

2019



YEAR IN REVIEW

ORGANIZATIONAL VALUES

Integrity

Honest and ethical policies, communication and actions without bias.

Respect

Appreciate differences in background, opinion and approach, and acknowledge with high regard.

Trust

Our actions and words inspire fairness and support.

Loyalty

Dedicated to the Public, the District and its employees.

Responsibility

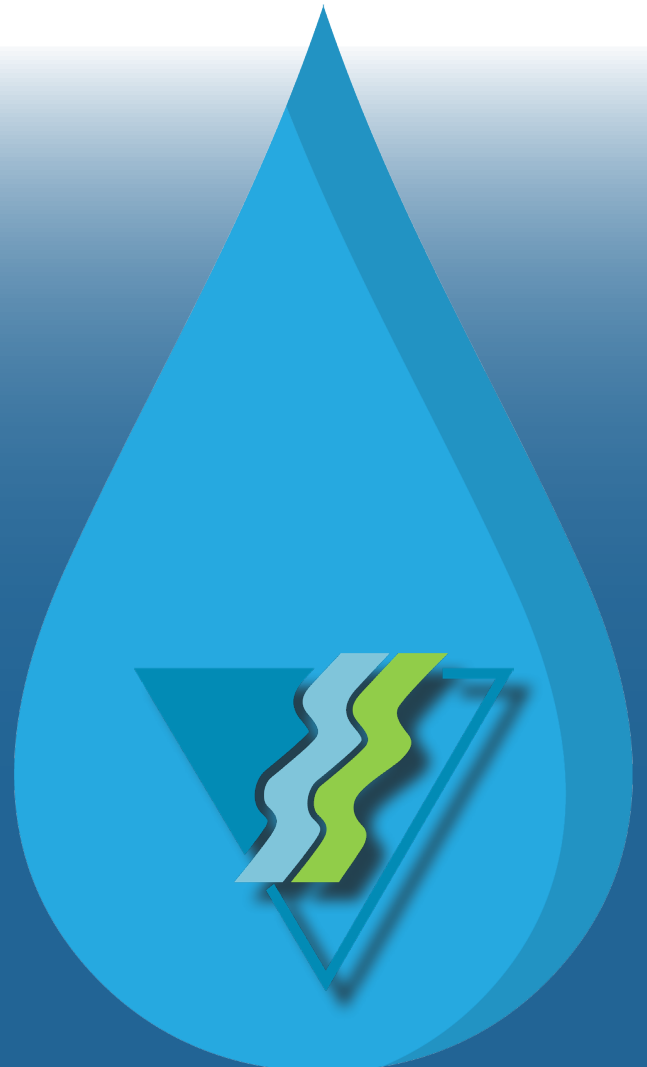
Demonstrate prudent use of all public and environmental resources.

Professionalism

Conduct interactions in a courteous and respectful manner and be accountable for personal actions and decisions.

CONTENTS

Board of Directors.....	3
Mission Statement.....	4
Vallecitos at a Glance.....	5
General Manager’s Message.....	6
Working in Water.....	7
“The Work We Do” Video series.....	8
CIP Sewer Repair.....	9
New Technology.....	10
Confined Space Partnership Training.....	11





Betty Evans
Vice President
Division 1



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2019
Board of Directors





MISSION STATEMENT

The mission of the Vallecitos Water District is to serve as water and wastewater specialists, providing exceptional and sustainable services.

How do we achieve our mission?

Supporting and retaining highly trained staff that is knowledgeable, engaged, team-oriented and responsive to the community and other agencies.

Proactively, innovatively, and continuously improving the quality and efficiency of our operations and service.

Providing continuous outreach and education to our customers on issues and topics that impact the services we provide and our role as water and wastewater specialists.

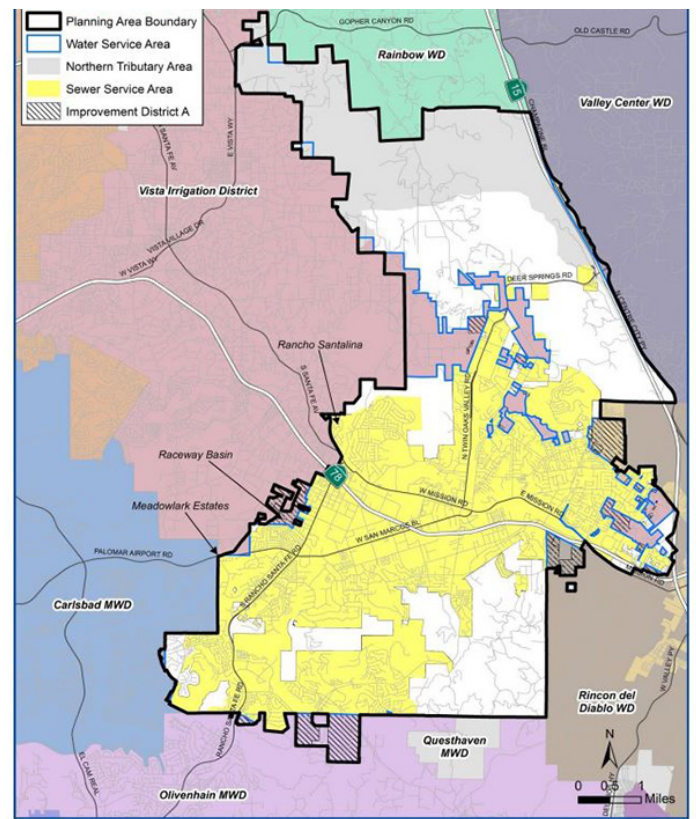
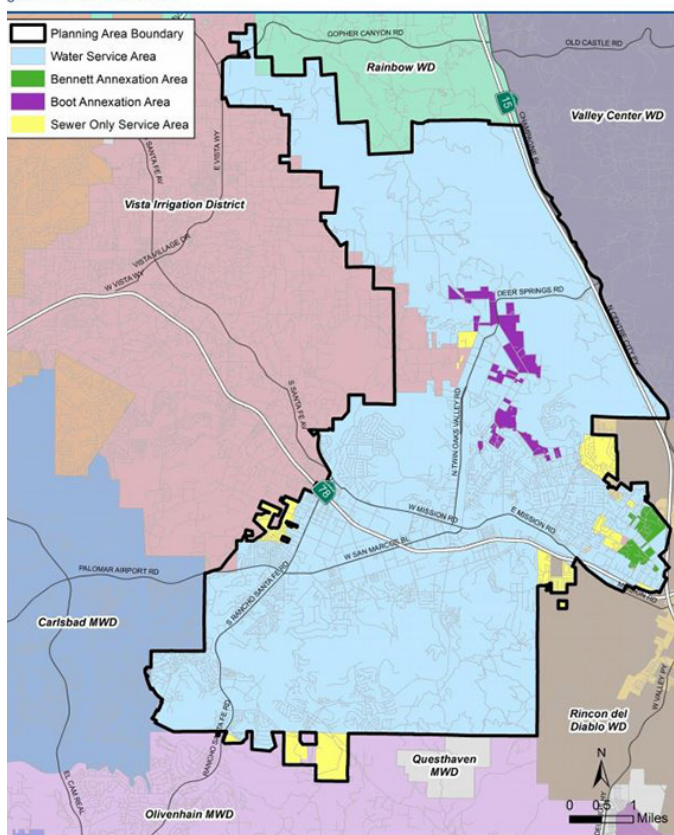
Providing support for the good of the region to remain a respected and active industry partner.

Vallecitos

at a glance

Water Service Area

Wastewater Service Area



The District provides water, sewer, and reclamation services to a service area greater than 45-square miles. This includes a population of more than 100,000 residents of San Marcos, the community of Lake San Marcos, portions of the cities of Carlsbad, Escondido, Vista and other unincorporated areas.

- 358 miles of water pipes
- 10 water pumping stations
- 19 water storage reservoirs
- 276 miles of sewer pipeline
- 4 sewer lift stations
- 1 water reclamation facility
- Twin Oaks Reservoir #1 (33 million gallons)
- Twin Oaks Reservoir #2 (40 million gallons)

General Manager's Message

Our Plan for the Future

Looking back on 2019, our principal achievement was the approval of the District's Master Plan. The District updates its Water, Wastewater and Recycled Water Master Plan approximately every five to ten years to keep up with General Plan amendments made by agencies responsible for land use within the District's boundaries.



The Master Plan updates the District's water and wastewater profile and incorporates approved land uses for each jurisdictional agency within the District's boundary. It also identifies and evaluates various water supply alternatives, that may be available to the District now and in the future. A Final Program Environmental Impact Report (PEIR) was prepared in conjunction with the Master Plan because the Master Plan describes a long-term Capital Improvement Program (CIP) that would be implemented through Ultimate Build-Out. This PEIR assesses the environmental effects associated with the District's Master Plan and details the impacts, at a programmatic level, that CIP projects may create on the community and the environment.

In May of 2019, the Vallecitos Board of Directors approved the Master Plan, which is now a dynamic long-term planning document that provides a conceptual layout of the District's future. Accordingly, as we look to the years ahead, the District will need to focus on creating a prioritized asset and infrastructure replacement schedule.

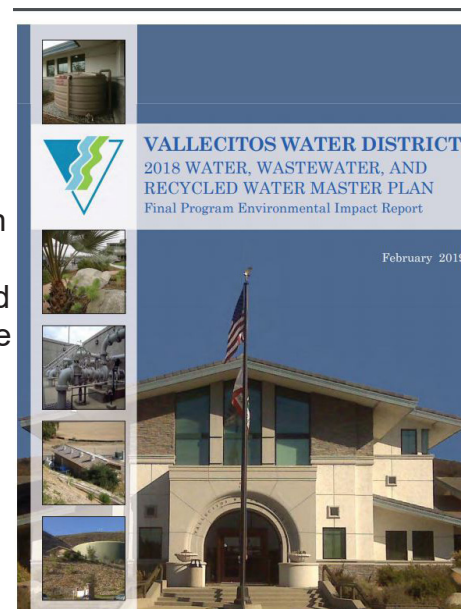
To make that happen, the District studied and created a new position titled "Asset Management Supervisor." This position plans, organizes, directs, coordinates, and oversees the activities of our infrastructure asset management program for water, wastewater, and recycled water systems. The position works to predict asset reliability as well as develop asset renewal and replacement schedules.

In coordination with the hiring of the Asset Management Supervisor, the District has embarked on a pipeline condition assessment program that will largely determine our required future funding/reserve levels. Additionally, we have budgeted--via our CIP process--for a condition assessment of some of our oldest pipelines and our most common (ductile iron) pipelines.

In 2019 we also updated the District's water and wastewater Capital Facility Fees. The previous structure had led to a financial structural instability, resulting in revenue shortfalls of over \$14 million between the two funds. Combining staff and consultant efforts with an extensive stakeholder engagement process, we presented the Board with new Cap Fees that would: pay for all future capacity increasing projects identified in the aforementioned Master Plan; address all existing debt service requirements; provide for future debt issuance; and, recover the combined revenue shortfall amounts. The new Cap Fees resulted in an approximate 21% increase over the previous Fees.

As we chart this new path into the future, I would like to acknowledge the Vallecitos Board of Directors for their outstanding leadership. I also want to thank all our employees for carrying forth the District's ongoing commitment to the communities we serve.

Glenn Pruum



California Law Creates Path to Water Job for Veterans

California Assembly Bill 1588 provides a pathway for military veterans to apply their skills and experience toward state and industry-supplied certifications in the water and wastewater treatment and distribution operator fields. The bill makes it possible for veterans to receive credit for their military education and experience when applying for civilian water and wastewater system operator certifications in California.

Along the same lines, the San Diego County Water Authority produced a 2020 calendar focusing on the “Faces of the Water Industry.” Vallecitos highlighted three former military veterans who now work in the water industry as shown below. Further, our “Current Job Openings” website can be found here: <http://www.vwd.org/departments/human-resources/current-job-openings> while internships at the San Diego County Water Authority can be found here: <https://www.sdcwa.org/internships> .



WORK FOR WATER

CAWATERJOBS.ORG

VETERANS
in
Water

A large graphic with an orange background. At the top, the words "WORK FOR WATER" are written in large, bold, white letters with a blue outline. Below this, a blue banner contains the text "CAWATERJOBS.ORG" in white. At the bottom, the words "VETERANS in Water" are written in blue, with "in" in a smaller font size.

The Work We Do

The screenshot shows the Vallecitos Water District website. The header includes the logo and navigation links: Home, About Us (highlighted), Departments, What's New, Transparency, and I Want to... Social media icons for Facebook and Twitter are in the top right. A left sidebar contains a menu with items like Awards, Contact, Facilities, Mission Statement, Organization Chart, Sustainability, The Work We Do (selected), Transparency, Water Sources & Partners, and Frequently Asked Questions. The main content area is titled 'THE WORK WE DO' and includes a video player showing workers in safety gear performing a valve replacement. Text on the page describes the video series and lists 'Replace a valve' as one of the activities.

Vallecitos has created videos to document many of our departments on film. Check out these videos to see our crews in action.

See our website at: <http://www.vwd.org/about-us/the-work-we-do>

This graphic features the Vallecitos Water District logo on the left, with the text 'Valve Replacement' in a large white font on a blue background. Below this, it says 'Construction Department'. The right side of the graphic is a photograph of two workers in safety gear and hard hats standing in a trench, working on a large blue valve. The background of the photo shows construction materials like bags of cement.

Rock Springs Sewer

The District maintains an existing 8-inch gravity sewer pipeline that conveys wastewater from the intersection of Rock Springs Road and Bennett Avenue west through a greenbelt area to an existing 12-inch pipeline near Rock Springs Road and Lancer Park Avenue. Due to its location near a drainage channel, ongoing capacity issues, and inflow and infiltration problems, this sewer was budgeted for replacement and upsizing in the 2018/19 Fiscal Year. This project had been identified in the District's Capital Improvement Master Plan. The existing 8-inch clay pipe was abandoned and replaced with new 15-inch PVC pipe west of Matthew Lane and 12-inch PVC pipe north and east of Matthew Lane. The pipe is sized to handle ultimate build-out wastewater flows within its upstream collection area.

Construction began October 19, 2018, and the final punch list was completed on October 4, 2019. A major challenge on the project was protecting the open channel ditch, which was identified as a "Waters of the United States," meaning it is an environmentally sensitive area. The Contractor had to install the new sewer pipeline under the channel using trenchless tunneling methods in three different locations in the San Marcos Woods Homeowners Association Greenbelt.



New Inspection Tool Aids Vallecitos Pipeline Assessments



After nearly completing construction in 2008, developers walked away from the 500-acre High Point subdivision in the northern section of the District. Water facilities installed for the subdivision were left unused for ten years and never accepted into the general system by the Vallecitos Water District (VWD).

Recently, new developers CalWest and TrueLife Communities decided to try and complete the project, and approached VWD to determine what is needed to complete water and sewer service.

The water mains for this project, made of ductile iron pipe (DIP), had not been used for ten years. VWD needed to conduct a thorough pipe condition assessment to determine their current status. Infrastructure Engineering Corporation (IEC) and subcontractor PICA (Pipeline Inspection and Condition Analysis) Corporation recently tested the integrity of the water main including the pipeline appurtenance (blow-offs, air vacs and fire hydrants) connections to the main pipeline.

Several processes were included in the High Point Pipeline Assessment project. Crews inserted a tool developed by PICA Corporation called a “See-Snake” into the pipeline, and gathered data showing the condition of the pipes. The See-Snake used an electromagnetic method on iron pipes, which can “see” past cement mortar, epoxy, or polyethylene lining to any actual damage to the iron structure of the pipe itself.

The See-Snake tool was pulled through the pipe at 17 feet per minute, delivering data as the inspection was being performed in real-time. The technology expedites information gathering,

saving time and money by accelerating the process without sacrificing attention to detail. VWD was then able to assess the pipeline’s wall thickness, potential iron loss, and other anomalies to determine the condition of the existing pipeline.

“Good decisions start with good data,” said Kris Embry, PICA Regional Manager. “Our ultimate goal in testing this new system is to more quickly and efficiently secure accurate condition assessment information, allowing the District to address any weak links and prevent potential pipeline failures long before they happen.”

Once the inspection was completed, any necessary repairs or replacements took place. Two water pipelines were inspected for the condition analysis, one running along Woodland Heights Glen starting at Briar Patch Glen; and one running along Elderwood Glen, totaling approximately 3,067 feet. The larger 2,300 feet section of pipe is near the District’s existing Palos Vista tank.

Over time, pipelines are exposed to corrosion from aggressive soils, electrical currents, physical force, or other factors. The result from corrosion could be a pipeline break interrupting water service, losing water supplies, and incurring monetary losses.

When an inspection finds corrosion, the affected section of iron pipeline will be isolated, removed, and replaced by PVC pipe. Because iron pipeline can be susceptible to corrosion from multiple causes, they are no longer being routinely installed in the Vallecitos Water District.

The inspection has been completed, and a full report is forthcoming. John Childs, Construction Inspector II with VWD, says the initial review discovered two badly corroded areas of pipeline, and excavations verified the accuracy of the data.

As VWD continues to test the new process and the accuracy of the data, we will determine whether to adopt the new technology for future working pipeline assessments.

Vallecitos WD Training Preps Firefighters for Wastewater Plant Emergencies



North San Diego County fire agencies teamed up in November with the Vallecitos Water District (VWD) for confined space training drills. The drills, held over a two-week period, prepare firefighting professionals to respond to emergencies in facilities such as wastewater treatment plants, and maintain their confined space certification.

This year, training took place at the Vallecitos Water District's Meadowlark Reclamation Facility (MRF). Firefighters were able to see how a wastewater plant operates, and gain familiarity with a facility new to them. Fire personnel worked with VWD staff in a team effort, and both groups benefitted from the opportunity to understand each other's equipment and protocols.

Wastewater Plant Supervisor Dawn McDougle said, "The confined space training with the fire agencies has helped prepare us for future scenarios that could happen at the plant."

VWD MRF crews and Risk Management/Safety Department staff selected the Meadowlark facility because it provided both vertical and horizontal confined spaces for training drills. MRF supervisor Dawn McDougle suggested MRF's storm wet well be used for the confined space exercise, since it is relatively environmentally clean.

Each day during training, eight different fire agencies trained during morning or afternoon session, breaking up groups for various skill set station drills. Stations included an "Arizona vortex," a new piece of equipment fire agencies use for rescues; a review of confined space rescue equipment; and training in confined space permit requirements. Confined space permits are required by OSHA before making any kind of confined space entry or rescue. Vallecitos and other member water agencies use such permits. Firefighters also participated in a complete walk-through tour of MRF.

MRF staff reviewed the conditions and possible actions within filter station space with fire crews. MRF staff discussed decision-making for confined space entry, and conditions they might encounter, such as chemical exposure, and lock-out/tag-out requirements.

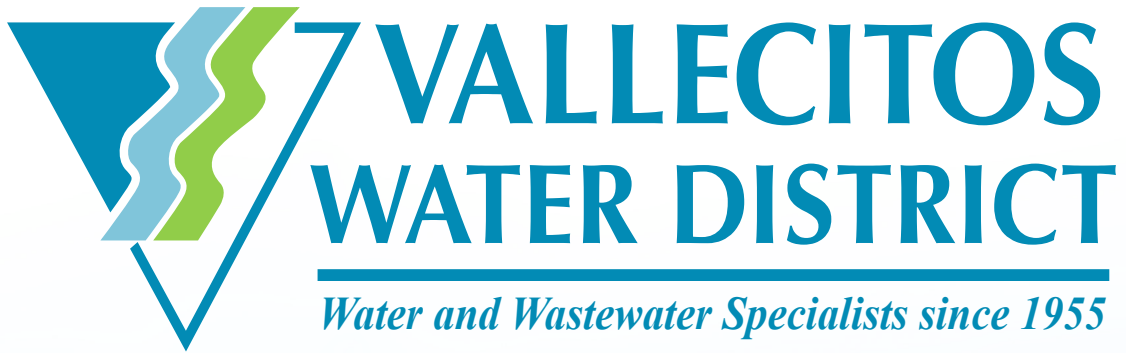


The culmination of this year's training was an all-hands mock confined space drill scenario at the MRF storm wet well. In this drill, participants were required to respond to a simulated mechanical failure with a station pump, leaving Vallecitos staff "trapped" in a hole. First responders needed to "rescue" Vallecitos staff. Fire department personnel used the vortex system to rescue personnel trapped in the stormwater wet well. As part of the rescue scenario, fire teams incorporated VWD staff involvement in the rescue mission.

VWD wastewater collection crews also completed the confined space training with the firefighters. Collection crews used their own davit (vehicle mounted crane) system, and had input throughout the training.

Fire agencies were impressed with staff and their operation of the Meadowlark Reclamation Facility. As a result of training, fire agencies can now respond more efficiently.

"We appreciate the collaboration with fire agencies and the time they took to explain their procedures to VWD staff. We look forward to future training with the fire agencies," added McDougle.



WWW.VWD.ORG