

# Attachment B to April 14, 2021 Notice of Violation

## COLLECTION SYSTEM

### COMPLIANCE EVALUATION INSPECTION REPORT

Name/Location of Facility Inspected:

Sonoma County Water Agency  
Russian River County Sanitation District  
(Guerneville Collection System)  
800 Aviation Boulevard  
Santa Rosa, CA 95403

Inspected By:

Jamie Johnson, WRCE<sup>1</sup>, SWRCB<sup>2</sup>  
Jim Fischer, WRCE, SWRCB  
Cathleen Goodwin, WRCE, NCRWQCB<sup>3</sup>  
Doreen Kiruja, ES<sup>4</sup>, NCRWQCB  
Connor McIntee<sup>5</sup>, ES, NCRWQCB

Date:

12-06-2019  
Entry: 0820  
Exit: 1445

Prepared By:

Jamie Johnson

Reviewed By:

Bryan Elder

WDID Number: 1SSO10067

Legally Responsible Official (LRO): Kevin Booker

Order Nos: 2006-0003-DWQ and 2013-0058-EXEC

#### FACILITY REPRESENTATIVES

Name	Title	Contact Information
Kevin Booker	Interim Deputy Chief Engineer	kevin.booker@scwa.ca.gov
George Lincoln	Water Agency Engineer IV	George.lincoln@scwa.ca.gov
David Royall	Water Agency Coordinator	David.royall@scwa.ca.gov
Troy Winton	Lead Worker	troy.winton@scwa.ca.gov
Daniel Colvin	Lead Worker	Daniel.colvin@scwa.ca.gov
Dion Barker	Lead Mechanic	dion.barker@scwa.ca.gov

Inspection Consent Approved By: David Royall

Date: 12-06-2019

Time: 0830

#### FACILITY DESCRIPTION

The Russian River County Sanitation District (RRCSD) is operated by Sonoma County Water Agency (hereafter, SCWA or Agency) and has a service area of approximately 2,700 acres which include the unincorporated areas of Rio Nido, Guerneville, Guerneville Park, and Vacation Beach. RRCSD has a wastewater treatment facility (WWTF) which treats wastewater for approximately 3,200 equivalent single-family dwellings. That wastewater is transported to the treatment plant through the collection system which consists of approximately 35 miles of gravity mainlines, five miles of force mains (pressurized sewers), six miles of lower sewer service laterals, and 11 pump stations. RRCSD operates under the

<sup>1</sup> Water Resource Control Engineer

<sup>2</sup> State Water Resources Control Board

<sup>3</sup> North Coast Regional Water Quality Control Board

<sup>4</sup> Environmental Scientist

<sup>5</sup> Only present for Site Investigation

SWRCB Order No. 2006-0003-DWQ “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems” (SSS WDRs) and SWRCB Order No. WQO 2013-0058-EXEC “Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems” (Amended MRP). RRCSD is located within the jurisdiction of the North Coast Regional Water Quality Control Board (North Coast Regional Board).

## PURPOSE OF INSPECTION

Ms. Goodwin, WRCE notified RRCSD on December 4, 2019 that we would be conducting an announced compliance evaluation inspection (CEI) on Friday December 6, 2019. On December 6, 2019, we (the inspection team listed above) performed a CEI in response to several past large sanitary sewer overflows (SSOs) and a history of flooding and noncompliance. The purpose of the inspection was to evaluate compliance with the SSS WDRs and Amended MRP and to gain an understanding related to SSOs that occurred in 2017 and 2019. The weather during the inspection was rainy and overcast.

## PRE-INSPECTION “DESKTOP” REVIEW

Prior to inspection, we reviewed information uploaded to the California Integrated Water Quality System (CIWQS<sup>6</sup>) as of December 3, 2019, information available on the SCWA website<sup>7</sup>, and information obtained during a previous CEI conducted by the North Coast Regional Board with assistance from the Office of Enforcement on May 30, 2017. Documents and information reviewed are listed below along with a list of key items noted during the “desktop review” to prepare for the inspection:

- Collection System Questionnaire on CIWQS
- Pre-Inspection Questionnaire from 2017 Inspection
  - *All 11 pump stations are equipped with audible and/or visual alarms.*
  - *Collection system has no “hot spots”.*
  - *Collection system has two sewer siphons.*
- Comprehensive Annual Financial Report (CAFR) 2018
  - *Net operating loss of approximately \$1.27 million during fiscal year 2017-2018 due to impairment of capital assets.*
  - *Statement of Net Position from June 30, 2018 shows only \$225,000 restricted for capital projects.*
- Fiscal Year 2019-2020 Budget
  - *Approximately \$1.2 million requested in government funding this fiscal year.*
  - *Sewer rates increased by 4.5% from previous fiscal year.*
  - *System upgrades related to unstable soils, based on 2014 Hazard Assessment, have a 20-year outlook for completion.*
- Sewer System Management Plan (SSMP) dated June 2016
  - *Maintenance staff required to complete 12 continuing education units (CEUs) annually.*
  - *Three overflows attributed to fats, oils, and grease (FOG) since 2008.*
  - *Documentation of SSMP audits are kept on file.*
- Capital Improvement Plan (CIP)
  - *Force Main, Headworks, and Lift Station Project relies upon securing prop 1 grant funding.*
- SSO Technical Reports for All Large Spills in Past 5 Years

<sup>6</sup> For more information on CIWQS, see: <https://www.waterboards.ca.gov/ciwqs/>

<sup>7</sup> For Sonoma County Water Agency’s website, see: <https://www.sonomawater.org/sanitation/>

- SSO 856715 (CIWQS Event ID): 45-Day Technical Report uploaded does not match the core spill data field information certified in CIWQS. Discrepancies found within 45-Day Technical Report
- SSO 856208 (CIWQS Event ID): States that maintenance staff have developed their own wet weather response SOPs.
- SSO Emergency Response Plan (SSO ERP)
  - States that training will be provided to key personnel annually and to new employees.
  - Overflow response and notification plan is kept at the Operations Water Desk.
- SSO – Agency Performance Report on CIWQS (provides historical review of system performance and issues)
  - 2017 Performance Report (**Attachment A**)
  - 2019 Performance Report (**Attachment B**)
- 2017 Inspection Notes
  - Staff had plans to expand their wet weather procedures.
  - Agency had an open position for a staff person to inspect FOG sources in the field.
  - Lift stations are past their useful life spans.
- RRCSD Hazard Mitigation Program dated April 2018
  - Identified nine site-specific vulnerable areas. Two of these vulnerable sites are sewer mains constructed beneath existing drainage channels. One site is a shallow gravity line (MH 31-3 to MH 31-4) with a potential for undermining and exposure during high-flow or flood events.
- Past Enforcement Actions
  - Administrative Civil Liability Order No. R1-2016-0022<sup>8</sup> issued in June 2016 requires an Enhanced Compliance Action project (Manway Project) to be completed by June 30, 2019 (or within 60 days of a revised completion date), otherwise the discharger is liable to pay the entire suspended liability.

Prior to the inspection, Ms. Goodwin provided a list of documents on December 4, 2019 via email (**Attachment C**) for the Agency to have available during the inspection for us to review.

## PRE-INSPECTION CONFERENCE

We arrived at the Agency's office at approximately 0820 on December 06, 2019. We were greeted by several members of SCWA, including Kevin Booker (Interim Deputy Chief Engineer), George Lincoln (Water Agency Engineer IV), David Royall (Water Agency Coordinator), Troy Winton (Lead Worker), and Daniel Colvin (Lead Worker). Mr. Fischer introduced the inspection team and explained the intention and scope of the inspection. At 0830 Mr. Royall verbally gave consent to conduct the inspection, take photographs, and review documents. The Agency provided us with several of the documents we had requested prior to the inspection and noted that any items they did not have time to acquire would be sent to us following the inspection.

The following summarizes statements and information obtained during the pre-inspection conference from RRCSD representatives.

### **Wet Weather Response [SSS WDRs, Provision D.10 and D.12 (viii)]**

I (Ms. Johnson) began by inquiring about RRCSD's wet weather response standard operating procedures (SOPs) which are mentioned in the SSO technical reports. Mr. Royall explained that they generated a procedure to shut off valves in

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<sup>8</sup> For more information on Administrative Civil Liability Order No. R1-2016-0022, see:

[https://www.waterboards.ca.gov/northcoast/board\\_decisions/adopted\\_orders/pdf/2016/160620\\_16\\_0022\\_RussianRiverCSD\\_ACLD.pdf](https://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2016/160620_16_0022_RussianRiverCSD_ACLD.pdf)

low flood areas. Additionally, they are trying to work more closely with the operators at the plant, so if they see issues they can be communicated clearly. Mr. Lincoln added that they have also talked with the manager of a local trailer park about the importance of not leaving cleanouts open. Mr. Colvin mentioned that the flood levels are nice in some ways as they are predictable, which allows them to plan for them. Ms. Goodwin reviewed the “Valve Location Binder”, which has not been updated since 2017, and commented that the binder primarily just has pictures of the valves and a list. Mr. Winton explained that the pictures are for field staff to confirm that they have the correct location and to assist new staff in locating the valves.

#### **Hot Spots [SSS WDRs, Provision D.13(iv)(c)]**

SCWA uses the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) system for condition assessment of their collection system infrastructure. The PACP system uses a one to five grading system for individual defects with Grade 5 defects being the most serious. Ms. Goodwin asked about current Grade 4 and Grade 5 defects<sup>9</sup> in the collection system. Mr. Colvin told us that they currently had one Grade 4 and one Grade 5 defect which are both located on Old Monte Rio Road. The Grade 4 was located the day before the inspection, and they said it will be dug up for repair. The Grade 5 will be fixed with a pipe patch which they said will be done internally by RRCSD staff.

#### **Enhanced Compliance Action [ACL Order No. R1-2016-0022]**

I next inquired about the status of the “Manway Project” – an enhanced compliance action (ECA) project required by an Administrative Civil Liability Order (ACL) issued by Region 1 in 2016. I explained that the ACL states that if the ECA is not completed by June 30, 2019 (or within 60 days of revised completion date), the Agency is liable to pay the entire suspended liability. Mr. Lincoln said that they did submit an extension request for the project. Mr. Lincoln provided more background on the project explaining that the original goal was to get inside of the force main to evaluate its condition, however, they realized to do so would be very costly. We learned RRCSD determined that it wasn’t feasible to assess the force main condition and said they decided they were better off putting the money towards replacing or rehabilitating the pipe. We informed Agency representatives that we would be following-up with the North Coast Regional Board on this issue.

Mr. Lincoln explained that they are in the process of securing state and federal funding for a two-phase project which will replace the Manway Project. He said they are eligible for funding up to \$8 million, but they must match 25%. Phase one of the project will be condition assessment and a 30% design plan, accounting for \$1 million of the project. This money has been secured and he said they hope to have phase one completed within the next 24 months. Phase two of the project will be finishing the design plan to 100% and construction, accounting for the other \$7 million of the project. The Agency’s goal is to have completion in five years, and he said they hope to get final reward from the state in the next five months. However, if they are unable to secure funding for phase two, RRCSD will at a minimum have the condition assessment on all of their lift stations which will allow them to create a prioritized list, which will go to their design group for future capital improvement projects. The inspection team noted that we will follow up with the Division of Financial Assistance (DFA) to receive an update on the status of this funding.

Mr. Lincoln stated there are some other large capital improvement projects planned, but since RRCSD doesn’t have a lot of funding, they must build in the percent match for existing projects. Mr. Lincoln added that if it is an emergency then

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<sup>9</sup> For more information on closed-circuit television grading, see the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) website: <https://www.nassco.org/content/pipeline-assessment-pacp>

the work gets done, but they only have so many staff and their maintenance crews are tied up with existing preventative maintenance so they sometimes have to hire out the work, which puts additional strain on their budget.

#### **Collection System Funding [SSS WDRs, Provision D.9]**

I asked if RRCSD gets any funding from sources besides sewer rates but was told that their only funding is from sewer rates which are added annually to the property tax. They recently had a 4.5% increase in sewer rates and have future increases planned, but increasing fees is still challenging as the rates are already high and the community is considered disadvantaged (previously severely disadvantaged) based on a recent income study. They explained that if they do not receive grant funding, it is difficult for them to complete sizeable projects. Ms. Goodwin asked if money weren't limited, what they would like to do, and they agreed that they would want to upgrade their lift stations.

#### **Staffing and Training [SSS WDRs, Provision D.8, D.13(iv)(d), D.13(vi)(d)]**

Mr. Fischer next asked about their current staffing and if there were any open positions. Mr. Royall said they have one maintenance worker II position open, but it is being filled temporarily with extra help. The position has been vacant for approximately one year, and while they could fill the position at any time, they are waiting for the right candidate. Additionally, they had an extra help employee filling an industrial waste position, but that person left one month prior. RRCSD recently received approval from the SCWA Board for a full-time industrial waste position. They will be starting the human resources (HR) process after the new year and hope to have it filled by the spring. In the meantime, Mr. Lincoln mentioned that SCWA has several tenured employees from the City of Petaluma who are available to help as needed.

I next inquired about staff training. They explained they try to have staff attend conferences and training every other year or so as they are required to earn 12 CEUs bi-annually in order to maintain their California Water Environment Association (CWEA) certificates. However, staff members are responsible for tracking their own CEUs and maintaining their certificates. Members of their staff are also PACP certified. Additionally, Mr. Winton, Mr. Colvin, and maintenance staff train every fall on procedures for the winter. Mr. Colvin mentioned they also receive training on SSO estimation.

#### **Service Call Records [Amended MRP, Section E]**

Ms. Goodwin next asked how RRCSD records complaints from customers and how many they have received in the past year. Mr. Royall said that complaints are recorded in the Operations logbooks, but they do not keep a separate list solely of customer complaints. Mr. Royall explained that most of the complaints they receive are regarding private lateral back-ups which are not the RRCSD's responsibility, so they do not always track or write those down. Ms. Goodwin asked Mr. Royall to clarify what is considered a customer's responsibility and what is considered RRCSD's responsibility. Mr. Royall explained that if it is a maintenance issue, that is the property owner's responsibility per their sewer ordinance. If it is a structural issue, then a plumber will provide a video of the defect to RRCSD and they will fix the structural issue. However, that is a rare occurrence.

#### **Maintenance [SSS WDRs, Provision D.13(iv)(c)]**

Mr. Winton next reviewed maintenance procedures, explaining that cleaning is set for each pipe on a schedule between one month and four years based on the condition of the line determined by closed circuit television (CCTV). They have inspected approximately 99% of their system using CCTV. They have a few 4-inch lines that run up hillsides, making them impossible to inspect as they are unable to push their camera up the hill. If crews flag an issue on CCTV, Mr. Winton or Mr. Colvin will determine next steps and sign off on it. Mr. Colvin added that any Grade 4 or Grade 5 defects, as defined by PACP, are typically repaired right away and that point repairs are done by their own staff. Mr. Winton clarified that if a defect requires longer lining to repair the issue, that work is contracted out.

### **Capital Improvement Projects [SSS WDRs, Provision D.13(iv)(c), D.13(viii)]**

I next mentioned past upgrades which have occurred at the plant and inquired as to the status of any collection system projects. Mr. Lincoln said they do not have any capital improvement projects currently planned for the collection system. There are plans to replace the primary force main, but that funding is scheduled out for the future beyond 2023 and the exact scope of the project has not been defined. Mr. Lincoln also mentioned that they do not have any capacity issues in their system according to a study conducted in 2015 by RMC Engineers. Mr. Booker added that they are planning to commission another capacity study and will be presenting this to the SCWA Board for approval.

Mr. Lincoln said his primary worry is possibly losing a force main or experiencing a catastrophic event. He is less worried about the smaller force mains, but the 16-inch force main running from the main lift station to the plant is a concern due to the material. He said it is a cement mortar-lined steel pipe, but not as thick as traditional C200 (steel) pipe.

### **SSMP Program Audits [SSS WDRs, Provision D.13(x)]**

Mr. Booker informed us the last SSMP program audit was conducted in 2016 and said Mr. Pat Gothard who was the person responsible for conducting these audits is no longer with RRCSD.

### **Sanitary Sewer Overflows [SSS WDRs, Provision D.13 and Amended MRP]**

The discussion next turned toward SSOs. Mr. Booker explained that their current permit for the plant only allows for 3.5 million gallons per day (MGD) of wastewater flow into the treatment plant. Mr. Lincoln added that they are hoping to address this during their permit renewal by allowing more wastewater flows into the plant. The idea being that during wet weather events, there are more locations at the plant where they can safely divert excess wastewater flows before resulting in a spill. They said their logic is if a spill were to occur at a plant with partial treatment, it would have less of an impact on the public than if a spill were to occur in the streets. Ms. Goodwin mentioned that she had a discussion with SCWA Wastewater Coordinator, Garrett Walker, who felt that more than 3.5 MGD could not be properly treated due to ultraviolet limitations at the treatment plant. Mr. Lincoln said that since the original permit, they have installed new flow meters at the plant and now have a better idea of actual flows. New magnetic flow meters (mag meters) were installed in front of the tertiary filters, on the filter back flush line, and at the river discharge. They are also adding mag meters at the headworks in an area following the spiral screens before the aeration basins. Ms. Goodwin mentioned we will be conducting a future inspection of the treatment plant to review the above information and other compliance concerns.

I next brought up two specific SSOs. I first asked about CIWQS Event ID SSO 856715<sup>10</sup> which occurred on February 26, 2019. I explained that the original information submitted to CIWQS showed half of the flow volume discharged to land and half of the flow volume reached a drainage channel that flows to a surface water body. This information matches the 45-day technical report. However, updated information was submitted to CIWQS showing that the entire flow volume was discharged to land, but the 45-day technical report was not updated<sup>11</sup>. Mr. Lincoln and Mr. Booker explained that during this storm event, they sandbagged the spill and directed the flow into a ditch which they originally believed went to a storm drain. Upon further evaluation, they found that the ditch led to residents' backyards. As a result, they revised the numbers to show that all the flow went to land and added that they would show us this location during the field inspection.

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<sup>10</sup> For more information on SSO 856715, see:

[https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportId=sso\\_detail\\_report&reportAction=generate&ss\\_o\\_spill\\_id=856715](https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportId=sso_detail_report&reportAction=generate&ss_o_spill_id=856715)

<sup>11</sup> For 45-day technical report on SSO 856715, see:

<https://ciwqs.waterboards.ca.gov/ciwqs/GetAttach.jsp?module=15&actID=1056551&tableName=ALLEGATIONS&docID=2279487&referrer=ssoAttachments.jsp>

Ms. Goodwin commented that Esa Day, a resident who lives on Orchard Avenue, provided photographs showing feces and toilet paper in the neighborhood during a storm event and SSO. Mr. Royall stated that he and Barry Dugan of SCWA walked the neighborhood with Ms. Day in order to address her concerns and did not observe feces or toilet paper. Mr. Royall further noted that when SSOs occur during flood conditions, the water which spills from the collection system is very diluted and mostly consists of river water.

We next discussed CIWQS Event ID SSO 803943<sup>12</sup> which occurred on February 13, 2014. I found in the 45-day technical report<sup>13</sup> uploaded to CIWQS that there had been an air valve RRCSD was not aware of; so at the time of the report they were going to start a research effort to identify any other air valves that may be on the system. I asked if they had identified any other valves, they were not aware of. Mr. Lincoln informed us that they did as-built record research and physical reconnaissance, but they did not find any other air valves that they were not aware of.

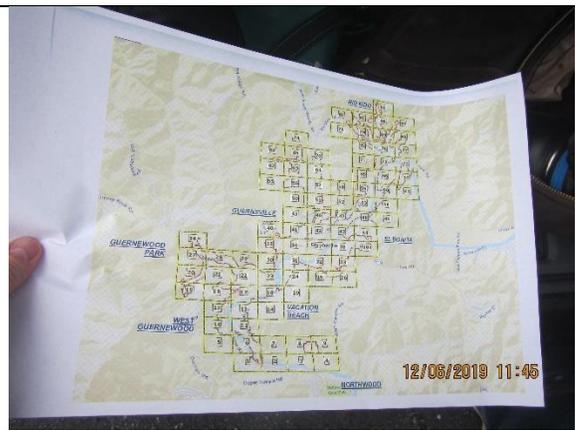
Ms. Goodwin next asked about RRCSD's procedures for large SSOs and volume estimation. Mr. Colvin said for any large SSOs over 50,000 gallons they automatically contact the lab for sampling, although they do not have that in a written SOP. Mr. Winton said they previously used the "San Diego" volume estimation method which is widely used in the sewer industry to visually estimate spills. However, they are now using a new method, which they started in 2019 and seems to be more accurate. This method involves measuring the depth of water over the manhole and taking photos over time to estimate the flow. Mr. Colvin added that they are unable to use the area estimation method due to the flood conditions.

### Pre-Inspection Conference Conclusion

Several documents prepared by RRCSD and detailed technical information about the sewer system and compliance with the SSS WDRs were discussed. These included operator logbooks, spill response SOPs, sewer service area maps, 2019 Sewer Summit conference binder, volume estimation SOPs, and CIWQS spill reports for calendar year (CY) 2019 (**Photos 1 and 2**). At the conclusions of the pre-inspection conference, I created and verified a list of the sewer assets to be inspected and reviewed any safety concerns with SCWA representatives.



**Photo 1:** Documents reviewed at the office.



**Photo 2:** Sewer service area map.

<sup>12</sup> For more information on SSO 803943, see:

[https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportId=sso\\_detail\\_report&reportAction=generate&ss\\_o\\_spill\\_id=803943](https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/PublicReportSSOServlet?reportId=sso_detail_report&reportAction=generate&ss_o_spill_id=803943)

<sup>13</sup> For 45-day technical report on SSO 803943, see:

<https://ciwqs.waterboards.ca.gov/ciwqs/GetAttach.jsp?module=15&actID=963702&tableName=ALLEGATIONS&docID=1420140&referrer=ssoAttachments.jsp>

## SITE INSPECTIONS

To evaluate compliance with the SSS WDRs Provision D.13 and the Amended MRP and document visual conditions of sewer assets, we conducted field inspections at six separate site locations which started at approximately 1200 hours (see Photos 1-28 below). We were accompanied by the same staff members who were present during the pre-inspection conference. The following information and statements documented below were obtained from RRCSD representatives at each of the six separate site location inspections. In addition, a detailed photo log documenting our full observations was also recorded.



### Location 1: Vacation Beach Lift Station

Our first location was the Vacation Beach Lift Station located on Orchard Avenue near the cross-street Beach Avenue where we were met by Dion Barker, Lead Mechanic for RRCSD, and Connor McIntee, North Coast Regional Board. Mr. McIntee participated in the remainder of the site inspections. MH 6-1 is the manhole on Orchard Avenue (**Photo 3**) located closest to the Vacation Beach Lift Station where several past SSOs have occurred. We observed two pipes entering MH 6-1. One pipe appeared to be approximately 12-inch in diameter and the other pipe approximately 8-inch in diameter (**Photo 4**). The manhole bench and barrel looked clean at the time of inspection, but some corrosion was observed as well as some damage to the top rim at the road surface. We were informed this damage does not negatively affect anything as it stays secure when cars drive over it. They explained they are not concerned with any potential infiltration at this spot as they feel it is equivalent to a pick hole, which are often found in standard manhole covers.



**Photo 3:** MH 6-1 located on Orchard Avenue.



**Photo 4:** Inside of MH 6-1 located on Orchard Avenue. Observed some corrosion. Manhole bench and barrel appeared clean at time of inspection.

The lift station itself is surrounded by a gate with a sign posted informing the public what phone number to call in the case of an emergency (**Photo 5**). This lift station receives emergency power from the emergency generator located at the RRCSD WWTF. We learned this lift station does not have any bypassing capabilities. According to RRCSD, the lift stations are cleaned annually and as needed. We were told the Vacation Beach Lift Station was cleaned six months ago. Mr. Barker opened one of the wet well vault doors so we could look inside the lift station (**Photos 6 and 7**). Mr. Fischer asked what Agency staff thought of the lift station condition. Mr. Lincoln said from a maintenance standpoint it looked alright, but he did not like the condition of the electrical, rails, or lids. He stated that he did not believe the wiring was up to today's standards. He added that the electrical box had been replaced at the Guerneville station to be corrosion proof and they would like to do the same at other lift stations. Mr. Lincoln reiterated that they have plans to hire a contractor to perform a condition assessment of all their lift stations. It was noted that there have also been discussions of raising the lift station, but they are concerned about public reaction as the lift station is already quite high (**Photo 8**).



**Photo 5:** Sign on fence of Vacation Beach Lift Station. Emergency phone number listed for public use.



**Photo 6:** Wet well at Vacation Beach Lift Station. Observed evidence of corrosion, exposed wiring, and pump rail wear.

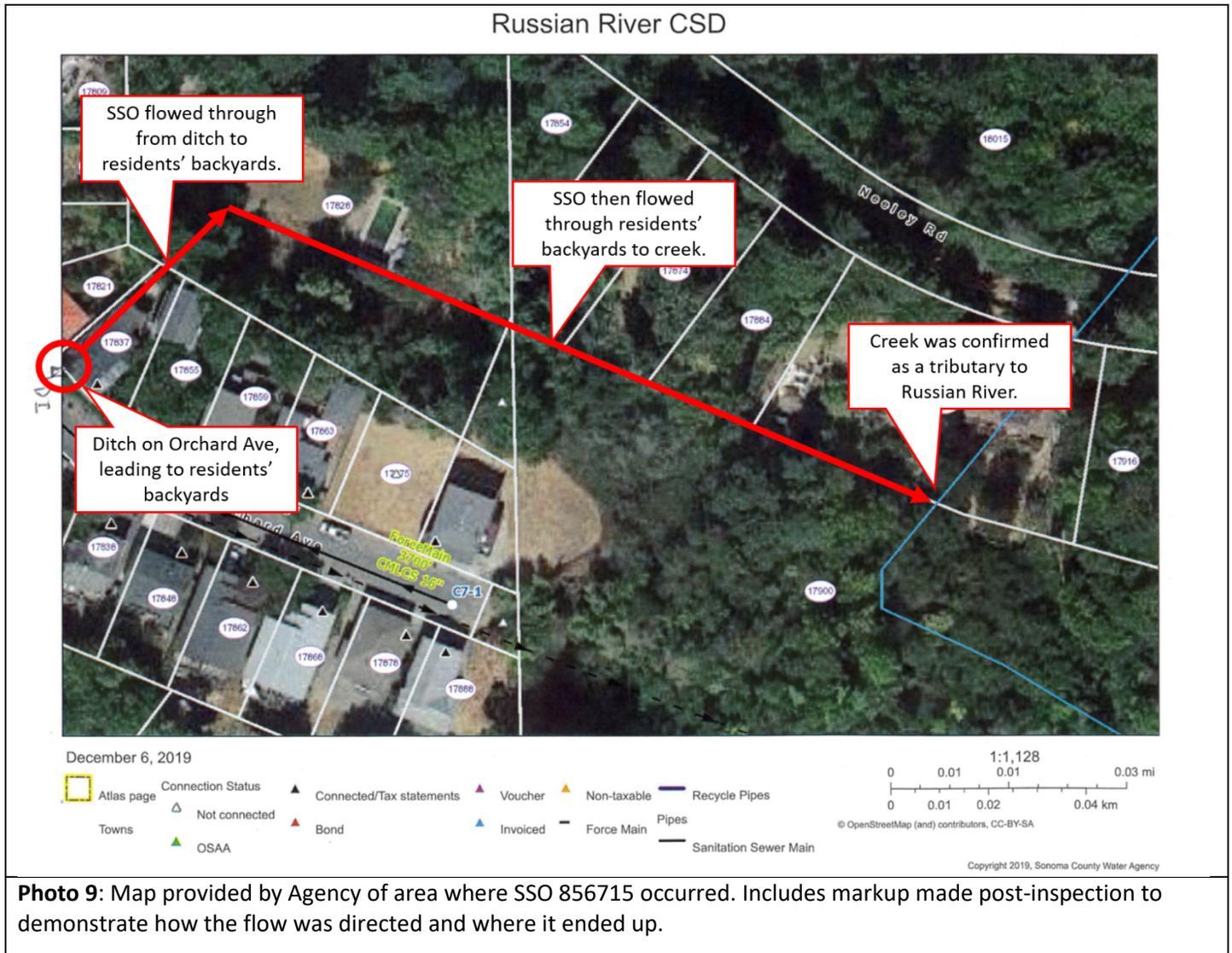


**Photo 7:** Dry well at Vacation Beach Lift Station.



**Photo 8:** Current height of Vacation Beach Lift Station.

Mr. Royall next provided me with a map of the area (**Photo 9**) to explain how they directed the flow during CIWQS Event ID SSO 856715 which occurred on February 26, 2019. Mr. Royall showed how the flow was directed to the backyards. I observed a downward slope that led to a creek. I asked Mr. Royall if the SSO would have flowed from the backyards down to the creek, which he confirmed. I next asked if the creek was a tributary to the river, which he also confirmed. Given this information, I commented that if the SSO was directed by sandbags into the backyards and the slope in the backyards allowed for the flow to enter the creek, which is tributary to the river, then the entire volume of the spill ultimately ended up in the river. Mr. Royall agreed that this was accurate and what would have occurred. I informed him this meant the information entered into CIWQS was incorrect and would need to be revised to show the entire flow volume entering a body of water. As such, this spill would also need to be revised from a Category 2 to a Category 1.



Agency staff indicated that this coming winter they will avoid any intentional directing of SSOs to the drainage pipe. Instead they plan to sandbag in such a way that the spill will be directed down Vacation Beach Road directly to the river instead of into the drainage pipe that leads into the backyards of residents.

**Location 2: Main Lift Station**

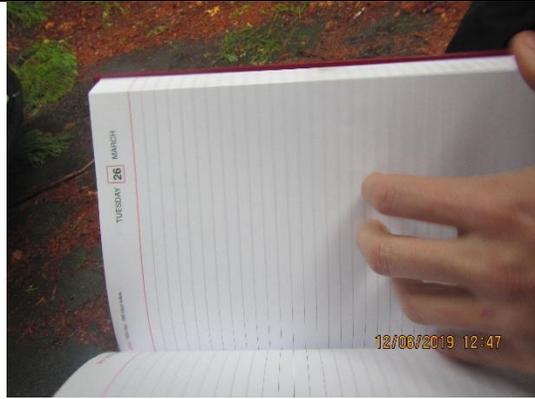
We next headed to the Main Lift Station where we met at approximately 1230. The Main Lift Station has a dedicated emergency power generator and a 1,000-gallon diesel underground storage fuel tank. The Main Lift Station generator also supplies power to other lift stations within their collections system including Guerneville, Guerneville, and Beanwood. The Main Lift Station is also the beginning of the primary force main conveyance which leads into the RRCSD WWTF.

We were told that the day tank at this lift station is old. Day tanks are used to provide a local supply of fuel for emergency generators. They also mentioned the day tank that failed at the WWTF in January 2017 has been replaced. This failure resulted in the loss of power to the treatment plant and Vacation Beach Lift Station and caused an SSO at the

Orchard Avenue manhole and aeration basin overflows at the WWTF. Mr. McIntee next asked to review the maintenance logbook which was provided (**Photo 10**). Mr. McIntee observed that the logbook appeared to be missing entries (**Photo 11**) and inquired about this. We were told that collections operators mainly utilize digital records on computerized maintenance management software (CMMS) versus logging maintenance entries in logbooks.



**Photo 10:** Maintenance log book for Main Lift Station. Many pages missing information (recorded in CMMS).



**Photo 11:** Example of page with no written entry.

We next walked to MH 17-23 located on Riverside Road behind the lift station (**Photo 12**) where historic SSOs have occurred. MH 17-23 has two pipes which flow into it and one pipe that flows out (**Photo 13**). We observed clear flows in the channel and some corrosion on top of the manhole barrel and on the base ring.



**Photo 12:** MH 17-23 on Riverside Road. Location of historical SSOs.



**Photo 13:** MH 17-23 on Riverside Road. Observed some corrosion on top of manhole barrel and on the base ring. Clear flows in channel at time of inspection.

I next asked them about the alarms for the lift station and if they could test them for us. Mr. Barker performed a high float test by manually raising the wet well alarm float above the top of the wet well surface to trigger an alarm, simulating high levels of sewage in the station wet well (**Photos 14 and 15**). We observed a red warning light on the front side of the lift station illuminated and flashing as expected for the test. They also contacted the operations desk to confirm that they received the alarm on SCADA<sup>14</sup>. The operations desk confirmed this and added there was an audible

<sup>14</sup> Supervisory Control and Data Acquisition (SCADA) system used for electronically monitoring wastewater systems.

alarm on their end as well. We were informed that the alarms at the lift stations are tested once a month and recorded in Maximo, RRCSD's CMMS. Wet well testing is also recorded in their CMMS.



**Photo 14:** High flow test being performed.



**Photo 15:** Wet well at Main Lift Station. Observed evidence of corrosion, exposed wiring, and pump rail wear.

**Location 3: 14300 Mill Street**

Our next location was 14300 Mill Street, where we met at approximately 1310. This location was chosen as it was the location of an SSO in 2013 due to FOG. This is a low-lying area near Fife Creek and many of the homes have been raised. The Agency opened the manhole for us, and a dark silty material could be seen on the bench (**Photo 16**). When asked about the cause of this material, we were informed that it was silt from the storms last winter. It was observed that the manhole cover did not have any pick holes. No visual signs of grease were observed at the time of inspection.

Mr. Royall next walked us over to one of their isolation valves (**Photos 17 and 18**) located adjacent to several residential homes on Mill Court including their sewer lateral connections. Agency staff stated the valve has historically been closed to isolate the homes, which were once at ground level to prevent flood waters from getting into the collection system through fixtures in the home. Many of the homes in this area have been raised (**Photo 19**). Agency staff stated that in the future when all the of the homes have been raised, they may no longer need to close this valve during storms.



**Photo 16:** Manhole located on Mill Street. Dark, silty material observed on the bench.



**Photo 17:** Isolation valve on Mill Court.



**Photo 18:** Isolation valve on Mill Court. Used to prevent excess floodwaters from entering private lateral sewer connections.



**Photo 19:** Example of raised home in area.

**Location 4: MH 51-8 at Guerneville Elementary School**

Following Mill Street, we moved to the Guerneville Elementary School at approximately 1325 in order to inspect manhole 51-8. This asset during the 2016 capacity study completed by RMC Engineering was identified as an area of potential surcharging in the collection system. When we arrived, MH 51-8 was bolted closed. We were told that this was due to its proximity to Fife Creek, so the cover wouldn't get displaced during storms. Mr. Winton had to return to his vehicle to get the proper tools to unbolt the cover. While he did this, the rest of us walked to the upstream manhole, 51-7, which was in the asphalt on the school's playground (**Photo 17**). We popped open this manhole and observed a clear channel, clear barrel, and a dark silty material on the bench (**Photo 18**). At the time of the inspection, we did not observe any other concerns.



**Photo 17:** MH 51-7 on playground of Guerneville Elementary School.



**Photo 18:** Inside of MH 51-7 located at Guerneville Elementary School. Minimal evidence of surcharging was observed inside manhole barrel. Dark, silty material observed on the bench.

When Mr. Winton returned, we proceeded to open manhole 51-8 (**Photo 19**). We observed that this manhole had a shallower depth than other manholes observed in the system. We observed a clear channel and clear barrel. We also observed dark staining on the manhole barrel approximately halfway to three-quarters of the way up, which indicates

flows consistently reach high levels within the manhole, evidence of surcharging. As with the upstream manhole, a dark silty material was observed on the bench (**Photo 20**).



**Photo 19:** Location of MH 51-8 in far corner of field at Guerneville Elementary School. Identified as vulnerable area of potential surcharging.



**Photo 20:** Inside of MH 51-8 located at Guerneville Elementary School. Evidence of surcharging was observed inside manhole barrel. Dark, silty material observed on the bench.

While walking back to the vehicles, Ms. Goodwin and I asked about RRCSD’s vacuum trucks. We were told that they have two trucks with a seven cubic yard capacity and one with a five cubic yard capacity. Ms. Goodwin and I asked if they had considered using their vacuum trucks to recapture some of the sewage flow during SSOs. They felt that given the flood conditions present during SSOs, they did not feel that using their vacuum trucks would have any significant impact or be able to collect very much flow. Additionally, this would require extra manpower and Agency staff explained that staffing is already spread thin during flooding and wet-weather periods. They would also still need to dispose of this flow somewhere else.

I followed up by asking if they had considered alternatives for recapturing flow during SSOs and storm events, such as a storage tank where sewage could be held temporarily until it could be released to the plant. Mr. Lincoln said that they looked into constructing a storage tank at the plant to expand equalization storage, but public comments raised during the California Environmental Quality Act (CEQA) review were not easily resolvable. Brenda Adelman, a member of the Russian River Water Protection Committee, had concerns about public outcry over the potential traffic caused by trucks driving up Neely Road for construction.

#### **Location 5: Rio Nido Lift Station**

Next, we met at the Rio Nido Lift Station at approximately 1400. This lift station appeared to be in similar condition to the two lift stations observed earlier in the inspection (**Photos 21 and 22**). Mr. Fischer requested an alarm test be performed. Mr. Barker conducted a simulated high float test on pump number three (**Photo 23**) and we observed the auto-dialer working as expected. We also visually observed an alarm light turn on during the test which was mounted on the lift station building. We observed that the main sewage flow line near the bottom of the wet well showed no evidence of surcharging or solids. A light FOG blanket was observed high on the surface of the wet well.

Mr. Fischer next asked about the condition of the lift station isolation control valves located below grade in large vaults located adjacent to the station’s wet well access doors (**Photo 24**). We were told one isolation valve along with an old flow meter were currently out of service. We learned after going out of service approximately one to two months ago,

RRCSD is currently waiting on new valve parts and plans during the next window of dry weather to replace all three valves at the same time. We learned these valves were installed in 1978, so RRCSD staff said it is only a matter of time before the other two valves fail and it is more efficient to replace them all at the same time.



**Photo 21:** High flow test at Rio Nido Lift Station. Observed evidence of corrosion and surcharging. FOG mat present.



**Photo 22:** Inside the Rio Nido Lift Station.



**Photo 23:** High flow test at Rio Nido Lift Station.



**Photo 24:** Valve No. 1 currently out of service at Rio Nido Lift Station.

#### Location 6: Willow Road and Canyon 2 Road

We next moved to Willow Road at approximately 1415 so we could view a mainline (MH 76-29 to MH 76-50) constructed beneath an existing drainage channel (**Photo 25**). This pipe was identified as a vulnerable area in RRCSD's Hazard Mitigation Program. The downstream manhole (MH 76-50) was located beside Willow Road and opened for the inspection team to observe. A dark silty material was observed on the bench (**Photo 26**). This mainline is located downstream from a restaurant, but no signs of grease were observed during the inspection.



**Photo 25:** Existing drainage channel adjacent to Willow Road. Mainline 76-29 to 76-50 runs beneath this channel.



**Photo 26:** Inside of MH 76-50 located on Willow Road. Dark, silty material was observed on the bench. No signs of FOG at time of inspection.

We next walked to Canyon 2 Road to view a mainline (MH 72-10 to MH 76-44) located downstream from the Rio Nido Roadhouse restaurant (**Photo 27**). Agency staff stated Rio Nido Roadhouse is one of their largest producers of FOG and has installed a grease interceptor to reduce FOG impacting the collection system. Agency staff opened both manholes for us to view. No evidence of grease was observed at the time of the inspection. However, both manholes had large amounts of a black silty material on the bench (**Photo 28**). Agency staff said this is likely silt from past flooding. In addition, the manhole downstream of Rio Nido Roadhouse had a white material coating the barrel. Agency staff said that this may be a bacterial growth.



**Photo 27:** Rio Nido Roadhouse restaurant, large producer of FOG. Grease interceptor has been installed at restaurant.



**Photo 28:** Manhole downstream of Rio Nido Roadhouse. Dark, silty material was observed on the bench. No signs of FOG at time of inspection.

### Site Visit Conclusion

Inspections at each of the six separate site locations throughout the sewer system provided a wealth of information about how RRCSD is currently operating, maintaining and managing their collection system.

## POST-INSPECTION CONFERENCE

At approximately 1435, Mr. Fischer conducted a short debrief discussion in the rain with RRCSD and the inspection team. Mr. Fischer explained that we would hold a joint call in the near future in order to have a full debrief. I mentioned the importance of updating the CIWQS Event ID SSO 856715 information in CIWQS to accurately reflect the entire volume of the spill going to surface water. Mr. Fischer next reiterated that we would submit a copy of our report to them following the inspection and thanked everybody for their time. We concluded the post-inspection conference at approximately 1445.

*Post-Inspection Note: On December 17, 2019, Mr. Booker updated the information in CIWQS for Event ID SSO 856715 to show that the entire flow volume (348,000 gallons) was discharged to a surface water body making it a Category 1 SSO.*

### Post-Inspection Telephone Conference on December 23, 2019

On December 23, 2019, an additional post-inspection conference was held (via telephone conference) to provide a full debrief of the inspection and requested follow-up items. Participants on this call included me, Mr. Fischer, Ms. Goodwin, Ms. Kiruja, Mr. Royall, Mr. Lincoln, and Mr. Booker. During this call we primarily discussed a list of requested items that was emailed to RRCSD by Ms. Goodwin on December 18, 2019 and clarified any questions the Agency had. Mr. Fischer also explained that review of these items could result in additional findings and any concerns related to these documents may be provided in a memo separate from this inspection report if necessary. Below is the list of requested documents:

1. Updated organizational chart listing RRCSD operations and management personnel (*SSS WDRs, Provision D.13(ii)*).
2. Current updated Wet Weather Standard Operating Procedures (SOPs) manual (*SSS WDRs, Provisions D.8 and D.10*).
3. Updated State Water Board “Pre-Inspection Questionnaire” information (updates since last completed in 2017).
4. Narrative description about how mechanical staff are being “maxed out” as stated at the 12-6-2019 inspection, including list of completed maintenance items (past 12 months) and list of any major outstanding maintenance items and costs still needed (*SSS WDRs, Provision D.8*).
5. RRCSD sewer fee rate structure (collection + treatment) including any updates or planned increases (*SSS WDRs, Provision D.9*).
6. Collection system “wish list” of priority capital improvements/projects needed for sewer system (*SSS WDRs, Provisions D.13(iv)(c) and D.13(viii)*).
7. List of any outstanding vacancies and description about history of vacancy and any plans moving forward to fill (*SSS WDRs, Provision D.9*).
8. Annual sewer operations training records including any training covered for sewer system management plan (SSMP) components including SOPs. Document who attended and topics covered (*SSS WDRs, Provisions D.8 and D.13(iv)(d)*).
9. Service calls and field records (past 3 years) including calls and resolutions for any private sewer issues (*Amended MRP, Section E*).
10. Narrative description detailing responsibilities for O/M for RRCSD mainlines/lateral connections, lower laterals, and upper laterals including description of homeowner responsibilities (*SSS WDRs, Provisions D.13(iii) and D.13(iv)*).
11. Narrative description of sewer pipeline cleaning statistics (mileage, etc.) (*SSS WDRs, Provision D.13(iv)(c)*).
12. Narrative describing enhanced maintenance area locations including reasons for enhanced maintenance and any plans moving forward to rectify issues (*SSS WDRs, Provision D.13(iv)(c)*).

13. List of spot/point repairs completed (past 2 years) including estimated costs for completion of each repair (SSS WDRs, *Provision D.13(iv)(c)*).
14. Narrative description of capital improvement program (CIP) schedules and funding for all planned improvements (next 5 years) (SSS WDRs, *Provisions D.13(iv)(c)* and *D.13(viii)*).
15. Narrative description of inspection (CCTV) areas inspected (past 2 years) including list of top concerns identified (PACP grade 4s or 5s). Please also describe any areas not yet inspected in the sewer system and provide any plans moving forward to complete inspections of these areas (SSS WDRs, *Provision D.13(iv)(c)*).
16. Narrative description about the Rio Nido smoke testing program /results including any plans moving forward to conduct additional smoke testing in other parts of the RRSCD sewer system (SSS WDRs, *Provisions D.8, D.13(iv)(c), and D.13(viii)*).
17. Narrative description of planned updates to be undertaken by RMC consulting for sewer system modeling (SSS WDRs, *Provision D.13(viii)*).
18. All SSMP Program Audits completed (SSS WDRs, *Provision D.13(x)*).
19. Narrative description about flow meter additions/improvements completed or planned at wastewater treatment plant.
20. Updated technical report for Orchard Ave SSO (ID #856715, changed from Category 1 to Category 2). This report also has discrepancies. See summary of Regional Board comments (*Amended MRP, Section C.5*).
21. Written sampling plan for large SSOs (*Amended MRP, Section C.5(iii)*).
22. Summary of all lift stations with a list of known problems at each (SSS WDRs, *Provision D.8*).
23. Summary of maintenance conducted at lift stations, siphons, air relief valves (last three years) (or provide the maintenance records if that is easier) (SSS WDRs, *Provisions D.8 and D.13(iv)*).
24. Call Center and WWTF Logbook pages (*Amended MRP, Section E*):
  - a. February 10 through March 15, 2019
  - b. January 1 through February 28, 2017
25. Main Lift Station Generator Test Records from maintenance system (SSS WDRs, *Provisions D.8 and D.13(iv)*).

## LIST OF ATTACHMENTS

**Attachment A:** 2017 Agency Performance Report from CIWQS

**Attachment B:** 2019 Agency Performance Report from CIWQS

**Attachment C:** List of requested documents, attached to December 4, 2019 email prior to investigation