

THE YEAR IN REVIEW 2021



**VALLECITOS
WATER DISTRICT**

Water and Wastewater Specialists since 1955

OUR BOARD OF DIRECTORS



JIM PENNOCK
DIVISION 1



JIM HERANDEZ
DIVISION 2



CRAIG ELITHARP
DIVISION 3



MIKE SANNELLA
DIVISION 4



TIFFANY BOYD-HODGSON, PhD
DIVISION 5



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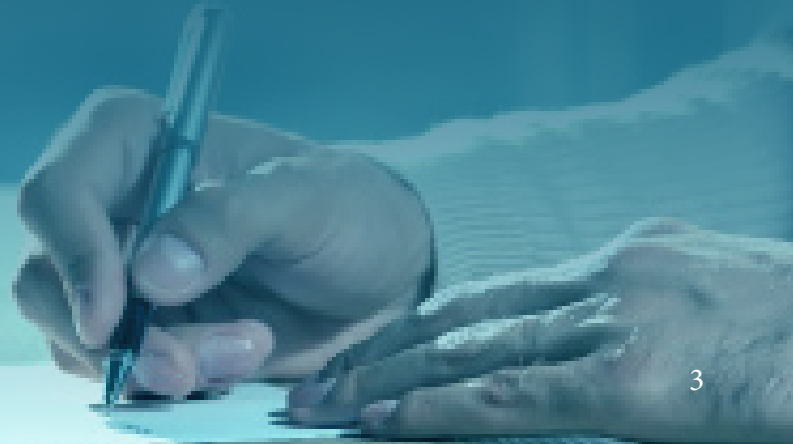
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Vallecitos Water District is governed by a 5-member Board of Directors. All are invited to attend the public Board meetings to learn more about the District. When safe, meetings are held at the District's Administrative offices at 201 Vallecitos de Oro in San Marcos.



GENERAL MANAGER'S MESSAGE

For the Vallecitos Water District (VWD), calendar year 2021 was a marked improvement over 2020. The year started with many of Vallecitos staff working remotely, but as winter warmed into spring, staff were gradually returning to the office. By summertime, almost all staff were back in the office.

Three themes resonated with me in 2021: stewardship, innovation, and adaptability.

Stewardship

Stewardship points back to our Board of Directors. Specifically, in 2021 the District received two awards from the Special District Leadership Foundation (SDLF). VWD received the District Transparency Certificate of Excellence in recognition of its outstanding efforts to promote transparency and good governance. VWD also received the “District of Distinction – Silver Level” accreditation for its sound fiscal management policies and practices in District operations. Further, the District received a ‘AA+’ rating from Fitch ratings (stories on page 14).

Innovation

The District used innovative techniques to maintain and upgrade our system. The District upgraded the San Marcos Interceptor (sewer line), inspected our massive sewer outfall to the coast, and installed backup Tesla batteries (stories on pages 9, 10 and 12 respectively) at critical locations throughout the District.

Adaptability

This includes our ability to navigate an increasingly complex world where the pace of technological change is ever quickening, volatility is increasing, regulatory requirements are becoming more stringent, and health policies and mandates impact the workforce. As an example, Board meetings were placed on Zoom, which increased public participation and improved the District’s transparency.

People from the board room, to our treatment plants, to maintenance and operations crews across our service territory are the fundamental driver of success of living up to our mission: delivering reliable, affordable, and responsible water, wastewater and recycled water services to our customers.





ABOUT VALLECITOS

The District's service area is 45-square miles providing water, sewer, and reclamation services to a population of more than 105,000 residents of San Marcos, Lake San Marcos, portions of Carlsbad, Escondido, Vista and unincorporated communities.

- 364 miles of water pipes
- 11 water pumping stations
- 19 water storage reservoirs
- 279 miles of sewer pipeline
- 4 sewer lift stations
- 1 water reclamation facility
- Twin Oaks Reservoir #1
- Twin Oaks Reservoir #2

As Vallecitos does not have a local water supply within its service area, it is reliant on imported water deliveries from the Metropolitan Water District of Southern California (MWD) and the San Diego County Water Authority (SDCWA), which is their largest water purchaser. MWD owns and operates the Colorado River Aqueduct, and also obtains the most water from the State Water Project for delivery of Sacramento-San Joaquin Delta water to Southern California.

They import water 444 miles from the Sacramento-San Joaquin Delta in Northern California and 242 miles from the Colorado River and store and treat it at Lake Skinner in Riverside County. The treated water is then delivered to Vallecitos via the SDCWA aqueducts that run throughout the county. Once the water enters our boundaries, it is delivered to customers through Vallecitos' large, well-planned system of pumps, reservoirs and more than 350 miles of pipelines.

ORGANIZATIONAL VALUES

Vallecitos is committed to providing reliable and sustainable services at the lowest possible cost.



Integrity

Honest and ethical policies, communication and actions.



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.

For more than 65 years, Vallecitos Water District has been your water and wastewater specialists, providing water, wastewater, and reclamation services to the City of San Marcos; the community of Lake San Marcos; parts of Carlsbad, Escondido and Vista and other unincorporated areas in north San Diego County.

Achieving our Mission

MISSION STATEMENT



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



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

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



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.



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



Our Commitment

Committed to Service and Environmental Excellence

Since 1981 Vallecitos has been one of the region's leading recycled water producers, now recycling up to 74 percent of the wastewater generated in its service area.

Looking Up to a Higher Standard of Excellence 24/7

Our crews are available 24 hours, 7 days a week to ensure that you always have reliable water and sewer service.

Conserving Resources Today for Availability Tomorrow

As natural resources become more limited, Vallecitos has increased recycled water capacity and created the region's first sustainable demonstration garden.

Certified for You

Vallecitos field staff are certified by the State of California to make them that much more capable of providing the reliable service our customers have come to expect.

Quality Assured to Deliver a Passing Grade

Your water is securely delivered and put through thousands of tests annually and consistently meets or exceeds all federal and state drinking water standards.

Saving Water

Vallecitos has cutting-edge conservation programs to help customers comply with ever-changing regulations.



CAPITAL PROJECTS 2021

San Marcos Interceptor - a Milestone Project in Size and Significance

The San Marcos Interceptor project replaced the District's 1960s era 21-inch diameter sewer interceptor with more than 12,000-feet of 42-inch diameter sewer pipeline between Twin Oaks Valley Road and Pacific Street.

The Interceptor is a large trunk sewer pipeline receiving and conveying wastewater by gravity to the Encina Wastewater Authority.

Phase one was completed in 2014-15. Phase 2 will complete the remaining 3,400-feet of the westernmost project corridor extending from Via Vera Cruz to Pacific Street.

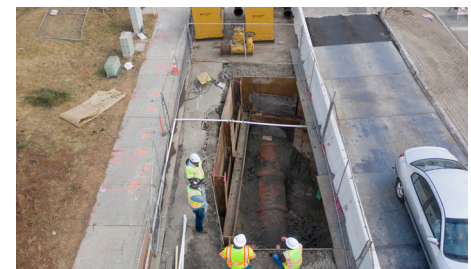
The project used state-of-the-art trenchless technology to install a 115-ft long tunnel under an existing concrete culvert under the Pacific Street and San Marcos Boulevard intersection.

The 42-inch diameter fiberglass reinforced plastic Interceptor sewer was installed inside a 60-inch diameter steel casing pipe.

A MicroTunnel Boring Machine (MTBM) was used inside an excavation. The MTBM is remote-controlled by an operator on the surface and is laser-guided to ensure it stays within the designed horizontal and vertical alignment. Special mitigation measures and biological monitoring were required for construction during bird nesting season between February 15 and September 15.

Additionally, tribal paleological monitors from Native American tribes of significance in the area were represented during excavation work in the creek.

This replacement project was originally identified in the District's 1991 Master Plan and has been phased to be completed prior to City of San Marcos development of the Creek District.





Tapping into Technology

The Vallecitos Water District is using a specialized camera and sonar to evaluate the condition of a sewer pipeline between San Marcos and Carlsbad.

The Land Outfall West pipeline is a large sewer line that stretches from El Camino Real to the Encina Water Pollution Control Facility in Carlsbad, which treats some of the wastewater generated within Vallecitos' service area. Originally installed in 1986, an evaluation of the pipeline's current condition using closed-circuit TV (CCTV) cameras and sonar will help the District identify and prioritize its ongoing pipeline renewal and maintenance activities.

The pipeline ranges in size from 24-inches to 54-inches in diameter and is approximately 3.2 miles long.

The technology allows the District to perform thorough inspections without digging up streets and disrupting neighborhoods.

The District regularly inspects manholes and performs routine inspection activities. Using cameras and sonar will provide more detailed information to help the District plan ongoing maintenance and repair to ensure the pipeline will continue to perform well.

It's a cost-effective way to ensure the District's assets are performing well. The technologies have really improved in the last 15 to 20 years. Previously, the only way to inspect a pipeline was to take it out of service and dig it up.



CAPITAL PROJECTS 2021

Meadowlark Water Reclamation Facility



Headworks Auger Upgrade

The old augers were replaced with larger augers to efficiently remove rags and debris to protect downstream equipment, such as pumps. Pumps were fouling with rags and debris that were passing by the smaller augers. The fouling of the pumps caused significant maintenance and rebuilding of the pumps. By replacing the smaller augers with larger ones, efficiency of the treatment plant was increased while reducing labor and staff time.

Odor Scrubber #1 Upgrade

The District replaced the scrubber that utilized chemicals to treat odors with to a biological scrubber that requires no harsh chemicals, only Miracle Gro.

Water Distribution Upgrades

Each year, the Water Operations Department assesses the condition of all the District's 19 reservoirs and tanks, 17 of which are steel. Every three years, the tanks are physically inspected. Tank inspectors or "divers" check the integrity of the epoxy coating on the interior and exterior of the tanks, as well as the steel beams and girders that reinforce the tanks. The goal is to identify the work required at each location to determine which tanks need coating, painting, repairing or replacing damage due to corrosion.

Typically, steel tank coatings have around a 20-year life span, depending on the year they were sprayed. However, this could potentially be longer or shorter depending on the quality of coating and inspection. At the top of the tank, rust typically inhabits the beams and girders due to the air and moisture located at the top of the tank. Below the water level, there is typically adequate protection of the tank due to cathodic protection and anodes that are used to inhibit rust, plus the lack of air for rust to form. If rust or corrosion is found on roof structures or tank appurtenances, the areas can be sand blasted and recoated as needed.

By adhering to a comprehensive and coordinated District-wide water tank repair and recoating program, the District will be able to repair and/or replace tank structures in a timely manner to continue to provide reliable water services well into the future.





one location, Meadowlark Reclamation Facility, will receive the mega pack. The Battery energy storage system will work in conjunction with the photo-voltaic systems and the generators that are currently installed.

The total value of the batteries being donated to the District is over \$6.7 million. These systems are estimated to save the District \$1,615,836 over the first 10 years. Tesla will perform the maintenance during the 10-year contract. After ten years, the District has several options which include recycling the batteries, selling them, contracting with Tesla for an extended maintenance agreement, or assuming maintenance responsibilities for the remainder of the 20-year useful life.

Tesla Battery System

The Tesla Battery Storage System came to completion after working with the California Public Utilities Commission (CPUC). The CPUC's Self Generation Incentive Program is funded by electric utility ratepayers; therefore, the batteries, installation, and maintenance were no cost to the District or the ratepayers.

The purpose of the battery storage system is to provide self-generation and resiliency during Public Safety Power Shutoff events. The District applied for the grant in December 2020, and successfully reserved the funds from San Diego Gas & Electric based on eligibility.

Tesla evaluated eight locations and determined that six are viable locations to implement the battery systems. Five locations will receive the power pack, while



SOCIAL MEDIA SUCCESSES



VIDEOS

Vallecitos' top Facebook post for 2021 was a video about the District's South Lake Reservoir. This former drinking water reservoir located near South Twin Oaks Valley Road, is now a bustling wildlife habitat. The post reached 6,746 people with more than 1,000 engagements. The video can be viewed at <https://bit.ly/VWDSouthLake>.

Vallecitos Water District
 Performance for your post
 6,746 People Reached
 4,239 3-Second Video Views
 235 Reactions, Comments & Shares

130 Like	26 On Post	102 On Shares
31 Love	13 On Post	18 On Shares
1 Wow	1 On Post	0 On Shares
44 Comments	12 On Post	32 On Shares
23 Shares	25 On Post	0 On Shares

769 Post Clicks
 66 Clicks to play | 141 Link clicks | 562 Other clicks

NEGATIVE FEEDBACK
 0 Hide post | 0 Hide all posts
 0 Report as spam | 0 Unlike Page

6,746 People reached | 1,002 Engagements

The second highest video post was posted on the annual "Imagine a Day Without Water" event. This national day of education and action highlights the value of water and the need for infrastructure investment. This year, Vallecitos partnered with the City of San Marcos and featured San Marcos Mayor, Rebecca Jones, in a video about water conservation. The video can be viewed at: <https://bit.ly/VWDImagine2021>

Vallecitos Water District
 Performance for your post
 248 Reactions, Comments & Shares

159 Like	30 On Post	103 On Shares
26 Love	4 On Post	25 On Shares
1 Haha	0 On Post	1 On Shares
1 Wow	0 On Post	1 On Shares
66 Comments	7 On Post	61 On Shares
27 Shares	27 On Post	0 On Shares

275 Post Clicks
 40 Clicks to play | 12 Link clicks | 220 Other clicks

NEGATIVE FEEDBACK
 0 Hide post | 0 Hide all posts
 0 Report as spam | 0 Unlike Page

4,275 People reached | 522 Engagements

The top non-video Facebook posts for the year highlighted: POSTS

- The San Elijo Hills water main break, where a car drove into a fire hydrant.
- A one-time water bill refund resulting from legal damages and interest charges refunded by our water wholesaler.
- How the District was prepared for the annual Super Bowl flush," where customers flush at the same time during half-time.
- The Vallecitos Board of Directors participated in a ribbon cutting ceremony to commemorate the District's new solar projects.
- Grant funding that may be available for customers to pay their water bill as a result of COVID-19 hardships.

watching the big game will head to the loo and simultaneously flush their toilets. Are we worried? Nah...our wastewater treatment plant operators are well prepared and know how to compensate for this higher flow. #FlugetThis

SUPER BOWL HALFTIME FLUSH

62 Like | 27 On Post | 35 On Shares
 5 Love | 2 On Post | 3 On Shares
 32 Haha | 6 On Post | 26 On Shares
 1 Wow | 0 On Post | 1 On Shares
 19 Comments | 3 On Post | 16 On Shares
 18 Shares | 11 On Post | 7 On Shares

172 Post Clicks
 4 Photo views | 2 Link clicks | 166 Other clicks

NEGATIVE FEEDBACK
 0 Hide post | 0 Hide all posts

In 2017, Vallecitos' Board agreed to pursue development of district-wide renewable power sources using existing open space to benefit the District and its ratepayers. Two projects are now complete; two arrays at the pair of Vallecitos owned reservoirs in Twin Oaks Valley, and an array at the (Seven) Lift Station #1 located on San Marcos Blvd.

Today, the Vallecitos Board officially finished the project with a ribbon cutting at the Twin Oaks Valley location. "The project is a g... See more

86 Reactions, Comments & Shares

55 Like	5 On Post	54 On Shares
7 Love	0 On Post	7 On Shares
12 Comments	2 On Post	10 On Shares
8 Shares	3 On Post	0 On Shares

76 Post Clicks
 9 Photo views | 3 Link clicks | 64 Other clicks

NEGATIVE FEEDBACK
 0 Hide post | 0 Hide all posts
 0 Report as spam | 0 Unlike Page

County Emergency Rent & Utility Assistance

Have you been recently impacted by COVID-19? Are you behind on rent and/or utility payments? Special relief available for eligible renters.

27 Like | 9 On Post | 18 On Shares
 2 Love | 1 On Post | 1 On Shares
 0 Comments | 0 On Post | 0 On Shares
 15 Shares | 15 On Post | 0 On Shares

37 Post Clicks
 2 Photo views | 4 Link clicks | 31 Other clicks

NEGATIVE FEEDBACK
 1 Hide post | 0 Hide all posts
 0 Report as spam | 0 Unlike Page

2,190 People reached | 81 Engagements

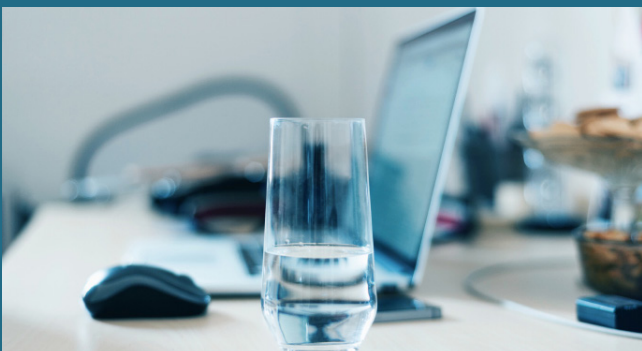
FINANCIAL OUTLOOK AND AWARDS

Fitch Ratings recently reaffirmed Vallecitos Water District's credit rating of 'AA+', with a "Stable" Outlook improved to "Positive." Fitch's analysis determined the factors for the favorable rating include a very strong financial profile and very low leverage.

The AA+ rating is a testament to the actions taken by the Vallecitos Board to ensure that Vallecitos is properly run financially.

Further, at the Board meeting on August 4, 2021, the Board of Directors approved staff to move forward with contracts necessary to issue \$28 million in 2021 Certificates of Participation (COPS). The Preliminary Official Statement was posted and distributed in August 2021. The terms of the 2021 COPS are estimated at a fixed all-in true interest cost of 2.24% for 30 years.

In this way, Vallecitos will be able to reimburse itself for previously constructed projects, address the Capacity Fund revenue shortfall, and provide funding for upcoming projects. Learn more at bit.ly/FitchVWD.



Special District Leadership Awards



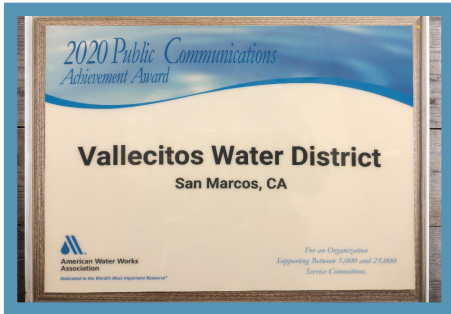
The Vallecitos Water District (VWD) recently received two awards from the Special District Leadership Foundation (SDLF). VWD received the District Transparency Certificate of Excellence in recognition of its outstanding efforts to promote transparency and good governance. VWD also received the "District of Distinction – Silver Level" accreditation for its sound fiscal management policies and practices in District operations.

To receive the award, VWD demonstrated the completion of essential governance transparency requirements, including conducting ethics training for all Board members, properly conducting open and public meetings, and filing financial transactions and compensation reports to the State Controller in a timely manner.

In addition, the District's Board of Directors and executive staff showed proof of educational training in public governance, as well as compliance with ethics and harassment prevention training.

AWARDS FOR VALLECITOS

2020-21



2020 Public Achievement Award

Work We Do video series

Each year the AWWA recognizes those who have made a profound impact to AWWA and the water industry. In 2021, Vallecitos' Public Information Department was recognized for the year 2020 for the District's "Work We Do" video series.



Two Awards - Excellence in Action

LG Sonic Technology

The Vallecitos Water District received two awards for its innovative use of technology to reduce algae blooms at Mahr Reservoir.

The District received the "Excellence in Action" national award from the WaterReuse Association and the "Innovation and Resiliency" state award from the California Association of Sanitation Agencies. The awards were given for the District's use of an ultrasound technology to address water quality issues at the Stanley A. Mahr Reservoir, which resulted in a reduced need for chemical treatment.

The most common method of treating algal blooms is with chemicals. VWD instead uses technology developed by the international company LG Sonic, which provides an overview of the water quality allowing identification and treatment of algal blooms.

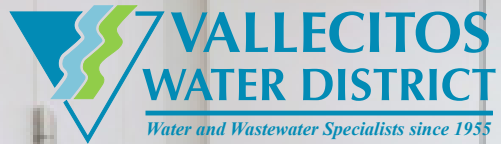
The LG Sonic buoy can create a sound barrier in the top water layer, which affects the buoyancy of the algae, preventing it from rising where it can absorb sunlight for photosynthesis to grow.

With overall algae levels reduced by this technology, the need for chemical treatment is also reduced, allowing the District to provide exceptional quality reclaimed water to its customers.

The VWD has contracts with Carlsbad and Olivenhain Municipal Water District to provide water as needed, as much as five million gallons of recycled water daily.



Every 10 minutes, a buoy in the reservoir measures and monitors green and blue-green algae population, pH, turbidity, dissolved oxygen and water temperature. The data is collected in real time and uploaded to a web-based software. The software uses the data to predict algal blooms three to ten days in advance.



www.vwd.org