



# Purple Pipe

Volume XXIII Spring/Summer 2021



## Recycled Water Flowing

*The Hesperia and Apple Valley Subregionals are producing clean Title 22 recycled water*



*Recycled water in a retention pond adjacent to the Hesperia Subregional water recycling facility.*

Both the Hesperia and Apple Valley Subregionals are producing and exporting Title 22 recycled water. This marks the first time that both plants are exporting recycled water at the same time. In Hesperia, the water is flowing into a large retention pond adjacent to the treatment facility. In Apple Valley, the recycled water is flowing to percolation ponds along the Apple Valley Golf Course. Once final regulatory approval is given by state water officials, the recycled water will be ready for its original intended use. In Hesperia, the recycled water will be pumped to a two-million-gallon city owned water tank located on Live Oak St. From there, the City of Hesperia will use the water to irrigate parks and the golf course. In Apple Valley, the water will be pumped to a large water tank on the Northwest corner of Brewster Park and the town will distribute the water to parks, the civic center and the golf course for irrigation. The Subregionals represent a change in VWVRA's approach to wastewater treatment from a central model to a regional treatment model. The new approach provides clean recycled water for the communities of Hesperia and Apple Valley so they can reduce the use of groundwater.



*Recycled water at one of two ponds along the Apple Valley Golf Course.*

• Title 22 disinfected tertiary recycled water is the most stringent water definition for water reuse. It describes water that has been both filtered and disinfected.

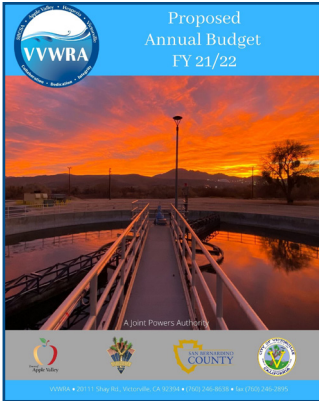




# VWRA Board Approves Balanced 21/22 Budget

The VWRA Board of Commissioners has approved a balanced budget for the 2021/2022 fiscal year. The budget sets aside funding for the final phase of the renewable natural gas project, new energy efficient blowers for the aeration process and improvements to our UV disinfection system. The budget also includes funding for 5 new positions including a wastewater operator, a maintenance mechanic and septage receiving attendant. They will help fill some of the 13 positions that were eliminated due to budget cuts five years ago.

In addition, the board approved their annual rotation of board officers. Commissioner Bill Holland from the City of Hesperia will serve as the commission chair for the coming fiscal year.



2021/2022 fiscal budget



Commissioner Bill Holland

## Commissioner Jones Visits VWRA



VWRA Commissioner and Victorville Mayor Debra Jones (*in white blazer*) recently toured the main treatment plant in Victorville to learn more about the wastewater treatment process and to see the improvements being made to our facility. She also took part in the annual awards luncheon with staff.

**Purple Pipe**

VWRA  
Board of Commissioners

Bill Holland / Hesperia  
Debra Jones / Victorville  
Scott Nassif / Apple Valley  
Paul Cook / SB GSA 64 & 42

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Contact: info@vwra.com 20141 Shay Rd, Victorville, CA 92394

## MDCP Presents Award to VWRA

General Manager Darron Poulsen was proud to accept the Outstanding Service Award from the Mountain and Desert Career Pathways (MDCP) on behalf of VWRA. The award highlighted VWRA's commitment to MDCP. VWRA was happy to take part in a video produced by MDCP that highlighted employment opportunities in local industry including wastewater treatment.







# Around the Plant

## Core Values Awards given to 3 employees

VWRA has established three core values as guiding principles for how we do business. Those values are collaboration, dedication, and integrity. VWRA General Manager Darron Poulsen recently recognized staff members who exemplify each of the core values.



Accounting technician Kyle Parker was recognized for collaboration.



E & I Technician Derek Evans was recognized for dedication.



Business Application Manager Latif Laari was recognized for integrity.

## Congratulations!



Craig Taylor earned his Grade 2 Electrical Instrumentation Certificate.



Kalin Westover passed his Grade 3 Wastewater Operations Exam.



Lucas Wilkens passed his Grade 2 Wastewater Operations Exam.





# Digester #4 receives upgrades



A beam of sunlight through a port opening creates a dramatic scene as Maintenance Mechanic Marcos Avila uses a steel extension attachment from a vactor truck to vacuum out a large amount of grit and sand at the bottom of Digester #4. Clean digester floor (inset photo).

Digester #4 at VWRA has undergone a renovation that included a thorough cleaning, inspection, and several upgrades. The one-million-gallon anaerobic digester is just over ten years old and was scheduled for routine maintenance. With the help of Anaergia Inc., VWRA used this time to add some improvements to the process. After draining the sludge inside, about 10 feet of grit was found caking the bottom of the 75-foot-wide digester. With help from staff at our member agencies, including the Town of Apple Valley, the City of Hesperia, and the City of Victorville, VWRA team members removed about 17,000 cubic feet of grit and sand. The improvements include new service boxes on the roof that will support more modern mixing technology. The mixers circulate the sludge inside the digester to assure all the material is treated consistently. Similar improvements are planned for Digester #5.

Digesters “digest” the solids pulled from the wastewater. The process is very similar to what happens inside the human stomach. The contents of the digesters are heated to about 100 degrees to create an optimal environment for microbes to consume organic waste and kill dangerous pathogens.



One of 3 new service boxes on top of digester #4.





# RNG Project...It's a gas, gas, gas!

Work is nearing completion on a green renewable natural gas (RNG) project at VVWRA's main treatment facility. The project is a partnership with VVWRA, Anaergia Inc. and Southwest Gas. Methane gas is a natural by-product of wastewater treatment process and is a potent greenhouse gas. VVWRA has traditionally captured a portion of that gas from our anaerobic digesters and used it to generate electricity to assist in powering our plant operations. Under the new partnership, all of the methane produced by our five anaerobic digesters will be converted into renewable natural gas. The meth-



Aerial view of the gas scrubbing facility.

ane pulled from the digesters will be piped to a new "scrubbing" facility that will remove hydrogen sulfide (H<sub>2</sub>s) and other impurities bringing it to natural gas standards. Once "scrubbed", the biogas will be pressurized and injected into an existing Southwest Gas pipeline that runs through VVWRA property. The biogas will mix with traditional natural gas and be distributed to Southwest Gas customers. RNG is a vital renewable energy source because it's always available. Wind and solar technologies are intermittent energy sources and can only generate energy when the sun is shining or the wind is blowing. RNG is available 24/7 and can be delivered within any natural gas pipeline.



SWG gas injection site.

## VVWRA Finance Team Earns Budget Award for 9th year in a Row



For the ninth year in a row, the VVWRA Finance Department has earned the prestigious the Distinguished Budget Presentation Award from the Government Finance Officers Association (GFOA). Congratulations to Controller Chieko Keagy and her staff, Senior Accountant Xiwei Wang, Accountant Kyle Parker and Accounting Technician Anne Mazzarella. The award represents a significant achievement by VVWRA. According to the GFOA, "It reflects the commitment of VVWRA and it's staff to meeting the highest principles of governmental budgeting." In order to receive the budget award, VVWRA had to satisfy nationally recognized guidelines for effective budget presentation. These guidelines are designed to assess how well an entity's budget serves as a policy document, a financial plan, an operations guide and a communications device.



# DAMS Installs New Board



The new Board of Directors for the Desert and Mountain Section of the California Water Environment Association was recently sworn in at an installation luncheon at Spring Valley Lake Country Club. The board organizes local training and networking events for those in the wastewater field. Covid 19 forced the cancellation of virtually every DAMS event in 2020, but the board is hoping to resume a nearly full schedule this year. 2020 Board President Bill Kuhlmann from Helendale CSD will continue in that role for 2021. Other board members include Sam Arvizu and Barbara Sopel from the City of Victorville, Ron Scriven from Crestline Sanitation, Wesley Garrison and Matthew Franklin from the City of Barstow, Kristi Casteel and David Wylie from VVWRA, Alex Aviles from Helendale CSD, Ryan Cerros from Woodward /Curran, George Lopez from Haaker.

## DAMS Hands Out Awards



Kristi Casteel



Derek Evans



Latif Laari



Robert Townsend

Covid-19 forced the cancellation of the Annual CWEA/DAMS Awards dinner in December of 2020. With the state reopening in June, the awards were given at the CWEA/DAMS Installation Luncheon. Four members of VVWRA’s staff won awards. (From left to right) Assistant to the General Manager Kristi Casteel won the award for Administrative Support Person of the Year, Derek Evans won Electrical Instrumentation Person of the Year, Business Applications Manager Latif Laari won Supervisor of the Year and Environmental Compliance Inspector Robert Townsend won EC Person of the Year.



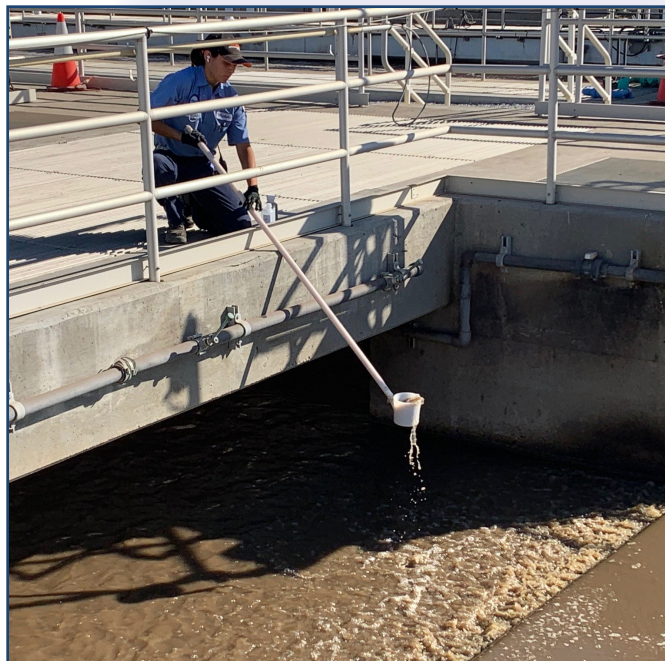


# “Every day is Different”

If you ask our staff members why they like their jobs, one of the things you’ll hear most often is that “every day is different”. A wastewater career offers a variety of tasks and challenges so rarely are two days the same. The team at VWVRA covers a number of sites including the two subregionals in Apple Valley and Hesperia, various lift stations and, of course the main plant in Victorville.



E & I Technician Derek and E & I Intern Adalberto Arteaga perform maintenance on a level indicator and other electronics used to monitor the recycled water percolation ponds at the Apple Valley Golf Course.



Operations intern Michelle Quintana collects a sample of the “mixed liquor” at the aeration basins. Mixed liquor is a mixture of raw wastewater and activated sludge. The aeration basins are where 90% of the treatment process takes place.



Senior Operator Johnny Bustos prepares to replace UV light bulbs used in the ultra violet light disinfection process. UV light is the final treatment before recycled water is ready to use.





# The Back Side..

## Sunrise at VWRA



A beautiful High Desert sunrise over VWRA's secondary clarifiers.

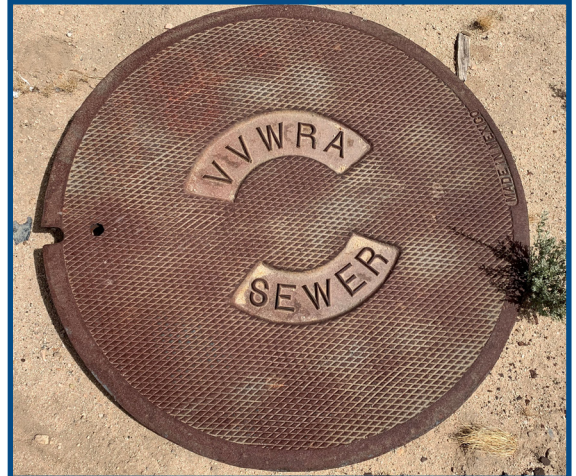
Photo: James Pasiaka.



## Fighting Fire

Utility Worker Chuck Trammel puts out a fire during our annual fire extinguisher training. The training focused on the acronym PASS which stands for pull the pin, aim at the base of the fire, squeeze the handle and sweep from side to side.

## Manhole Replacement



VWRA will begin phase 1 in July to repair or replace up to 61 manholes along Highway 18 in Apple Valley. A 2019 survey showed that a large number of the manholes showed signs of severe corrosion due to sewer gas (H2S).