

BREAKING NEWS: VVWRA's renewable natural gas and food waste co-digestion program has been nominated for a Global Water Award. Details in the next edition of the Purple Pipe.

Purple Pipe

Volume XXIV Spring 2023



One Water Concept Would Expand Use of Recycled Water

The One Water concept has been around for about 15 years. The idea is that all water has value and the concept envisions regional agencies working together to provide a sustainable and multi-beneficial water supply. Led by VVWRA General Manager Darron Poulsen, the One Water concept is coming to the High Desert.



Over the last year, VVWRA's regional plant has averaged a daily influent flow of just over 11 million gallons per day (MGD). The influent flow has the ability to produce an almost equivalent flow of recycled water that gets discharged directly to the Mojave River or gets pumped to percolation ponds which ultimately feed the aquifer under the river. A relatively small amount of the recycled water is used by the large American Organics composting facility near VVWRA and by the City of Victorville to supplement potable water supplies being

used for landscape or industrial purposes. And while returning water to the river and aquifer is a good thing, the large volume of recycled water being discharged is causing high groundwater concerns that could threaten operations at our main plant. *Story continues on page 5.*

GM Poulsen Inducted in to VVC Alumni Hall of Fame



Darron Poulsen receives a plaque for his induction into the VVC Alumni Hall of Fame. (l-r) VVC Foundation President Fred Hunter, Y-102 Personality Coleen Quinn, Darron Poulsen and VVC Superintendent/President Dr. Daniel Walden.

VVWRA General Manager Darron Poulsen was formally inducted into the Victor Valley College Alumni Hall of Fame during a formal ceremony in February. With family and co-workers looking on, the award was presented by Y-102 radio personality Coleen Quinn at the Hilton Garden Inn Conference Center in Victorville. Darron gave an emotional acceptance speech highlighting his early struggles at a four-year college and how VVC helped him get back on the path to education.

Continued on page 2



Poulsen inducted into VVC Hall of Fame cont.

A lifetime resident of the High Desert, Darron is well known for sharing his love and adoration for the Victor Valley region. As a child, Darron began to anticipate his college career and worked tirelessly to ensure he would be the first person in his family to obtain a college degree. Upon graduating from Apple Valley High School with an outstanding grade point average in 1983, Darron enrolled in a four-year engineering school. It was at the start of his higher educational journey that he came to face numerous obstacles. While academic success was not an issue for Darron, as he remained devoted to his studies, he soon realized that college's hefty demands went beyond academia. So Darron unenrolled from school for a time to focus on his health and confidence. Soon he began to work in the water industry as a meter reader, eager to grow and learn in his field. His drive to achieve at a higher level began to grow. Though nervous about endeavoring back into higher education, Darron pursued a new educational journey at Victor Valley College. He often credits VVC for its warm and inviting environment that helped ease his transition back into school. Darron earned his AA from VVC in Business Administration in 1996. With reinvigorated confidence, Darron continued on to earn both his Bachelor's and Master's Degrees in Business Administration from the University of Redlands. His educational journey is one of humility and triumph as he often recognizes the growing pains that young college students endure.



Photo from Apple Valley High School (1982)

Just over three years ago, Darron became General Manager of Victor Valley Wastewater Reclamation Authority. With a passion for the water and wastewater industry and a knack for exceptional leadership, Darron is working to build a model utility. His core values of dedication, collaboration, and integrity have allowed him to lead his team to serve local communities successfully. Though he holds an extensive list of professional accomplishments,



(L-r) Michael McDaniel, Brooke McDaniel, Darron Poulsen, Donna Poulsen, Meagan Hayes, Casey Hayes

Darron's greatest source of pride is his wife, Donna, and their three daughters Meagan, Elissa, and Brooke.

Councilman Bird returns to VWRA Board



Hesperia City Councilman Larry Bird has returned to the VWRA Board of Commissioners following the retirement of Councilman Bill Holland.



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VWRA Board of Commissioners

- Scott Nassif - Town of Apple Valley
- Larry Bird - City of Hesperia
- Paul Cook - SB CSA 64 & 42
- Debra Jones - City of Victorville

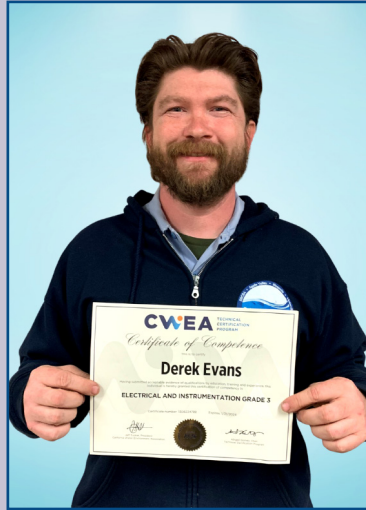


Around the plant

Congratulations!



Lead Operator Kalin Westover earned his Grade 5 Wastewater Certification.



E & I Technician Derek Evans earned his Grade 3 Electrical and Instrumentation Technologist certificate.



James Pasieka has been promoted to Operator.

Welcome to VWRA!



Ray Lopez
Maintenance Supervisor



Hillary Chavez
Administrative Aide



Cynthia Bernal
Accounting intern



Danny Mullikin
Operator-in-Training



Mechanic James Carothers lifts an ADM tank cover as Mechanic in Training Allen Dorado helps set the lid in place. ADM is food waste that generates methane that is converted into renewable natural gas.



Environmental Compliance Inspector Daniel Enriquez checks a manhole.



Plant operator Daniel Kessell performs maintenance on probes in the aeration basins.



That's so raven!

Lasers used to scatter scavenger birds

VVWRA was once a favorite spot for ravens to roost. The birds would damage equipment and leave behind an unwanted mess. But recently a team of wildlife biologists has been using an innovative, non-lethal method to keep the birds away. Specifically, green laser beams that the ravens find very irritating. "If you have noticed a lack of ravens around VVWRA of late, your eyes don't deceive you", said Hardshell Labs Founder Tim Shields. "Since early January, Hardshell Labs has been using a variety of lasers to drive the birds from VVWRA", said Shields. So far, raven numbers are down 95% from pre-laser levels



Desert biologist Tim Shields is the founder and president of Hardshell Labs.

The main laser coverage of the VVWRA area has been done with a revolutionary system allowing remote operation of the device by a human operator, reducing any interference with the normal functioning of the plant. The zoom lens allows close examination of target birds and non-target items (workers and vehicles, for example) before firing, ensuring safety. Hardshell is still doing hourly drive-through bird counts to document the laser's effect, but the laser itself is run from afar. After an initial period of intense laser work the number of laser shots needed to keep raven numbers low is small and shrinking.



Green laser at VVWRA.



9 month old desert tortoise.

Ravens are not only a problem at VVWRA. They are known to kill baby desert tortoises. Desert tortoises are considered an endangered species. In places like Joshua Tree, the raven population has increased by 1000% in the last 35 years. The increase is associated with the presence of humans who bring food and trash that attract the birds. Ravens are also a nuisance for pistachio farmers and can cause problems on power poles, near airports and military installations. Researchers are hopeful that the laser deterrence system developed by Hardshell Labs will help mitigate in a variety of different scenarios.

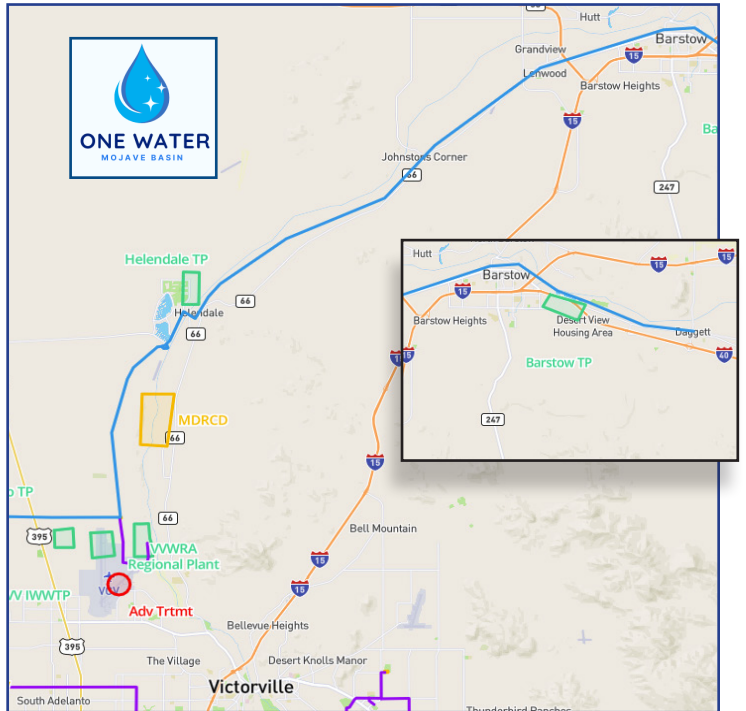


To learn more about the work that Hardshell Labs does, check out their website Hardshelllabs.com.



One Water Concept cont.

The simplest way to eliminate this high groundwater concern is to change where we discharge the recycled water. An idea to change the discharge location was conceived using existing assets owned and operated by VWVRA, the City of Victorville, and the Mojave Water Agency (MWA). The MWA operates a large water line that allows State Water Project water from the aqueduct to be used for recharge in Helendale, Barstow, and Daggett. The City of Victorville owns and operates a large water line that goes from the Victorville High Desert Power Plant (HDPP) to a MWA facility that connects to the State Water Project Line, allowing the HDPP a source of emergency supply of water. Neither of these lines flows water on a consistent basis. VWVRA Operates a recycled water line that connects to the City of Victorville recycled water system at SCLA that runs parallel to the City of Victorville HDPP line that connects to the MWA Facility. A collaborative effort is underway to discuss the feasibility of connecting the VWVRA recycled water line to the Victorville line which would then connect to the MWA line.



The blue line highlights the proposed path for recycled water to be piped to percolation ponds in the Barstow area.

This project could also utilize recycled water produced at the Victorville Industrial Wastewater Treatment Plant and the Adelanto Wastewater Treatment Plant. The scope of the future project will also include collaboration to build percolation ponds for recycled water, State Project Water, and stormwater.



VWVRA took part in the Mojave Water Agency' High Desert Water Summit at High Desert Church. Kristi Casteel and David Wylie had the pleasure of teaching students about our recycled water program.



Mechanic-in-Training Allen Dorado is lowered into a wet well in Hesperia to help remove rags, wipes and other debris.



Expanding Food Waste Capacity

Food Waste Capacity Expanding at VWVRA



VWVRA is making a move to expand the amount of food waste it can receive. With the help of a CalRecycle grant, VWVRA is adding a second 45-foot storage tank to accommodate more of the slurried food waste also known as ADM (anaerobically digestible material). Nearly two dozen big rig trucks bring the waste to our plant every day. The new tank will give VWVRA more capacity to store the material before being piped into one of three anaerobic digesters. The demand for ADM disposal has risen dramatically as communities throughout California are moving to comply with SB 1383, which requires the diversion of 75% of organic waste from landfills by 2025. The mission of SB 1383 is to reduce the amount of greenhouse gases like methane produced by organic waste. The ADM program at VWVRA includes the co-digestion of food waste with municipal sewage. The resulting methane gas is captured and treated to become renewable natural gas (RNG). RNG from VWVRA is injected directly into a major Southwest Gas pipeline so it can be used by homes and businesses throughout their service area. Plans are also being made to construct an organics polishing system, which is essentially a screening system that will help get rid of unwanted garbage that is mixed in with the ADM.



Fun Fact: During a big storm at the end of February, VWVRA saw peak flows of 17.4 million gallons per day, more than Super Bowl Sunday which is typically our busiest day of the year. On a dry day, VWVRA averages about 11.5 MGD.



Outreach



Career Talk!

VWRA's Kristi Casteel and Robert Coromina speak to local high schools students at a recent career fair about job opportunities in the wastewater industry. Careers can include things like plant operator, mechanic, electrician, IT technician, accounting and more.



Take a look!

VWRA's David Wylie shows the aeration basins to Granite Hills High School students during a tour of the main plant. VWRA offers plant tours for schools, community groups, service organizations, and individuals. The tours are an interesting and informative way to learn what VWRA does day in and day out. For more information or to check for availability, contact David Wylie at Dwylie@vwra.com.

Tri-state Seminar

WEIRD SCIENCE - PREDICTING AND PROTECTING HUMAN HEALTH AND THE ENVIRONMENT

38th Annual Tri-State Seminar
August 7-10, 2023
 South Point Hotel & Casino
 Las Vegas, NV

The Back Side...



I'll clarify ladder!

Lead Mechanic Marcos Avila uses a boom truck to move an extension ladder into place as mechanics Mike Koncur, Martin Cedeno and Richard Swatzell prepare to do maintenance on one of our secondary clarifiers.

FLASHBACK!



Flashback to 2013 when six-year-old kindergartener Bryce Scott took a tour of our plant.



Dirty money!

You never know what you'll find in the sewer system. This five dollar bill was found among the debris in a clogged pipeline.

Wipe your paws!



Raccoon paw prints found in the mud at VVWRA following the recent rains.