



# CITY OF REDDING

PUBLIC WORKS DEPARTMENT

FIELD OPERATIONS

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October 3, 2012

Mr. Bob Crandall  
Assistant Executive Officer  
California Regional Water Quality Control Board  
Central Valley Region  
364 Knollcrest Dr., Suite 200  
Redding, CA 96002

Dear Mr. Crandall:

SUBJECT: Response to Comments and Additional Information Regarding the City of Redding's Wastewater Collection and Treatment Program

The City of Redding (City) requests that your office take into consideration the following response to comments recently submitted by Lawyers for Clean Water (comments). Those comments address ongoing settlement negotiations between your office and the City. The proposed settlement agreement provides significant benefit to the citizens of Redding, protects and enhances the quality of water used throughout California, comprehensively resolves outstanding enforcement matters, and is in the best interest of the overall public. Please consider the following information and the City's request that this matter be resolved without further administrative proceedings.

No new or significant information is presented with the comments, and they do not affect the appropriateness of the proposed settlement. The comments characterize the City's wastewater collection and treatment program as deficient, lacking in appropriate investment, improperly managed, and unprotective of water quality. Following is a description of program activities indicating the resources and effort invested to ensure proper management, operation and maintenance of the collection and treatment systems. The City would also like to address inaccurate information presented in the comments, as it presents a misleading characterization of the state of the City's wastewater collection and treatment program.

For example, the comments include an Attachment A summarizing the information apparently used when considering the proposed settlement agreement. The total number of violations to be addressed in the settlement is shown as 206, which is incorrect. City staff could not determine how that number was derived, considering the various enforcement documents mentioned only address 22 potential violations. The settlement agreement also includes 76 sanitary sewer overflows (SSOs), which together would bring the total number of potential violations to 98. A review of the CIWQS online reporting system maintained by the State Water Resources Control Board also indicates 98 potential violations if both SSO and treatment plant violation data are combined. The number of violations stated in the comments appears to have been incorrectly determined, indicated by the 31 violations listed for "Alleged DCBM Violations" in Table 1. That

event resulted in only 1 violation, which can be verified using the CIWQS system. The number of violations presented in the comments is incorrect and provides an inaccurate picture of the City's regulatory compliance.

The City maintains a comprehensive program to ensure the City owned collection system and treatment facilities are well maintained and responsibly operated, and substantial resources have been and continue to be invested in this infrastructure. In addition to maintenance and repair of the public wastewater system, this investment allows for economic growth and an enhancement of capacity through the responsible and timely expansion of this infrastructure. The following summary of the City's efforts addresses the wastewater collection system and the two wastewater treatment plants owned and operated by the City.

#### Sanitary Sewer System

Redding is served by an extensive sanitary sewer collection system composed of over 420 miles of public mains, lift stations and related facilities, as well as the private laterals that connect into that system. Currently the City has no jurisdiction over private laterals, nor mechanisms in place to independently address lateral maintenance or the problems that arise in its absence. The City has in place a developed and well managed operation and maintenance program for this system, bolstered by experienced, CWEA certified collection system staff that is very familiar with the system and able to focus efforts on high maintenance and high risk assets. In addition, substantial effort is taken to model community growth and forecast capital projects needed to adequately expand and upgrade the public system. A new Wastewater Master Plan is currently being prepared that will serve as a stable, long-range plan with an emphasis on identification of capacity limitations and on asset maintenance and replacement. The Wastewater Utility's rate structure represents a responsible effort to adequately fund operation and maintenance, address capacity issues, and replace aging system components.

The City appreciates the importance of routine maintenance and of system repair and replacement, especially as ways to limit sanitary sewer overflows (SSOs), protect public health and water quality, and reduce treatment costs associated with high levels of inflow and infiltration (I&I). The following ongoing efforts are only an example, but indicate the extent to which the City properly operates and maintains the sanitary sewer collection system:

- Sewer main cleaning - According to a nationwide study commissioned by the American Society of Civil Engineers (ASCE)<sup>1</sup>, wastewater agencies clean an average of thirty percent of their collection system annually. In 2011, City staff hydro-cleaned 1,498,910 linear feet of sewer line, representing 68% of the system and 76% of small-diameter pipes. This cleaning focuses on the identified system "hot spots" and small-diameter pipes that pose the greatest risk of blockage and overflow.
- Sewer main viewing - The City's annual goal for viewing is 3% of the system. With camera equipment out of service for repairs September through the end of December, 4% of the system was viewed in 2011, and during the more representative 2010, 6% was viewed.

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<sup>1</sup> Black & Veatch, 1998. *Optimization of Collection System Maintenance Frequencies and System Performance*.

- Manhole and remote manhole inspection – According to the ASCE study, wastewater agencies inspect an average of 26% of manholes annually. The City’s annual goal for manhole inspection is 33%, focusing on remote manholes often located along riparian corridors. In 2011, staff inspected a total of 6,004 manholes and made necessary repairs to prevent groundwater intrusion, resulting in the inspection of 77% of system manholes.
- Sewer main replacement and lining – Between June, 2002, and January, 2012, the City completed projects for sewer main replacement, and sewer main lining, with an overall total cost of \$14,407,000. These projects replaced aging infrastructure, increased system capacity, and reduced I&I. Future projects continue to be placed on the capital improvement list by priority, with replacement generally focusing on older sections of the system most likely to contribute I&I.

These efforts continue to reduce the number of SSOs the City’s collection system experiences, and by 2011 the annual number of SSOs had fallen to half the previous 6-year average. Consideration of other indices further highlights the effectiveness of the City’s operation and maintenance programs. For example, the system’s performance compares quite favorably with that of other agencies in California, indicated by both the number of SSOs and the overall volume released being well below state and regional averages. The following table summarizes statewide and regional data for 2010 and 2011 taken from the CIWQS online reporting system maintained by the State Water Resources Control Board:

	Spill Rate (#spills/100mi/yr)		Spill Volume (gallons/1000 capita/yr)	
	Category 1 SSOs	Category 2 SSOs	Volume- Category 1	Volume- Category 2
Redding Collection System	.7	2.33	116.7	1.03
State - Municipal - Average	2.72	5.16	1628.65	3.23
Region - Municipal - Average	3.23	6.41	569.03	92.82

Through this aggressive, proactive program of routine maintenance, repair and replacement, the City ensures it’s collection system is properly managed, operated and maintained. By extending the useful life of system assets, identifying aging infrastructure and capacity issues, and reducing the number and volume of SSOs, ratepayer funds are responsibly allocated and public health and water quality are protected. These efforts, along with the City’s expanding flow monitoring program, also reduce the amount of I&I entering the system, thereby protecting downstream treatment works while forestalling expansion and modification of these facilities.

Private Lateral Maintenance and Repair

The City has no authority over the roughly 30,000 private laterals that carry residential, commercial and industrial flow into the public system, and the public interest in granting such authority is negligible. Because median income in the City is 69% of the state average, the community meets the criteria of a disadvantaged community. This limited household income, the area’s exceptional economic circumstances, and an unemployment rate above the state average contribute to a significant number of private laterals being inadequately maintained and often utilized beyond reasonable service life. Some older sections of

the City's system date from the early 1900s, and while the public system in these areas is given priority for replacement, the private laterals connected to these sections tend to contribute an increased rate of leakage while disproportionately serving areas housing lower income residents. While public system efforts have produced significant results, and possibilities for substantial improvement remain, the multifaceted impacts of I&I cannot be adequately reduced and controlled without a focus on private laterals.

The issue of private laterals and the impact on collection systems is widespread, and many municipalities and wastewater districts have experimented with public-private projects to determine funding methods, public interest, and potential results. Industry studies have found that as much as 80% of system I&I may come from private sources<sup>2</sup>, and private laterals alone contribute an average of 24% of system I&I<sup>3</sup>. A mechanism is clearly needed to address the public impact of these private assets, and the supplemental environmental project (SEP) proposed as part of the settlement agreement would be a reasonable and direct means to do so. Approval to use as much as 55% of the settlement penalty for the proposed SEP would benefit the public by potentially delaying rate increases and by providing funding for private improvements that might otherwise be delayed or not implemented. This potential project, and the benefits likely to result, played a significant part in the City's agreement with the subject settlement.

#### Wastewater Treatment Facilities

Significant investment has also been made to expand and modify the City's wastewater treatment plants. This work was identified as a cost effective means to gain additional capacity for the future, provide better removal of ammonia and other pollutants, and protect water quality through capacity assurance and process resilience. Expansion and modification of the Clear Creek Wastewater Treatment Plant (CCWTP) is nearing completion, with construction work at the Stillwater Wastewater Treatment Plant (SWTP) just beginning; together these projects have an estimated cost of approximately \$90 million. Both projects are funded by State Revolving Fund (SRF) loans. Prior to loan approval a SRF-required Sewer System Evaluation Survey determined these projects would be more cost effective than alternate projects aimed at reducing I&I in the collection system due to the system's size and the potentially broad distribution of I&I sources. These projects are supplemented by a robust collection system operation and maintenance program and well-funded capital planning, leaving a concerted effort to address deficient private laterals as the most significant outstanding community need.

Treatment performance and regulatory compliance will almost certainly be enhanced with the completion of these projects, but the facilities performed well even prior to these modifications. From 2008 to 2011, the total number of violations varied year to year at each plant, ranging from one violation in some years to greater numbers in years of significant wet weather events. It is important to note that CIWQS data indicates that during this time period 20% of the violations at the SWTP and 15% of the violations at the

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<sup>2</sup> Strand Associates, Inc., 2006. *Inflow and Infiltration From Private Property*.

<sup>3</sup> Water Environment Research Foundation, 2006. *Cost Effective Rehabilitation of Private Sewer Laterals*.

CCWTP related to monitoring or reporting errors, and did not involve the release of pollutants or an affect on water quality. Also, 30 % of the SWTP incidents listed as violations in CIWQS, and 15% of the CCWTP incidents, relate to events that occurred during the storms of March, 2011; the City contends that these do not constitute violations.

During the same time period, the treatment plants measure well in relation to regulatory performance of facilities throughout the state. As the table below indicates, from 2008-2011 the average number of annual violations at both facilities was less than the Region 5 average and comparable to the statewide average. As noted above, those averages would be lower if reporting violations and violations the City disagrees with were not considered.

Average # of Violations Per Year 2008-2011	Region 5	Statewide	Stillwater WWTP	Clear Creek WWTP
	8.9	3.4	2.5	5

Conclusion

The City appreciates the opportunity to provide this additional information and address inaccuracies contained in the recent comments received by your office. The proposed settlement is fair and reasonable, representing an effective approach to comprehensively resolve outstanding enforcement matters while providing funding for a private lateral replacement program. Such a program would benefit the public at large and the citizens of Redding by protecting water quality and by providing a means to reduce the impact deficient private assets have on the public wastewater collection and treatment system. Thank you for your consideration of this additional information. The proposed settlement agreement is the most effective means to resolve the matter, and the City hopes that the agreement can be executed without recourse to further administrative proceedings.

Sincerely,



Josh Keener  
Wastewater Compliance Coordinator

- C: Rick Duvernay, City Attorney
- Brian Crane, Director of Public Works
- Jon McClain, Assistant Director of Public Works
- Tess Dunham, Somach, Simmons and Dunn