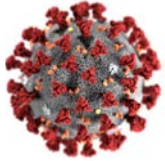


THE HERON

Las Gallinas Valley Sanitary District

Winter 2021



Tracking COVID in our Sewers District Participates in Pandemic Research

As the Novel COVID-19 pandemic initially surged across the country epidemiologists and researchers already knew that viruses, bacteria, and other pathogens that leave the human body are detectable in wastewater generated by humans. Early detection of COVID-19 in wastewater can give health authorities critical data to help identify virus "hot spots" and reduce the magnitude of a localized outbreak.

Early in the pandemic the Las Gallinas Valley Sanitary District and other wastewater treatment agencies were contacted by university researchers, including from UC Berkeley and Stanford, asking

for assistance in their work to detect COVID-19 in wastewater. The District joined the effort, contributing to the fight against the pandemic.

Since then our staff has been collecting and providing wastewater samples to researchers, leveraging the science of wastewater in a way that can ultimately help the public—from our own local ratepayers, to the wider general public. We're proud to be supporting this research, at virtually no additional cost to our ratepayers, and to be part of the leading edge of wastewater-based epidemiology.

Learn about UC Berkeley's program of wastewater monitoring for COVID-19 at covid-web.org/regional-monitoring.

Biosolids — Capturing a Resource

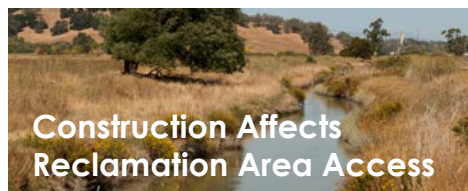
What are biosolids? Simply put, they are a byproduct of the wastewater treatment process. But beyond that, biosolids are a nutrient and energy rich resource that innovative wastewater utilities like the District capture and utilize.



Application of Biosolids on District Land

The first step in treating wastewater (called primary treatment) is to separate the liquids from the solids. Once that takes place, the liquids are processed down one "pathway" through our facility, while the solids go down a different path. The solids are put through an anaerobic (oxygen-free) digestion process where bacteria breaks down the organic matter and turns it into what we call biosolids.

A significant benefit of that anaerobic digestion process is the production of methane gas. The District uses that to operate microturbines which generate on-site electricity, while the heat they produce goes back to the digester to support that process.



Construction Affects Reclamation Area Access

Construction at the District's facilities requires periodic temporary closure to vehicles of the Smith Ranch Road access to the Reclamation Area parking lot and trails. Typically, such closures will be on weekdays from 4AM to 5PM. A guard is posted at the entrance gate to control the number of vehicles entering the parking lot area. During those closures, the northerly "Hamilton" access will remain open. Check the District website at lgvsd.org for information prior to visiting.



So-called "flushable" wipes can cause problems in your plumbing, in the sewer system, and at the wastewater treatment plant.

Remember the three "P"s: **P**oop, **P**ee and (toilet) **P**aper are the only things that you should put in the toilet.

Continued on page 2...

The methane can also be used to fuel one of the District's vehicles.



Methane Gas Powered Microturbines

Once biosolids are produced they are temporarily stored before they are spread onto a dedicated nine-acre area on District property, where they become part of the soil. This is a permitted, approved method of disposing of biosolids—but our goal is to treat them as a resource, not as a disposal issue.

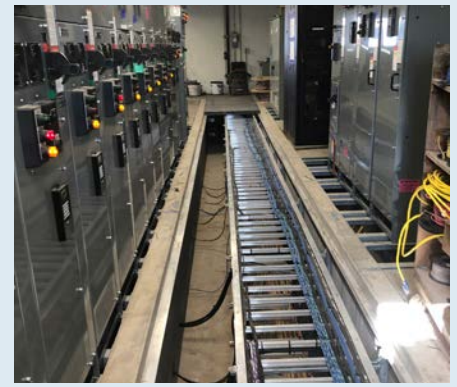
In keeping with District's philosophy of environmental sustainability we are exploring ways to beneficially use the nutrient value of biosolids. There are potential alternatives to disposal—for example on certain crops biosolids can be applied to reduce the use of chemical fertilizer. Another option is to compost biosolids with locally-generated green waste to produce a high-quality compost product.

With the District's 300 acres of reclamation area we expect to be able to accommodate some level of future biosolids use. We've already conducted a feasibility study that indicates we're going in the right direction with biosolids use — we're taking proactive steps that are widely acknowledged as responsible tools in wastewater utility management.

The District's Board and senior staff keep a focus on implementing innovative operational improvements that will give us the ability to take full advantage of all the nutrient and energy value that biosolids have to offer.



New Internal Recycle Pump Station



New Electrical Building Equipment and Cable Trays

Progress Continues on Secondary Treatment Plant Upgrade/Recycled Water Expansion Project

Since early 2019 the District has been working non-stop on the Secondary Treatment Plant Upgrade and Recycled Water Expansion Project. This massive improvement and modernization of the District's facilities is key to the District's overarching mission: protecting public health and the environment by providing effective wastewater collection, treatment, and recycling services. Construction is expected to continue into 2022.



New Recycled Water Distribution Pump Station

Estimated to cost about \$62 million, this project represents an important and necessary investment in ensuring an enhanced, reliable, efficient water treatment facility and recycled water system, to serve the community today and in the future. The key elements of the project include expansion of the plant's secondary treatment capacity, construction of a new primary effluent pump station

and two secondary clarifiers, quadrupling the recycled water facility's capacity to over 5 million gallons per day, rerouting of a force main pipeline, and a lot of related work from electrical and utilities improvements, to on-site road realignment, and much more.

The events of 2020 were unprecedented, and very difficult for everyone. We're proud to say that despite 2020's challenges this critical upgrade project continues through all the obstacles of the pandemic, and we were able to complete and make significant progress on many major elements this year, including:

- Installation of the 16-inch diameter North Marin Municipal District recycled water distribution pipeline
- Completion of the PG&E undergrounding of overhead lines, installation of 16 electrical duct banks, and construction of a new electrical building
- Construction of the anoxic basin and aeration basin concrete structures
- Completion of the Pond Return Pump Station and the Bypass Control Structure
- Operational readiness testing of the deep bed filter pumps,

Continued on page 4...

Department Spotlight:

Wastewater/Water Reuse Treatment Plant Operations

The District has a great deal of equipment, machinery, and systems that control the wastewater treatment process at the District's plant, including a lot of high-tech gear and automation. It takes more than equipment to accomplish these processes — it's the Wastewater/Water Reuse Treatment Plant Operations Department staff members who make it all work.

The treatment process is very complex, including physical screening/filtering of wastewater, settling processes, microorganism cleaning systems, anthracite coal filtration, and other steps. All of the water also goes through one of the District's two disinfection systems. These stages bring the water to a level suitable for safe discharge, either to the District's reclamation ponds (in summer), or to Miller Creek during the permitted winter periods of the year.

The future of the wastewater treatment industry is reuse. At the District, a substantial portion of cleaned water is pumped to the District's recycled water plant for further treatment. There, the water goes through a process of pressurized membrane ultrafiltration, and UV light disinfection to inactivate any remaining pathogens. The resulting recycled water is then pumped to Marin Municipal Water District and North Marin Water District and is used by those agencies for irrigation of common areas, parks, and median strips, and other non-potable uses.

These plant operations are carried out by a small group of

dedicated staff members: a Plant Manager, a Plant Operations and Maintenance Supervisor, five Wastewater Treatment Plant Operators, an Environmental Services Director, and a Laboratory Technician. Together, the staff of the Wastewater/Water Reuse Treatment Plant Operations Department handles the processing of an average of over 1.6 million gallons of wastewater every day.

On a daily basis they review the current state of the plant's operations and various ongoing projects. The assigned "operator of the day" monitors and logs all plant activities and systems, and identifies any abnormalities. The staff typically deals with equipment calibrations, manages bulk chemicals, reviews and acts on reported issues, makes safety checks, and conducts routine maintenance. The laboratory staff performs the critical sampling and testing of water at various stages to ensure regulatory compliance of the treatment operations.

And, we are hiring! There is one vacant Wastewater Treatment Plant Operator position—more information on this job opening can be found on the District website.

Meet the staff of the Wastewater/Water Reuse Treatment Plant Operations Department:



Mel Liebmann
Plant Manager



Josh Binder
Plant Operations and Maintenance Supervisor



John Bontrager
Wastewater Treatment Plant Operator



Chris Campbell
Wastewater Treatment Plant Operator



Ralph Loveless
Wastewater Treatment Plant Operator



Norman Rogers
Wastewater Treatment Plant Operator



Sahar Golshani
Environmental Services Director



Elena Knuutti
Laboratory Technician



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Board of Directors

Megan Clark
Rabi Elias
Craig K. Murray
Judy Schriebman
Crystal Yezman

Board Meetings are

held at 3:30 PM on
the first and third
Thursday of each month,
presently via Zoom
teleconference

ECRWSS – Postal Customer

District Administration

Mike Prinz, General Manager

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"Progress Continues" continued from page 2

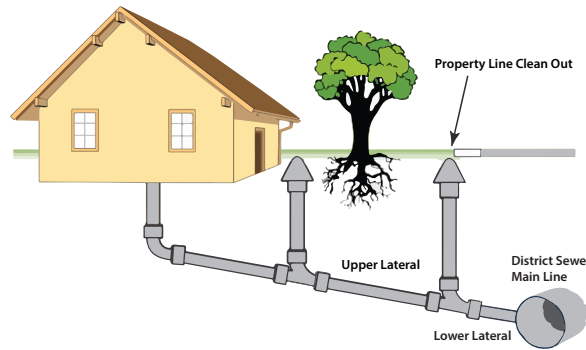
recycled water treatment facility filter feed pump station and membranes, and distribution pump station

The District is well-prepared to continue our efforts to move this project toward completion in 2022. Among the project goals as we continue into 2021 are:

- Complete the interim milestone for the production and delivery of recycled water
- Complete the Phase 1 milestone for the completion of the Secondary Treatment Process upgrades
- Commence Phase 2 with the demolition of the primary and secondary bio-filters
- Start on the construction of two new secondary clarifiers

This important project is really all about you—the people, businesses, and facilities we serve. Our goal is to offer the best, most efficient treatment and recycled water systems possible—this project improves the way we reach that goal.

Low Cost Funds Available for Lateral Repair/Replacement



Repair or replacement of a sewer lateral—the pipeline from a home to the main sewer line—is the responsibility of the property owner. The District's Sewer Lateral Replacement Assistance Program can help homeowners finance the work with a low interest (2%) loan for up to \$10,000. For more information, visit lgvsd.org/doing-business/sewer-lateral-assistance.



Introducing Dale McDonald Administrative Services Manager

The District is happy to welcome Dale McDonald as its new Administrative Services Manager. In that role he manages functions including accounting, budget, human resources, risk management, procurement, and administrative support, and also serves as the Chief Financial Officer. He joined the team last September, coming here from the Crockett Community Services District where he served for 10 years as General Manager. Prior to that, Dale worked in the private sector for EBIX, an e-commerce insurance software company. Dale holds a Bachelor's degree from San Francisco State University. He says he's thrilled to be part of the team and is enjoying helping the District in its important work on behalf of the community it serves. Welcome, Dale!