).
Alderson Convalescent	124	Walnut Street	Trap	In side screened area outside kitchen West side by parking lot.	9/16" Hex and Flatheads	Maint Sup: Patrick Bourland. Permit issued 3/31/10.	8a-5p Mon-Fri. 662-9161	03/12/15	11/25/14 YP 12/10/13 YP 11/12/13 **Every mo.**	3/12/15 Trap - 1" top mat, minimal sediment.
Andy's ARCO	313	W. Main Street	BMP	N/A	None	O - Bharpur Takhar Mgr - Andy Takhar	24/7	01/20/15	N/A	01/20/15 All sinks and floor drains have strainers. Garbage & parking lots were clean, pose no threat to storm drains.
Applebee's	1790	E. Main Street	INT.	North side of building in bushes near Main Street.	Hook & Sludge Judge	GM: Megan Biagi. Permit issued 3/31/09 ***GRB**	11a-12a 668-8282	02/23/15	02/16/15 11/18/14 LES 08/14/14 BVS **3 mo. cycle**	02/23/15 Outlet has 1" top mat & no sediment. Inlet has 1" of top mat and no sediment. Garbage area was clean. Mgr stated it was recently pumped and will be sending in log.
Aria ****CLOSED****	614	Main Street	Trap ***Big Dipper**	Under Sink	In washroom next to 3 compartment sink	Owner: Thomas Robinson	11am to 2pm opens again at 5pm for dinner	06/19/14	06/16/14 06/09/14 06/02/14	6/19/14 Trap- 1 and half " topmat, minimum sediment. The parking and garbage areas are clean and pose no threat to the storm drains.
Bangkok Cuisine	525	Main Street	Trap	Under sink	Flathead	Owner: Kornrapong Paiboonsriwattana Mgr. Top Permit issued 5/21/10. ***GRB**	11a-9p 668-9788	01/29/15	02/27/15 02/20/15 02/13/15 02/06/15	01/29/15 Very old grease trap, was recently cleaned, no top mat or sedement. All sinks had strainers in place. Garbage and parking areas were clean.

Automotive Repair Business
2015 - 1st Quarter Inspections

Business Name	#	Street	Device Location	Tools Needed	Owner/Mgr Name Permit Info.	Hours Phone #	Last Inspection	Last Cleaning(s)	Information
Armando Cruz Car Wash - **OUT OF BUSINESS**	101	W. Court Street	Under plates along south side of building.	Hook & Sludge Judge	Owner: Armando Cruz	8a-5p 662-1456(number no longer in service)	02/18/15	03/30/10 YP	2/18/15 OSS inlet - 5' tank, 6" sediment middle tank - 3" sediment outlet - 5' dirty water, no sediment. **BUSINESS CLOSED**
Barnard Pipline Inc.	21	Pioneer Avenue	Center of Back Lot under Canopy 4' Tank	Hook & Sludge Judge	Manager: Ron Johnson Yard Supervisor: Jamie Weeden	8am to 5pm phone #: 669-5810	02/19/15	03/09/15	2/19/15 OSS Inlet - 3' sediment. Outlet - 2' sediment. Device needs to be pumped asap.
City of Woodland Public Works MSC Fleet & Facilities	655	N. Pioneer Avenue	South side of Bay 12.	Hook & Sludge Judge	Manager: Phillip Lovejoy Permit issued 11/3/09.	M-F 8a-5p 661-5889	02/18/15	12/23/14 Safety-Kleen 11/26/13 Safety-Kleen	2/18/15 OSS Inlet- 4' dirty water, 6" sediment. Outlet- 4' dirty water, no sediment. The parking area is very clean and poses no threat to the storm drains. Dumpster lids found open, Pete Bair advised.
City of Woodland-WPCF	42929	County Road 24	Between shop and office building Westside	Hook & Sludge Judge	Permitting Contact Person: Shane Carlsen. Permit Issued 10/16/2012	8a-5p	01/28/15	Hasn't needed one	01/28/15 Inlet had 3 ft of clean water & no sedement. Outlet had 2.5 ft of clean water & no sedement.
Costco (Fuel station & tire center)	2299	Bronze Star Drive	Driveway side (north) of fuel station, in yellow cross-hatched area	Hook & Sludge Judge	Fuel emp: Ed Gongora. Tire Manager: Tyler Garrison. Permit issued 4/2/13.	Fuel 6a-7p 662-8148 Tire 10a-6p	03/17/15	04/17/12 Darling	3/17/15 OSS: Inlet - no top mat, 2" sediment. Outlet - no top mat or sediment.
Eaton Drilling Co.	20	W. Kentucky Avenue	Behind back building	Hook & Sludge Judge	Owner: Tom Eaton. Mgr: Mark Newman. Email: mnewman@eatondrilling.com	8a-5p 662-6795	08/06/14	5/21/11 Ramos (pumps when city advises them to do so, currently up to date)	8/6/14 OSS Inlet- 11" sediment, clean topmat. Outlet- 5" sediment, clean topmat. The parking, work shop, and garbage areas are clean and pose no threat to the storm drains. I emailed manager Mark Newman to confirm that the last cleaning took place on 5/21/11 by Ramos.

Attachment vii-10:

FOG Program Inspection Standard Operating Procedure

FOG PROGRAM INSPECTION SOP

Operating and Maintenance Standards

1. Standards

   A. The following items violate standards for interceptors:
      - Allowing wastewater with a temperature greater than 140° F to contact the interceptor.
      - Utilizing the interceptor in areas that subject it to contact with fecal materials.
      - Allowing the FOG and solids accumulation level to exceed 25% of the total design hydraulic depth.

2. Conditional Waivers

   A. Standards for the installation of a grease interceptor may be waived for an establishment under the following conditions:
      - Lack of space for the grease interceptor.
      - Limitations on the ability to meet hydraulic requirements required by an grease interceptor
      - Providing an alternative type of technology that is equal or superior to standard grease interceptor technologies. (Proof must be provided).

   B. Fees for Waiver
      - When the requirement for the grease interceptor or another acceptable type of technology is not able to be met, an annual fee is charged to cover the cost of increased maintenance required on the sewer system as a result of the increase in solid demand.

Best Management Practices

1. Sizing of Interceptor
   - Size of interceptor is based on number and size of drainage fixture units.
   - Interceptor capacity by the flow rate of gallons per minute.

2. Pre-Inspection of Establishments

   A. Prioritize which establishments in an area are to be inspected.
      - Establishments in areas that are located in critical areas of the sewer system are given a higher priority.
      - Establishments that have had a bad track record are given a higher priority.

   B. Gather background information on the establishment of interest.
      - Key contacts (i.e. managers, owners, etc.)
      - Type of equipment utilized by the facility.

- Identify the location of the grease trap or grease interceptor in the facility.

C. Schedule an inspection time convenient for both the inspector and the establishment
   - Avoid lunch hours (11 am to 1:30 pm).
   - Inspect during the hours of operation of the facility.

D. Bring all necessary tools to inspection (examples listed below)
   - Camera, hammer, manhole pick, and pry bar,
   - Grease interceptor and grease trap monitoring device.
   - Gas Detector and sulfide test kit.

3. Inspection of Establishments

A. Notify the establishment of your intent to inspect.

B. Perform a visual inspection and record results
   - Defective external parts (i.e. lids)
   - Defective internal parts (inlet tee, baffle tee, outlet tee, sample box)
   - Thickness of FOG in the interceptor (after a visual inspection use sludge judge to measure the levels as well).
   - Check that the grease interceptor is properly functioning and completing all of its required tasks.

C. Collect samples of interceptor contents
   - Use a container to sample contents of interceptor, then save sample for later laboratory work.
   - Use field tests for specific areas of concern (i.e. sulfide content) if needed.

D. Inform establishment of results
   - Review any areas of concern where standards are not met with the establishment.
   - Inform the establishment of the necessary steps and time frame required to meet deficiencies.
   - Gather and document a signature from an appropriate member of the establishment to confirm the inspection and review of the inspection.

4. General BMP Requirements

A. Equipment
   - Drain screens shall be installed on all drainage pipes.
   - Food should be disposed of in disposal bins as opposed to sinks to reduce the amount of pumping frequency required by the grease interceptors.
   - Waste haulers should be used to dispose of cooking oil
   - All kitchen exhaust filters shall be cleaned frequently to minimize the potential risk of FOG infiltration into the storm water system.
   - Signs shall be posted throughout the kitchen to remind employees of the rules and practices required for the efficient disposal of fats, oils, and greases.

B. Employee Training

- Employees should be trained on a semi-annual basis on subjects that include the following:
- Dry wiping pots, pans, and other cooking utensils prior to washing to remove grease
- Disposal of food waste and solids in plastic bags prior to disposal of them in trash cans.
- The utilization of absorption products to clean under fryer baskets and other locations where grease may potentially be spilled or dripper
- Disposing of grease or oils from cooking equipment into a grease receptacle like a barrel without spilling

- Employees shall provide signature to their employer to document that they have received proper training on the handling of fats, oils, and greases.

Attachment vii-11:

Example Illicit Connection / Illegal Discharge Stop Action Report

ILLICIT CONNECTION/ILLEGAL DISCHARGE STOP ACTION REPORT

DATE:

NAME, ADDRESS, PHONE # OF ILLICIT /ILLEGAL DISCHARGE (Responsible Party)

TIME IN:
TIME OUT:
PERSON REPORTING:
EMPLOYEE & DEPARTMENT FILLING OUT THIS FORM:

TIME CALLED OES:
OES #:
TIME CALLED COUNTY:
TIME CALLED RWQCB:
TIME CALLED DFG:

TYPE OF DISCHARGE (check all that apply)

- ☐ Motor oil
- ☐ Antifreeze/transmission fluid
- ☐ Paint
- ☐ Solvent/degreaser
- ☐ Detergent
- ☐ Fuel Spill-Diesel ☐ Fuel Spill-Gasoline
- ☐ Pet waste
- ☐ Excessive yard waste **(leaves, grass, mulch)**
- ☐ Excessive dirt and gravel
- ☐ Trash
- ☐ Construction debris (concrete, mortar, etc.)
- ☐ Pesticides and fertilizers

☐ Other:

DESCRIPTION AND CAUSE OF ACCIDENT

DID MATERIAL ENTER STORM DRAIN: ☐ YES ☐ NO

ILLEGAL DISCHARGE INFORMATION

Start time of discharge: End of discharge: Unknown ☐
Approx. amount of spill: (gallons) Unknown ☐

DESCRIBE HOW DISCHARGE WAS CONTAINED, MATERIAL USED TO CLEAN AND WHERE MATERIAL WAS DISPOSED OF:

ILLICIT CONNECTION/ILLEGAL DISCHARGE STOP ACTION REPORT
(Continued)

ENVIRONMENTAL COMPLIANCE INSPECTOR CONTACTED:

☐ Angela Weeks ☐ Jon Guse ☐ Other:

Agencies Notified

Yolo County, (530) 666-8646: ☐ Yes ☐ No

RWQCB, (916) 464-4606: ☐ Yes ☐ No

Dept. of F&G, (530) 682-7088: ☐ Yes ☐ No

Samples Taken: ☐ Yes (If yes, attach COC document ☐ No **Documentation:** ☐ Pictures ☐ Video

Communications with discharger: ☐ Yes (If yes describe below) ☐ No

Additional form(s) attached: ☐ Yes ☐ No

Further Action Needed: ☐ Yes (If yes, describe below) ☐ No

Item Closed Out: ☐ Yes ☐ No

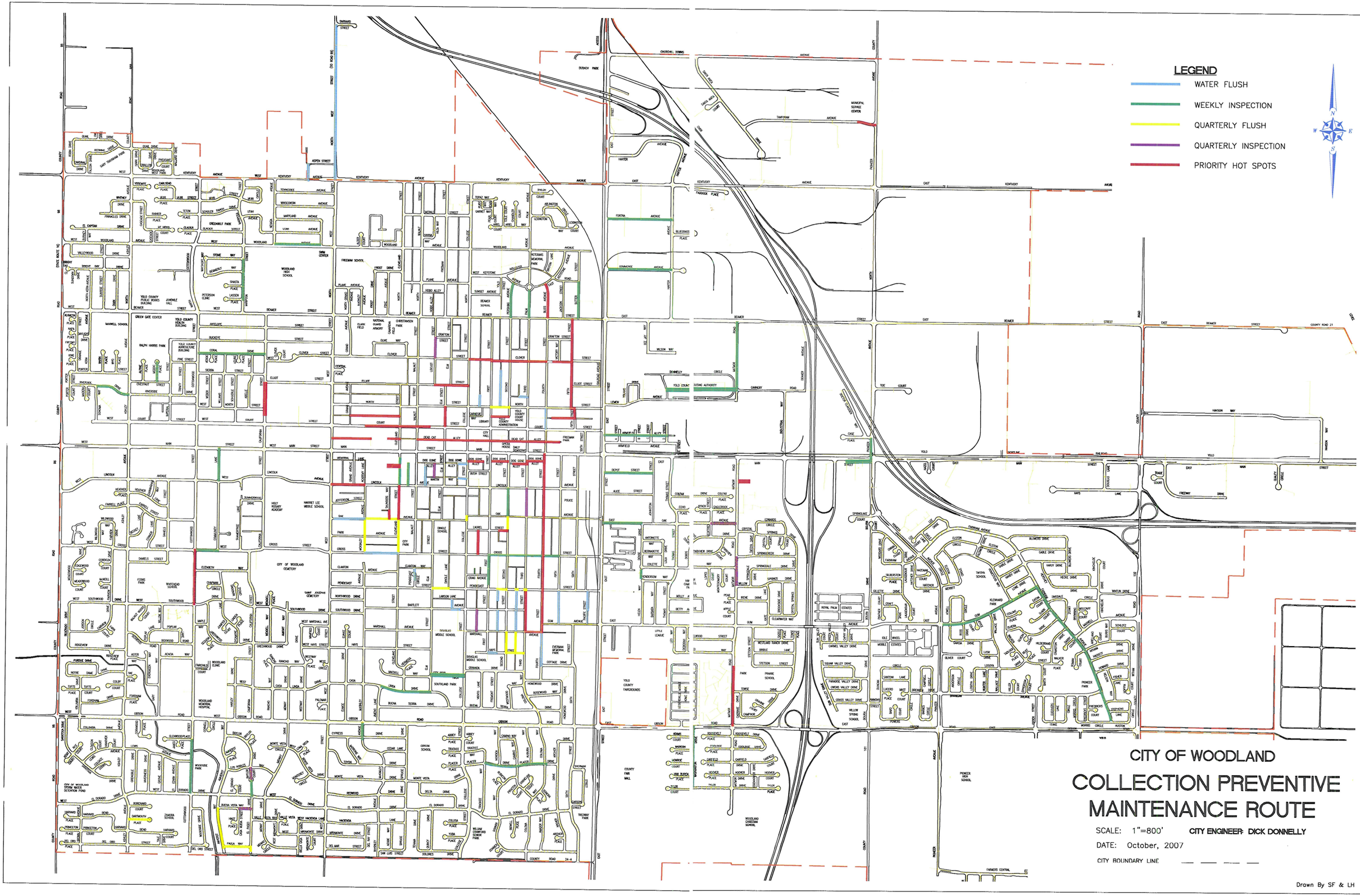
Date of meeting when closed out:

Submitted by: **Date:**

Form to be used when illegal discharges are observed by City staff.
Return to Industrial Pretreatment (WPCF)

Attachment vii-12:

Priority Cleaning / Inspection Route GIS Map


LEGEND
WATER FLUSH
WEEKLY INSPECTION
QUARTERLY FLUSH
QUARTERLY INSPECTION
PRIORITY HOT SPOTS
N
W
E
S
CITY OF WOODLAND
COLLECTION PREVENTIVE MAINTENANCE ROUTE
SCALE: 1"=800'
CITY ENGINEER: DICK DONNELLY
DATE: October, 2007
CITY BOUNDARY LINE
Drawn By SF & LH

Attachment vii-13:

Sample Pretreatment Inspection Field Report

Pretreatment Inspection Form
Ordinance No. 1271

Name of Facility

Pretreatment Device

Where is the device located

What tools are needed

Does the device appear to be working as designed? ☐ Yes ☐ No

If not, what is needed to get the device working properly?

Manager's name/ working schedule

Business Hours

Inspector's Name

Date of Inspection

Date of last Inspection

Is the Spill Response Plan Current? ☐ Yes ☐ No

Is the device cleaning log displayed? ☐ Yes ☐ No

Date of last cleaning

How often is the cleaning

Is there a grease recycle bin? ☐ Yes ☐ No

Is the garbage area well maintained? ☐ Yes ☐ No

Are BMP's in place and are the employees trained on them? ☐ Yes ☐ No

Is the business in compliance with all of the above? ☐ Yes ☐ No

What is needed to get the businesses in compliance?

What kind of follow up is needed, if any?

Comments:

Are there any Storm Water issues? If yes, what are they:

Where pictures or video taken?

☐ Yes ☐ No

If Yes, how many and of what areas:

Is there a correction notice Issued?

☐ Yes ☐ No

If Yes, What are the reasons for the correction notice?

Re-Inspection Date:

Is there reason to believe that any identified deficiencies of the pretreatment device, is causing or may have caused, in the past an excessive discharge of fats, oil, or grease to the sewer collection system?

☐ Yes ☐ No

If yes, Who in the O&M department is this being delivered to?

Name. Date and Signature of Pretreatment employee

Print Form Submit by Email

Attachment vii-14:

Sample Inspection Request Form

Request for Pretreatment Inspection Form

Submitted By:

Employee Title:

Contact Phone #:

Date of Observation:

Observation Location:

Description of Observation:

List of Upstream Commercial / Industrial Establishments:

Name:	Address:

The FOG issue is: ☐ Urgent (Conduct Inspections ASAP) ☐ Important (Conduct Inspections within 1 week)

Name, Date, and Signature of Utility O&M Employee

Submit by Email

Print Form

viii System Evaluation and Capacity Assurance Plan

SWRCB Requirement:

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

*(a) Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by **hydraulic deficiency**. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;*

*(b) Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to **establish appropriate design criteria**; and*

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

*(d) Schedule: The Enrollee shall develop a **schedule of completion dates** for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.*

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.

Background

This section of the SSMP describes the ongoing use of the City's hydraulic model of the sewer collection system to identify assets that will not have the capacity to convey design flows during peak dry and wet weather flows now and in the future under ultimate build-out of the City's General Plan land use designations. The City has used the hydraulic model in the past to identify capital improvement projects in the latest Wastewater Collection System Master Plan (2000), and continues to update the model with the completion of new developments and new capital projects to identify any future capacity issues. The hydraulic model was updated in August 2014 as part of the General Plan Scenario Wastewater Hydraulic Review. The City is also constructing a major upgrade to

the Water Pollution Control Facility (WPFC) primarily to improve solids handling capacity. The Wastewater Collection System Master Plan will be updated in 2016 after the 2035 General Plan Update is completed and the Aeration Retrofit Project at the WPFC is largely completed. This section fulfills the requirements of the GWDR SSMP mandatory element viii.

viii-a. Identify areas of hydraulic deficiency

Requirement

Describe actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events.

Discussion

Sewer System Hydraulic Models and Analysis

The Utilities Engineering Division Associate Civil Engineer is the person responsible for the use of the sewer collection system hydraulic model that was initially completed by CH2MHill in 1986. The original model was a System Analysis Module (SAM), and was created to model dry and wet weather peak flows based on existing City zoning and the City General Plan land uses at the time. The most recent Master Plan models the existing system based on existing land uses, and also models the system in the year 2020 based on 1996 General Plan Update land uses and population projections. The Master Plan identified pipes that will surcharge under peak dry and wet weather flows for existing conditions and ultimate build-out (2020) scenarios. The 2035 General Plan Update is currently underway and utilizes the updated hydraulic models for both the existing system based on 2014 land uses and models the system in the year 2035.

Implementation of General Plan Scenario Wastewater Hydraulic Review Recommendations

The General Plan Scenario Wastewater Hydraulic Review did not identify any significant capacity issues of concern (i.e. surcharging resulting in SSOs) under existing conditions, and does not recommend the upsizing of any pipes in the sewer collection system in the near term, including the main trunk sewers (Kentucky, Beamer, and Gibson) which convey wastewater to the WPCF. The update to the Master Plan will include the recommended improvements from the General Plan Wastewater Hydraulic Review. However, the Master Plan notes that surcharging

occurs in 2020 peak wet weather conditions in the East Street, Kentucky, and Gibson trunk lines as the sewer collection system is currently configured. The report finds that the contributing area (downtown) for the East Street trunk line is mostly built out, and that the peak wet weather surcharging that occurs both now and during the 2020 model year is acceptable. The Plan recommends that future areas of development in the northeast portion of the City have sewer service which connects into the Beamer trunk (shown to have some level of excess capacity) instead of the Kentucky trunk, and that future areas of development in the southern portion of the City have sewer service that connects directly to the WWTP through a newly constructed trunk line instead of connecting into the Gibson trunk line. These recommendations were made to prevent further surcharging of the existing Gibson and Kentucky trunk lines, minimize the possibility of a capacity-related SSO, and help the City avoid having to upsize the Gibson and Kentucky trunk lines.

In 2003, a Downtown Specific Plan was completed which proposed future changes to the land uses in the historical downtown portion of the City. The Specific Plan's analysis of the sewer collection system in this area simply sites the 2000 Wastewater Collection System Master Plan, stating that adequate sewer capacity exists downtown and in the downstream Beamer trunk line. However, the 2000 Wastewater Collection System Master Plan model was not run including land use changes recommended in the Specific Plan.

The General Plan Wastewater Hydraulic Review included flow monitoring that was successful in capturing data during dry periods to accurately calculate GWI/I from each designated sub-basin of the sewer collection system. RDI/I was determined by comparing historical flow monitoring data at the WPCF versus recorded rain events, and a system wide RDI/I versus rainfall relationship was determined. For the purposes of hydraulic modeling, system wide RDI/I was evenly distributed to all manholes throughout the system.

Ongoing Sewer System Hydraulic Model Updates and Use

Although the sewer collection system has never experienced a capacity related SSO, the City endeavors to maintain an up-to-date system capacity model to ensure that future changes including alterations of sewer collection system infrastructure, the addition of new developments, and land use changes approved in specific plans and General Plan updates are accounted for.

Engineering Consultant Services

The City executed a consultant services contract in 2014 for General Plan Scenario Wastewater Hydraulic Review. The services provided in the hydraulic model update contract include:

- Use of the City's sewer system GIS data to compile an ArcGIS based hydraulic model using Innovyze InfoSewer
- Identification of gaps in City GIS data (missing pipes, manholes, elevation data, etc.) where field data needs to be collected, or assumptions can be made to allow the hydraulic model to run
- Review of all available land use data
- Refinement of existing and future build-out land use GIS map layers following data review and analysis of aerial photography
- Dry weather flow monitoring at Kentucky, Gibson, and Beamer Street trunk sewers to quantify existing dry weather flows
- Development of sewer generation rates for all utilized land use designations, and calibration with dry weather flow monitoring
- Compilation of a dry weather hydraulic model in InfoSewer to locate any areas of hydraulic deficiency under existing conditions and future development scenarios
- Development and implementation of a system-wide flow monitoring program to develop wet weather flow parameters
- Compilation of a wet weather hydraulic model in InfoSewer to locate any areas of hydraulic deficiency under existing conditions and future development scenarios
- A General Plan update including recommended capital projects associated with the various hydraulic model scenarios consistent with the City's desired level of service and to prevent SSOs

The consultant services obtained by the City will ensure that the City's sewer system GIS data is updated in critical areas necessary to run the hydraulic model.

Additionally, a thorough review of the land use data will ensure that the City has up-to-date existing and future build-out GIS land-use layers. Specific land use information reviewed as part of this study and incorporated in the hydraulic model include:

- 2002 City of Woodland General Plan
- Draft 2015 City of Woodland General Plan

- 2014 City of Woodland Design Standards
- Phase 3 – GIS Based Sewer System Hydraulic Model Project (2012)
- Wastewater Collection System Wet Weather Flow Monitoring (2010)
- City of Woodland Downtown Specific Plan (2003)
- East Street Corridor Specific Plan (1998)
- Woodland Park Specific Plan (Draft)
- Spring Lake Specific Plan (2001)
- Discussions with City staff regarding areas of future development

The consultant will use the results of dry weather hydraulic modeling to specifically tailor the wet weather flow monitoring program to target areas of concern where hydraulic deficiencies may be present.

Flow Monitoring

The flow monitoring plan developed by the consultant will be utilized by the City on an ongoing basis. The flow monitoring plan will include the following components:

- System wide flow monitoring will be conducted every 5-10 years, or in conjunction with any Master Plan update with the purpose of quantifying and tracking GWI/I and RDI/I over time and identifying areas of excessive infiltration and inflow
- Permanent wet weather flow monitoring will be monitored on the City's main sewer trunk lines upstream of the wastewater treatment plant
- Targeted flow monitoring will be conducted as needed to:
  - evaluate the effectiveness of rehabilitation / replacement projects in reducing I/I (using before and after flow monitoring)
  - monitor and confirm additional sewer flows contributed by new developments, residential densification projects, or changes to existing commercial / industrial uses
  - monitor "trigger points" at which flows in assets targeted for a future capacity-related capital improvement projects according to the Master Plan reach the limit where implementation of the project is required due to additional upstream flow contributions

Ongoing Hydraulic Model Updates

The Master Plan update will provide estimates of available or excess capacity in key collection system assets that will allow the City to determine the ability of the system to handle additional flows associated with any major proposed projects or changes to land use designations. Additionally, the City will retain the model files and an InfoSewer license. Select City staff will be trained on the use of the model, and will also have the ability to use the model to investigate the effect of proposed projects or changes to land use designations. The City may execute contracts as needed to update the hydraulic model and the capacity related capital improvement plan for new major projects or land use changes. Also, a thorough Master Plan update is conducted following any major updates to the City's General Plan.

Related Documents

- Refer to the City of Woodland Wastewater Collection System Master Plan Report, CH2MHill, 2000
- Refer to "Sanitary Sewer Flow Monitoring and Capacity Analysis", V&A November 2008
- Refer to "City of Woodland Sewer Master Plan Update Land Use Assumptions and Sanitary Flow Generation Rates", NEXGEN / Kimley-Horn & Assoc. February 2009
- Refer to "Proposed Winter 2008/2009 City of City of Woodland Sewage Flow and EC Monitoring Plan", NEXGEN / Kimley-Horn & Assoc. December 2008
- Refer to " Wastewater Collection System Wet Weather Flow Monitoring", V&A July 2010
- Refer to "General Plaqn Scenario Wastewater Hydraulic Review", Waterworks Engineers, August 2014
- Refer to "Phase 3 – GIS Based Sewer System Hydraulic Model Project", Waterworks Engineers, December 2012

Element viii. System Evaluation and Capacity Assurance Plan

Plan & Schedule

Task	Responsible Party	Scheduled Date
Coordinate with consultant to gather data and implement necessary updates to sewer system GIS mapping for hydraulic model use.	GIS Network Specialist	April 2015 – June 2016
Obtain training for hydraulic model use for select City Staff.	Associate Civil Engineer	June 2015 – June 2016
Conduct system-wide flow monitoring to quantify and track I/I in specific sewer "sheds".	Associate Civil Engineer / WPCF Superintendent	Every 5-10 years or with Master Plan Updates
Implement targeted flow monitoring for rehabilitation / replacement projects, new major development, and assets of concern.	Associate Civil Engineer	Continuously / As-Needed
Review and comment on the effect of major proposed projects or land use changes on sewer collection system capacity, coordinate with consultants as needed.	Associate Civil Engineer	Continuously / As-Needed
Maintain permanent wet weather flow monitoring data on major trunk lines.	Associate Civil Engineer	Continuously

viii-b. Establish appropriate design criteria

Requirement

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

Discussion

Existing Design Standards

As discussed in section v-a of the SSMP, the City has sewer collection system design standards that include dry weather flow calculation, standard I/I rates, pipe capacity determination equations, minimum slopes, maximum depth to diameter ratios at the design flow, and minimum flow velocities at the design flow.

Master Plan Capacity Considerations

The General Plan Scenario Wastewater Hydraulic Review pinpoints areas of surcharging in key trunk lines in future build-out wet weather scenarios. There are no standards established in the Master Plan which place acceptable limitations on surcharging. The surcharging that was discovered was considered "acceptable" because there were no cases where surcharging was expected to cause an SSO by flowing out of a manhole cover. The City will enforce the usage of the maximum depth to diameter ratio that applies to the calculated design flow presented in the City Standards for new construction, but will continue to use a case-by-case "soft" standard for determining levels of surcharging that are acceptable and unacceptable when evaluating older existing infrastructure during hydraulic model analysis.

The 2000 Master Plan and the General Plan Scenario Wastewater Hydraulic Review have identified the 5-year return period / 24-hour duration storm as the design storm for the sewer collection system, and has projected that 5.7 MGD of RDI/I enters the system during this storm event based on historical analysis of rainfall records, WWTP flow monitoring data, and the updated hydraulic model. The specific design storm that will be used to identify hydraulic deficiencies in the Master Plan update may change based on new wet weather flow monitoring data and current City level of service objectives.

Related Documents

- Refer to the City of Woodland Wastewater Collection System Master Plan Report, CH2MHill, 2000
- Refer to the General Plan Scenario Wastewater Hydraulic Review, Waterworks Engineers, August 2014
- Refer to City of Woodland Standard Specifications and Details, 2014

Plan & Schedule

No further efforts are projected for this element at the present time.

Element viii. System Evaluation and Capacity Assurance Plan

viii-c. Capacity Enhancement Measures: Steps needed to establish short- and long-term CIP for identified hydraulic deficiencies

Requirement	Define the steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.
Discussion	Whenever a capacity-related improvement is required in the sewer collection system, an engineering analysis is conducted (typically by a civil engineering consultant) to determine the most cost effective means for making the improvement. An alternatives analysis will be required by the City within a pre-design report for capacity-related projects submitted by consultants. The analysis will use available hydraulic model and flow monitoring data to determine if I/I reduction in upstream basins is a potential solution to the problem, and will consider the long term operational benefits of I/I reduction. Additionally, the analysis will include the investigation of various options including dig-and-replace construction with larger diameter lines, trenchless upsizing (such as pipe bursting), and parallel construction. As discussed in section 0 of the SSMP, the City determines development-related impact fees for sewer utility infrastructure in the Major Projects Financing Plan (MPFP) which is completed annually. If the City is unable to attribute new capacity related deficiencies within the collection system to specific new development projects and collect impact fees to offset the costs of making improvements, funding must be provided from the sewer enterprise fund.
Related Documents	o Refer to current City of Woodland CIP Schedule
Plan & Schedule	No further efforts are projected for this element at the present time.

viii-d. Schedule: Develop a schedule of completion dates for CIP

Requirement	The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.
Discussion	The City integrates capacity driven capital improvement projects into a comprehensive capital improvement plan which includes condition driven projects that are prioritized based on the rating system described in SSMP section iv-c. Pipelines that are determined to cause an SSO or "unacceptable" levels of surcharging during existing dry or peak wet weather conditions according to the hydraulic model are scheduled for improvement within the most rapid timeframe possible, regardless of the risk of failure rating assigned as part of the condition assessment process. Capacity-related SSOs are capable of causing large and possibly repetitive spills if not addressed quickly. Any necessary capacity-related improvements that are identified by the Master Plan Update under existing conditions will be integrated immediately into the short-term capital improvement plan. Pipelines that are identified by hydraulic modeling results to cause an SSO or "unacceptable" levels of surcharging during dry or peak wet weather future scenarios are scheduled for improvement prior to the time at which actual sewer flows are expected to reach the levels indicated by the model. The timeline for improvements associated with near-term (5-10 years) or full build-out capacity issues is determined based on the pace of development in the areas which are contributing future flows to the asset in question. Improvements associated with near-term and full-build out projects are tentatively scheduled within the capital improvement plan, and project timelines are adjusted as changes to project schedules occur. The City will conduct targeted "flow trigger" monitoring on the assets scheduled for future capital improvement projects as described in SSMP section viii-a.
Related Documents	o Refer to current City of Woodland CIP Schedule
Plan & Schedule	No further efforts are projected for this element at the present time.

ix Monitoring, Measurement, and Program Modifications

SWRCB Requirement:

The Enrollee shall:

*(a) Maintain relevant **information** that can be used to establish and prioritize appropriate SSMP activities;*

*(b) Monitor the **implementation** and, where appropriate, measure the effectiveness of each element of the SSMP;*

*(c) **Assess** the success of the preventative maintenance program;*

*(d) **Update** program elements, as appropriate, based on monitoring or performance evaluations; and*

*(e) Identify and illustrate **SSO trends**, including: frequency, location, and volume.*

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.

Background

This section of the SSMP describes the monitoring of specific performance indicators (PIs) by the City to evaluate utility performance against quantifiable goals. The City has established performance indicators for 23 specific areas, and assigned a specific employee the task of periodically comparing actual utility activities in each area to the benchmarks established within the PI to rate performance and make recommendations to improve performance where it may be lacking. This section fulfills the requirements of the GWDR SSMP mandatory element ix.

Element ix. Monitoring, Measurement, and Program Modifications

ix-a. Maintain relevant information to prioritize SSMP activities

Requirement

The Enrollee shall maintain relevant information that can be used to establish and prioritize appropriate SSMP activities.

Discussion

The 23 performance indicators established by the City set goals in the areas listed in the performance indicator summary table found in **Attachment ix-1**. Each PI is tracked by a responsible person (RP) who must document specific statistics throughout the year, and ensure that adequate data is being collected to evaluate performance. The RP for each indicator is an employee that would naturally be involved with the collection or use of the data required for the PI before this monitoring program was established, to ensure efficiency in data collection and tracking. The data tracked by each PI and the RP for each is listed on the performance indicator summary table. Much of the data analyzed by the PIs is tracked within the City's CMMS, CCTV, or GIS databases and requires the production of a Crystal Report to extract specific data that can be analyzed. Each quarter, the Engr. Technician will prepare all of the Crystal Reports that are required and make them available to the RP for each PI, who will use the data to complete the tracking sheet. Each PI tracking sheet describes the method of data collection for each data indicator. The PI tracking sheets can be found in **Attachment ix-1**.

Related Documents

- Attachment ix-1: PI Summary and PI Tracking Sheets

Plan & Schedule

Task	Responsible Party	Scheduled Date
PIs will be updated based on SSMP Change log.	Engr. Tech	Annually

Element ix. Monitoring, Measurement, and Program Modifications

ix-b. Monitor and measure effectiveness of SSMP elements

Requirement

The Enrollee shall monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP.

Discussion

Each RP must rate each separate goal for their PI according to the rating scale established for that goal every quarter. The RP records the date that the evaluation was completed on the tracking sheet. At the end of the year, the RP makes program modification recommendations at the bottom of their tracking sheet, which are intended to increase future ratings to at least "acceptable" levels for goals that are below that rating.

Related Documents

- Attachment ix-1: PI Summary and PI Tracking Sheets

Plan & Schedule

Task	Responsible Party	Scheduled Date
Complete data entry for each PI.	Various Employees	Quarterly

Element ix. Monitoring, Measurement, and Program Modifications

ix-c. Assess success of preventative maintenance program

Requirement	The Enrollee shall assess the success of the preventative maintenance program.
Discussion	The success of the preventative maintenance program is assessed by the evaluation of the following PIs: ➢ CCTV Inspection ➢ GIS/CMMS ➢ FOG Control Program ➢ HVVC Activities ➢ Preventative Maintenance Activities ➢ Preventative Maintenance Effectiveness ➢ SSO Mitigation ➢ SSO Prevention ➢ SSO Response The success of the preventative maintenance program is dependent on assessing the condition of the system (CCTV Inspection), regularly cleaning the collection system (HVVC Activities), maintaining accurate records of PM activities (GIS/CMMS), and scheduling PM activities at frequencies (PM Activities) that are adequate to prevent emergency events and SSOs (PM Effectiveness, SSO Mitigation, SSO Prevention, SSO Response). Running an effective FOG control program is also a critical component to an effective preventative maintenance strategy. The tracking and review of the quantitative benchmark goals set for each of these PIs will ensure that an accurate picture of the success of the DPW in operating and maintaining the system with a minimum number of spills is presented each year.
Related Documents	o Attachment ix-1: PI Summary and PI Tracking Sheets
Plan & Schedule	No further efforts are projected for this element at the present time.

Element ix. Monitoring, Measurement, and Program Modifications

ix-d. Update SSMP program elements based on performance evaluations

Requirement	The Enrollee shall update program elements, as appropriate, based on monitoring or performance evaluations.
Discussion	All PI tracking sheets are filed centrally, and reviewed every year as part of the SSMP auditing process by the Superintendent. It is during the auditing process that potential updates to program elements are identified based on the recommendations of each RP and the judgment of the Superintendent. Physical changes to the SSMP text will be made by the Superintendent as needed, but at a minimum of every 5 years. Possible future modifications to SSMP programs and activities may include but are not limited to the following: o detailed efforts to increase funding or staffing o changes to the CCTV inspection or FOG programs o changes to OERP protocols o major additions to Codes, Ordinances, and Design Standards o O&M activities and protocols for newly added infrastructure components o updates to CIP prioritization and funding processes o changes in hydraulic modeling and flow monitoring priorities, etc. Any major changes to SSMP elements or programs will be presented to City Council, and approval gained for impacts any changes may have on City budgets and staffing effort allocations.
Related Documents	o Attachment ix-1: PI Summary and PI Tracking Sheets
Plan & Schedule	No further efforts are projected for this element at the present time.

Element ix. Monitoring, Measurement, and Program Modifications

ix-e. Identify and illustrate SSO trends

Requirement

The Enrollee shall identify and illustrate SSO trends, including: frequency, location, and volume.

Discussion

All SSO report forms are centrally filed. The RP for the SSO Prevention PI maintains a spreadsheet which totals annually SSOs by category (1, 2, and 3) and displays a running bar graph of the historical number of spills per year. Each bar on the bar graph will be labeled with the total SSO volume for each spill category per year The RP also reviews the SSO Event layer within Cityworks that displays the SSO locations based on SSO work orders. The SSOs work order stores includes pertinent information for example the spill category, volume, cause of spill, spill volume recovered, etc. This data can be analyzed geographically concurrently with other City GIS data to determine if any geographical trends in SSOs are occurring, and to help identify any geographical or physical factors that may be contributing to those trends. This data is reviewed by the Utility O&M Division annually to help drive changes to PM activity frequencies.

Related Documents

- None

Plan & Schedule

Task	Responsible Party	Scheduled Date
Create the SSO Event Layer in Cityworks and print out for review.	GIS Tech/ Utility Maintenance Supervisor	May 2015
Update the SSO bar graph with data from SSO report forms and attach to SSO prevention PI tracking sheet.	Utility Maintenance Supervisor	Annually

Attachment ix-1:

Performance Indicator Summary and Performance Indicator Tracking Sheets

Element ix. Monitoring, Measurement, and Program Modifications

Summary of Performance Indicators

Performance Indicator	Responsible Party	Indicator Data
CCTV Inspection	CCTV Crew Leader	Total yearly CCTV inspection footage
CCTV Inspection	CCTV Crew Leader	Total yearly number of pipe segments CCTV inspected
CCTV Inspection	CCTV Crew Leader	Average footage inspected per 16 hours of work (one full day for a crew of 2)
CCTV Inspection	CCTV Crew Leader	Percentage of CCTV surveys that pass QA/QC inspection
Codes and Ordinances	Principal Utilities Civil Engineer	Frequency of meetings to discuss / document potentially required updates to the Municipal Code
Codes and Ordinances	Principal Utilities Civil Engineer	Frequency of actual updates to Municipal Code based on utility-specific issues
Communication Program	Administration Clerk	SSMP website updated with SSMP Bi-annual Audit
Communication Program	Administration Clerk	Total number of public comment email responses
Communication Program	Administration Clerk	Percent of total public comment emails received that were responded to
Employee Recognition	Wastewater Systems Administrator	Frequency of award distribution to O&M Staff
Employee Recognition	Wastewater Systems Administrator	Frequency of award distribution to Engineering Staff
Employee Recognition	Wastewater Systems Administrator	Frequency of award distribution to Management Staff
FOG Control Program	Environmental Compliance Inspector	Percent reduction in SSOs and blockages requiring flushing attributed to FOG blockages from the previous year
FOG Control Program	Environmental Compliance Inspector	Frequency with which inspection of Pollution Prevention Program (PPP) permit holders are conducted
FOG Control Program	Environmental Compliance Inspector	Number of FOG disposal public education outreach events or activities conducted per year
FOG Control Program	Environmental Compliance Inspector	Time since last joint meeting between Environmental Compliance and O&M to review FOG-related issues in the collection system.
GIS / CMMS	GIS Analyst	Percent population of key attribute data for sewer gravity main assets within GIS geodatabase
GIS / CMMS	GIS Analyst	Percent population of key attribute data for sewer manhole assets within GIS geodatabase
GIS / CMMS	GIS Analyst	Percent of CityWorks work orders that have been closed
HVVC Activities	HVVC Crew Leader	Total footage of the collection system cleaned per year with HVVC
HVVC Activities	HVVC Crew Leader	Total number of pipe segments cleaned with HVVC per year
HVVC Activities	HVVC Crew Leader	Average footage cleaned per 16 hours of work (one full day for a crew of 2)
HVVC Activities	HVVC Crew Leader	Percentage of CCTV inspections that were conducted where pre-cleaning was completed
Maintain Up-To-Date Standards	Principal Utilities Civil Engineer	Frequency of meetings to discuss / document potentially required updates to the sewer collection system
Maintain Up-To-Date Standards	Principal Utilities Civil Engineer	Frequency of actual updates to the design standards, standard drawings, and specifications based on sewer utility-specific issues
Operation and Maintenance Funding	Management Analyst	Amount of funding provided for operating and maintaining the collection system per foot of main line pipe
Operation and Maintenance Funding	Management Analyst	Annual cost of operating and maintaining the collection system per foot of main line pipe
Preventative Maintenance Activities	Utilities Maintenance Supervisor	Percent completion of work orders in the CMMS compared to expected work orders based on weekly / quarterly cleaning & inspection route lists
Preventative Maintenance Activities	Utilities Maintenance Supervisor	Frequency of thorough electrical and mechanical inspections of lift stations
Preventative Maintenance Effectiveness	Utilities Maintenance Supervisor	Percentage of work orders that are emergency
Preventative Maintenance Effectiveness	Utilities Maintenance Supervisor	Percentage of accountable labor and material costs that are attributed to emergency work versus regular preventative maintenance work
Preventative Maintenance Effectiveness	Utilities Maintenance Supervisor	Percentage of accountable labor and material costs that are attributed to emergency work on private laterals
Rehabilitation / Replacement Budgeting	Management Analyst	Percentage of the total system value as defined by GASB34 reporting spent per year on R/R projects
Rehabilitation / Replacement Budgeting	Management Analyst	Funding for R/R projects compared to the funding required according to estimates produced by the CA&CIP

Element ix. Monitoring, Measurement, and Program Modifications

Summary of Performance Indicators (Continued)

Performance Indicator	Responsible Party	Indicator Data
Rehabilitation / Replacement Program	Principal Utilities Civil Engineer	Percentage of assets in the CA&CIP Module that have been CCTV inspected that have also been evaluated
Rehabilitation / Replacement Program	Principal Utilities Civil Engineer	Percentage of assets in the CA&CIP Module that have risk ratings from 4-5 that have a capital improvement "action" assigned
Rehabilitation / Replacement Program	Principal Utilities Civil Engineer	Percentage of CIP bundles assigned to the previous year that are in design or construction
Rehabilitation / Replacement Program	Principal Utilities Civil Engineer	Number of line failures or breaks per 100 miles of pipe
Replacement Parts	Equipment Services Clerk	Frequency with which the inventory of necessary equipment and replacement parts for fleet vehicles is reviewed and updated, and new parts ordered if needed
Replacement Parts	Utility Maintenance Worker	Frequency with which the inventory of necessary equipment and replacement parts for pipeline and manhole repairs is reviewed and updated, and new parts ordered if needed
Replacement Parts	WPCF Operator	Frequency with which the inventory of necessary equipment and replacement parts for lift stations is reviewed and updated, and new parts ordered if needed
Response to Service Requests	Administrative Clerk	Average response time for an urgent call
Response to Service Requests	Administrative Clerk	Average response time for a routine call
Response to Service Requests	Administrative Clerk	Average number of service calls per 100 miles of pipe per year
SSMP Audits and Updates	Principal Utilities Civil Engineer	Preparation of annual SSMP performance indicator report and submission to City Council
SSMP Audits and Updates	Principal Utilities Civil Engineer	Frequency of peer review of SSMP and utility performance
SSO Mitigation	Utilities Maintenance Supervisor	Percent of SSO volume capture in flat areas (i.e. slopes of 1-5%)
SSO Mitigation	Utilities Maintenance Supervisor	Average amount of time from the SSO event to when the line is inspected with CCTV to investigate the cause
SSO Mitigation	Utilities Maintenance Supervisor	Percent of private lateral spills that are reported as category 3 spills in the CIWQS database
SSO Prevention	Utilities Maintenance Supervisor	Number of SSOs per 100 miles of gravity sewer mains per year
SSO Prevention	Utilities Maintenance Supervisor	Percent reduction in SSOs from the previous year
SSO Prevention	Utilities Maintenance Supervisor	Number of repeat SSOs in a three year period
SSO Response	Utilities Maintenance Supervisor	Average response time during normal business hours
SSO Response	Utilities Maintenance Supervisor	Average response time after normal business hours
Staff Training	Wastewater Systems Administrator	Frequency with which tabletop / tailgate training meetings are conducted by the O&M staff
Staff Training	Wastewater Systems Administrator	Frequency with which field training exercises are conducted by the O&M staff
Staff Training	Wastewater Systems Administrator	Frequency with which field or tabletop / tailgate training is conducted that includes training on SSO response procedures outlined in the OERP
Staffing	Administrative Clerk	Percentage of vacant staff positions within the Engineering, Utility Maintenance, and Environmental Operations of the City of Woodland.
System Evaluation and Capacity Assurance	Principal Utilities Civil Engineer	Ratio of peak wet weather flow to peak dry weather flow as monitored at the WWTP
System Evaluation and Capacity Assurance	Principal Utilities Civil Engineer	Frequency of hydraulic model updates
System Mapping	CAD Administrator / GIS Analyst	Average time to update GIS maps based on redlines received from O&M staff in the field through Redline Process
System Mapping	CAD Administrator / GIS Analyst	Time since the last feature class export for redline changes from the GIS mapping system was completed for updating of the CAD mapping system due to redline markups made in the field
System Mapping	CAD Administrator / GIS Analyst	Average time to update CAD/GIS maps based on as-builts received from rehabilitation or replacement projects
System Mapping	CAD Administrator / GIS Analyst	Average time to update CAD/GIS maps based on as-builts received from new development

Goal:	**Maintain Up-to-date Standards**

Responsible Person (RP):
Principal Utilities Civil Engineer

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to keep the City Standards current with regards to design and construction of the collection system. This effort involves keeping a list of recommended updates to the standards, which is reviewed by all parties with responsibility over the sewer collection system and updated on a consistent basis.

PIs and Data Collection Methods:

1. *The frequency with which the list of required/requested updates to the standards is maintained and discussed with O&M, Engineering, Environmental Compliance and Management.*
   Data Collection Method: Keep track manually. Current list of updates, and meeting notes from past meetings should be available.

2. *The frequency with which the standards are revised to incorporate the list of required/requested updates.*
   Data Collection Method: Keep track manually. A file of completed updates and/or new design standards specific to the sewer collection system should be kept.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	Time since last meeting to discuss list of design standard updates based on sewer-specific issues	> 2 years	1-2 years	6 months – 1 year	< 6 months
2	Time since last actual update to design standards based on sewer-specific issues	> 5 years	2-5 years	1-2 years	< 1 year

Periodic Performance Tracking				
Date	**Measured Value**			**Performance Assessment Comments**
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Staffing**
Responsible Person (RP): Administrative Clerk	

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to fill all funded positions within the Utility Maintenance, Environmental Operations, and Utilities Engineering Divisions of the City of Woodland to meet the necessary effort required to implement the City SSMP.

PIs and Data Collection Methods:

1. *The percentage of vacant staff positions in the divisions listed above.*
   Data Collection Method: Keep track manually.

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	% of vacant positions	> 10%	10%	5%	All filled

Periodic Performance Tracking			
Date	**Measured Value**		**Performance Assessment Comments**
[date]	Goal	1	**[Summary of Ratings]** [Description]
[initial]	Value		
[date]	Goal	1	**[Summary of Ratings]** [Description]
[initial]	Value		
[date]	Goal	1	**[Summary of Ratings]** [Description]
[initial]	Value		
[date]	Goal	1	**[Summary of Ratings]** [Description]
[initial]	Value		

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Signature of Responsible Person: (sign when complete)	Date:

Goal:	**Response to Sanitary Sewer Overflows (SSOs)**

Responsible Person (RP):
Utilities Maintenance Supervisor

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts taken to effectively respond to SSOs. *Response time* is defined as the time of first notification or discovery of a SSO to the arrival onsite by City staff.

Data Collection Methods

1. *The average response time during normal business hours (M-F 7am-4pm).*
   Data Collection Method: Determine manually from year-to-date City SSO records or using the CIWQS database. Determine response time for each event by comparing "Date and time sanitary sewer system agency was notified of or discovered spill" to "Estimated Operator arrival date/time" and calculate Response Time. SSOs that occur during normal business hours are those that are initially reported between 7am and 4 pm Monday through Friday. Determine the average response time for year-to-date incidents.

2. *The average response time after hours (M-F 4pm-7am, weekends, holidays).*
   Data Collection Method: Determine manually from year-to-date City SSO records or using the CIWQS database. Determine response time for each event by comparing "Date and time sanitary sewer system agency was notified of or discovered spill" to "Estimated Operator arrival date/time" and calculate Response Time. SSOs that occur during normal business hours are those that are initially reported between 4pm and 7am, or on weekends or holidays. Determine the average response time for year-to-date incidents.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	SSO response time during normal hours	>30 min	30 min	20 min	15 min
2	SSO response time after normal hours	<1 hr	1 hr	45 min	30 min

Periodic Performance Tracking				
Date	**Measured Value**			**Performance Assessment Comments**
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Prevention of Sanitary Sewer Overflows (SSOs)**

Responsible Person (RP):
Utilities Maintenance Supervisor

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts taken to prevent the occurrence of SSOs.

PIs and Data Collection Methods:

1. *The number of SSOs per 100 miles of gravity sewer mains per year.*
   Data Collection Method: Determine the number of SSO events that occurred year-to-date that are attached to gravity mains, force mains, manholes, and lift stations from the central crystal report. Project the number of SSOs to year-end totals. Divide this number by the total footage of gravity mains and force mains in the City (also available on the central crystal report).

2. *The percent reduction in SSOs from the previous year.*
   Data Collection Method: Determine the number of SSO events that occurred year-to-date that are attached to gravity mains, force mains, manholes, and lift stations from the central crystal report. Project the number of SSOs to year-end totals and compare to the number of SSOs that occurred last year to determine the % reduction.

3. *The number of repeat SSOs in a three year period.*
   Data Collection Method: Review the central crystal report which lists all SSOs by asset type over the last three year period, sorted by Facility ID. Manually determine the number of repeat SSOs.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	# of SSOs / 100 miles / year	>5	5	3.5	2.3
2	% reduction of SSOs from previous year	< 0%	0-5%	5-10%	> 10%
3	# of repeat SSOs / 3 years	>0	-	-	0

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Mitigation of Sanitary Sewer Overflows (SSOs)**

Responsible Person (RP):
Utilities Maintenance Supervisor

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts taken to mitigate any SSOs that occur.

PIs and Data Collection Methods:

1. *The percent of SSO volume capture in flat areas (i.e. slopes of 1-5%).*
   Data Collection Method: Calculate manually from either completed City of Woodland SSO report forms filed year-to-date, or from information entered into the CIWQS database. Calculate % captured volume for all categories of SSOs (including from private laterals) for which the "description of terrain surrounding the point of blockage or spill cause" is described as flat. For each SSO event, determine the "% captured" as the volume of sewage recovered and returned to the sewer system divided by the total spill volume. Then, average the % captured for all spills in the year-to-date period.

2. *The percent of SSO volume capture in steep areas (i.e. slopes greater than 5%).*
   Data Collection Method: Calculate manually from either completed City of Woodland SSO report forms filed year-to-date, or from information entered into the CIWQS database. Calculate % captured volume for all categories of SSOs (including from private laterals) for which the "description of terrain surrounding the point of blockage or spill cause" is described as steep. For each SSO event, determine the "% captured" as the volume of sewage recovered and returned to the sewer system divided by the total spill volume. Then, average the % captured for all spills in the year-to-date period.

3. *Average time from an SSO event to when the line is inspected with CCTV to investigate the cause.*
   Data Collection Method: Review the central crystal report which lists all CCTV inspections that were completed year-to-date where the reason for the inspection is identified as a follow-up to an SSO. Manually compare this list to SSO report forms filed year-to-date. For each year-to-date SSO, determine if a corresponding follow-up CCTV inspection was completed. Manually calculate the time between when each SSO is reported to the date a follow-up CCTV inspection was calculated. If there are SSOs for which a CCTV inspection has not been conducted, calculate the time from the SSO occurrence to the current date. Average the CCTV inspection response time for all year-to-date SSOs.

4. *% of private lateral spills that are reported as category 3 spills in the CIWQS database.*
   Data Collection Method: Determine the number of Category 3 (private lateral) work orders that have been completed year-to-date from the central crystal report. Compare manually to the number of category 3 spills that have been reported year-to-date through the City's CIWQS account.

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	% captured of SSO (flat, 1-5%)	<70%	70%-80%	90-90%	90-100%
2	% captured of SSO (steep, >5%)	<30%	30-50%	50-90%	90-100%
3	Average time to investigate SSO with CCTV	>1 week	5-7 days	3-5 days	< 3 days
4	% complete on-line reporting for category 3 spills	< 70%	70-80%	80-90%	90-100%

Periodic Performance Tracking						
Date	Measured Value					Performance Assessment Comments
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Recommendation #4:

Signature of Responsible Person: (sign when complete)	Date:

Goal: **Response to Service Requests**

Responsible Person (RP):
Administrative Clerk

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts taken to effectively respond to customer service calls.

PIs and Data Collection Methods:

1. *The average response time for an urgent call.*
   Data Collection Method: Determine the average response time for "priority 1" (emergency), "priority 2" (urgent), and "priority 9" (on-call) service calls from the central crystal report.

2. *The average response time for a routine call.*
   Data Collection Method: Determine the average response time for "priority 3" (routine) service calls from the central crystal report.

3. *Average number of service calls per 100 miles of pipe per year.*
   Data Collection Method: Determine the total number of year-to-date service calls from the central crystal report, project to year-end totals, and determine number of calls per 100 miles of main line gravity and pressure pipe.

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	Response time for urgent calls	> 1 day	1 day	8 hours	1 hour
2	Response time for routine calls	> 1 week	1 week	3 days	1 day
3	Average # of service calls / 100 miles of pipe	> 200	150-200	100-150	< 100

Periodic Performance Tracking

Date	Measured Value				Performance Assessment Comments
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates
[Summary of Ratings for the year] [Description] Recommendation #1: Recommendation #2: Recommendation #3:

Signature of Responsible Person: (sign when complete)	Date:

Goal:	**System Evaluation and Capacity Assurance Program (SECAP)**

Responsible Person (RP):
Senior Civil Engineer

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to conduct an evaluation of the system and ensure sufficient capacity to convey expected wastewater flows.

PIs and Data Collection Methods:

1. *Ratio of peak wet weather flow to peak dry weather flow as monitored at the WWTP*
   Data Collection Method: Collect daily flow data for the largest wet weather event at the WWTP headworks year-to-date and compare to the average daily dry weather (summer) flows as reported by WWTP operators to determine the ratio.

2. *Frequency of hydraulic model updates*
   Data Collection Method: Keep track manually. Hydraulic model updates include adjustments to parcel use information, system geometry (i.e. pipe sizes, inverts, locations), updates to I/I rates, etc. RP should keep a log of hydraulic model update activities.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	Ratio of peak WWF to peak DWF	> 2.0 : 1	1.7:1 – 2.0:1	1.5:1 – 1.7:1	1.3:1 – 1.5:1
2	Time since last hydraulic model update	> 24 months	18-24 months	12-18 months	< 1 year

Periodic Performance Tracking				
Date	**Measured Value**			**Performance Assessment Comments**
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			

Annual Performance Assessment / Recommendations for Updates
[Summary of Ratings for the year] [Description] Recommendation #1: Recommendation #2:

Signature of Responsible Person: (sign when complete)	Date:

Goal:	**Replacement Parts**

Responsible Person (RP):
Equipment Services Lead /
Utility Maintenance Worker /
WPCF Operator

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to ensure that adequate reserves of replacement parts are available to respond to foreseeable emergency situations that may arise within the collection system.

PIs and Data Collection Methods:

1. *Frequency with which the inventory of necessary equipment and replacement parts for fleet vehicles is reviewed and updated, and new parts ordered if needed.*
   Data Collection Method: Report generated through Fleet Software System semi-annually.

2. *Frequency with which the inventory of necessary equipment and replacement parts for pipeline and manhole repairs is reviewed and updated, and new parts ordered if needed.*
   Data Collection Method: Keep track manually.

3. *Frequency with which the inventory of necessary equipment and replacement parts for lift stations is reviewed and updated, and new parts ordered if needed.*
   Data Collection Method: Keep track manually.

		Below Goal	Acceptable	Good	Excellent
1	Frequency of Fleet equipment and replacement part inventory review	>Annually	Annually / Semi-annually	Semi-annually / Quarterly	> Quarterly
2	Frequency of pipeline / manhole equipment and replacement part inventory review	>Annually	Annually / Semi-annually	Semi-annually / Quarterly	> Quarterly
3	Frequency of lift station equipment and replacement part inventory review	>Annually	Annually / Semi-annually	Semi-annually / Quarterly	> Quarterly

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal: **Rehabilitation and Replacement (R/R) Program**

Responsible Person (RP):
Principal Utilities Civil Engineer

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to develop and implement an R/R program. This involves developing a CA&CIP Module for continually prioritizing line segments to be identified for rehabilitation or replacement. Once prioritized line segments are identified and bundled into Capital Improvement Projects (CIPs), appropriate rehabilitation or replacement methods will be analyzed, designed, and constructed.

PIs and Data Collection Methods:

1. *The percentage of assets in the CA&CIP Module that have been CCTV inspected that have also been evaluated.*
   Data Collection Method: Determine the percentage of CCTV inspected assets that have been evaluated in the CACIP from the central crystal report.

2. *The percentage of assets in the CA&CIP Module that have risk ratings from 4-5 that have a capital improvement "action" assigned.*
   Data Collection Method: Determine the percentage of assets in the CACIP module with risk ratings of 4 of 5 that have capital improvement actions assigned from the central crystal report.

3. *The percentage of CIP bundles assigned to the previous year that are in design or construction.*
   Data Collection Method: Manually determine the % based on determination of which CIP bundles assigned to the previous year in the CACIP Module are actually in design or construction.

4. *The number of annual main line structural pipe failures or breaks per 100 miles of pipe.*
   Data Collection Method: Determine the number of SSOs caused by structural failures in gravity mains, force mains, and manholes from the central crystal report. Also determine the number of repairs or replacements of gravity mains, force mains, and manholes due to emergency structural problems from the central crystal report. Project the total number of year-to-date structural issues to year-end totals. Finally, determine the ratio of structural failures per 100 miles of pipe using the total length of sewer system gravity and pressure main piping (also found in the central crystal report).

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	% of CCTV inspected assets that have been evaluated in the CA&CIP Module	< 75%	75-85%	85-95%	95-100%
2	% of assets with risk ratings of 4 or 5 that have CIP "actions" assigned	< 75%	75-85%	85-95%	95-100%
3	% of scheduled CIPs designed or in construction	< 60%	60-70%	70-80%	> 80%
4	# of line failures per 100 miles of pipe	> 4	3-4	2-3	< 2

Periodic Performance Tracking							
Date	**Measured Value**						**Performance Assessment Comments**
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
Annual Performance Assessment / Recommendations for Updates							
[Summary of Ratings for the year] [Description] Recommendation #1: Recommendation #2: Recommendation #3: Recommendation #4:							

Signature of Responsible Person: (sign when complete)	**Date:**

Goal: **Rehabilitation and Replacement (R/R) Funding**

Responsible Person (RP):
Management Analyst

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to provide sufficient funds for the R/R program to maintain or improve the condition of the collection system over time.

PIs and Data Collection Methods:

1. *The percentage of the total system value as defined by GASB34 reporting budgeted for the year for R/R projects.*
   Data Collection Method: Manually compare total R/R funding provided to the value of the sewer collection system as determined by GASB34 reporting.
   [Note: this PI may be tracked on an annual basis, and does not need to be tracked quarterly.]

2. *The annual funding budgeted for R/R projects compared to the estimated funding required according to estimates produced by the CA&CIP Module.*
   Data Collection Method: Manually sum the total annual R/R funding provided vs. the funding required for the current year according to CIP bundles scheduled for the current year in the CA&CIP module.
   [Note: this PI may be tracked on an annual basis, and does not need to be tracked quarterly.]

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	Annual R/R funding provided as % of sewer system value	<1%	1.0%-1.5%	1.5%-2.0%	>2.0%
2	Annual funding provided for R/R program vs. CA&CIP cost projections	< needs from CA&CIP analysis	Consistent with needs from CA&CIP analysis	N/A	N/A

Periodic Performance Tracking				
Date	**Measured Value**			**Performance Assessment Comments**
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Frequency of Preventative Maintenance (PM) Activities**

Responsible Person (RP):
Utilities Maintenance Supervisor

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the effort to ensure that work orders are being created to accurately document preventative maintenance activities, and that preventative maintenance activities are being completed as planned by management.

PIs and Data Collection Methods:

1. *Compare the number of closed-out work orders in the CMMS to the number of flushing and inspection work orders that should have been generated if all of the pipes on the weekly and quarterly cleaning routes were completed and determine the completion %.*
   Data Collection Method: Determine the total number of year-to-date closed-out preventative maintenance CCTV inspection and hydroflushing work orders from the central crystal report. Compare the number of closed-out work orders to the number of work orders that were expected based on the number of assets on the weekly and quarterly inspection and cleaning routes (excel files).

2. *Frequency of thorough electrical and mechanical inspections of lift stations.*
   Data Collection Method: Keep track manually. Determine the number of thorough electrical/mechanical inspections conducted over the previous 2-year period for each lift station to determine the inspection frequency. Report the average inspection frequency for all lift stations. [Note: when lift station work orders are being managed through CityWorks, a querry can be set up to determine the number of work orders completed over the last 2-year period and calculate the average inspection frequency.]

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	% Completion of closed-out work orders vs. expected preventative maintenance work orders	< 75%	75-85%	85-95%	95-100%
2	Frequency of thorough lift station inspection / maintenance	> Biannually	Every 4-6 months	Every 3-4 months	< Quarterly

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Preventative Maintenance Effectiveness**

Responsible Person (RP):
Utilities Maintenance Supervisor

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the effectiveness of the preventative maintenance program in limiting time and expenses required to respond to emergency calls and failures of the sanitary sewer system.

PIs and Data Collection Methods:

1. *The percentage of work orders that are emergency.*
   Data Collection Method: Determine from central crystal report. Emergency work orders include the following CityWorks priority categories: "priority 1" (emergency), "priority 2" (urgent), and "priority 9" (on-call).

2. *The percentage of accountable labor and material costs that are attributed to emergency work versus regular preventative maintenance work.*
   Data Collection Method: Determine from central crystal report. Emergency work orders include the following CityWorks priority categories: "priority 1" (emergency), "priority 2" (urgent), and "priority 9" (on-call).

3. *The percentage of accountable labor and material costs that are attributed to emergency work on private laterals.*
   Data Collection Method: Determine the total year-to-date work order costs (labor and materials) for all "priority 1" (emergency), "priority 2" (urgent), and "priority 9" (on-call) work orders associated with sewer laterals from the central crystal report. Determine the percentage of the total year-to-date work order costs (also from central crystal report) associated with the sewer collection system these "lateral emergency" work orders represent.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	% of work orders that are emergencies	> 40%	30-40%	20-30%	< 20%
2	% of Labor and Material Costs that is Emergency	> 30%	20-30%	10-20%	0-10%
3	% of Labor and Material Costs that is Emergency Work on Private Laterals	> 20%	10-20%	5-10%	0-5%

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Recommendation #4:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal: **Operation and Maintenance Budgeting**

Responsible Person (RP):
Management Analyst

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to sufficiently provide and utilize funds to effectively operate and maintain the collection system.

PIs and Data Collection Methods:

1. *The amount of funding provided for operating and maintaining the collection system per foot of main line pipe.*
   Data Collection Method: Determine annual funds allocated for operation and maintenance of the sewage collection system, and divide by the total gravity main and pressure main pipe footage from the central crystal report. [Note: This PI only needs to be tracked on an annual basis, not a quarterly basis.]

2. *The annual cost of operating and maintaining the collection system per foot of main line pipe.*
   Data Collection Method: Determine actual year-to-date sewer system O&M costs from financial accounting system, and divide by the total gravity main and pressure main pipe footage from the central crystal report. Project the cost per foot to the year-end total cost per foot.

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	Funding provided for O&M budget	< $1/ft/year	$1-$2/ft/year	$2-$3/ft/year	> $3/ft/year
2	O&M operation cost	> budget	N/A	within budget	N/A

Periodic Performance Tracking				
Date	**Measured Value**			**Performance Assessment Comments**
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal: **System Mapping**

Responsible Person (RP):
GIS Analyst

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to provide up-to-date maps of assets in the collection systems and other applicable facilities (i.e., stormwater facilities, waterways, etc.). This effort involves completing map change requests in a timely fashion. Map change requests come from three sources; namely, 1) variations observed in the field, 2) changes from rehabilitation or replacement, and 3) additional assets from new development.

PIs and Data Collection Methods:

1. *The average time to update GIS maps based on redlines received from O&M staff in the field through Redline Process.*
   Data Collection Method: Determine the average completion time for field staff redline map updates completed in the year-to-date period from the central crystal report.

2. *Time since the last feature class export for redline changes from the GIS mapping system was completed for updating of the CAD mapping system due to redline markups made in the field.*
   Data Collection Method: Keep track manually.

3. *The average time to update CAD/GIS maps based on as-builts received from rehabilitation or replacement projects.*
   Data Collection Method: Keep track manually from map change request forms (MCRs) filed within the year-to-date.

4. *The average time to update CAD/GIS maps based on as-builts received from new development.*
   Data Collection Method: Keep track manually from map change request forms (MCRs) filed within the year-to-date.

	Performance Indicators	Rating			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	Average time for redline updates	> 2 months	1-2 months	1 month – 2 weeks	< 2 weeks
2	Time since last GIS redline markup export and update of CAD maps for field changes completed	> 3 months	2-3 months	1-2 months	< 1 month
3	Average time for rehab & replacement updates	> 3 months	2-3 months	1-2 months	< 1 month
4	Average time for "new development" updates	> 6 months	3-6 months	2-3 months	< 2 months

Periodic Performance Tracking							
Date	**Measured Value**						**Performance Assessment Comments**
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Recommendation #4:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal: **High Velocity Vacuum Cleaning (HVVC)**

Responsible Person (RP):
HVVC Crew Leader

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the effort to periodically clean hot spot pipes and support CCTV inspection by pre-cleaning pipes.

PIs and Data Collection Methods:

1. *The total footage of the collection system cleaned per year with HVVC.*
   Data Collection Method: Determine year-to-date HVVC footage production from central crystal report, and project to year-end production.

2. *The total number of pipe segments cleaned with HVVC per year.*
   Data Collection Method: Determine year-to-date HVVC pipe cleaning production from central crystal report, and project to year-end production.

3. *The average footage cleaned per 16 hours of work (one full day for a crew of 2).*
   Data Collection Method: Determine year-to-date HVVC effort hours expended from central crystal report, and divide by 16 to determine the number of equivalent 16-hour blocks worked. Divide the year-to-date footage cleaned (also from central crystal report) by the number of 16 hour blocks worked to determine average daily crew production.

4. *The percentage of CCTV inspections that were conducted where pre-cleaning was completed.*
   Data Collection Method: Determine the number of year-to-date CCTV inspections that have been pre-cleaned from the central crystal report, and compare to the total number of year-to-date CCTV inspections completed (also from central crystal report).

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	Feet cleaned / year	< 170,000	170,000-200,000	200,000-250,000	> 250,000
2	Pipe segments cleaned / year	< 700	700-900	900-1000	> 1000
3	Footage cleaned / 16 work hours	<3000	3000-4000	4000-5000	> 5000
4	% Pipe segments pre-cleaned prior to CCTV inspection	< 70%	70-80%	80-90%	> 90%

Periodic Performance Tracking							
Date	**Measured Value**						**Performance Assessment Comments**
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Recommendation #4:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal: **Fats, Oils, and Grease (FOG) Control Program**

Responsible Person (RP):
Environmental Compliance Inspector

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to operate an effective and efficient FOG control program.

PIs and Data Collection Methods:

1. *The percent reduction in sanitary sewer overflows (SSOs) and blockages requiring flushing attributed to FOG blockages from the previous year.*
   Data Collection Method: For the first year of tracking, simply report number of SSOs and blockages caused by FOG from the central crystal report. Report SSOs and blockages from both sewer mains and sewer laterals. After data is available from the first year of tracking, determine the year-to-date FOG-related SSOs and blockages from the central crystal report, project the number of events out to the total year, and compare to the previous year's events to determine % reduction.

2. *The frequency of Pollution Prevention Program (PPP) permit holder inspections.*
   Data Collection Method: Divide the total number of PPP permit holders in the permit excel database by the number of inspection forms collected year-to-date, and project an equivalent inspection frequency in years.
   [Example: If there are 1,000 permit holders and 50 inspections are completed in the first 6 months of the year, the inspection frequency is: 1000 permits / 50 inspections / (12 mo / 6mo) = 10 years]
   [Note: when PPP program managed through CityWorks, a querry can be set up to quantify inspections completed based on work-order records rather than counting inspection forms.]

3. *The number of public education outreach events conducted per year.*
   Data Collection Method: Keep track manually. Project the year-to-date activity number out to the total year. The RP should keep documentation on all FOG Control public outreach events and activities in a file which can be reviewed to determine what activities have been conducted.

4. *Time since last joint Environmental Compliance and O&M meeting to review FOG-related issues in the collection system.*
   Data Collection Method: Keep track manually. RP should keep file of meeting notes and action items from meetings.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	% reduction of FOG-related SSOs compared to previous year	< 0%	0-5%	5-10%	10-20%
2	Frequency of PPP permits inspections	> Annually	6-12 months	3-6 months	< Quarterly
3	Annual # of FOG control public education events	< 2	2-3	4-6	> 6
4	Time since last coordination meeting with Environmental Compliance and O&M staff	> 6 months	3-6 months	2-3 months	< 2 months

Periodic Performance Tracking							
Date	**Measured Value**						**Performance Assessment Comments**
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
[initial]	Value						

Annual Performance Assessment / Recommendations for Updates
[Summary of Ratings for the year]
[Description]
Recommendation #1:
Recommendation #2:
Recommendation #3:
Recommendation #4:

Signature of Responsible Person: (sign after annual review)	**Date:**

Goal:	Employee Recognition

Responsible Person (RP):
Wastewater Systems Administrator

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to publicly recognize employees for exceptional work and provide a rewards system (gift certificates, cash, etc.) as part of the program.

PIs and Data Collection Methods:

1. *The frequency with which awards are distributed to O&M staff.*
   Data Collection Method: Keep Track Manually

2. *The frequency with which awards are distributed to Engineering staff.*
   Data Collection Method: Keep Track Manually

3. *The frequency with which awards are distributed to Management staff.*
   Data Collection Method: Keep Track Manually

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	Time since last awards distribution: Operation & Maintenance staff	< 6 months	6 months	1 Quarter	1 month
2	Time since last awards distribution: Engineering staff	< 6 months	6 months	1 Quarter	1 month
3	Time since last awards distribution: Management staff	< 6 months	6 months	1 Quarter	1 month

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
Annual Performance Assessment / Recommendations for Updates					
[Summary of Ratings for the year] [Description] Recommendation #1: Recommendation #2: Recommendation #3:					

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Communication Program**

Responsible Person (RP):
Administration Clerk

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to communicate with the public on a regular basis concerning the development and status of the City SSMP.

PIs and Data Collection Methods:

1. *Based on the current SSMP phase as described in the Communication Plan (Development, Implementation, Performance phases) in SSMP section xi, the percentage of communication activities completed that have been scheduled per the Communication Plan Table to-date.*
   Data Collection Method: Keep track manually. RP should develop a file for documenting communication activities and completed dates.

2. *Total number of year-to-date public comment email responses.*
   Data Collection Method: The City's public comment email link should be set up to deliver emails directly to the RP. The RP should keep a separate folder specifically for filing SSMP public comment emails and responses. There is no goal set for this PI. The RP only needs to document the total number of responses.

3. *The percentage of public comment emails received that were responded to.*
   Data Collection Method: RP will use Microsoft Outlook to determine the number of year-to-date comment emails received, and determine the number of year-to-date responses and determine the response percentage.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	% Communication Activities Completed	< 70%	70-80%	80-90%	90-100%
2	# of Public Comment Email Responses	N/A	N/A	N/A	N/A
3	% Public Comment Emails Responded To	< 80%	80-90%	90-95%	95-100%

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Maintaining Codes and Ordinances**

Responsible Person (RP):
Principal Utilities Civil Engineer

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to keep the City Codes and Ordinances current with known or upcoming changes in regulatory issues. This effort involves keeping a list of recommended updates to the codes and ordinances, which is reviewed by all parties with responsibility over the collection system and updated on a consistent basis.

PIs and Data Collection Methods:

1. *The frequency with which the list of required/requested updates to the City Code and Ordinances is maintained and discussed with O&M, Engineering, Environmental Compliance, and Management with regard to sewer-specific issues.*
   Data Collection Method: Keep track manually. Current list of updates, and meeting notes from past meetings should be available.

2. *The frequency with which the Municipal Code is revised to incorporate the list of required/requested sewer-specific updates.*
   Data Collection Method: Keep track manually. A file of completed updates and/or new ordinances specific to the sewer collection system should be kept.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	Time since last meeting to discuss list of Ordinance/Code updates based on sewer-specific issues	> 5 Years	2-5 years	1-2 years	< 1 year
2	Time since last actual update to Ordinances/Codes based on sewer-specific issues	> 10 Years	5-10 years	2-5 years	< 2 years

Periodic Performance Tracking				
Date	**Measured Value**			**Performance Assessment Comments**
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	Computerized Maintenance Management System (CMMS) & Graphical Information System (GIS)

Responsible Person (RP):
GIS Analyst

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts required to maintain a robust population of attribute data within the City GIS that can be used to supplement the City's CA&CIP Module and hydraulic modeling efforts. Additionally, the City's effort to consistently close-out work orders is quantified, to ensure that scheduled work is completed in a timely manner.

PIs and Data Collection Methods:

1. *Percentage population of key attribute data for sewer collection system assets within GIS geodatabase for gravity sewer mains.*
   Data Collection Method: Determine the % of null values for the following fields in the GIS geodatabase SGravityMain table from the central crystal report: InstallDate, Material, WidthTop, UpstreamInvert, DownstreamInvert, Slope, DesignFlow, Condition, ConditionDate

2. *Percentage population of key attribute data for sewer collection system assets within GIS geodatabase for manholes.*
   Data Collection Method: Determine the % of null values for the following fields in the GIS geodatabase SManhole table from the central crystal report: InstallDate, Condition, ConditionDate, Elevation, BarrelDiameter, BarrelMaterial, Depth

3. *Percentage of year-to-date CityWorks work orders that are closed*
   Data Collection Method: Determine the % of year-to-date CityWorks work orders that have been closed out from the central crystal report.

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	% population of key GIS attribute fields for gravity sewer mains	< 80%	80-90%	90-95%	95-100%
2	% population of key GIS attribute fields for sewer manholes	< 80%	80-90%	90-95%	95-100%
3	Year-to-date % of CityWorks work orders that have been closed-out	< 80%	80-90%	90-95%	95-100%

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal: **Closed Circuit Television (CCTV) Inspections**

Responsible Person (RP):
CCTV Crew Leader

Description of Performance Indicator(s) (PIs):

CCTV inspections are conducted using a standardized protocol to supply sufficient data for use in capital improvement project planning. The PIs listed below quantify efforts to complete CCTV work according to system-wide inspection frequency goals, and to complete the work both efficiently and with high quality.

PIs and Data Collection Methods:

1. *The total footage of the collection system inspected per year with CCTV.*
   Data Collection Method: Determine year-to-date CCTV inspection footage production from central crystal report, and project to year-end production.

2. *The total number of pipe segments inspected with CCTV per year.*
   Data Collection Method: Determine year-to-date CCTV inspection pipe production from central crystal report, and project to year-end production.

3. *The average footage inspected per 16 hours of work (one full day for a crew of 2).*
   Data Collection Method: Determine year-to-date CCTV effort hours expended from central crystal report, and divide by 16 to determine the number of equivalent 16-hour blocks worked. Divide the year-to-date footage inspected (also from central crystal report) by the number of 16 hour blocks worked to determine average daily crew production.

4. *The percentage of CCTV surveys that pass quality control standards (not more than one defect omitted per 100 feet of pipe inspected) by Utilities Engineering during review using the CACIP Module.*
   Data Collection Method: Determine total number of CCTV inspections completed in the year-to-date with a "pass" or "fail" in the QA/QC field from the central crystal report. Calculate the percent passing as those inspections with a "pass" divided by the total number with either a "pass" or "fail" assigned.

	Performance Indicators	Rating			
		Below Goal	Acceptable	Good	Excellent
1	Feet inspected with CCTV / year	< 100,000	100,000-170,000	170,000-200,000	> 200,000
2	Pipe segments inspected / year	< 400	400-600	600-800	> 800
3	Footage inspected / 16 work hours	<1500	1500-1750	1750-2000	> 2000
4	% Passing quality control check	< 90%	90%	95%	98%

Periodic Performance Tracking						
Date	**Measured Value**					**Performance Assessment Comments**
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					
[date]	Goal	1	2	3	4	**[Summary of Ratings]** [Description]
[initial]	Value					

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Recommendation #4:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**SSMP Audits and Updates**

Responsible Person (RP):
Wastewater Systems Administrator

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify efforts to present the findings of SSMP performance evaluations to City Council and other peer agencies, with the purpose of receiving valuable feedback on performance and possible improvements to existing procedures and programs.

PIs and Data Collection Methods:

1. *Was an annual report prepared and presented to City Council based on the SSMP performance indicator review process?*
   Data Collection Method: Keep track manually.

2. *The frequency with which a review of the City SSMP, a SSMP Audit, or SSMP performance evaluation (i.e. annually summary of performance indicator tracking process) is completed.*

   Data Collection Method: Keep track manually. A file of all peer reviews should be kept.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	Annual Council presentation	No	Yes	-	-
2	Time since last review of SSMP, SSMP Audits, or SSMP Performance Evaluations	> 5 years	2-5 years	1-2 years	< 1 year

Periodic Performance Tracking				
Date	**Measured Value**			**Performance Assessment Comments**
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			
[date]	Goal	1	2	**[Summary of Ratings]** [Description]
[initial]	Value			

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Staff Training**

Responsible Person (RP):
Wastewater Systems Administrator

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the effort required to ensure that regular training takes place.

PIs and Data Collection Methods:

1. *The frequency with which tabletop / tailgate training meetings are conducted by the O&M staff.*
   Data Collection Method: Keep track manually of tabletop / tailgate meetings completed year-to-date, and calculate the average frequency of the trainings during that same time period.

2. *The frequency with which field / equipment training exercises are conducted by the O&M staff.*
   Data Collection Method: Keep track manually of field / equipment training exercise training completed year-to-date, and calculate the average frequency of the trainings during that same time period.

3. *The frequency with which field, equipment or tabletop / tailgate training is conducted that includes training on SSO response procedures outlined in the OERP.*
   Data Collection Method: Keep track manually of all tabletop, tailgate, field, or equipment trainings that involve SSO response that have been completed year-to-date, and calculate the average frequency of trainings during that same time period.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	Frequency of tabletop / tailgate training	< Biweekly	Biweekly	Weekly	>Biweekly
2	Frequency of field / equipment training	<Bimonthly	Bimonthly	Monthly	>Monthly
3	Frequency of SSO response training	<Quarterly	Quarterly	Bimonthly	Monthly

Periodic Performance Tracking					
Date	**Measured Value**				**Performance Assessment Comments**
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				
[date]	Goal	1	2	3	**[Summary of Ratings]** [Description]
[initial]	Value				

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Signature of Responsible Person: (sign when complete)	**Date:**

Goal:	**Root Treatment Program (RTP)**

Responsible Person (RP):
Utilities Maintenance Worker III

Description of Performance Indicator(s) (PIs):

The PIs listed below quantify the efforts to mitigate reoccurring sewer lateral blockages due to root intrusion and to operate an effective Root Treatment Program.

PIs and Data Collection Methods:

1. *The total footage of sewer laterals treated for root intrusion over one year*
   Data Collection Method: Determine the year-to-date footage of treated sewer laterals from central crystal report, and extrapolate to the end of the year.

2. *The average footage of sewer laterals treated per fiscal quarter.*
   Data Collection Method: Determine the year-to-date total footage of sewer laterals treated from central crystal report and divide by four.

3. *The percent reduction in Sanitary Sewer Overflows (SSOs) and blockages requiring flushing attributed to root intrusion from previous year.*
   Data Collection Method: For the first year of tracking, simply report the number of SSO's and blockages caused by root intrusion from the central crystal report. After data is available from the first year of tracking, determine the year-to-date number of SSOs and blockages attributed to root intrusion, project the number of events out to the total year, and then compare the previous year's events to determine the percent reduction.

	Performance Indicators	**Rating**			
		Below Goal	**Acceptable**	**Good**	**Excellent**
1	Total footage of laterals treated for root intrusion over one year	> 500	< 500 - 1250	1250-2000	>2000
2	Average footage of sewer laterals treated per quarter	> 500	< 500 - 2000	2000-5000	> 5000
3	% reduction in SSOs attributed to root intrusion from the previous year	< 0	> 0 – 2.5%	> 2.5-5%	> 5%

Periodic Performance Tracking							
Date	**Measured Value**						**Performance Assessment Comments**
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
	Value						
[date]	Goal	1	2	3	4		**[Summary of Ratings]** [Description]
	Value						

Annual Performance Assessment / Recommendations for Updates

[Summary of Ratings for the year]

[Description]

Recommendation #1:

Recommendation #2:

Recommendation #3:

Signature of Responsible Person: (sign after annual review)	**Date:**

x SSMP Program Audits

SWRCB Requirement:

*As part of the SSMP, the Enrollee shall conduct periodic **internal audits**, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur **every two years** and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them. Records documenting all changes made to the SSMP since its last certification indicating when a subsection(s) of the SSMP changed and/or updated and who authorized the change or update. These records shall be attached to the SSMP.*

Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2,2006 and Order No. WQ 2013-0058-EXEXC Attachment A

Background

Periodic self-assessment of the City's SSMP is necessary to evaluate the effectiveness of the plan and related activities. Internal audits are an opportunity to review performance and establish changes to SSMP elements that will assist in more effectively meeting the goals of the SSMP as outlined in SSMP section i. This section fulfills the requirements of the GWDR SSMP mandatory element x.

Element x. SSMP Program Audits

x-a. SSMP Program Audits

Requirement

As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum the audits must occur every two years and a report must be prepared and kept on file.

Discussion

The person responsible for updating the SSMP for the City of Woodland is the Infrastructure O and M Superintendent. For this reason, the Superintendent will also be responsible for conducting the internal audits of the SSMP. Conducting the internal audits will allow the Superintendent to assess the program as a whole, determine necessary modifications to the SSMP, and apply those modifications.

The internal audits will be focused on meeting the goals of the SSMP, which are outlined in section i of the SSMP. This will provide consistency to the efforts of the City in meeting the objectives of the regulatory requirements. Performance relative to these goals will be assessed using the performance indicators as described in section ix of the SSMP. This will provide the Superintendent a wealth of knowledge about the performance of the Utility Maintenance Division in executing SSMP programs, and the effectiveness of those programs. Obtaining this view of the SSMP program will allow the Superintendent to properly evaluate the SSMP and produce a valuable internal audit.

The internal audit will consist of two components. The body of the internal audit will be made up of the PI assessment sheets, which will be completed during the course of the year by each responsible person (RP). The Superintendent will add to the front of those assessment sheets a SSMP Audit Cover Letter (see **Attachment x-1**). The SSMP Audit Cover Letter will include the following information:

- System overview, based on CIWQS questionnaire
- SSO history, the number and nature of SSO's over the past 10 years
- Progress on development of SSMP elements
- How SSMP elements were implemented over last year
- Effectiveness of the implemented SSMP elements
- What SSMP elements are planned to be implemented next year
- Description of additions and improvements to the collection system over the last year

- Description of the additions and improvements to the collection system planned for the upcoming year

Annually, the Infrastructure O and M Superintendent will follow the steps outlined below to conduct the internal audit of the City SSMP.

1. Collect Performance Indicator (PI) assessment sheets from each responsible person (RP).
2. Review assessments and recommendations from each PI.
3. Summarize the overall performance of the SSMP

Bi-annually, the Infrastructure O and M Superintendent will go to council with program-wide recommendations on the SSMP Program Audit Cover. Letter.

As the scope and activities of the SSMP evolve over time, the text of the SSMP will be modified as needed to reflect those changes. However, as a minimum, the SSMP will be updated once every 5 years and re-certified by the City Council when significant changes to the SSMP are made as required by GWDR section D.14. A sample City Council Communication used by the Superintendent to communicate changes to the SSMP that may require-certification is included in **Attachment x-2**. An example sanitary sewer management plan change log is supplied as **Attachment x-3**.

Related Documents

- Attachment x-1: Sample SSMP Program Audit Cover Letter
- Attachment x-2: Sample SSMP Program Audit Council Communication
- Attachment x-3: SSMP Changes Log

Plan & Schedule

Task	Responsible Party	Scheduled Date
Conduct internal audit.	Infrastructure O & M Superintendent	Annually
Present 2 years of internal audits to Council.		Bi-annually
Update SSMP programs based on internal audits.		As Needed / Every 5 Years Minimum

Attachment x-1:

Sample SSMP Program Audit Cover Letter

City of Woodland

Memorandum

To: Paul Navazio, City Manager and/or Greg Meyer, Director of Public Works

From: Tim Busch, Principal Utilities Civil Engineer

Date: 10/08/14

Subject: SSMP Program Audit Cover Letter
Annual SSMP Performance Review for 2013/2014

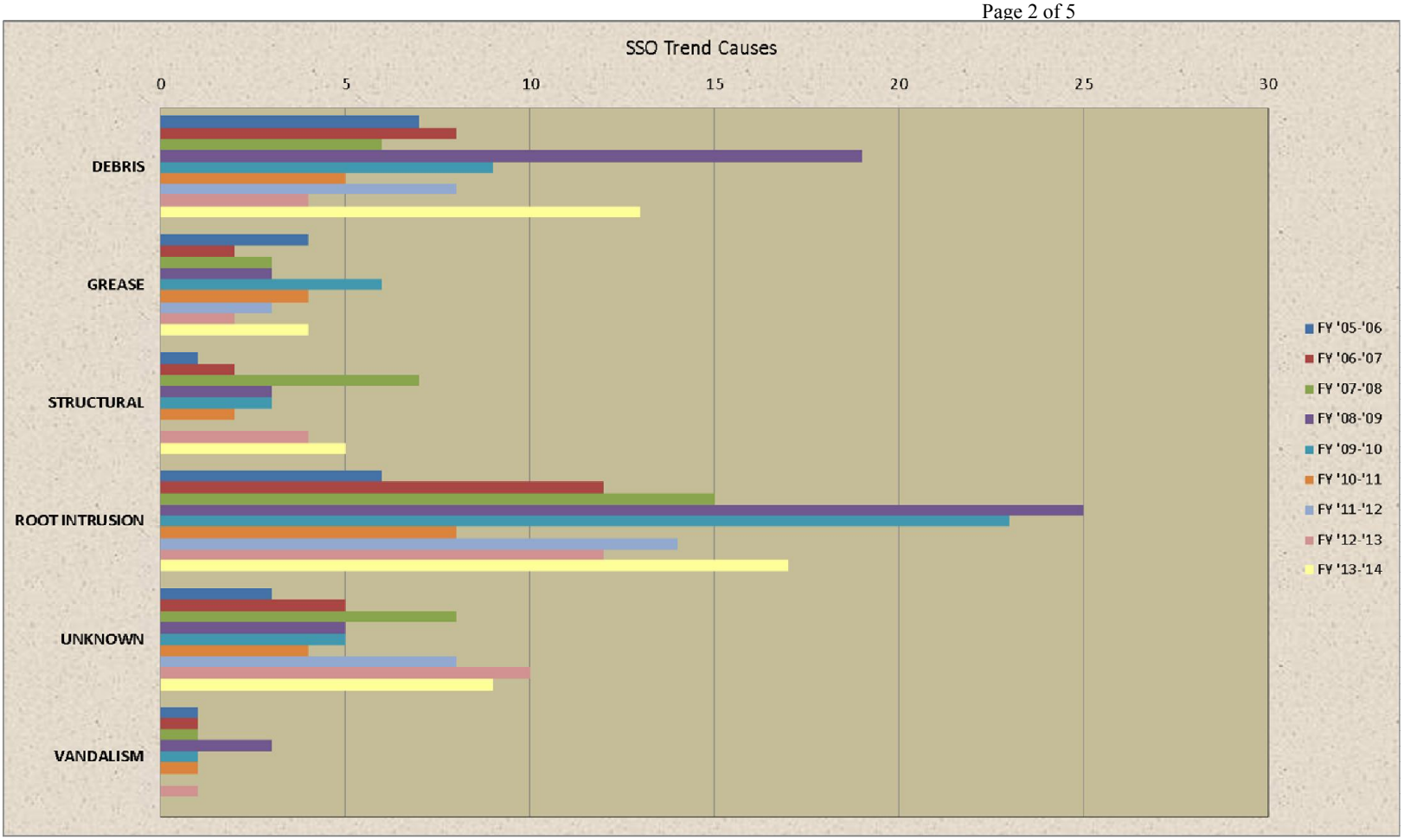
Regulatory Compliance

The City of Woodland is currently in compliance with all of the SSMP requirements as described in subsection D.13 of the GWDR.

Objectives

This memorandum summarizes the performance of the City of Woodland's Sewer System Management Plan (SSMP) for FY 13/14. The purpose of the SSMP is to provide a written framework for the management, operation, and maintenance programs executed by the City, with the ultimate goal of maintaining the level of service of the sewer collection system while minimizing sanitary sewer overflows (SSOs). This review is completed as part of the annual audit process described in sections ix and x of the City's SSMP. This process helps the SSMP document to evolve over time to address identified deficiencies in the management, operation, and maintenance of the sewer collection system. This memorandum summarizes the following information:

1. SSO history, describing the number and nature of SSOs over the past nine years.
2. Summary of progress of further development of the SSMP elements which have a plan and schedule for full implementation.
3. Summary of how many SSMP elements were implemented over last year.
4. Effectiveness of the implemented SSMP elements.
5. What SSMP elements are planned to be implemented next year.
6. Description of additions and improvements to the collection system over the last year.
7. Description of the additions and improvements to the collection system planned for the upcoming year.
8. Review of performance indicators and overall summary of the past fiscal year with proposed modifications for implementation in fiscal year 14/15 in areas in need of improvement.



SSO History

FY13-14

Lateral SSO's	Main SSO's	SSO volume lateral	SSO volume Main
27	1	2,628	675

FY12-13

Lateral SSO's	Main SSO's	SSO volume lateral	SSO volume Main
17	0	1,737	0

FY11-12

Lateral SSO's	Main SSO's	SSO volume lateral	SSO volume Main
20	0	1,419	0

FY10-11

Lateral SSO's	Main SSO's	SSO volume lateral	SSO volume Main
18	1	1,266	400

The majority of SSO's are associated with lateral connections to the City System. Overall root intrusion and some debris are being addressed through root treatment program in FY 13/14 and public outreach. All SSO response is within minutes of notification including after hours emergencies. A CCTV inspection is typically done of the pipes in the area that day or within 3 days. Documentation of investigations is available to view on GIS through IT Pipes inspections and Cityworks' work orders. For FY 14/15, an evaluation of the current root intrusion preventative maintenance program to decide if lining the laterals will be more cost effective and efficient in reduction of SSOs in the City.

Progress on development of SSMP elements

The SSMP audit has identified some elements that need refinement in the frequency of data collection and type of data collected for both the utility maintenance workers and management staff. Some elements only need to be collected on an annual basis. Some new data needs to be collected to facilitate data collection for the SSMP and analysis of future needs. Furthermore, the SSMP is being reviewed and updated this year as part of the required 5 year revision requirement by the SWRCB which will go to council in December for approval. Key elements that have changed through the amendments of the statewide general waste discharge order for sanitary sewer systems since 2009 are the SSO categories, reporting requirements, and public outreach which will be incorporated in the revised SSMP. The sewer system changes since 2009 will also be incorporated into the revised SSMP including revised performance indicators based on the current O&M practices, a revised public outreach webpage on the city's website, and comprehensive maps of the sewer system.

How SSMP elements were implemented over last year

The CACIP module problems of integrating CCTV data in the CIP scheduler have been resolved. The linkage between CCTV data and the rating system of the sewer system main lines shows on the GIS Utilities map for easy identification of structurally weak mains. In the meantime, there is ~ $16.3.M in the 10 year CIP plan for sewer and lateral repair/replacement. Not all of these projects are scheduled because current rates will not support them. The sewer rate study was completed at the end of FY 12/13 and the new sewer rates were effective as of 1/1/2014. A flat rate remains for residential all non-residential/institutional accounts are now on volumetric rates based on the winter average of water use. The initial sewer rate increase is approximately 13% but the annual adjustments will only be 9% through 2018.

A number of sewer mainline repairs were done this FY because of problems identified through the CCTV program. The number of repairs completed greatly exceeds the number of repairs associated with SSO's. The majority of SSO's are associated with lateral connections to the City System. The problems are dominated by roots and Orangeburg pipeline failures. The City began a root treatment program in FY 9-10 and created a CIP Orangeburg Lateral Replacement Project.

There was a pipeline failure in Sycamore Ranch at the end of FY 10-11 that cost the City ~ $350K to repair. The major problem appears to be settlement of the deep manholes. This pattern of problems indicates a need for modification of our standards with respect to installation of sewer projects in areas of high groundwater and weak soils. Standards will be developed to reflect the need for analysis in future deep sewer development projects.

Effectiveness of the implemented SSMP elements

The CCTV program continues to find problems in main lines before a SSO occurs. The Operations crew keeps the Engineering department informed of pipeline failures, causes, and repairs. The Engineering department follows the City's purchasing policy to contract repair work that exceeds the operations crew's ability to perform. While the documentation and communication elements of the SSMP were not fully implemented due to staff changes and reorganization, the use of Cityworks and other software has helped in documenting the efforts of staff to meet the intent of the SSMP in reducing SSO's in the City.

What SSMP elements are planned to be implemented next year

Review and update standards to include an analysis of settlement of manholes in high groundwater areas. Evaluation and assignment based on the CCTV inspection through the CACIP module to bundle CIP work will be a priority in FY 14/15. With repair and reinstallation of the trunk line flow monitors, the gathering of dry and wet flow data from trunk lines to calibrate sewer model has continued through FY 13/14. While discussions with City Council and Infrastructure have not occurred to date, these discussions are planned for FY 14/15 to discuss and gather their support for new ordinances on lateral connections to mandate the installation of cleanouts behind the walk, and elimination of private Orangeburg laterals on repair of any lateral at the time a house is on sale.

The Beamer and Gibson trunk lines were cleaned and CCTV'd in the last quarter of FY 12/13. These two trunklines are the largest sewer assets that remained to be examined and evaluated. This information will drive prioritization of sewer line repair in FY 14/15. There are several large diameter repairs that have been identified but are being delayed to see if they need to be coupled with repairs on the other large diameter trunk lines.

Description of additions and improvements to the collection system over the last year

The major accomplishments in CIP implementation of the FY 13/14 were progress in model calibration, identification of system deficiencies for inclusion in the CIP Budget, and the West Woodland Ave. Project, CIP 14-17, replaced 463 feet of sewer gravity main that was responsible for 3 SSOs in the last year. The new sewer rates were passed through the proposition 218 process and included winter averaging of the sewer rate to non-residential customer for a more accurate cost associate with sewer use. The sewer crew did 17 spot repairs/replacements of sewer gravity mains based on CCTV inspections which found structural failures in the mains. Furthermore, sewer crew replaced 21 laterals due to structural issues found after inspecting the lateral connection.

The purchase of in-house foaming equipment for root control and staff training on equipment has reduced the risks for lateral SSO's because the root SSO locations are being put on an annual pretreatment program. Investigation of all lateral and lateral failures was started at the end of fiscal 10-11 and is continuing. The crews foamed 17,991 feet of pipeline in FY 13/14. The Crews cleaned over 276,000 feet of sewer and CCTV'd over 170,000 feet of the sewer system.

Description of the additions and improvements to the collection system planned for the upcoming year

Major collection system rehabilitation projects planned for FY 14/15 include:

- Replacement of 645 lineal feet of gravity sewer main along Oak Avenue, CIP 14-21
- Replacement of 570 lineal feet of gravity sewer main along College St. at Bartlett Ave., CIP 15-14
- Rehabilitation of 3 segments of Kentucky Ave. trunk sewer, including lining and replacement of cast iron sewer with VCP, CIP 15-13
- Spot repairs of the gravity sewer main at two locations on Gibson Street.

The flow monitors have been collecting wet and dry weather flow data for continued model calibration and system observation. Flat bottom sewer manholes will be channelized and any existing lining problem will be lined with mortar as an on-going project to remove flat bottom manholes from the sewer system. The foaming program will be expanded to also treat mainlines.

Review of Performance

Attached to this memorandum are performance indicator assessment sheets, which summarize the collection of specific data, intended to provide a basis by which performance in various areas related to the management and operation of the sewer collection system are measured. A responsible person is assigned to each performance indicator assessment sheet. Each quarter, each responsible person collects the data related to their assigned performance indicator assessment sheet and provides an interim rating of the City's performance. At the end of the one year auditing period, final assessments, and recommendations for performance improvement are made. This process is described in section ix of the City's SSMP. Attached is a summary of the performance indicators tracked by the City and performance in each area with explanation of why goals were not met and actions taken or to be taken in the next FY for future performance improvements and modifications to the SSMP. Overall, the 60 performance indicators had only 9 below goal PI's in FY 13/14, an improvement over last FY's 12 below goal performance indicators. The main issues with not meeting performance indicator goals were generally due to lack staffing, non-communication with staff on tracking for the SSMP, and a backlog of CCTV inspection for evaluation and assignment in the CACIP module. These are all addressed in the summary spreadsheet and FY 14/15 audit should see a marked decrease in below goals.

Attachments:

Performance Indicator Assessment Sheets (23 PI forms)
Summary of Performance Indicator Spreadsheet FY 13/14

Attachment x-2:

Sample SSMP Program Audit Council Communication

City of Woodland

Legislation Details (With Text)

File #:	14-418	**Version:**	1	**Name:**	
Type:	Consent Item(s)			**Status:**	Passed
File created:	10/13/2014			**In control:**	City Council
On agenda:	11/4/2014			**Final action:**	
Title:	SUBJECT: Internal Audit of the City of Woodland's Sewer System Management Plan Recommendation for Action: Staff recommends that the City Council certify the Internal Audit of the Sewer System Management Plan (SSMP) for the past reporting year of July 1, 2013 to June 30, 2014.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	1. SSMP Internal Audit FY14				

Date	Ver.	Action By	Action	Result
11/4/2014	1	City Council	approved on the Consent Agenda	

TO: THE HONORABLE MAYOR AND CITY COUNCIL

DATE: November 4, 2014

SUBJECT: Internal Audit of the City of Woodland's Sewer System Management Plan

Recommendation for Action: Staff recommends that the City Council certify the Internal Audit of the Sewer System Management Plan (SSMP) for the past reporting year of July 1, 2013 to June 30, 2014.

Staff Contact

Tim Busch, Principal Utilities Civil Engineer - 530-661-5963, tim.busch@cityofwoodland.org

Fiscal Impact

There are no budget impacts anticipated at this point.

Background

Internal audits of the City's Sewer System Master Plan (SSMP) are required by the State of California, General Waste Discharge Requirements (GWDR) every two years, under Sanitary Sewer Systems Order 2006-0003. The SSMP requires regular monitoring of the program, assessing the effectiveness of related activities, updating the program based on findings, and making the ongoing development of the SSMP available to the public. Public Works and CDD Utility Engineering Division conducts annual performance reviews of the SSMP and combines the results of these reviews every two years to complete the internal audit. This performance review/audit process helps the SSMP document evolve over time to address identified deficiencies in the management, operations, and maintenance of the sewer collection system.

The purpose of the SSMP is to provide a written framework for the management, operations, and maintenance programs executed by the City, with the ultimate goal of maintaining the level of service provided to the sewer collection system while minimizing sanitary sewer overflows (SSO).

Discussion

Below is a summary of the SSMP information for FY 13/14 describing the number of SSO events over the past year.

FY 9/10			
Lateral - SSO	Volume in gallons	Main-line - SSO	Volume in gallons
33	1,719	0	0
FY 10/11			
18	1,266	1	400
FY 11/12			
20	1,419	0	0
FY 12/13			
17	1,737	0	0
FY 13/14			
27	2,628	1	675

Since the beginning of the SSMP program lateral SSOs have been reduced by 18%. The SSO volume release has increased by 47% but the volume increase is reflective of better training of staff in estimating volume of spills. Main-line SSOs are infrequent but do occur once every 2-3 years. Main-line SSO events decreased from 1 in FY 10/11 to 0 in FY 11/12 and FY 12/13.

The majority of SSO events are associated with stoppages located within lateral connections to the City's main-line system wherein root intrusion and grease are the largest contributors. These two issues are being addressed through a root treatment program and the fats, oil, and grease program (FOG) public outreach. Staff treated over 17,900 feet of pipeline this year for prevention of root intrusion.

Once notified, staff response time to a SSO averages less than 1 hour to respond in the field, including after-hours and weekends. Following a stoppage removal, the line is inspected with a closed circuit television (CCTV) to ensure the stoppage has been successfully removed, to identify the cause, and to reveal any potential pipe structural anomalies that may exist. The City's post-stoppage CCTV activities have average follow-up time of 1-3 days to CCTV.

Conclusion

Staff recommends that the City Council certify the Internal Audit of the Sewer System Management Plan (SSMP) for the past reporting year of July 1, 2013 to June 30, 2014.

Prepared by: Tim Busch

Principal Utilities Civil Engineer

Reviewed by: Brent Meyer
City Engineer
Ken Hiatt
Community Development Director

Paul Navazio
City Manager

Attachment: Sewer System Management Plan Audit for FY 13/14

Attachment x-3:

SSMP Change Log

City of Woodland
Sewer System Management Plan
Change Log

Date	SSMP Element/ Section	Description of Change/Revision Made	Change Authorized By:

xi Communication Program

SWRCB Requirement:

> *The Enrollee shall **communicate on a regular basis with the public** on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.*
>
> *The Enrollee shall also create a plan of **communication with systems** that are tributary and/or satellite to the Enrollee's sanitary sewer system.*
>
> *Taken from SWRCB GWDR Order No. 2006-0003 adopted May 2, 2006.*

Background

This section of the SSMP outlines the elements of the City's plan of communication with the public on the development, implementation, and performance of the SSMP. Communication between the City and various public stakeholders will ensure that programs and activities will be both implemented and augmented on an ongoing basis so as to provide a maximum benefit and level of service to stakeholders. The dissemination of information regarding the SSMP and the solicitation of public comment will ensure that potential disputes between the City and various stakeholders are recognized in advance of the implementation of programs or activities affecting stakeholders. Thus, the communication program will help the City and stakeholders to create solutions to disputes and implement SSMP programs with minimal delay and conflict. This section fulfills the requirements of the GWDR SSMP mandatory element xi.

Element XI. Communication Program

xi-a. Plan of Communication with Public

Requirement

The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.

Discussion

The Administration Clerk and IT Technician have been designated by the City as the individuals responsible for coordinating the implementation and operation of the SSMP public communication program. The City website will be the most prevalent communication tool used by the City. The City will create an SSMP link from the Public Works Department page. This link will feature sub-links to the issues and topics outlined in the communication program schedule including the SSMP and SSMP Audits.

Related Documents

- None

Plan & Schedule

Task	Responsible Party	Scheduled Date
Continuously perform and document completion of the public communication tasks outlined in the communication program schedule.	Administration Clerk / IT Technician	Continuously

Element XI. Communication Program

xi-b. Plan of Communication with Satellite Collection Systems

Requirement

The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.

Discussion

The City of Woodland investigated the potential satellite system status of the following facilities:

- Woodland Community College
- Yolo County Jail

Neither facility has more than a mile of sewer pipe. If such a facility exists the below are the following procedures:

The first communication step is for the Wastewater Systems Administrator to contact the above facilities to determine if they own and operate more than a mile of pipe. The City sends potential satellite facilities an inquiry letter that discusses the GWDR and requires a response to determine the size of the facility's sewer collection system, and the facility's current level of compliance with the GWDR. An inquiry letter sent to the Yolo County Jail is included in **Attachment xi-1**.

If a subject facility is found to own and operate more than a mile of sewer collection system pipe, the Superintendent will contact the utility manager of the facility to make him or her aware that the facility requires a separate SSMP. The Superintendent will provide the potential satellite facility with information about the SSMP process, including the purpose of the document, the location of basic information on the internet, and how to submit a NOI for coverage under the GWDRs so that the facility can get started generating their own SSMP.

The Superintendent may create a sewage acceptance or service agreement and get it signed by the utility manager of the satellite facility, if an agreement or contract is not already in place. The agreement will outline the mutual expectations regarding maintenance, operation, and management procedures specific to the SSMPs used by both the City and the satellite facility, and may establish specific discharge requirements for the satellite facility.

As part of the satellite facility's SSMP or service agreement with the City, a plan of communication between the City and satellite facility will be put into place. The communication plan will consist of the following activities:

- Inclusion of City Public Works contact information in the satellite facility's SSO chain of communication so the City is aware of any SSOs.
- Inclusion in the satellite facility's SECAP section of a required review of proposed sewer collection system improvements or expansions by the City's Utilities Engineering Division.
- Annual meeting of Wastewater Systems Administrator and satellite facility utility manager(s) to review performance indicator tracking results, share strategies for improving performance, or coordinate O&M or FOG control activities.
- The City will keep on-hand the latest version of the satellite facility's SSMP, and the satellite facility will keep a copy of the latest City SSMP. Both agencies will send updated copies when updates occur through the auditing process.

Related Documents

- Attachment xi-1: Yolo County Jail Inquiry of Sewer Collection System

Element XI. Communication Program

Plan & Schedule

Task	Responsible Party	Scheduled Date
Determine if any facilities own and operate more than 1 mile of sewer collection system piping.	O&M Superintendent	On-going
Compose sewage acceptance agreements if necessary with newly identified satellite facilities.	O&M Superintendent	If occurs, within five months
Communicate with utility managers of any satellite facilities to negotiate and sign sewage acceptance agreements, and to review satellite facility SSMPs as they are being written to ensure they include the items discussed above.	O&M Superintendent	If occurs, within five months
Hold annual performance indicator review meeting with satellite facility utility manager(s).	O&M Superintendent	If occurs, Annually

Attachment xi-1:

Yolo County Jail Inquiry of Sewer Collection System

City of Woodland
Public Works Department
655 N Pioneer Avenue ▪ Woodland, CA 95776-6112 ▪ Telephone: 530-661-5962 ▪ FAX: 530-661-1290 ▪ www.cityofwoodland.org

March 16, 2009

Jail Commander Captain Larry Cecchettini
c/o Yolo Co Jail-
(Monroe Detention Center and
Leinberger Minimum Security Facility)
2420 E Gibson Rd
Woodland CA 95776

Subject: City of Woodland SSMP
Inquiry of Private Sewer Collection System Regulatory Compliance Status

Dear Captain Cecchettini,

We are writing to inform you of a recent regulation implemented by the State Water Resources Control Board (SWRCB) regarding sewer collection systems that may affect your institution. Discharge of pollutants to California waterways is regulated by the SWRCB. The SWRCB regulates and monitors discharges from sources such as industries, municipal wastewater treatment plants, agriculture, and storm water. A webpage address for the SWRCB is provided below in case you would like more detailed information about the Board.

http://www.swrcb.ca.gov/

In 2006, the SWRCB found that unintended discharges from sewer collection systems to waterways of the State were having a significant negative effect on public water quality. The SWRCB had been finding numerous sanitary sewer overflow (SSO) discharges from public sewer systems over a number of years, consisting of spills from sewer manholes and sewer pump stations due to inadequate maintenance and management of the systems.

In response to the unacceptable level of SSOs occurring on a consistent basis across the State, the SWRCB developed a statewide Waste Discharge Requirement (WDR) requiring development of detailed sewer system management plans (SSMPs) by every public agency owning and operating more than one mile of sewer system pipe. The SSMPs are required to address eleven specific components (see SSMP development schedule below) of sewer system management, operation, and maintenance with the overall goal of reducing the occurrence of SSOs. In addition, each agency is required to submit for coverage under the general permit and report all SSOs to the SWRCB using a new web-based reporting system and database. The SWRCB makes information on all SSOs reported in the State available on the webpage listed below.

http://gistest.waterboards.ca.gov/webmap/sso_pub.html

The SWRCB regulation regarding SSMP development was officially enacted on May 2, 2006 and requires SSMP development by all applicable public agencies according to the schedule shown below:

Sewer System Management Plan (SSMP) Time Schedule				
Task and Associated WDR (Waste Discharge Regulation) Section	Completion Date			
	Population > 100,000	Population Between 100K and 10K	Population Between 10K and 2,500	Population < 2,500
SSMP Development Plan and Schedule	August 2, 2007	November 2, 2007	February 2, 2008	May 2, 2008
Goal	November 2, 2007	November 2, 2007	May 2, 2008	May 2, 2008
Organization				
Legal Authority	November 2, 2008	May 2, 2009	November 2, 2009	February 2, 2010
Operation and Maintenance Program				
Overflow Emergency Response Program				
FOG Control Program				
Design and Performance Provisions	May 2, 2009	August 2, 2009	May 2, 2010	August 2, 2010
System Evaluation and Capacity Assurance Plan				
Monitoring and Program Modification				
Program Audits				
Communication Program				
Final SSMP				

The City of Woodland has recently developed its SSMP. We are contacting you because your facility may be served by a sewer collection system that is owned and operated specifically by your organization (not by the City of Woodland) and includes more than one mile of pipe that discharges into the City's sewer collection system. If your organization is a public agency (state and federal agencies, cites, counties and special districts) that owns more than one mile of sewer collection system piping, you are subject to the WDR and therefore must develop your own system specific SSMP.

You may already be aware of this regulation and are taking steps to comply with it. However, we are contacting all potentially affected facilities, which are satellite to the City of Woodland Wastewater Collection System, to determine the status of their compliance with the WDR. Please respond by checking the statement on the following page that best describes your status with respect to the WDR. After marking the appropriate box, please return the original signed copy with any comments you feel the City should be aware of with respect to your compliance effort. Send to:

City of Woodland Public Works Department
Attention: SSMP Public Notification Compliance Officer
655 N. Pioneer Ave
Woodland, CA 95695

Current WDR Compliance Status

- ☑ Your organization or facility does not own more than one mile of sewer system piping and is therefore not subject to the WDR
- ☐ Your organization or facility is not considered a public entity, and is therefore not subject to the WDR
- ☐ Your organization or facility does own more than one mile of sewer system piping, is aware of the WDR, and is taking action by developing an SSMP
- ☐ Your organization or facility does own more than one mile of sewer system piping and was unaware of WDR requirement

If your status is "c" above, please provide a description of your compliance activities completed to date:

If you are unsure whether or not your organization owns more than one mile of sewer system piping, you should gather facility plans and attempt to make that determination. If you have any questions or concerns identifying the current status of your organization with respect to the WDR, please do not hesitate to contact me and we can discuss further.

Please provide your signature and the date in the space provided below certifying your response.

Signature

3-25-09
Date

Ray Groom
General Services Director
Yolo County X8120
Print Name

Please note that non-response to this letter will be viewed as a certification by the recipient that they are in full compliance with the WDRs. A non-response to this letter may result in a follow-up phone call or in-person visit by a representative of the City's Public Works Department.

Regards,

Jerry Gedatus
Utility Operations & Maintenance Superintendent