

FARR WEST
ENGINEERING

October 18, 2017

California Water Boards – Central Valley Regional Water Quality Control Board
Brendan Kenny, Engineering Geologist
Compliance Unit, Non-15
11020 Sun Center Dr, #200
Rancho Cordova, CA 95870

RE: CITY OF LOYALTON (CW-214650) - SPILL CONTINGENCY PLAN

Dear Mr. Kenny:

On April 13, 2017, the City of Loyalton (City) was issued a Notice of Violation (NOV) by the Central Valley Regional Water Control Board (Regional Board) for the winter discharge of approximately six million gallons of treated effluent from the City's domestic wastewater treatment facility during the month of March 2017 (Violation ID: 1023438). The discharge came as a consequence of a wet winter with record-setting precipitation and flooding, impacting the City's sewer collection system, which is highly susceptible to infiltration and inflow (I&I).

The City has brought Farr West Engineering (Farr West) onboard to help investigate, identify, and resolve issues discussed in the NOV. Farr West proposes a phased approach to help address the City's challenges. This plan will include immediate action items to minimize the risk of the impending winter season. It will also include more thorough study, design, and system repairs to resolve larger issues of the system-wide I&I.

The first and most immediate item of concern identified in the NOV is development and implementation of a *Spill Contingency Plan*. This *Spill Contingency Plan* focuses on alleviating the need to land apply effluent "within 24 hours of a forecasted storm, during a storm, or within 24 hours after any precipitation event, nor when the ground is saturated." As the winter season is quickly upon us, the following items are being recommended to minimize the I&I issue immediately (this Fall):

- A. **Maximize storage volume in the effluent storage basins:** The City should transfer-out and land apply all treated effluent from the two basins in compliance with the permits, while weather conditions allow. The basins should be run down and remain at near empty levels throughout the remainder of the irrigation season.
- B. **Investigate and temporarily alleviate identifiable I&I sources:** The City has identified several areas of standing water/flooding during high precipitation events. Farr West will further investigate, recommend, and assist the City in minimizing I&I of these areas, by:
 - a. **Securing the manhole lids (with either locking mechanisms or sealing)** – by securing the manhole lids, the City staff will retain access for maintenance, but others may not open lids to redirect flows from the street and storm systems into the sewer collection system.
 - b. **Addressing manhole structures in poor condition** – if the manhole structures receiving a fair amount of leakage are in fair to better condition, the structures may be sprayed with

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an epoxy or cementitious coating (called lining) to improve their water-resistance. However, if the manhole structure is significantly deteriorated, it is recommended that the whole structure be removed and replaced with a new unit.

- c. **Investigate and mitigate obvious sources of I&I** – Farr West will work with City staff to identify and mitigate any other obvious sources of I&I (e.g., clogged storm drains, etc.).

By implementing the above-outlined action items this Fall, it is anticipated that the City will remain in compliance with their Waste Discharge Requirements throughout the winter season. These actions are considered to be the most effective way to ensure compliance during the coming winter. The reality is that other measures, such as restricting water usage, installing temporary storage tanks onsite and hauling wastewater to another facility, will not be effective in addressing this situation, should it occur again. Flows to the plant last winter were in excess of 800,000 gallons per day when flooding occurred in the community. Flows of that magnitude would be very difficult to store temporarily or to haul off. The City simply needs to address the I&I issue to prevent this from happening again.

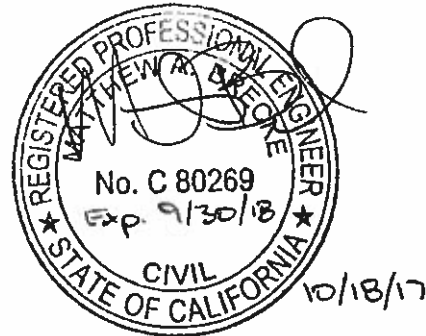
Farr West will continue to work with the City to resolve other outstanding issues shown on the NOV and the Cleanup and Abatement Order R5-2013-07000 (issued by the Regional Board on February 28, 2013). In addition to the short-term action items identified above, Farr West will be working on a comprehensive I&I study that will be submitted with the *Water Balance Report* and *Sanitary Sewer Maintenance Plan* by January 20, 2018.

If you have any questions, comments, or require additional information, please do not hesitate to contact us.

Sincerely,



Matt Brecke, PE
Senior Engineer
mbrecke@farrwestengineering.com
Direct: (775) 853-7263



cc: Mark Marin, City of Loyalton, Mayor
Elizabeth Morgan, Sierra County Dept. of Environmental Health, Loyalton

SCOPE OF WORK

City of Loyalton Wastewater System

PROJECT BACKGROUND

The City is currently facing a number of challenges involving the wastewater system, most of which are summarized in the following regulatory documents:

1. Notice of Violation regarding lack of capacity at the wastewater treatment plant; issued by the Regional Water Quality Control Board, dated April 13, 2017.
2. Cleanup and Abatement Order R5-2013-0700; issued by the Regional Water Quality Control Board, dated February 28, 2013.

PROJECT APPROACH

Our approach to this project is to work closely with the City to systematically solve the problems that have plagued the wastewater utility now for many years. As a general overview, we must address the recent Notice of Violation, then work on the Cleanup and Abatement Order. Then we want to work with the City to find a way to reduce the infiltration and inflow issues that have been a major cause of the City's problems in the wastewater utility. We will do our best to allocate the City's available resources to solving the I & I problem. So far, money and effort have been allocated to managing the symptoms of the problem, rather than solving the actual problem.

SCOPE OF WORK

Task 1 – Respond to Notice of Violation dated April 13, 2017

Farr West will coordinate with Brendan Kenny at the Regional Board to comply with the NOV by submitting the following:

1. Infiltration and Inflow Study. The intent of this study is to fully characterize the I&I problem. The approach will include review of existing sewer inspection videos, inspection of the physical system, an estimate of I&I flows, and recommendations to reduce flows. This study will be required to complete the other items required by the NOV.
2. Spill Contingency Plan. This is a simple plan that describes the City's strategy to avoid wastewater discharges to the field when it is unauthorized and to reduce I&I during the wet season.
3. Water Balance Report. The water balance requirements are somewhat extensive and are outlined in the Regional Board's "Requirements for Water Balance Update and Calibration."
4. Sanitary Sewer Maintenance Plan.

Task 2 – Respond to Cleanup and Abatement Order dated February 28, 2013

Farr West will coordinate with Brendan Kenny at the Regional Board to address the items that remain in the Cleanup and Abatement Order. A detailed scope of work will be prepared for this task after the completion of Task 1 and after thorough conversations with the Regional Board, Black Eagle Consulting and the City.

Task 3 – I & I Reduction Program

The I & I problem has been causing significant issues for the City's wastewater utility and should be addressed immediately to reduce further problems. The approach to this task is proposed to include the following, but will likely be modified as this effort unfolds.

1. Prepare a Preliminary Engineering Report that summarizes the issues, provides recommendations for improvement and includes cost estimates.
2. Complete engineering design for the proposed improvements.
3. Apply for construction funding from State or Federal sources.
4. Manage the construction process.

Budget and Funding

Task 1 - Respond to Notice of Violation dated April 13, 2017

Infiltration and Inflow Study (Estimated effort: 120 hours)	\$16,800
Spill Contingency Plan (Estimated effort: 40 hours)	\$5,600
Water Balance Report (Estimated effort: 120 hours)	\$16,800
Sanitary Sewer Maintenance Plan (Estimated effort: 40 hours)	\$5,600
TOTAL:	\$44,800

This work will be done on a time and materials basis. It is recommended that this work be paid for using remaining USDA grant funds.



SIERRA CONTROLS, LLC

WATER MEASUREMENT AND CONTROL SYSTEMS

DATE

September 28, 2017

QUOTATION NO.

17-5294 R1

To: City of Loyalton

Attn: John Cussins

Subject: SCADA Computer Upgrade

Rev. 1: Remove option for database backup.

Sierra Controls, LLC. (SC) is pleased to provide this proposal to the City of Loyalton, CA to provide a SCADA computer upgrade utilizing VT SCADA HMI Software.

This upgrade will replace the WWTP computer to bring it up to current standards. This will include operations software, alarming software and trending software. The treatment plant computer has reached end of life, and is a constant problem for operators. We will increase the functionality and the lifespan of the system with this upgrade.

Item 1. VT SCADA HMI SCADA Computer

Price \$ 27,420

Plus Estimated Tax \$ 1,662

Pricing Includes: (1) Dell OptiPlex SCADA Computer with Windows Server 2012, (1) Netgear 8 Port Managed Ethernet Switch, (1) New VT SCADA 1000 Tag License with 1-Year Software Support Contract, (1) VT SCADA Thin Client, (1) VT SCADA Alarm Notification, (1) Dell 24" monitor, (1) 1500VA Liebert UPS with web card, SC Remote Access, MS Office Suite, Snagit Screen Capture Software, WinZip Software and AVG Anti-Virus.

Pricing Also Includes: Project Engineering / Design, Computer Assembly, Configuration, and Testing, Travel, Installation, Commissioning, and Documentation.

Dell OptiPlex 7040

- Intel Core i7-6700
- 16GB (2x8GB) RAM
- 2x1TB Hybrid Drives (RAID 1)
- AMD Radeon R5 340X 2GB (1 DP / 1 DVI)
- Dual Gigabit NIC
- 3 Year Pro Support NBD

Notes:

1. Computer Install is based on one day on site for one IT technician.
2. Pricing does not include any permits or bonds.
3. Pricing is based upon standard rates and does not account for any prevailing wage or Davis-Bacon requirements.
4. The district should budget **\$1000 to \$2000** annually for future software support contracts after the first year. **Plus \$800** more annually after the first year for Database Backup (if chosen). These costs will be proposed on future Preventative Maintenance Agreements.
5. Assume the re-use of an existing network switch.
6. Proposal is based upon the assumption that any re-used equipment is fully operational.
7. No warranty on re-used parts.
8. No additional spares provided as part of this proposal.
9. All additional work not specifically listed as part of this agreement will be billed on a T&M basis.

DELIVERY: Scheduled ARO
TERMS: NET 30
FOB: CARSON CITY, NV
THIS QUOTATION IS VALID FOR 60 DAYS.

BY

**RESPECTFULLY SUBMITTED,
 SIERRA CONTROLS, LLC**


Danny Hunsaker, P.E. – General Manager

To proceed with this order please sign below with an authorized signature and return.

Signed _____

PO Number _____

Date _____

Requested Delivery Date _____