

STAFF REPORT

**CITY OF FOLSOM
SANITARY SEWER COLLECTION SYSTEM
SACRAMENTO COUNTY**

Since September 2012, staff has received over 20 complaints from a Folsom resident regarding the City's sanitary sewer collection system. The complaints allege that there are ongoing capacity issues with the collection system and that there is an overall lack of management of the system.¹ At the December 2012 Board meeting, two residents of Folsom and a representative of the Save the American River Association addressed the Board regarding their concerns about the collection system and the potential for sewage spills into the American River.

Staff has thoroughly reviewed the complaints, conducted a multi-day audit of the collection system, reviewed engineering documents, and provided responses to the citizens. Although minor issues were found with the Folsom collection system, staff found that in general the system is well operated and maintained, and that the City has reported significantly fewer spills than either the regional or statewide average number of spills.

The purpose of this Staff Report is to provide the Board with an overview of the Folsom collection system and a formal written response to the complaints. The Staff Report will be presented at the January 2013 Board meeting, which will allow the City of Folsom an opportunity to respond to the complaints in a public forum. Unless directed otherwise by the Board, staff is not proposing to take any enforcement actions against the City of Folsom as a result of the complaints received to date.

HISTORY

The City of Folsom owns and operates a sanitary sewer collection system that provides wastewater services to domestic, commercial, and industrial facilities, including the Folsom Prison. The wastewater is conveyed to the Sacramento Regional Wastewater Treatment Plant through regional interceptors owned and operated by the Sacramento County Sanitation District.

Between 1995 and 2000, the City had several sanitary sewer overflows (SSOs) of raw sewage, ranging in volume from 84,000 to 700,000 gallons. These SSOs spilled into the American River and the Folsom South Canal. The lack of wet weather capacity in the

¹ The complaints are found as Attachment A to this Staff Report.

sewer collection system, a failure to conduct adequate preventive maintenance, and inflow and infiltration (I/I) were the primary factors contributing to the SSOs.

The Central Valley Water Board responded by adopting a Cleanup and Abatement Order and an Administrative Civil Liability Order in the amount of \$700,000. In March 2002, the Board adopted Waste Discharge Requirements (WDRs) Order R5-2002-0042 (NPDES CA0084816) and Cease and Desist Order (CDO) R5-2002-0041, prescribing requirements for operation of the sewer collection system and providing a time schedule for the City to complete corrective actions.

In 2003, the City of Folsom conducted a capacity analysis of its sewer system² and found several areas with possible issues (including Blue Ravine Road upstream of Oak Avenue Parkway, Flower Drive, and the 27-inch interceptor along Folsom Boulevard). The City then implemented several sewer system improvement projects including:

- The Basin 7 Diversion Project along Blue Ravine Road near Oak Avenue Parkway, which diverted 0.5 million gallons per day of peak flows from the 27-inch interceptor line to the 33-inch interceptor line;
- Installation of the 36-inch interceptor line along Iron Point Road to reduce surcharging in the 27-inch line; and
- Improvements in downtown Folsom to replace sewer cleanout caps, and replacement and/or rehabilitation of deficient manholes.

As described in the Staff Report for the 2/3 August 2007 Central Valley Water Board meeting,³ the City responded appropriately to the enforcement Orders. The City developed and implemented a Sewer System Management Plan, which resulted in a significant reduction in SSOs. In addition, the City addressed capacity issues through completion of the above system-wide hydraulic capacity study in 2003, completion of a Capacity Assurance Plan, and numerous construction projects. The City conducted flow monitoring, sewer system testing, and sewer system inspections; mapped the system using GIS; improved staff training; and developed an SSO Emergency Response Plan, a Sewer Condition Retrofit Plan, and a Grease Control/Disposal program. By December 2006, the entire collection system was cleaned and flushed, the system had been examined using smoke testing and closed circuit television, and all manholes and pump stations were inspected.

² *System-Wide Hydrologic Evaluation and Capacity Assurance Plan*
(ECO:LOGIC, February 2003)

³http://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/0708/folsom/folsom-stfrpt.pdf

In 2006, the State Water Resources Control Board adopted the *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*⁴ (Statewide Order) and required that all public agencies with over one mile of collection system apply for coverage. The Statewide Order requires development and implementation of sewer system management plans and reporting of all SSOs to the State Water Board's online SSO database. The City of Folsom obtained coverage under the Statewide Order, and in August 2007, the Central Valley Water Board rescinded the individual NPDES permit and the CDO for the City's collection system.

In 2006, and again in 2008, the City re-evaluated the capacity of its collection system.⁵ Both of the re-evaluations resulted in recommendations to improve the sewer system's reliability and to reduce capacity issues. The City completed the recommended projects from each analysis, including the reduction of surcharging in the sewer along Blue Ravine Road, and inflow and infiltration entering and surging in the Folsom Boulevard 27-inch line and surging in the Folsom Prison 20-inch line. The next capacity update is scheduled for 2013.

The City of Folsom's sewer collection system continues to be regulated under the *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, and Central Valley Water Board staff is responsible for ensuring that the City complies with this Order.

SANITARY SEWER OVERFLOWS

The Statewide General WDRs for Sanitary Sewer Systems requires that dischargers report all sanitary sewer overflows⁶ into a statewide database. For reporting purposes, SSOs fall into one of two categories: Category 1 (a spill of over 1,000 gallons, or a spill which enters surface water) and Category 2 (spills of less than 1,000 gallons which do not enter surface waters).

Board staff searched the statewide spill database⁷ to generate a summary of the collection system spills for the City, and then compared these spills to the spills found throughout the Central Valley Region as well as the state. The database normalizes the spill rates based on the length of the collection system, and reports the values as the number of spills per 100 miles of collection system.

4

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2006/wqo/wqo2006_0003.pdf

⁵ *City of Folsom Wastewater Collection System Capacity Analysis Update* (ECO:LOCIC, January 2006 and February 2008)

⁶ Excluding spills from private laterals

⁷ http://www.waterboards.ca.gov/water_issues/programs/ciwqs/

As shown in the table below, for the last year, the City of Folsom reported significantly fewer spills than the other public entities in the Central Valley or the State.

| <i>Spill Rate for Last Year (number of spills/100 mile of collection system)</i> | | |
|----------------------------------------------------------------------------------|-------------|-------------|
| | Category 1 | Category 2 |
| City of Folsom | 0.4 spills | 10.6 spills |
| Regional average | 23.1 spills | 55.4 spills |
| State average | 31.2 spills | 40.4 spills |

Staff also looked at the spill rate data over the last five years, and again found that Folsom reported significantly fewer spills than other public entities throughout the State.

| <i>Spill Rate Averaged for Last Five Years (number of spills/100 mile of collection system)</i> | | |
|-----------------------------------------------------------------------------------------------------|-------------|-------------|
| | Category 1 | Category 2 |
| City of Folsom | <0.1 spills | 9 spills |
| Regional average | 11 spills | 24.2 spills |
| State average | 6.9 spills | 23.1 spills |

Sanitary sewer overflow data is also evaluated based on the magnitude of each spill. For example, a public agency may have only a few spills in a year, but the volume of each spill may be so large that there may be a greater water quality impact than for a public agency with many smaller spills. The database normalizes the spill volumes based on the population that the public entity is serving. As shown in the two tables below, the volume of Folsom's spills was significantly less than the regional or statewide averages, for both the last year and for the last five years.

| <i>Net Volume of Spills for Last Year (gallons per 1,000 capita)</i> | | |
|----------------------------------------------------------------------|---------------|-------------|
| | Category 1 | Category 2 |
| City of Folsom | 85 gallons | 2 gallons |
| Regional average | 2,182 gallons | 237 gallons |
| State average | 1,561 gallons | 183 gallons |

| <i>Net Volume of Spills, Averaged for Last Five Years (gallons per 1000 capita)</i> | | |
|-------------------------------------------------------------------------------------|---------------|------------|
| | Category 1 | Category 2 |
| City of Folsom | 14 gallons | 4 gallons |
| Regional average | 3,323 gallons | 92 gallons |
| State average | 8,383 gallons | 53 gallons |

In summary, the data shows that the City of Folsom's collection system has significantly fewer spills – at a significantly lower volume – than other public entities throughout the

State. The data support the fact that Folsom has made significant improvements to its collection system since the large spills that took place from 1995 through 2000.

COLLECTION SYSTEM AUDIT

The State Water Board's Office of Enforcement assists Regional Board staff in determining compliance with the Statewide General Order for Sanitary Sewer Systems. State Water Board staff has conducted over 50 compliance audits of sewer collection systems throughout the state. In response to the recent complaints about Folsom's collection system, Central Valley Water Board staff and State Water Board staff conducted a joint audit of the City's sewer collection system in October 2012. The audit included a review of written records, interviews with City staff, and inspections of portions of the collection system. The audit took over 80 hours of staff time to complete.

On 8 November 2012, staff transmitted the audit findings to the City of Folsom (see Attachment B to this staff report). In summary, staff found that:

"...the collection system is in good operational condition. The assets that were inspected were found to be in good condition with minimal obstructions. The Young Wu pump station was observed to be adequately maintained. Pump Station #2 was observed to have substantial build-up of solids in the wet well. Both pump stations contained proper safety equipment, backup generators, and exercise of the submersible pumps. Flows on the manholes were observed to be flowing at or below the spring line in the sewer lines. Records are adequately kept at the Corporation Yard and were provided in a timely manner. Field staff proved to be highly knowledgeable about the collection system and its components. The City continuously provides quality training to field staff when needed."

During the audit, staff identified two violations and four areas of concern. The City of Folsom was required to submit a technical report responding to each item by 15 December 2012. In addition, the City was required to provide a capacity modeling report for the Young Wu pump station by 30 November 2012. The City submitted its response and the capacity report on time (see Attachments C and D to this staff report).

A summary of the violations and areas of concern, as well as the City's response, is found below:

- Violation: *The City is deficient in preventative maintenance relating to fats, oils, and grease (FOG) control for commercial and residential assets.* Folsom response: The City reviewed its fats, oil, and grease (FOG) program and identified areas of success as well as areas of deficiency. As a result the City has identified a plan of action to improve its FOG program. The planned improvements will take place in January 2013.

- Violation: *The City is not sufficiently maintaining Pump Station #2.* Folsom response: The City has increased the frequency of maintenance at Pump Station 2. The updated Standard Operating Procedure (SOP) for Pump Station 2 includes an increased cleaning schedule from one time per week to three times per week.
- Area of Concern: *The City was unclear on who had ownership of the Folsom Prison line and who is responsible for operations, maintenance, and management of each segment of this sewer line.* Folsom response: A meeting was held on October 24th, 2012 between the City and Folsom Prison to discuss the Agreement. As a result the City and Folsom came to the following resolution: (a) the City is responsible for operating and maintaining the 20-inch sewer south of the prison fence line, (b) Folsom Prison is responsible for all costs borne by the City associated with the operations and maintenance of the 20-inch sewer line, and (c) all costs for capital improvements on the 20-inch sewer line shall be borne by Folsom Prison.
- Area of Concern: *The City is deficient in maintaining manhole covers throughout the collection system.* Folsom response: The City has incorporated a corrosion inspection component to the Condition Assessment Program. A manhole lid assessment and rating has been added to the existing Manhole Inspection Standard Operating Procedure. In addition, the Manhole Lid and Corrosion Form was added to the City's Work Order Program. Wastewater crews inspect and rate each manhole frame and cover; based on the rating, the City will schedule manhole frames and lids for repair, replacement or follow-up inspection.
- Area of Concern: *Field data collection and record keeping practices for SSOs reaching the municipal storm drain system are inadequate.* Folsom response: The City modified its SSO procedures for spills that reach a drain inlet during dry and wet conditions.
- Area of Concern: *The City can improve scripts to get all the information possible for when the public reports spills.* City response: The City modified the Standard Operating Procedure for SSO-related phone calls. In addition, the SSO Call-Out Questionnaire script will be provided to all Departments within the City that have interaction with the public.

The City also submitted a capacity analysis of the Young Wu pump station (see attachment D of this staff report). Folsom retained an engineering consultant to complete this analysis due to the recent complaints by the resident. The complainant alleges that the pump station does not have the capacity for the wastewater flows from the residences, the Corporation Yard, and the VFW Hall. Regional Board staff reviewed the document and concurs with the consultant that the Young Wu pump station has sufficient capacity to handle the worst-case flow scenarios. In addition, the

system's actual flows are significantly less than the worst-case scenarios. Staff's review memo is found as Attachment E to this staff report.

In summary, Board staff is satisfied with the City's response to the issues raised during the audit. It is noted that Office of Enforcement engineers have conducted over 50 collection system audits state-wide, and they concluded that the City of Folsom's sewer collection system is well managed; quality training is provided to staff; and the reporting protocol and procedures are amongst the top in the State that have been reviewed.

RESPONSE TO CITIZEN COMPLAINTS

As stated earlier, Board staff has received over 20 complaints from a Folsom resident since August 2012. The remainder of this staff report responds to the specific complaints. Many of the complaints are similar, and therefore staff has grouped the complaints by subject.

In order to appropriately respond, staff has reviewed the following documents (as well as the documents reviewed and discussed earlier in this staff report):

1. City of Folsom 2011 *Sewer System Management Plan*⁸
2. City of Folsom FY 12-13 Wastewater CIP
3. 2008 City of Folsom *Wastewater Collection System Capacity Analysis Update*
4. 2007 *Agreement for 'Joint Sewage Disposal* between the City of Folsom and the State of California Department of Corrections (found as Attachment F to this staff report)
5. City of Folsom website
6. City of Folsom Municipal Code *Title 13 Water and Sewer*
7. City of Folsom *Sanitation/Sewer Standard Specifications*
8. City of Folsom *Design and Procedure Manual and Improvement Standards*
9. *California Professional Engineers Act*⁹
10. *California Board Rules and Regulations Relating to the Practices of Professional Engineering and Professional Land Surveying*¹⁰

Issue No. 1: No City Engineer

Concern No. 1: *Since the firing of Bob Blaser in the mid 1990's and the retirement of City Engineer Rich Lorenz in 2012, the City has not been able to enforce the Folsom Municipal Code or the Design and Operational Standards. There also has not been an*

⁸ Items 1, 2, 5, 6, 7, and 8 are available on the City of Folsom website

⁹ http://www.bpelsg.ca.gov/laws/pe_act.pdf

¹⁰ <http://www.bpelsg.ca.gov/laws/boardrules.pdf>

engineer overseeing development. In addition, there is no longer a licensed engineer who has the total picture of the City's risks. (Emails dated: October 2, 2012 and October 19, 2012)

Staff Response: The Statewide Order does not require the enrollee to have a "City Engineer". Board staff also notes that a number of senior level City staff that are responsible for compliance with the Statewide Order are California Registered Engineers. The City's registered engineers include: Todd Eising, Utility Section Manager, Senior Civil Engineer¹¹ (responsible for the management of the sewer collection system); Steve Kran, City Engineer¹² (responsible for overseeing development within the City); and Daniel Wolfe, Associate Civil Engineer¹³ (responsible for the review and processing of private development projects and the issuance of engineering related permits). In addition, once the Engineering Division of the Community Development Department has completed a review of development plans for code compliance, the plans are then sent to each department within the City that may be impacted by the plans. These departments review and comment on the development plans. The Utility Section provides comments regarding management and capacity of the sewer collection system.

Concern No. 2: *The Audit Questionnaire was certified "true to his knowledge" by retired Public Works Director, Richard Lorenz. However, neither the Questionnaire nor the statements and evidence did not include Mr. Lorenz's engineering seal. Mr. Lorenz's duties never included designing, overseeing, budgeting, or supervising the operations of the sewer system. (Email dated: September 8, 2012)*

Staff Response: The State Water Board's Office of Enforcement Pre-Inspection Questionnaire does not require engineering calculations. Therefore, a Licensed Engineer is not required to stamp and sign the document. In regard to the concern that Mr. Lorenz did not oversee the collection system, staff notes that Mr. Lorenz's duties as Public Works and Utilities Director/City Engineer included overseeing the Utilities Department (now the Environmental and Water Resources Department) which included:

- Consultant Contracts
- Engineering and Compliance
- Sewer System Management Plan (SSMP)
- Wastewater Collection

The Office of Enforcement staff and Regional Board staff are satisfied with the responses contained within Mr. Lorenz's submitted questionnaire.

¹¹ [http://www.folsom.ca.us/depts/environmental_n_water_resources_\(formerly_utilities\)/water/default.asp](http://www.folsom.ca.us/depts/environmental_n_water_resources_(formerly_utilities)/water/default.asp)

¹² http://www.folsom.ca.us/depts/community_development/engineering/default.asp

¹³ http://www.folsom.ca.us/depts/community_development/engineering/default.asp

Concern No. 3: *In 2012, the City merged the Public Works Department into its Development Department, promoting an employee with a Bachelor of Arts in planning to lead the Department versus a licensed engineer. (Emails dated: October 3, 2012 and October 9, 2012)*

Staff Response: Although this is not an issue for which the Water Board has regulatory oversight, we note that the City's website shows that Mr. Steve Krahn is a registered engineer and is responsible for overseeing the engineering aspects of development. In addition, Mr. Krahn manages the Community Development Department's Engineering Division staff.

Issue No. 2: Sanitary Sewer Overflows (SSOs)

Concern No. 1: *The City has bolted down manhole covers in this over-burdened system, as found by CH2M Hill and West Yost studies of small portions of the system. The City bolted down the manhole covers to increase its capacity. (Emails dated: September 7, 2012; September 13, 2012; and October 2, 2012)*

Staff Response: The bolting down of manhole covers is a common practice which helps to prevent vandalism of the sewer system, while also preventing access to the public. Board staff notes that in the past five years, about 50% of the total volume of SSOs were due to vandalism. It is appropriate for the City to bolt down manholes to prevent vandalism of its collection system. In regard to the concern about capacity, bolting down manholes does not increase the capacity of a sewer pipe. If there isn't enough capacity, then the wastewater will just surface elsewhere (likely at a lift station). Based on staff's review of the number of sanitary sewer overflows in the past five years, the City's capacity studies, and construction projects, Board staff disagree that the collection system is currently "over-burdened".

Issue No. 3: Capacity of the Collection System

Concern No. 1: *The Folsom Corporation Yard (Corp Yard) was connected to the Young Wu Pump Station without an engineering study being performed to determine if the Pump Station was adequately designed to handle the additional flow. The Young Wu Pump Station is designed to serve 113 homes (61 of which are currently connected) and not 20 acres of heavy industrial zone and the 500 – 1,000 person gatherings at the VFW Hall. Therefore, the usage of the Pump Station to convey the additional flow from the Corp Yard and VFW Hall is an "illegal use". As the Corp Yard and VFW are "industrial and commercial users", a 6-inch connection is required. As designed the connections are in violation of City Design Standards. (Emails dated: September 18, 2012 and October 9, 2012)*

Staff Response: A 6-inch gravity sewer line takes sewage from the VFW Hall to the Young Wu pump station and seven pump stations pump sewage from the Corp Yard to either Pump Station 2 or the Young Wu pump station. Wastewater from the southern half of the Corp Yard is pumped to the Young Wu pump station and wastewater from the northern half is pumped to Pump Station 2.

As a result of complaints received, the City hired J. Crowley Group, Inc. to perform a capacity analysis of the Young Wu Pump Station. The analysis was completed by Jim Crowley, P.E., and dated 29 November 2012. The analysis concludes that the Young Wu Pump Station has adequate capacity to handle the reasonable worst-case flow scenario. Board staff agrees with the methodologies used, and the conclusions of the analysis. (See Attachment E to this staff report).

Per VFW Hall representatives, the maximum capacity for the hall is 74 occupants for dining and 150 occupants in assembly. The representative stated that the maximum number of occupants in the hall was a couple hundred at one time for a memorial. It is the City's responsibility, not the Water Board's responsibility, to enforce the capacity limits.

Concern No. 2: *Did the City supply a capacity analysis prepared by a licensed engineer, as required by the Board's Compliance Evaluation Audit.* (Email dated: December 12, 2012)

Staff Response: Yes. The City submitted the 29 November 2012, "Young Wu Pumping Station Capacity Analysis", prepared by J. Crowley Group. The document is found as Attachment D to this staff report, and staff's review is found as Attachment E. Staff are in agreement that the Young Wu pump station has adequate capacity to handle worst-case scenario flows.

Concern No. 3: *The north of the river system is so heavily overloaded that the city constructed a huge open pit for extracting raw sewage from the "old Oak Avenue" sewer line during wet months.* (Email dated: October 9, 2012)

Staff Response: According to City staff, in the 1990's the City constructed a lined pond for emergency storage. The pond was never used for storing raw sewage and was removed prior to 2002. Given the significant improvements that Folsom has made to its collection system, this comment has no relevance to current conditions.

Concern No. 4: *The City has its old sewage treatment plant pipes connecting the Corporation Yard down to the American River. At times it is possible to hear liquid entering the river from the river bank where the pipes appear to terminate.* (Email dated: October 9, 2012)

Staff Response: During the 30 October 2012 compliance audit, Board staff found no evidence of sewer pipes terminating at the American River. In addition, Ms. Laurant made the same allegation several years ago when the City clean-closed the Folsom Corporation Yard Landfill. At that time, Water Board staff made numerous inspections with Ms. Laurant, and representatives of the Save the American River Association and the City of Folsom. No one was able to find any indication of pipelines that lead from the Corporation Yard to the American River.

Concern No. 5: *There is a documented possibility Lake Natoma Shores residents could receive backing-up sewage. Oversight is necessary until the root issues are resolved appropriately. In addition, the American River is threatened because when the Young Wu pump station is overwhelmed, the sewage backs up into the laterals and overflows into the river and onto the land.* (Emails dated: September 25, 2012 and October 9, 2012)

Staff Response: Board staff disagree that there is a “documented possibility” that sewage could back up into resident’s homes or that the Young Wu pump station is over capacity. The City’s entire sewer collection system was inspected over a five year period (2002 – 2006) using closed-circuit television. The inspection generated work orders for problem areas, and the City made repairs. The Board’s audit found no indication of root issues or overloading of the Lake Natoma Shores sewer collection system. The 29 November 2012 capacity analysis confirms that the Young Wu pump station (which collects sewage for the Lake Natoma Shores subdivision) has adequate capacity to handle the worst-case flow scenario.

In addition, staff reviewed the sanitary sewer overflow (SSO) reports submitted by the City. In the past five years, the City has only had one SSO which resulted in a discharge to surface water. The spill occurred on 11 May 2012 and was due to vandalism (a large rock was dropped into a manhole). The vandalism caused 6,392 gallons of sewage to spill from the manhole, of which 6,072 gallons of sewage entered Hinkle Creek.

Concern No. 6: *The City has made huge commitments to the CA State Prisons without a single page of engineering documentation that all the added prison sewage can be accommodated in the 27-inch line. The Prison interceptor itself is 20-inches and it is only one of the major sewage sheds entering the 27-inch line at that point. The City lacks the capacity for the 2.5 million gallons per day (mgd) in the contract with the CA State Prisons.* (Emails dated: September 13, 2012, October 2, 2012, and October 9, 2012)

Staff Response: In 2003, 2006, and 2008, the City hired an engineering firm to conduct a capacity analysis of the collection system. The next capacity analysis is scheduled for this year (2013). The February 2008 analysis included a separate evaluation of Basin 5, representing the Folsom Prison. The analysis recommended

re-routing a portion of Basin 6 from the 27-inch to the 33-inch line to reduce surcharging in the City's 27-inch line. The City completed the recommended project in 2010.

Board staff has reviewed the 1973 Agreement, amended in 2007, between the City and the California Department of Corrections. This document allows the Department of Corrections to discharge an average daily flow of 1.15 million gallons per day (mgd) and a maximum daily flow of 2.5 mgd from the Folsom Prison's 20-inch line to the City's 27-inch line. The City's documents do not indicate that there is currently an issue with the flows from the prison, and the lack of SSOs confirm this. The City will re-evaluate the capacity of the collection system this year.

Concern No. 7: *Sanitary sewer overflows have occurred in the vicinity of the junction of the 20-inch Folsom Prison sewer line and the City's sewer main. The 20-inch Prison sewer main and several 15 to 18-inch City sewer mains connect to a City 21-inch main, but does not appear to have a direct connection to the 27-inch sewer line. (Emails dated: September 13, 2012 and September 21, 2012)*

Staff Response: The Folsom 20-inch line connects directly to the City's 27-inch line. A capacity analysis was prepared for the City in 2008, and concluded that the area most likely to experience significant surcharging within the City was the 27-inch line along Folsom Blvd. The analysis recommended re-routing a portion of Basin 6 from the 27-inch to the 33-inch line. The City completed the recommended project in 2010 reducing surcharging in the 27-inch line.

Concern No. 8: *The City cross connected the 27-inch and 33-inch sewer mains. The "blue prints" for the cross connection does not appear to have California Engineering Certifications. In addition, there is not a pre or post flow analysis for the connection to show that the cross connection provided value. (Emails dated: September 7, 2012; September 13, 2012; and September 21, 2012)*

Staff Response: The 2008 capacity analysis of the City's sewer collection system recommended for the City to re-route flow from Basin 6 from the 27-inch line to the 33-inch line to reduce surcharging in the 27-inch line. The project consultant, West Yost and Associates, provided improvement plans that were stamped and signed by a registered Civil Engineer in 2010 to re-route the flow as recommended in the 2008 capacity analysis.

Concern No. 9: *Will RWQCB require CA Engineer-Certified flow data for all of these nodal sewage pipes connecting the three sewer sheds: (1) 20-inch Folsom Prison; (2) several City lines of 15 to 18-inches, apparently not to connect to the 27-inch line; and (3) 18-inch line on the bridge conveying all of the sewage from the north portion of Folsom, as well as the pipes north of the 27-inch line? (Email dated: September 21, 2012)*

Staff Response: The Statewide Order does not require that a public entity submit specific capacity data certified by a Registered Engineer. Board staff ensures that the City complies with the Statewide Order, and Folsom is in compliance. While the Executive Officer has the ability to require submittal of technical reports signed by a Registered Engineer, this would only be done in the case of numerous large sewage spills. However, there is no need for that in the case of the City of Folsom. Over the last few years, the City has had very few SSOs. The City is also proactively conducting sewer system capacity analyses on a regular basis, and constructing the recommended improvements. Staff's audit did not find any major concerns, and the City responded appropriately to the staff's findings. Therefore, there is no need for Board staff to spend its limited resources further investigating the capacity of certain sections of the sewer system

Concern No. 10: *The City has not addressed the lack of capacity in the sewer system since approximately 1995. In addition, no capacity improvements have been made since the major spills of 1999-2002.* (Emails dated: September 7, 13, 17, and 18, 2012)

Staff Response: Staff strongly disagrees with this statement. Capacity analyses were conducted in 2003, 2006, and 2008 evaluating and recommending improvements for the City's sewer collection system. As described in the "History" section of this staff report, the City has made improvements to the sewer collection as a result of each capacity analysis. The fact that Folsom has had very few SSOs in the last few years is proof that the improvements have been successful. For example, in addition to routine maintenance, the City has made the following improvements since 2010:

- Lake Forest Pump Station Improvements Project – 2010
- Pump Station No. 2 Bypass Pumping Project - 2010
- Historic District Utilities Rehabilitation Project - 2010
- Dutch Alley Sewer Improvement Project – 2011
- Sutter Street Improvements - 2011
- Sutter Street – Figueroa Alleyway Improvement Project – 2012

Concern No. 11: *The last studies state the City system was surcharged at capacity then, yet the City has added many new sewer connections.* (Email dated: September 13, 2012)

Staff Response: The 2008 capacity analysis of the sewer collection system states the following: *'The modeled stretches of sewer in Basins 10 and 17 show significant amounts of surcharging in both the existing and build-out scenarios. However, the City has reported no problems or overflows with this part of the sewer. Therefore, it is recommended that this part of the sewer be monitored for signs of surcharging/capacity issues, but it is not currently considered an area of concern.'*

'Other...areas scattered throughout the basins (including 2, 3, 4, 9, and 13) area are all within the City's surcharging criteria... However, it is recommended that all areas described in this section be kept under observation in case conditions change.'

'...the area most likely to experience significant surcharging within the City is the 27-inch trunk sewer along Folsom Blvd. As a result, reducing surcharging in this sewer is the focus of the recommendation within this report.'

The City completed the recommended project in 2010 by re-rerouting a portion of the flow from Basin 6 from the 27-inch line to the 33-inch line. A review of the SSOs reported after the re-routing project shows that in 2011 there was one SSO which reached surface water (30 gallons) and in 2012 there was one SSO which reached surface waters (6,072 gallons as a result of vandalism). While the City may have added new sewer connections, the data does not indicate a concern.

Concern No. 12: *How does the north City sewage get to the 27-inch interceptor? What is the size of the pipe in Folsom Blvd which is directly north of the 27-inch sewer line and apparently connected to it? (Email dated: September 21, 2012)*

Staff Response: Sewage from the north portion of the City travels south across the Folsom Blvd bridge in an 18-inch gravity line that ultimately reaches Pump Station 2. From the pump station, a 14-inch force main connects to a 27-inch gravity line that ultimately connects to the 27-inch interceptor. On the west side of Folsom Blvd, there are 6-inch gravity sewer lines connecting residential homes. 27-inch gravity lines are connected from the east side of Folsom Blvd and connected from the confluence of the 14-inch force main and the Folsom Prison sewer line.

Issue No. 3: Collection System CIP

Concern No. 1: *The City does not have a regular City Engineer's report and does not have separate accounting for accumulating monies to grow the capacity of the sewage system. (Emails dated: September 7, 2012 and October 9, 2012)*

Staff Response: Board staff's audit of the City's compliance with Statewide General Order for Sanitary Sewer Overflows did not find concerns about the funding for the maintenance of the sewer collection system. A further review, as described below, does not find concerns.

According to City documents, Folsom has a Utility Commission¹⁴ serving as an advisory group to the City Manager and City Council on cost related matters

¹⁴ http://www.folsom.ca.us/depts/cnc/utility_commission/default.asp

associated with the City's water, sewer, and solid waste functions. The Utility Commission consists of seven appointed volunteer members with the Utilities Director serving as staff to the commission. In addition, the City has an Enterprise fund that is used to account for self-supporting actives (including wastewater collection) that provide services on a user-charge basis. The following is a summary of the proposed program revenues for wastewater:

| | | |
|--------------------|-----------------------|----------------------|
| <u>FY11 Actual</u> | <u>FY12 Projected</u> | <u>FY12 Proposed</u> |
| \$5,508,731 | \$5,976,709 | \$6,176,200 |

In addition, a summary of the fiscal year 2012-2013 budget for wastewater is provided below:

| | <u>Actual</u> <u>FY 2010-11</u> | <u>Budget</u> <u>FY 2011-12</u> | <u>Projected</u> <u>FY 2011-12</u> | <u>Approved</u> <u>FY 2012-13</u> |
|-------------------------|------------------------------------|------------------------------------|---------------------------------------|--------------------------------------|
| Operation & Maintenance | \$691,311 | \$1,705,583 | \$881,214 | \$1,759,770 |
| Capital Outlay | <u>\$2,246,967</u> | <u>\$1,050,000</u> | <u>\$895,409</u> | <u>\$3,000,000</u> |
| Total | \$2,938,278 | \$2,755,583 | \$895,409 | \$4,759,770 |

For additional details, the City of Folsom's fiscal year 2012-2013 operating budget can be found at the following location:
<http://www.folsom.ca.us/civicax/filebank/blobdload.aspx?blobid=18130#page>

Issue No. 4: Collection System Odors

Concern No. 1: *Due to the 20-inch Folsom Prison connection to the City overloading the system, the entire City always has a stench. Where all three pipelines come together at the American River, there are eternal difficulties due to lack of capacity. The North Folsom line which crosses the lake Natoma Bridge at the river is always backed up to a point one-half mile north of the bridge. This is why the City constructed the open-air raw sewage pit in Lew Howard Park. (Emails dated: September 13, 2012; September 20, 2012; September 21, 2012; and October 9, 2012)*

Staff Response: Since 2002, then the City has completed three collection system evaluations, constructed many improvement projects, and removed the raw sewage pit (removed in 2002). Staff's review of the data shows that there is currently minimal surcharging within the collection system.

In regard to odors, Folsom citizens are encouraged to contact the City directly so that City staff may investigate. In addition, the City has recently contracted with HDR Engineers to provide an overall odor control plan for areas within the City with known odor problems, including: Pump Station 2, Home Depot Pump Station, Oak Avenue Pump Station, and the Young Wu Pump Station.

Concern No. 2: *There is a constant, unsolvable odor problem at the adjacent lift station at the northern end of the 27-inch line.* (Emails dated: September 13, 2012 and September 21, 2012)

Staff Response: In response to the Water Board's inspection in October 2012, the City has increased the scheduled routine cleaning of the pump station from one time per week to three times a week to decrease the potential for solids to buildup. Because solids tend to be the cause of odors at pump stations, this update to the Standard Operating Procedure will minimize the potential for odors.

Concern No. 3: *There are odors from the Young Wu Pump Station.* (Verbal comment at the December 2012 Board meeting).

Staff Response: During the October 2012 audit, Board staff inspected the Young Wu pump station and did not observe foul odors in the surrounding area. However, did observe an odor after the wet well was opened. The City has installed an odor control system for the Young Wu Pump Station with a smell of bubble gum. In addition, the City has contracted with HDR Engineers to provide an overall odor control program for areas with known odor problems, including the Young Wu Pump Station.

CONCLUSION

The City of Folsom has made significant improvements to the management and reliability of its sewer collection system since the 700,000 gallon raw sewage spill in 2000. Board staff have conducted a comprehensive review of the City's compliance with the *Statewide General Waste Discharge Requirements for Sanitary Sewer Overflows* and recommend that no further action be taken regarding the above complaints.

Attachment A: Citizen Complaints

Attachment B: November 2012 Folsom audit letter

Attachment C: City's response to audit

Attachment D: Young Wu pump station capacity analysis

Attachment E: Board staff review of Young Wu pump station capacity evaluation

Attachment F: City of Folsom and Department of Corrections sewer agreement