



125 Years of Service

Ross Valley Sanitary District

General Manager's Monthly Bulletin

February 2025



Staff hard at work

As we wrap up February, our team has been diligently addressing key infrastructure maintenance while responding to unforeseen challenges. This month, we managed a spill in the system, swiftly mitigating the impact and ensuring minimal disruption. Alongside managing the spill, we successfully completed twelve manhole rehabilitations and nineteen point repairs, reinforcing the reliability and integrity of our collection system. These efforts reflect our ongoing commitment to proactive maintenance, ensuring the continued smooth operation of the RVSD system and protecting the community we serve.

Our headquarters are located at 1111 Andersen Drive in San Rafael. Our regular public lobby office hours are Monday through Friday, from 7:30 a.m. to Noon and 1p.m. to 4 p.m. Our dedicated staff are here to assist you via phone, email or in person.

We are available for emergency calls 24/7. If you see a public sewer emergency such as a manhole overflow, leaking pipe, or sewage on the ground, **please call the RVSD Emergency Line at 415-259-2949 as soon as possible.** Every minute counts to help avoid a public health or environmental hazard. Thank you!

Accomplishments

Getting Things Done: Staff Complete Nineteen Point Repairs

Our staff recently completed the installation of nineteen point repairs using the internal pipe patch repair system. This is a notable accomplishment, showcasing our ability to quickly and efficiently address critical issues within the RVSD collection system.

The majority of these repairs focused on "Grade 5" defects, which are categorized as "visible voids." These

defects are high priority because they pose significant risks to the system if not promptly addressed. They typically occur when a section of pipe deteriorates significantly, often due to age, corrosion, or external pressure. The pipe patch repair is about four-feet in length, and sometimes several can be installed on one pipe between two manholes.

We can complete these repairs in-house, minimizing downtime and avoiding costly external contracting. These repairs were conducted across various locations, including Larkspur, Greenbrae, Sleepy Hollow, Bon Air, San Anselmo, and Fairfax. The ability to perform these repairs internally ensures we maintain a high level of control, quality, timelines, and cost-efficiency, allowing us to keep the system running smoothly and reliably.



Staff completing point repair work

Maintaining System Integrity: Staff Complete Twelve Manhole Rehabilitations

Our staff recently completed twelve manhole rehabilitations within the District's service area. This is a significant achievement in maintaining the integrity of our infrastructure and greatly contributes to the overall health of the system.

These vital rehabilitation efforts ensure a free-flowing system by addressing issues such as rough or misaligned channels, failing bases, and deteriorating rims and covers. In some cases, roots and debris infiltrate manholes and the surrounding pipes, as shown in the photo. Additionally, manhole rehabilitations are planned in the wet season because higher groundwater levels reveal the locations where grouting can stop infiltration and inflow. If left unaddressed, these problems can lead to blockages and even spills. Additionally, misaligned rims and covers can create unwanted noise for nearby residents.

New manhole installations further enhance maintenance access to challenging infrastructure, improving efficiency and ensuring that our team can effectively manage the system. These repairs were carried out across various locations, including Larkspur, Fairfax, San Anselmo, and Kentfield, demonstrating our commitment to keeping the entire service area robust and well-maintained.



Roots invading a manhole

Education and Information

FM14 Force Main Spill at Back of Bon Air Center: A Rare Opportunity for Force Main Condition Assessment

On February 6, 2025, the force main (FM14) that conveys wastewater from the Larkspur Pump Station (PS14) to the Greenbrae Pump Station (PS13) sprung a leak during rainy conditions. Our on-call staff reacted quickly when notified, and within a half-hour switched a valve and diverted the wastewater flow from PS14 to FM2

toward the treatment plant. Staff also posted warning signs around the area to avoid contact with the wastewater and the nearby creek waters. The spill flowed into the creek that runs behind Bon Air Center and out to tidal Corte Madera Creek where it quickly dissipated in the high storm flows. About 88,000 gallons escaped to the creek, but staff managed to divert about 25,000 gallons back into the system by opening a sewer rodhole in the parking lot.

A force main is a pressurized pipe downstream of a pump station. Due to the storm and the preceding wet weather, we estimate that the wastewater that escaped the FM14 force main was over 90% storm water and less than 10% sewage by volume. No debris was observed in the creek and some paper waste was cleaned up from the parking lot, which was disinfected. Water quality sampling conducted after the spill confirmed that the creek water quality returned to normal within two days of the spill, and warning signs were subsequently removed.

FM14 is used as a secondary force main, which means it is out of use in typical conditions. It is a backup system used intermittently to divert high flows during wet weather, or otherwise isolate other parts of the system for their maintenance. Because it is secondary it was able to be shut off without necessitating immediate bypasses or modifications to the force main system.

FM14 is a reinforced concrete cylinder pipe (RCCP) that was installed in 1965, sixty years ago. Over half of the District's force main system is RCCP, which consists of an outer layer of steel-reinforced concrete, a middle layer of a steel cylinder, and an inner layer of cementitious material. It is built to last, so a defect in this pipe was unexpected, even after a half-century of use.

After the storms passed, staff carefully excavated the area of the leak, using hydroexcavation techniques with our Vaccon combination (vacuum-jetter) truck to preserve the pipe. We discovered that there were two parallel fourteen-foot-long cracks along the top of the pipe, and one hole along one of the cracks where the wastewater spilled out. An abandoned fence post with a large concrete plug had been poured directly onto the force main. The force main is only 31 inches below ground surface at the spill site, more shallow than expected. A concrete slab and shipping container were directly on top of this posthole concrete, focusing weight like a spike directly on the pipe.

This defective force main provided a rare opportunity to learn about the condition of RCCP in our system, which ranges in age from 40 to 67 years. To perform condition assessment, RVSD televises all of its gravity sewer system by CCTV, accessing it through manholes. RVSD uses this information to set priorities for maintenance, repair and replacement. Force mains do not have access points and televising is rare or nonexistent, because one has to excavate and cut a hole in the pipe which is expensive and can then create a weaker point in the system.

To be able to televise this force main, the crews had to work hard to de-water the pipe, which was underneath seasonally high groundwater levels. While keeping the pumps on full-throttle, staff then inserted our state-of-the-art CCTV camera to assess the condition of the pipe from within. About 100 feet of pipe was dewatered and televised on February 19, 2025.

The CCTV inspection revealed the cause of the spill and provided valuable insight into the pipe's condition. We



FM14 pipe defects at location of leak



Fence posthole concrete that was poured directly onto the FM14 pipe where it spilled

discovered an unknown “high point” of elevation in this force main at the spill location where corrosive hydrogen sulfide gas was allowed to accumulate for decades. The corrosive gas compromised the structural integrity of the pipe, erasing the cementitious layer and eroding the steel cylinder. We measured about 70 linear feet of corroded pipe crown in this area, and about 28 feet of severely corroded pipe around the spill location where the metal layer flaked away to the reinforced concrete outer layer.

In force main design and construction, air release valves are installed at such high points to prevent accumulation of gas pockets that cause such corrosion impacts and to maintain the flow capacity of the force mains. The installation of this key asset may have been overlooked all those years ago, with the omission finally catching up with the District sixty years later. An alternative theory is that soils differentially settled creating a localized high point on a formerly flat sewer. The posthole concrete and concentrated weight on the pipe may have been a contributing factor, but the cause of this spill was pipe corrosion caused by the lack of air release at a force main high point.

This finding comes as a relief because the 60-year-old RCCP was in good condition outside of the 70-foot-long corroded pipe. This bodes well for the rest of the RVSD force main system that goes all the way to the CMSA treatment plant in San Rafael.



Corroded steel on crown of FM14, twelve feet upstream of leak location

Capital Improvement Program (CIP) Project Updates

Fairfax Capacity and Creek Crossings Project

We are preparing for the Fairfax Capacity and Creek Crossings Project, which will improve the capacity of the sanitary sewer system and address critical creek crossings in the Town of Fairfax. The project will involve replacing approximately 3,259 linear feet of existing sewer main and installing 2,500 linear feet of new relief sewer to address capacity issues and prevent the flooding of downtown Fairfax with raw wastewater.

The project is on track to go out to bid by September 5, 2025, with construction scheduled to begin by October 2025.

We are coordinating closely with the Town of Fairfax on this project. Residents may begin to see utility markings in the streets as we assess and plan for necessary infrastructure work. These markings will indicate utilities from both the District and other agencies involved in the project.

Visit the [project webpage](#) for more information and updates.



FY 24/25 Gravity Sewer Improvements Project

This month, the contract for the FY 24/25 Gravity Sewer Improvements Project was awarded to Glosage Engineering, Inc., the low bidder, for a total of \$6,137,410. Construction is expected to begin April 2025.

This project will replace approximately 2.8 miles (14,042 linear feet) of aging gravity sewer pipelines in San Anselmo, Fairfax, and Kentfield. Work will involve open-cut removal, pipe bursting, and reaming, as well as the installation of new high-density polyethylene (HDPE) pipe and 33 sewer manholes. The project is expected to improve sewer infrastructure and address critical maintenance needs in high-risk areas. Notably, the awarded bid came in 26% below the engineer's estimate, making it a cost-effective solution for our community.

Visit the project [webpage](#) for more information and updates.



Open-cut installation

Lift Stations 20, 31 & 32 Improvements

Work continues on underground utilities at LS20, and electrical equipment has been delivered for LS31 and LS32. We expect to wrap up work at LS31 and LS32 within the next two months.

LS31 and LS32 are on Riviera Circle at Via La Brisa and Corte Del Bayo, respectively, in the Larkspur Marina neighborhood. LS20 is in Larkspur Landing next to East Sir Francis Drake Blvd, and near the northbound 101 on-ramp.

The project will convert the lift stations to submersible pump configurations, saving maintenance and energy costs. The project also includes rehabilitating the two small force mains for the LS31 and LS32 lift stations (completed), new electrical control panels, communications equipment, and flow meters will improve the reliability of the lift stations and allow for faster response times to issues at each station.

Visit the project [webpage](#) for more information and updates.



Lift Station 20

Please remember, if you see a public sewer emergency such as a manhole overflow, leaking pipe, or sewage on the ground, **please call the RVSD Emergency Line 24/7 at 415-259-2949 as soon as possible**. When making an emergency call, be prepared to provide your name, phone number, and address where the incident occurs. After-hours calls will route to our on-call staff for immediate assistance.

Sincerely,

Stay Connected



RVSD is on Nextdoor. Subscribe to our page [here](#) as one of the ways you can find out if there will be construction in your neighborhood.



We are also on LinkedIn! Follow our page [here](#) to stay up to date on current job announcements and other news about the District.

Public Meetings

The Ross Valley Sanitary District Board of Directors conducts monthly public meetings. The public is invited to attend these in-person meetings, held at our new Board Assembly Room:

Ross Valley Sanitary District

1111 Andersen Drive
San Rafael, 94901

The public can also attend the meeting remotely from a computer, tablet, or smartphone.

Ross Valley Sanitary District Board Meetings are typically held on the third Wednesday of each month at 5 p.m. For more information, please click [here](#) or contact the District's Board Clerk at 415-259-2949 or clerk@rvsd.org.

**The next RVSD Regular Board Meeting is scheduled
for Wednesday, March 19, 2025.**

[Meeting Access](#)

[Agenda Posting](#)

Want an alert when the next Board Meeting agenda is available?
Please write to our [Clerk of the Board](#) to request upcoming agenda alerts.

Sewer FAQs

Review our Frequently Asked Questions (FAQs) that explain sewer overflows, what to do if you see one, and other commonly asked questions about the sewer system.

[Review FAQs](#)

Before Hiring a Plumbing Contractor

Check the California Department of Consumer Affairs Contractors State License Board (CSLB) for more information.
Make sure any plumber you hire is familiar with District policies and programs
for any private property sewer emergency.

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Contact Us

Phone & Email

415-259-2949 (24/7)
Email: info@rvsd.org

Hours

Mon - Fri
7:30 a.m. - noon
1 p.m. - 4 p.m.

New Address

1111 Andersen Dr
San Rafael, CA 94901

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