

CITY OF NATIONAL CITY

SEWER SYSTEM MANAGEMENT PLAN

VOLUME I

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PREPARED FOR:



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City of National City Sanitary Sewer Management Plan

Revisions Log

Date of Revision	Sections Revised	Reason for Revision
May 2013	All sections revised and updated.	2012 Sanitary Sewer Collection System inspection by the SWRCB, RWQCB, and an environmental consultant noted program deficiencies.
August 2013	Executive Summary, Section 6 (Overflow Emergency Response Plan) and associated appendices were revised and updated according to the new requirements.	Order 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems

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Abbreviations /Acronyms

BMP	Best Management Practice
Cal EMA	California Emergency Management Agency
CCTV	Closed Circuit Television
CIP	Capital Improvement Plan
City	City of National City
CIWQS	California Integrated Water Quality System
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
GCD	Grease Control Device
GIS	Geographic Information System
IEC	Infrastructure Engineering Corporation
I/I	Inflow / Infiltration
MRP	Monitoring and Reporting Program
NPDES	National Pollutant Discharge Elimination System
OES	Office of Emergency Services
O&M	Operation and Maintenance
PLSD	Private Lateral Sewage Discharge
PW	Public Works
PM	Preventative Maintenance
RWQCB	Regional Water Quality Control Board
SDCDEH	San Diego County Department of Environmental Health
SSMP	Sewer System Management Plan
SSO	Sanitary Sewer Overflow
SSOERP	Sanitary Sewer Overflow Emergency Response Plan
SSSWDR	Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order 2006-0003 DWQ)
SWRCB	State Water Resources Control Board
WDR	Waste Discharge Requirements

Executive Summary

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted Order 2006-0003 DWQ, the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSSWDR). The order requires all federal and state agencies, municipalities, counties, districts, cities, and other public entities that own or operate a sanitary sewer system greater than one mile in length to comply with the requirements of the SSSWDR and to develop and implement a Sewer System Management Plan (SSMP).

While SWRCB Order 2006-0003-DWQ is the primary regulatory mechanism for sanitary sewer systems statewide, it allows each regional board to issue more stringent or prescriptive waste discharge requirements for sanitary sewer systems within their respective jurisdictions. Regional Water Quality Control Board (RWQCB) Order R9-2007-0005 applies to collection agencies in the San Diego Region, including the City of National City (City), and requires the reporting of all Private Lateral Sewage Discharges (PLSD). The order acknowledges that the City is not responsible for the cause, cleanup or repair of PLSDs but is responsible for PLSD notification and reporting to regulatory agencies following a specific timeline.

Additionally, SWRCB Order WQ 2008-0002-EXEC amended the SSSWDR on February 20, 2008. The revised order requires that the notification and reporting of sanitary sewer overflows (SSO) to regulatory agencies follow a strict timeline.

SWRCB Order WQ 2013-0058-EXEC amended the Monitoring and Reporting Program (Order WQ 2008-0002-EXEC) for the SSSWDR effective September 9, 2013. Several major changes were made to the public notification, reporting, water quality monitoring, recording keeping, and certification requirements. The revised order also requires the submission of an electronic copy of the SSMP to the SWRCB or the web address where it posted. This SSMP has been prepared in accordance with the following:

- SWRCB Order 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*
- RWQCB Order R9-2007-0005, *Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region*
- SWRCB Order WQ 2008-0002-EXEC, *Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*
- SWRCB Order WQ 2013-0058-EXEC, *Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*

These regulations are provided in Appendix A.

The SSSWDR include directives for the management, operation, and maintenance of the sanitary sewer system as well as proper control, containment, and cleanup of any SSOs that occur. They also require that SSOs be reported to the SWRCB using the online California Integrated Water Quality System (CIWQS). This ensures a uniform approach for reporting and tracking SSOs. Each agency that is responsible for the operation of the sanitary sewer system must develop and implement a SSMP that details the procedures and activities that City staff follow in order to comply with applicable SSSWDR elements. This SSMP is designed to protect the health and safety of the public and the environment and to provide the best management practices (BMPs) for the operation and maintenance of the collection system while in compliance with the orders issued by the SWRCB and the San Diego RWQCB.

The organization of this SSMP is consistent with the SWRCB guidelines and includes the following eleven SSSWDR elements:

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

Supporting information is provided in referenced appendices.

Chapter 1: Goals

The City's Goals address the SSMP provision outlined in the SSSWDR Section D.13.(i).

- (1) The goal of this SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the City's sanitary sewer collection system, in order to reduce and prevent Sanitary Sewer Overflows (SSO's), as well as mitigate any SSO's that do occur.*

1.1 Goal Summary

The City of National City strives to provide safe and efficient operation of the sanitary sewer system through the following goals:

1. Proper management, operation, and maintenance of all parts of the City's system, including adequate training for system operators and accurate record-keeping of cleaning and maintenance activities.
2. Maintenance and improvement of the condition of the collection system infrastructure to ensure reliable service and prevent SSOs.
3. Assurance of adequate capacity to convey peak wastewater flows as detailed in a long-range planning and improvement plan. This includes implementation of a Capital Improvement Plan (CIP) as scheduled as well as an annual review of the priority projects to address the most critical maintenance needs.
4. Effective reduction and prevention of SSOs through the implementation of a Fats, Oils, and Grease (FOG) Inspection Program designed to reduce the volume of FOG entering the system.
5. Effective containment and mitigation of SSOs that ensures the protection of the public's health and safety and the environment. This includes the implementation of an effective Sanitary Sewer Overflow Emergency Response Plan (SSOERP) that all staff are properly trained on.
6. Full compliance with all regulatory requirements, including standard operating procedures to meet all applicable SSO notification and reporting requirements.

Chapter 2: Organization

The City's organizational structure addresses the following SSMP components as stated in the SSSWDR Section D.13.(ii):

- (1) *The name of the responsible or authorized representative as described in Section J of SWRCB Order No. 2006-0003.*
- (2) *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*
- (3) *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)).*

2.1 Compliance Summary

The City maintains an organizational structure that meets the SSSWDR Section D.13.(ii) requirements as described below.

- (1) *The name of the responsible or authorized representative as described in Section J of SWRCB Order No. 2006-0003.*

The Director of Public Works is the authorized representative for the City.

- (2) *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*

The National City Public Works Department Organizational Chart (Appendix B) provides names and position titles within the Wastewater Division as well as identifies the lines of authority. Contact numbers are listed in the Sanitary Sewer Overflow Emergency Response Plan (SSOERP) in Appendix E.

The Community Services' Department Quick Guide (Appendix B) also includes contact numbers for various City departments.

Key positions are indicated below with a description of their responsibilities. At the time of this SSMP update, both the Street Maintenance and Wastewater Superintendent and the Sewer Crew Chief positions are vacant at the City. Responsibilities have been reassigned to the Director of Public Works and to sewer crew staff at the Director's discretion as

appropriate until the positions are filled. It should also be noted that the City is expecting the Public Works Director position to be vacant within the next four to ten months. All responsibilities will go to the City Engineer.

1. **Director of Public Works** – Establishes policy, plans strategy, leads staff, allocates resources, delegates responsibility, authorizes outside contractors to perform services, and may serve as public information officer. Responsible for SSO reporting to regulatory agencies and to the CIWQS online reporting system. Oversees preparation of wastewater collection system planning documents; manages capital improvement delivery system; oversees documentation of new and rehabilitated assets; oversees development and implementation of SSMP; provides information updates to City Council; and arranges for emergency meetings if necessary. In the event of an SSO, he is authorized to volunteer City liability, offer cleaning service and/or repair service to affected property owners.
2. **Street Maintenance and Wastewater Superintendent** – Notified by the non-emergency police dispatcher when an SSO is reported after hours. Oversees posting of public health warnings; provides relevant information to agency management, prepares contingency plans, and trains field crews on the Sanitary Sewer Overflow Emergency Response Plan (SSOERP). Prepares wastewater collection system planning documents; documents new and rehabilitated assets; and coordinates development and implementation of SSMP. In the event of an SSO, he is authorized to volunteer City liability, offer cleaning service and/or repair service to affected property owners.
3. **Sewer Crew Chief** – As leader of the Public Works stand-by crew, he is notified by the non-emergency police dispatcher when an SSO is reported after hours. Oversees the SSO response, manages field operations and maintenance activities, implements contingency plans, leads emergency response, and investigates SSOs. Notifies all other members of the sewer crew to assist in the SSO response; assesses the SSO and assigns crew job duties in order to eliminate the overflow.
4. **Maintenance Worker & Equipment Operator** – Members of the Public Works stand-by crew. Staff conduct preventive maintenance activities; mobilize and respond to notification of stoppages and SSOs (mobilize sewer cleaning equipment, by-pass pumping equipment, and portable generators), all at the direction of the Sewer Crew Chief.
5. **Non-Emergency Police Dispatcher** – If after hours, will be first notified of an SSO via the 24-Hour Non-Emergency Phone Line. Contacts Public Works Department and provides a verbal report of the afterhours SSO complaint.

- (3) 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)).

The chain of communication for reporting SSOs from the initial notification call to reporting to regulatory agencies is included in the City's Sanitary Sewer Overflow Emergency Response Plan (SSOERP) in Appendix E. See Section 4 "SSO Notification and Reporting Procedures" for details.

Chapter 3: Legal Authority

The SSSWDR Section D.13.(iii) requires that the City show through its existing codes, ordinances, service agreements or other legally binding procedures that the City possesses the legal authority to:

- (1) *Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.).*
- (2) *Require that sewers and connections be properly designed and constructed.*
- (3) *Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the City.*
- (4) *Limit the discharge of Fats, Oils, and Grease (FOG) and other debris that may cause blockages.*
- (5) *Enforce any violation of its sewer ordinances.*

3.1 Compliance Summary

The City's legal authority and power over the City's wastewater collection system is codified in the National City Municipal Code. Applicable National City Municipal Code excerpts are included as Appendix C, while the entire National City Municipal Code can be viewed at <http://library.municode.com/index.aspx?clientId=16516>.

- (1) *The City prevents illicit discharges into its sanitary sewer system (including, but not limited to, I/I, stormwater, chemical dumping, and unauthorized debris).*

National City Municipal Code Sections 14.06.180 and 14.16.020 address this requirement. See Appendix C.

- (2) *The City requires that sewers and connections be properly designed and constructed per the implementation of the following:*

The City has implemented the following standard sewer design and construction documents, which are provided in Appendix C. It should be noted that the Greenbook is available to the public and has therefore not been included in the appendix.

- **Standard Specifications for Public Works Construction (Greenbook), 2012.**

The City utilizes the Greenbook for design and construction standards and specifications for the installation of new sanitary sewer systems, pumps and other appurtenances, and for the rehabilitation and repair of existing sanitary sewer infrastructure.

- **Ordinance No. 92-2033**, Standards for Public Rights-of-Way and Public Improvements.

Ordinance No. 92-2033 was adopted by the City on June 16, 1992 and requires that all new sanitary sewer systems be properly designed and constructed in accordance with the Greenbook as well as the San Diego Area Regional Standard Drawings. Section 3.7 of the ordinance includes specifications for the following sanitary sewer elements:

1. Sewer Grades
2. Cradle/Encasement Requirements
3. Manholes
4. Sewer Locations
5. Cleanouts
6. Sewer Constructed Along Curved Alignments
7. Sewer Laterals

- **San Diego Area Regional Standard Drawings**, County of San Diego, April 2006

These drawings are referenced in Ordinance No. 92-2033 and are used as the City's sewer system standard drawings for:

1. Sewer Cleanout
2. 48" Diameter Precast Manhole Installation
3. 60" Diameter Precast Manhole Installation
4. Sewer Manhole Base
5. Manhole Pipe Connectors
6. Manhole Miscellaneous
7. Manhole Coating and Lining System
8. Existing Manhole Abandonment
9. Warning/Identification Tape Installation
10. Pipe Bedding and Trench Backfill for Sewer Facilities
11. Concrete Protection for Sewer Pipe
12. Slope Protection Installations
13. Cut-Off Wall Installation in Traveled Areas
14. 4" and 6" Sewer Lateral Installation
15. Sewer Lateral Notes and Detail
16. 4" and 6" Sewer Cut-In Wye Connections

- **Sewer Notes**, Department of Engineering, City of National City

The sewer notes were prepared by the City's Engineering Department and serve as a summary of the design and construction standards in the Greenbook based on considerations specific to the City.

(3) The City ensures access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the City.

National City Municipal Code Section 14.16.080 addresses this requirement. See Appendix C.

(4) The City limits the discharge of Fats, Oils, and Grease (FOG) and other debris that may cause blockages.

National City Municipal Code Sections 14.06.180 and 14.06.190 and 14.16.020 address this requirement. See Appendix C.

(5) The City enforces any violation of its sewer ordinances.

National City Municipal Code Chapters 1.44 (Administrative Citations) and 1.48 (Administrative Remedies) address this requirement. See Appendix C.

Chapter 4: Operation and Maintenance Program

The City follows an Operation and Maintenance Program that meets the requirements of the SSSWDR Section D.13.(iv) as stated below.

- (1) *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 storm water conveyance facilities;*
- (2) *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.*
- (3) *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;*
- (4) *Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and required contractors to be appropriately trained; and*
- (5) *Provide equipment and replacement part inventories, including identification of critical replacement parts.*

4.1 Compliance Summary

- (1) *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 storm water conveyance facilities;*

The City maintains an up-to-date Geographic Information System (GIS) database of the sanitary sewer system, including all gravity line segments and manholes, pumping stations, pressure pipes and valves, as well as direction of flow and material when available. This database was used by D-MAX Engineering, Inc. to create a map of the City's existing wastewater facilities and pipes, as shown in Appendix D. Manhole identifications shown on the maps are catalogued in the Sewer Manhole Index. This index lists all City-

owned manholes, along with their invert elevations and an associated direction identified (i.e. N, S, E and/or W). A pdf map of applicable storm water conveyance facilities is maintained by the Storm Water Division of the Department of Engineering.

(2) 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.

The City is committed to a regular sanitary sewer maintenance program in order to reduce and prevent SSOs and to extend the useful life of the system. This includes routine maintenance and cleaning of wastewater facilities and pipelines. The City has divided its sewerage system into 11 sections for routine maintenance and cleaning (Appendix D). Approximately one section is cleaned each month, which ensures that all gravity mains in the City are cleaned once per year. Sections of the sewer system that require more frequent cleaning are identified on the monthly and quarterly flushing and rodding schedules (Appendix D). The monthly list includes fats, oils, and grease (FOG) problem areas that require at least monthly cleaning and maintenance. These hotspots are presented in the sewer cleaning frequency map (Appendix D). City staff also conduct visual inspections of the manholes and pipes as part of the cleaning protocol. Closed circuit televising (CCTV) of manholes and sewer pipes are done based on these observations. Known problem areas and complaint issues are prioritized for video inspection.

Additionally, the City inspects and maintains two force mains. The force main at 14th Street and Tidelands Avenue is a very short segment and can be easily accessed via manhole inspection. The force main at 24th Street (Bay Marina Drive) and Tidelands Avenue is inspected at least twice per year. It should be noted that this force main is not always used on daily basis. The City's two pump stations at these locations are inspected every business day. A pump station operation and maintenance checklist is included in Appendix D. Cleaning of the force mains and pump stations is done as needed.

The City documents the Preventative Maintenance (PM) program of scheduled and conducted activities in several ways. A typical monthly schedule for maintenance and cleaning of wastewater facilities and pipes is provided in the City's Wastewater Division Basic Work Schedule packet (Appendix D). This packet includes the forms used to document manhole inspections and sewer cleaning. The Sanitary Sewer Manhole Inspection Form and the Sewer Cleaning Log Form are completed by sewer staff following cleaning activities. Additionally, the sewer staff records activities in daily log books. Sewer related complaints are tracked using the Work Request Form. Finally, CCTV printouts with photos are generated following each video inspection.

Cleaning and maintenance schedules are reviewed and adjusted as necessary upon completion of sewer televising and after SSOs. Sites are added to the monthly or quarterly routine schedules as necessary. The current list of sewer hotspots has been digitized and will be updated at least annually to help aid in program planning. Additionally, the FOG inspection program results are tracked in an electronic database, and may be used to compare to the list of priority cleaning locations.

- (3) 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;

The City's rehabilitation and replacement plan is based on the 2008 Sewer System Hydraulic Analysis (Appendix G) by Infrastructure Engineering Corporation (IEC). The analysis presents wastewater flow projections at the existing (2007), 5-year, 10-year, and 20-year time intervals. These projections were used to identify system deficiencies and to develop a Capital Improvement Plan (CIP) that outlined a strategy to mitigate them. The City's 2011 Sewer System Master Plan (Appendix G) was also completed by IEC and built on the 2008 analysis by updating the existing (2009) wastewater flows and recommended system capital improvements. These updates were done considering the critical findings of the 2009 Sewer Closed Circuit Television (CCTV) and Condition Assessment Report and the 2010 Sewer Flow Monitoring Report (Appendix G), both completed by IEC.

The 2009 Sewer Closed Circuit Television (CCTV) and Condition Assessment Report presented the results of televising gravity mains with missing hydraulic information, areas known to have fats, oils, and grease (FOG) problems, and those areas identified as deficient in the 2008 analysis. The 2010 Sewer Flow Monitoring Report collected flow data from ten (10) monitoring sites for four (4) weeks. Eight of the monitoring sites were selected based on deficiencies noted in the 2008 analysis.

The City is following a short- term and long-term wastewater CIP to address projected deficiencies as presented in the 2011 Sewer System Master Plan. The report presents a phased and prioritized CIP, including recommended immediate projects, short-term projects, 2012 projects, 2017 projects, and 2027 projects. It also includes recommendations for monitoring and televising to help prioritize projects. Funding for these projects is

through the Capital Improvement Fund, which includes an estimated \$5,000,000 in undesignated reserves. On average, the City allocates \$400,000 a year for rehabilitation and replacement of their sewer system. The City's Engineering Department reviews the CIP on an annual basis to ensure the most critical needs are addressed.

In addition to the list of pipes recommended for upsizing based on the hydraulic analysis, the City maintains a prioritized list of sewer problem areas. Sections of the sewer system that require more frequent cleaning are identified on monthly and quarterly flushing and rodding schedules (Appendix D). City staff also conduct visual inspections of the manholes and pipes as part of the cleaning protocol. Televising of manholes and sewer pipes are done based on these observations. Known problem areas and complaint issues are prioritized for video inspection.

Maintenance and cleaning schedules are reviewed and adjusted as necessary upon completion of sewer televising and after SSOs. Sites are added to the monthly and quarterly routine schedules as necessary.

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

The City recognizes the importance of consistent staff training and documentation of training sessions. The City's wastewater staff is trained on wastewater operations and maintenance policies, procedures, safety policies, and equipment. The Director of Public Works is responsible for documenting the details of each training event including dates, content, and participating employees. A sample training template is provided in Appendix D. A training binder is kept in the Director's office. Training components include the following:

- The SSMP is accessible to all staff for review; a hard copy is kept in the office of the Director of Public Works (or City's designee).
- New wastewater hires or staff transferred from another group in Public Works are trained on the SSMP. This awareness training discusses the specifics of the Plan and the responsibilities of each employee.
- An all staff training on the SSMP, including the Operations and Maintenance procedures, is conducted at least annually and reinforced during biweekly staff meetings.
- Initial and recurrent training on the Operations and Maintenance component of the SSMP is provided as necessary to outside contractors.
- Equipment training is primarily "on-the-job" training that is supplemented during safety and operations meetings.

- In-house training sessions on technical skills or other job-related skills are provided as necessary at the discretion of the Public Works Director.
- Individual employee trainings and competencies are annually tracked.

Additional training requirements on the City's Sanitary Sewer Overflow Emergency Response Plan (SSOERP) are described in Section 5 "Training" of the SSOERP (see Appendix E).

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

The City has developed equipment and replacement part inventories. These are included in Appendix D, along with an inventory of chemicals maintained by the sewer staff. Inventory maintenance is ongoing; materials are replaced as-needed. All materials listed on the equipment and replacement part inventories are considered critical.

Chapter 5: Design and Performance Provisions

The City's Design and Performance Provisions address those mandatory SSMP provisions outlined in the SSSWDR Section D.13.(v):

- (1) *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*
- (2) *Procedures and standards for inspecting and testing the installation of new sewers, pumps and other appurtenances and for rehabilitation and repair projects.*

5.1 Compliance Summary

- (1) *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*

In June 1992, the City adopted Ordinance No. 92-2033 (Standards for Public Right-of-Way and Public Improvements - see Appendix C), which requires that all new sanitary sewer systems, as well as the rehabilitation and repair of existing sewer facilities, be designed and constructed in accordance with the Standard Specifications for Public Works Construction (Greenbook), published by Public Works Standards, Inc. The Greenbook is widely used by cities and counties from Santa Barbara County to San Diego County and contains the latest standards and recommendations as researched and approved by a 25-member committee, with representatives from the American Public Works Association, the Associated General Contractors of California, the Engineering Contractors Association, and the Southern California Contractors Association. It should be noted that the Greenbook (2012) is available to the public and has therefore not been attached in an appendix.

The sewer notes (Appendix C) prepared by the City's Engineering Department serve as a summary of the Greenbook's design and construction standards based on considerations specific to the City.

Section 3.7 of Ordinance No. 92-2033 includes specifications for the following sanitary sewer elements:

1. Sewer Grades
2. Cradle/Encasement Requirements
3. Manholes
4. Sewer Locations
5. Cleanouts
6. Sewer Constructed Along Curved Alignments
7. Sewer Laterals

The San Diego Regional Standard Drawings (Appendix C) are referenced in Ordinance No. 92-2033 and are used as the City's sewer system standard drawings for:

1. Sewer Cleanout
2. 48" Diameter Precast Manhole Installation
3. 60" Diameter Precast Manhole Installation
4. Sewer Manhole Base
5. Manhole Pipe Connectors
6. Manhole Miscellaneous
7. Manhole Coating and Lining System
8. Existing Manhole Abandonment
9. Warning/Identification Tape Installation
10. Pipe Bedding and Trench Backfill for Sewer Facilities
11. Concrete Protection for Sewer Pipe
12. Slope Protection Installations
13. Cut-Off Wall Installation in Traveled Areas
14. 4" and 6" Sewer Lateral Installation
15. Sewer Lateral Notes and Detail
16. 4" and 6" Sewer Cut-In Wye Connections

(2) *Procedures and standards for inspecting and testing the installation of new sewers, pumps and other appurtenances and for rehabilitation and repair projects.*

Procedures and standards for inspecting and testing the installation of new sewers and other appurtenances, and for rehabilitation and repair projects, are outlined in National City Municipal Code Sections 14.06.130 and 14.06.140. It should be noted that although these sections reference the Uniform Plumbing Code, the City has adopted the 2010 California Plumbing Code (see Section 15.20). Code excerpts are provided in Appendix C.

Chapter 6: Overflow Emergency Response Plan

The City has developed and implemented a Sanitary Sewer Overflow Emergency Response Plan (SSOERP) that identifies measures to protect public health and the environment, as required by SSSWDR Section D.13.(vi) by including:

- (1) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner*
- (2) A program to ensure an appropriate response to all overflows;*
- (3) 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;*
- (4) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;*
- (5) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and*
- (6) 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.*

The SSOERP also complies with the additional notification requirements outlined in RWQCB Order R9-2007-0005, *Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region*. These include:

- (1) For Category 1 (as defined in State Board Monitoring and Reporting Program No. 2006-0003-DWQ) SSOs, the Sewage Collection Agency shall provide notification of the SSO to the Regional Board by phone, email, or fax within 24 hours after the City becomes aware of the SSO, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the name and phone number of the person reporting the SSO, the responsible sewage collection agency, the estimated total sewer overflow volume, the location of the SSO, the receiving water (if any), the start date/time of the SSO (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local*

health services agency was or will be notified as required under the reporting requirements of the local health services agency.

- (2) The Sewage Collection Agency shall provide notification of all Private Lateral Sewage Discharges (as defined in the State Board Order), for which they become aware of, that equal or exceed 1,000 gallons; result in a discharge to a drainage channel and/or surface water; and/or discharge to a storm drainpipe that was not fully captured and returned to the sanitary sewer system, to the Regional Board by phone or fax within 24 hours after the City becomes aware of the Private Lateral Sewage Discharge, notification is possible, and notification can be provided without substantially impeding cleanup or other emergency measures. The information reported to the Regional Board shall include the following information, if known: the name and phone number of the person reporting the Private Lateral Sewage Discharge, the service area where the Private Lateral Sewage Discharge occurred, the responsible party (other than the Sewage Collection Agency, if known), the estimated Private Lateral Sewage Discharge volume, the location of the Private Lateral Sewage Discharge, the receiving water (if any), the start date/time of the Private Lateral Sewage Discharge (or whether or not the sewer overflow is still occurring at the time of the report), and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.*
- (3) The following requirement supersedes the Private Lateral Sewage Discharge Reporting Timeframe for Private Lateral Sewage Discharge in the State Board Monitoring and Reporting Program No. 2006-0003-DWQ: For Private Lateral Sewage Discharges that occur within a Sewage Collection Agency's service area and that a Sewage Collection Agency becomes aware of, the Sewage Collection Agency shall report the Private Lateral Sewage Discharge to the State Board Online SSO Database within 30 days after the end of the calendar month in which the Private Lateral Sewage Discharge occurs. The Sewage Collection Agency must identify the sewage discharge as occurring and caused by a private lateral, and responsible party (other than the Sewage Collection Agency) should be identified, if known. The City will not be responsible for the cause, cleanup, or repair of Private Lateral Sewage Discharges, but only the reporting of those within their jurisdiction and for which they become aware of.*

Furthermore, the City's SSOERP complies with the additional notification requirements outlined in SWRCB Order WQ 2008-0002-EXEC, *Adopting Amended Monitoring and Reporting Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, including:

- (1) For any discharges of sewage that results in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local*

health officer or directors of environmental health with jurisdiction over affected water bodies, and the appropriate Regional Water Quality Control Board.

- (2) *As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.*

SWRCB Order No. WQ 2013-0058-EXEC, *Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, amended the existing Monitoring and Reporting Program (Order 2008-0002-EXEC). Several major changes were made to the public notification, reporting, water quality monitoring, recording keeping, and certification requirements. The requirements, including a summary of changes, can be found in Appendix A.

6.1 Compliance Summary

The City has developed a Sanitary Sewer Overflow Emergency Response Plan (SSOERP) in order to protect public health and safety and the environment in the event of a sanitary sewer overflow (SSO). The City's SSOERP is provided as Appendix E, along with supporting attachments. It should be noted that the SSOERP incorporates the new monitoring and reporting requirements in Order 2013-0058-EXEC and those outlined in RWQCB Order R9-2007-0005, although they are not directly addressed in the list below.

- (1) *Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner*

Detailed SSO response procedures as well as notification and reporting guidelines are provided in Sections 3 and 4, respectively, of the SSOERP.

- (2) *A program to ensure an appropriate response to all overflows;*

SSO response procedures are described in Section 3 of the SSOERP.

- (3) *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;*

SSO notification and reporting procedures are discussed in Section 4 of the SSOERP. An SSO Reporting Flowchart is included as Attachment 5.

- (4) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;*

Training activities are discussed in Section 5 of the SSOERP.

- (5) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and*

SSO response procedures are discussed in Section 3 of the City's SSOERP.

- (6) 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.*

SSO response procedures are discussed in Section 3 of the SSOERP. Water quality monitoring is addressed in subsection H.

Chapter 7: Fats, Oils, and Grease (FOG) Control Program

The City's Fats, Oils and Grease Control Program addresses the mandatory SSMP provisions outlined in the SSSWDR Section D, 13 (vii). The City's FOG Control Program helps reduce the amount of fats, oils and grease discharged to the sanitary sewer system, by including:

- (1) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;*
- (2) 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;*
- (3) The legal authority to prohibit discharges to the system and identify measures to prevent SSO's and blockages caused by FOG;*
- (4) 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;*
- (5) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;*
- (6) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and*
- (7) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified above.*

7.1 Compliance Summary

- (1) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;*

The City is committed to reducing the amount of FOG discharged to the sanitary sewer system through the implementation of an effective public outreach program. The City's Department of Engineering identifies all new food service locations within the City's service area. FOG compliance inspections are annually conducted at selected food service and manufacturing establishments (FSE) as part of the City's FOG Inspection Program. High priority facilities are routinely selected for inspection. These include FOG-producing facilities that are in close proximity to known FOG hotspots and sites that failed to comply during the last inspection. Facilities that did not receive an inspection in the past fiscal year

are also prioritized for inspection. It should be noted that some FOG inspections are conducted in conjunction with storm water compliance inspections.

FOG inspections include an assessment of the grease control device (GCD) condition (if applicable), food and grease waste disposal practices, drain screen presence and condition, spill preparedness, and employee training. During the inspections, business owners are educated on the City's FOG Control Program and the best management practices (BMPs) required for proper FOG disposal to prevent SSOs. Businesses receive a list of corrective actions following the inspection, and inspectors work with business owners until compliance is achieved. Enforcement actions are taken as necessary.

FOG inspection materials, including the FOG Inspection Form and the Storm Water and FOG Inspection Form (for inspections that evaluate both storm water and FOG BMP compliance) are provided in Appendix F. Additionally, a list of required FOG BMPs and templates for GCD maintenance and employee training are also provided. The public are reminded of proper residential FOG disposal on the City's website at <http://www.nationalcityca.gov/index.aspx?page=242>.

- (2) *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;*

A list of vendors which offer collection and disposal services within the City's service area can be found at the CalFOG website (www.calfog.org). Food service establishments (FSEs) are annually inspected for FOG disposal compliance during FOG inspections. Grease control devices (GCDs) are required to have a total grease and solids accumulation of less than 25% by volume in order to be in compliance. Records of GCD cleaning and maintenance as well as documentation of waste hauling from GCDs and/or grease bins are required to be kept by FSEs as applicable. See Appendix F for more details.

- (3) *The legal authority to prohibit discharges to the system and identify measures to prevent SSO's and blockages caused by FOG;*

The City possesses the legal authority to prohibit discharges to the sewer system and to identify measures to prevent SSO's and blockages caused by FOG through the National City Municipal Code, Sections 14.06.180, 14.06.190, 14.16.020 and 14.16.080. Excerpts are provided in Appendix C.

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

The National City Municipal Code, Section 14.06.190 addresses the installation of grease removal devices (see Appendix C). City staff can require existing food service establishments (FSEs) to install grease removal devices via the permitting processes for tenant improvements.

The City utilizes the grease removal design standards discussed in the Standard Specifications for Public Works Construction (Greenbook, 2012) for grease interceptors. The City has also adopted the 2010 California Plumbing Code into its ordinance as the authority on City plumbing.

Pre-treatment grease control best management practices (source control BMPs) and maintenance requirements are reviewed with business owners of FSEs during FOG compliance inspections. Source control BMPs are especially important in limiting the amount of FOG that reaches a GCD. Proper implementation of these ensures that the GCD is functioning effectively and reduces the frequency of GCD maintenance. GCDs are required to have a total grease and solids accumulation of less than 25% by volume in order to be in compliance. Records of GCD cleaning and maintenance as well as documentation of waste hauling from GCDs and/or grease bins are required to be kept by FSEs as applicable. Requirements for record keeping are discussed during FOG inspections and contact information to report an SSO is provided. See Appendix F for details.

(5) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance;

The City has the authority to inspect grease producing facilities through the National City Municipal Code Section 14.16.080, and enforces any violation of its sewer ordinances per Municipal Code Chapters 1.44 and 1.48. Municipal code excerpts are in Appendix C.

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

The City has identified sections of their sanitary sewer system subject to high levels of FOG. These are shown on the sewer cleaning frequency map (Appendix D). The City has established cleaning and maintenance schedules for these problem sections; pipelines that are cleaned quarterly as well as a list of gravity mains that require more frequent monthly maintenance are provided in Appendix D. The list of sewer cleaning hotspots has been digitized and may be used to help in FOG program planning. Additionally, FOG inspection program results are tracked in an electronic database and may be compared to the list of priority cleaning locations.

(7) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified above.

Source control best management practices (BMPs) remove a significant portion of FOG before the effluent reaches the grease control device (GCD). This helps GCDs perform more effectively and also reduces the maintenance frequency for GCDs. Common source control BMPs include pre-wiping oily pans and dishes prior to washing them, installing drain screens in sinks to catch food particles, cleaning hoods regularly, training employees, and maintaining records of training and maintenance activities. As previously discussed, the City conducts FOG inspections at food service establishments (FSEs) for compliance with the source control BMP requirements. See Appendix F for more details.

The City also has basic design standards for the proper installation of GCDs as well as an aggressive cleaning and maintenance schedule for FOG hotspots within the City.

Chapter 8: System Evaluation and Capacity Assurance Plan

The City's System Evaluation and Capacity Assurance Plan addresses the mandatory provisions as outlined in the SSSWDR Section D.13.(vii). These include the following:

- (1) *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*
- (2) *Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (1) above to establish appropriate design criteria; and*
- (3) *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.*
- (4) *Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (1)-(3) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.*

8.1 Compliance Summary

- (1) *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*

An evaluation of potential hydraulic deficiencies is presented in the City's 2008 Sewer System Hydraulic Analysis (Appendix G). This hydraulic analysis of the City-owned wastewater infrastructure was completed by Infrastructure Engineering Corporation (IEC) using an H₂OMap Sewer hydraulic model. The model evaluated average dry weather flows, peak dry weather flows, and peak wet weather flows at the existing (2007), 5-year, 10-year, and 20-year time increments. Wastewater flow projections determined for these

time intervals were used to identify system deficiencies and to develop a CIP that outlined a strategy to mitigate the projected deficiencies. The City's 2011 Sewer System Master Plan (Appendix G) was also completed by IEC and built on the 2008 analysis by updating the existing (2009) wastewater flows and recommended system capital improvements. These updates were done considering the critical findings of the 2009 Sewer Closed Circuit Television and Condition Assessment Report and the 2010 Sewer Flow Monitoring Report (Appendix G), both completed by IEC.

The 2009 Sewer Closed Circuit Television (CCTV) and Condition Assessment Report presented the results of CCTVing gravity mains with missing hydraulic information, FOG problem areas and those areas identified as deficient in the 2008 analysis. The 2010 Sewer Flow Monitoring Report collected flow data from ten (10) monitoring sites for four (4) weeks. Eight of the monitoring sites were selected based on deficiencies noted in the 2008 analysis.

(2) Design Criteria: Where design criteria do not exist or are deficient, undertake the evaluation identified in (1) above to establish appropriate design criteria; and

The City's 2008 Sewer System Hydraulic Analysis and 2011 Sewer System Master Plan (both in Appendix G) summarize the City's design criteria to ensure sufficient capacity and preserve the estimated life-cycle of wastewater infrastructure.

(3) 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.

The City is following a short- term and long-term wastewater CIP to address projected hydraulic deficiencies in the 2011 Sewer System Master Plan (Appendix G). It was developed by Infrastructure Engineering Corporation (IEC) and is based on the results of their 2008 Sewer System Hydraulic Analysis (Appendix G), as well as their 2009 Sewer Closed-Circuit Television and Condition Assessment Report and the 2010 Sewer Flow Monitoring Report (previously discussed). The 2011 Sewer System Master Plan notes 260 gravity mains that are recommended for upsizing by 2027. Replacement diameters for all gravity mains are identified to satisfy the City's design criteria and accommodate peak flows through 2027. The analyses present a phased and prioritized CIP, including recommended immediate projects, short-term projects, 2012 projects, 2017 projects, and 2027 projects. The report also includes recommendations for monitoring and CCTVing to help prioritize projects. Funding for these projects is through the Capital Improvement Fund, which includes an estimated \$5,000,000 in undesignated reserves. On average, the City allocates \$400,000 a year for rehabilitation and replacement of their sewer system. The

City's Engineering Department reviews the CIP on an annual basis to ensure the most critical needs are addressed.

- (4) Schedule: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (1)-(3) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.

The City's CIP is presented in the 2011 Sewer System Master Plan (Appendix G) as previously described. It includes recommended completion dates for the various phases of replacement and rehabilitation. The Engineering Department reviews the CIP on an annual basis and adjusts if necessary to address the most critical issues.

Chapter 9: Monitoring, Measurement, and Program Modifications

The City's Monitoring, Measurement, and Program Modifications addresses the mandatory provisions outlined in SSWDR Section D.13.(ix). These components include:

- (1) *Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;*
- (2) *Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;*
- (3) *Assess the success of the preventative maintenance program;*
- (4) *Update program elements, as appropriate, based on monitoring or performance evaluations; and*
- (5) *Identify and illustrate SSO trends, including: frequency, location, and volume.*

9.1 Compliance Summary

- (1) *Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;*

The City effectively maintains information regarding the wastewater system in several ways. These include, but are not limited to, accurate record keeping of cleaning and maintenance activities, FOG compliance inspection data, training sessions, Capital Improvement Plan (CIP) planning and implementation, as well as documentation of reported and confirmed SSOs. Because the Public Works Director is responsible for ensuring that the wastewater system is managed in accordance with this SSMP, any necessary improvements or modifications to the SSMP activities as noted by the Director will be implemented as soon as practical. Additionally, the City conducts and documents an internal audit of their SSMP at least every two (2) years and updates the SSMP at least every five (5) years as required by SSSWDR Section D.13.(x).

- (2) *Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;*

The following performance parameters may be used on an annual basis to measure the effectiveness of each SSMP element:

Table 9.1
SSMP Performance Assessment Metrics

Performance Parameters	Annual Totals		Program Adjustments Made, If Applicable
Total number of SSOs	Dry Season	Wet Season	
Number of public SSOs			
Number of private lateral spills			
Number of spills (public and private) that reached a drainage channel and/or creek, bay, or other water body			
Percent of total overflow volume recovered from public SSOs (overflow recovered/total overflow x 100)			
Average response time to public SSO sites			
Addresses of any locations where multiple spills occurred within the last year. If any, also list actions taken to prevent future occurrences.			
Causes of public SSOs, including the number of SSOs linked to each cause (e.g., FOG buildup). If one or more causes are especially common, describe what action was taken to address that cause type.			
Number of locations maintained and/or repaired specifically for FOG			

Table 9.1
SSMP Performance Assessment Metrics

Performance Parameters	Annual Totals	Program Adjustments Made, If Applicable
Number of Food Service Establishments (FSE) on FOG inventory		
Number of FOG inspections conducted		
Percent of FOG inspections requiring follow-up or enforcement		
Most common deficiencies noted during FOG inspections		
Number of locations routinely cleaned and maintained		
Length of pipeline televised		
Brief description of adjustments to maintenance program based on SSO occurrence or CCTV results		
Identify pipe sections that were upsized or replaced as prioritized in the CIP		
Number of sewer staff training sessions conducted		

(3) Assess the success of the preventative maintenance program;

The preventative maintenance program is assessed annually considering the applicable performance indicators listed above as well as the program elements discussed in Chapter 4: Operations and Maintenance. Additionally, staff productivity metrics will be evaluated.

(4) Update program elements, as appropriate, based on monitoring or performance evaluations;
and

The Public Works Director is responsible for ensuring that the wastewater system is managed in accordance with this SSMP. Monitoring and performance standards are annually evaluated by the Public Works Director and any improvements or modifications to the SSMP program elements as noted will be implemented as soon as practical. Additionally, the City conducts and documents an internal audit of their SSMP at least every two (2) years and updates the SSMP at least every five (5) years as required by SSSWDR Section D.13.(x).

(5) Identify and illustrate SSO trends, including: frequency, location, and volume.

The City documents all SSOs using the online California Integrated Water Quality System (CIWQS). Additionally, the City completes an internal SSO Reporting Form and takes photos of each spill while onsite. Details are in the City's Sanitary Sewer Overflow Emergency Response Plan (SSOERP – see Appendix E). The Spill Review Committee (composed of the Public Works Director, Wastewater Superintendent, and Sewer Crew Chief) meets to discuss each spill and how to prevent a reoccurrence or to better respond in the future. Actions taken to prevent future SSOs are documented on the SSO Reporting Form. SSO trends are also annually evaluated as part of the performance parameters previously discussed.

Chapter 10: SSMP Program Audits

The City is committed to continually reviewing and updating its SSMP in order to be the most effective at managing, operating, and maintaining the sanitary sewer system. The SSSWDR Section D.13.(x) is stated below:

- (1) *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.*

10.1 Compliance Summary

- (2) *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.*

The City conducts an internal audit of their SSMP at least every two (2) years. A complete SSMP Audit Checklist is provided in Appendix H. Each audit report includes, but is not limited to, the following:

- Identification of any program deficiencies and discussion of how these deficiencies have been or will be remedied.
- Evaluation of the performance parameters discussed in the “Monitoring, Measurement, and Program Modification” section of the SSMP.
- Details of action plans that will be implemented to restore poor performance measures to an acceptable level, as applicable.
- Description of system improvements within the audit period.
- Description of system improvements planned for the next two years.
- Summary of SSMP updates, as applicable.

The audit report is kept on file.

Additionally, the SSMP is updated every five (5) years and includes any significant program changes, as required by the SSSWDR. Re-certification by the City Council is required when significant updates are made to the SSMP. The Director of Public Works

will enter any revised SSMP information in CIWQS and mail the certification form to the State Water Board.

Chapter 11: Communication Program

The City's Communication Program addresses the mandatory SSMP provisions outlined in SSSWDR Section D.13.(xi).

- (1) *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.*
- (2) *The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.*

11.1 Compliance Summary

- (1) *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 City recognizes the importance of communication with the public on the development, implementation, and performance of its SSMP. The City maintains a website (<http://www.ci.national-city.ca.us/>) as the primary means of communication. City news, announcements, and upcoming activities are presented on the website. A copy of the current SSMP and the Sewer Master Plan are included on the Public Works wastewater link. The website also provides the public with direct contact information for the City's wastewater department.

The SSMP is updated every five (5) years and any significant program changes to it require a recertification by the City Council. Draft SSMPs will be posted on the City's website for review and public comments will be accepted during the City Council meeting to certify the SSMP. City Council meeting agendas, meeting minutes, and webcasts are accessible on the City website.

- (2) *The Enrollee shall also create a plan of communication with systems that are tributary and/or satellite to the Enrollee's sanitary sewer system.*

The City of National City maintains an open line of communication with other adjacent agencies. These include the County of San Diego, City of Chula Vista, City of San Diego, Port of San Diego, and Naval Base San Diego. Appendix E includes the contact information for these jurisdictions.