



THE PIPELINE

News From Your Ross Valley Sanitary District

Reopening of Path Marks Completion of Historic Project

Ross Valley Sanitary District just celebrated the completion of a once-in-a-generation capital improvement project that replaced a major force main sewer pipe running along Corte Madera Creek in the Ross Valley.

A ribbon-cutting ceremony on Saturday, December 10, brought together community stakeholders including Friends of Corte Madera Creek Watershed, Marin County Bicycle Coalition, the County, local residents and others to celebrate the completion of the project with its many benefits to the community.

The nine million dollar construction project, known as the Kentfield Force

Main Project, replaced a pipeline installed in the 1970s that serves approximately 60% of the Ross Valley. In completing the project, the old single Techite pipe running under the berm along Corte Madera Creek was replaced by two parallel, 3,600-foot pipes made of HDPE, a stronger pipe material.

The 7,200 feet of new HDPE pipeline will increase capacity and enhance reliability while improving the overall operational flexibility of the system.

In completing the project, the District worked with Marin County Flood Control and the Friends of Corte Madera Creek Watershed to replace culverts along the creek, which allow tidal water to flow into



RVSD's Board of Directors and staff were joined by an enthusiastic group of neighbors and stakeholders at the opening celebration.

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CCTV Confirms Critical Condition of Ross Valley's Sewer System

Our new close-circuit TV (CCTV) system is presenting vivid images of a failing sewer system and confirming both a preliminary assessment of the system made by General Manager Brett Richards shortly after joining the District in 2008 and a more complete assessment presented last spring.

While the CCTV survey of the entire system is less than 10% complete, what has been discovered and is being compiled for review by the RVSD Board of Directors is nothing short of alarming.

There are many pipes that will need

immediate attention as images show where sections of pipe have disintegrated, large cracks are present, and/or pipes have lost structural integrity (shown here).

"This is what a sewer system looks like when it has been essentially neglected for decades," says Mr. Richards. "The good news, if any, is that we are seeing

and mapping the damage like never before. Our new camera system is pinpointing exact locations, so we can develop an efficient plan for dealing with the most

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The new CCTV system records images of damaged pipes and pinpoints their exact locations.

An Affordable Infrastructure Solution Requires A Focus on Collection and Treatment Costs

Solving our community's \$300 million infrastructure challenge is going to demand that we look very carefully where ratepayer fees are being spent. While the District will continue its efforts to provide a transparent picture of its operations, it is critical that ratepayers understand that over 50% of their sewer rate fee goes to Central Marin Sanitation Agency (CMSA), our jointly-owned treatment plant.

CMSA is a state-of-the-art facility that treats wastewater for Ross Valley, San Rafael, and Corte Madera. It has an annual budget of \$16.9 million of which Ross Valley ratepayers fund about \$7.3 million.

Given the cost to fix our aging sewer system, it makes sense to evaluate where sewer dollars are best spent: upstream in the collection system or downstream at the treatment plant. A case in point is to

look at CMSA's decision to bond for \$68.7 million in 2006 to increase the wet weather capacity of the plant. The question is whether this money might have



The treatment plant on Anderson Drive near Orchard Supply, serves Ross Valley, San Rafael and Corte Madera customers.

been better spent fixing the aging pipes upstream in San Rafael, Ross Valley and Corte Madera, so less stormwater would enter the system and the plant expansion could have been cut back or eliminated. It could be easily argued that the \$68.7 mil-

lion investment did not provide the best solution to the overall problem.

This past decision is stormwater under the bridge (or down the pipe), but going forward the communities of Ross Valley, Corte Madera and San Rafael should take an objective look at their collection systems and treatment plant to see if they are being operated with the "big picture" in mind.

It would also be prudent for ratepayers to look at the efficiency of the treatment plant operations including evaluating a public-private management solution. The citizens of Novato voted for this option in 2010 to save money.

We invite ratepayers to visit our website and/or attend monthly board meetings to learn more and to comment on this issue.

For information on your treatment plant, please visit <http://www.cmsa.us> and attend its monthly board meeting as well.

Smoke to Show Stormwater Infiltration Over 45 Million Gallons Can Enter Pipes During storms!

The most compelling evidence that our sewer system is in desperate need of repair is to consider the difference between the dry and wet weather flows in our pipes.

On a typical summer day, our flow is about five million gallons. During a major storm event, this volume can increase to 50 million gallons!

One dependable and economical way to identify where millions of gallons of unwanted stormwater are infiltrating our system - where it has the potential to overwhelm the pipes and cause big spills - is by blowing smoke into sewer pipes and monitoring where it escapes.

Smoke Testing is very effective at locating breaks in public mains as well as the private lateral pipes that connect properties to the public sewer system. The technique also shows where there

are improper connections to the sewer system, such as roof and other drainage



Smoke billows from an uncapped cleanout pipe during the pilot test.

systems. Our collection system is designed for wastewater only.

The white smoke is manufactured specifically for this type of testing. It is EPA endorsed and is a non-toxic, non-staining substance that is generally con-

sidered to be harmless to humans, pets, food, and material items. The specific product being used by RVSD has been employed successfully for over 30 years throughout the United States.

The District ran a successful pilot of the testing procedure this fall. It will begin an ongoing program each year during the dry months, when it is easier to see where there are defects in the system. In the meantime, we ask that homeowners check to ensure that their drain systems are not connected to the sewer system. Previous or current property owners may have unknowingly performed these illegal connections.

Property owners should also check that their private lateral pipe is not leaking. The District estimates that as much as 50% of the millions of gallons of stormwater entering the system originate on private property.

To learn more about Smoke Testing, please visit rvsd.org.

New Ramjet Pipe Cleaners Deliver Productivity Gains

Ideal Tools for The Ross Valley Sewer System

One of the early “must have” requests made by the District’s management team was the purchase of two state-of-the-art Ramjet pipe cleaners.

Considered standard equipment by most sewer agencies, these powerful tools use high-pressure water jets to scour sewer pipes and they do the job at an incredible rate of speed!

The two new trucks, which were recently put into service, are poised to cut the time it takes to clean the entire 200 miles of public pipe from eighteen months down to eight months, which will have some very important benefits.

First and foremost, the Ramjets, which deliver 2000 psi of water pressure, do a superior job of cleaning our pipes when compared to the mechanical Rodders they will all but

replace (see photo comparison). Considering the critical state of our system, the cleaner pipes will increase flow

also allow the robotic TV camera to move faster through the pipes on its mission to map our entire system.

The Ramjets will be valuable in emergency situations as they can be deployed very quickly and have a special pump feature which delivers a jack

hammer action that can break through line blockages.

While there are more benefits including safety and better preparation of damaged pipe for repairs, suffice to say that the

new trucks will have a very positive impact on productivity now and for years to come.

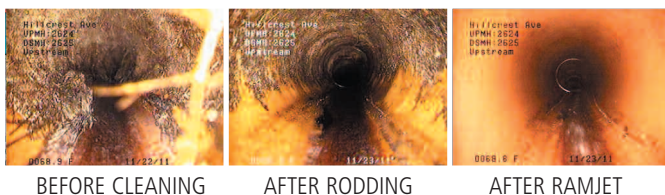


The District’s new Ramjet cleaners are not only efficient, but the model selected is the ideal size for our narrow roads.

capacity and require less cleaning the next time they are serviced.

The Ramjets are also being used in tandem with our new state-of-the-art Close-Circuit TV (CCTV) system that surveys pipes after they are cleaned. The

cleaner pipes not only allow for a better assessment of their condition, but



BEFORE CLEANING

AFTER RODDING

AFTER RAMJET

Consolidation Study Seeks Volunteers

As the Ross Valley community faces the daunting challenge of repairing its sewer infrastructure, politicians and others, including the Marin Civil Grand Jury, are suggesting that consolidation of sewer agencies (and other public agencies) is a cost-saving and worthwhile endeavor.

Ross Valley Sanitary District believes that an impartial study of the fiscal impact of consolidation on its ratepayers is not only warranted at this time, but it believes that the study will help the com-

munity better understand where its sewer dollars are being invested and help provide a clear path forward in managing its vital sewer service.

The District will employ an outside consultant to facilitate the study, which will include gathering input from members of the community who will be invited to participate in the study process.

To learn more about the study, please visit rvsd.org. To request an application to participate or to contact the District with your questions, email us at info@rvsd.org.



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the adjacent wetlands and help protect nearby homes from flooding.

"The immediate benefits should be to the fish," says Sandra Guldman, President of Friends of Corte Madera Creek Watershed. "The new culvert that connects to McAllister Slough will allow fish to take refuge during storms when the creek flow is high, and we can expect the overall water quality in the slough to improve, too."

She is also hopeful that the new culverts will someday allow for an increase in the amount of wetlands in the area.

Jack Curley, Capital Planning and Project Manager for Marin County Flood Control District, noted that partnering with the District saved the county's Flood District about \$30,000. By replacing a tidal gate along with one of the culverts, Curley believes the Berens Drive neighborhood will be less impacted by high tides and stormwater runoff.

The popular multi-use path running alongside the creek from the bridge at

Bon Air Road to the District's pump station across from Kent Middle School was also refurbished. Along with new asphalt and a crushed quarry running path, the benches were relocated to make the path ADA compliant and more user-friendly to all.

The Kentfield Force Main Project, which began in June of 2010 on South Eliseo Drive in Greenbrae, was designed to replace an inferior and rigid pipe material called Techite with new pipe made of flexible, high-density polyethylene (HDPE). The work completed in 2011 stabilized the berm along Corte Madera Creek in key areas before the two new parallel pipes were installed. The berm stabilization enhances the seismic safety of the berm and force main system.

The project also paves the way for the installation of a new flow meter later this year, which will provide important data about both wastewater flows and the amount of unwanted stormwater entering the system from pipes upstream.

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critical problems first."

In an April 7, 2011 board presentation on sewer rates and a plan for the future (online at rvsd.org in the Meeting Minutes), Mr. Richards stated that many miles of old pipes could fail at any time as they are beyond their useful lives. He therefore recommended that 170 miles of the District's 200 miles of public sewer pipes should be replaced in less than ten years. The latest CCTV survey footage should help the RVSD Board of Directors make the need for repair crystal clear to ratepayers and community leaders.

"Thanks to our CCTV system, we no longer have a problem that is out of sight and out of mind," says Richards. "If our roads were in the same condition as our aging pipes, people would not drive on them and they would demand that they be fixed. Hopefully, now that everyone can see the sewer problem, we can move forward quickly and get it fixed."

Please attend an upcoming board meeting to learn more about our challenge and possible solutions.



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