

THE HERON

Las Gallinas Valley Sanitary District

Spring/Summer
2020

Project Update: Treatment Plant Upgrade/Recycled Water Expansion

After several years of planning, the construction on the District's \$62 million Secondary Treatment Plant Upgrade and Recycled Water Expansion Project got underway in early 2019. The work has been going non-stop since then, and continues to make substantial progress. Work is anticipated to continue into 2022.

Here are some of the key milestones achieved just since late last year: Installed portions of the PG&E power supply underground; completed construction of foundations, and began construction of concrete walls, for the Primary Pump Station, Anoxic Basin, and Aeration Basin facilities; completed construction of the new Electrical Building; installed a new 30" diameter pipeline to bring wastewater to the facility's new Primary Pump Station; completed installation of the new Recycled Water Treatment Facility membranes and Distribution Pump Station.

Work during the first half of 2020 includes completion of PG&E power supply undergrounding; startup and testing of the Electrical Building and the Recycled Water Treatment Facility membranes and Distribution Pump Station; installation of bio-wheel systems in the Aeration Basin



Fabricating new stainless steel pipework at the UV building.

facilities (for aeration and mixing of partially-treated wastewater); installation of pumps in the Primary Pump Station; and more...!

You've been reading about this project for the last several years, but here's a reminder of its major components:

- Replace the two trickling filters and fixed film reactor with a hybrid fixed-film activated sludge process, with 18 MGD capacity
- Build two new secondary clarifiers to accommodate the increased secondary treatment flow and provide redundancy for this critical process

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Construction Affects Reclamation Area Access

Construction at the District's facilities requires periodic temporary closures of the Smith Ranch Road access to the Reclamation Area parking lot and trails. Typically, such closures will be on weekdays from 4 AM - 6 PM. During those closures, the northerly "Hamilton" access will remain open. On days the road is closed, all access can resume after 6 PM, until sunset. Check the District website at lgvsd.org for updated information prior to visiting.

District's Monitoring Helps Keep Mercury Out of the Environment

The District regularly monitors a little-known source of mercury and other heavy metals, to ensure those toxic materials don't find their way into the environment. That source is dental amalgam — a combination of silver, tin, copper, mercury, and other metals that dentists have traditionally used for fillings.



When the dentist uses suction to remove excess liquid from a patient's mouth (when installing, removing, or modifying an amalgam filling), that liquid can contain traces of amalgam. Before the District began monitoring that source of metals (which was years prior to such monitoring being mandated by law), that water would go down the drain, into the sewer system, and through the wastewater treatment plant. Treatment plants aren't specifically designed to efficiently remove heavy metals, however, so those serious toxics would end up in the ecosystem where they damage the aquatic environment, and harm fish and other creatures.

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To prevent these metals from entering the environment, the amalgam materials must be captured at the source – the dental offices. This is done by requiring most types of dental facilities to have an amalgam separator device. The suction water goes through that device, the amalgam is filtered out, and the water continues on to the sewer system. While most dentists now use composite resins instead of amalgam for new fillings, there are still plenty of existing amalgam fillings out there — so this is an important way of preventing those materials from entering the environment.

Within the District's jurisdiction there are 11 amalgam separator devices (shown at right) known to be in use, at 15 dental facilities (in one case, a single device is shared by several dentists). The first amalgam separator installation within the District was in 2009. All of these dental offices are visited each year to see that the amalgam separators are correctly operating and to check their filter cartridges. When determined to be nearly full, the dental office requests a new cartridge from the device's manufacturer, swaps it out, and ships the old one back. The manufacturer then processes the material for recycling, appropriate disposal, or re-use for other purposes.



We're happy to report that the District achieves 100% compliance by the affected dental offices. The federal government made amalgam separators mandatory in 2017 for most types of dental facilities — so Las Gallinas is already way ahead of the curve in protecting the environment from that source of mercury and other toxic heavy metals.

Mutually-Beneficial Partnerships Leverage our Efforts

Wastewater treatment and production/distribution of recycled water are very complex, multi-layered processes — physically, logistically, and regulatory. The District has built and maintains a number of key partnerships with other agencies in the region, which offer mutual benefits and advantages.

Marin Sanitary Service (MSS) is one such partner. Under contract with the District, MSS provides some key recycling programs such as the Mercury Thermometer Exchange Program, the Fluorescent & CFL Bulb Drop-Off Program, the Battery Recycling Program, and the Compost Giveaway Program. Additionally, MSS provides weekly residential and commercial waste collection, street sweeping, and garbage/recyclables pick-up services within the District's service area. MSS is also under contract to Marin County for those services in other areas.

www.marinsanitaryservice.com



Two other valued partners are the **Marin Municipal Water District** and **North Marin Water District**, both of which are public agencies (special districts). These agencies provide water to their customers in central and southern Marin County (Marin Water) and parts of northern Marin County (North Marin Water).

A large portion of the District's recycled water is distributed to those two agencies which then sell it for use in landscape irrigation, car washes, cooling towers, commercial laundries, and toilet flushing.

These partnerships provide the District with an opportunity to beneficially reuse the recycled water it produces, in a wonderful, environmentally-conscious way.

The two agencies participate in the costs of operations and maintenance of the District's recycled water facility.

www.marinwater.org
www.nmwd.com



The **Marin/Sonoma Vector and Mosquito Control District (MSMVCD)** is another special district with which Las Gallinas has a working partnership. The District works with the MSMVCD to monitor the species of mosquitos in the District's wildlife ponds. MSMVCD personnel place surveillance traps at the ponds, apply biological controls such as mosquito fish, and apply microbial and chemical control when needed.

Most recently, the District worked with MSMVCD as part of the removal of cattails from the wildlife pond, which increases the water surface area, opens areas to wind and small wave action, and creates wildlife "pathways" among the cattails — which also reduces mosquito breeding areas.

www.msmosquito.org





River otters are sometimes seen in the District's wildlife pond area.

Help Protect Local Waterways — Tips for your Pool, Spa, or Fountain

Attention pool, spa, and fountain owners:

Pools, spas and fountains should never be drained into a street gutter or storm drain! That water often contains harsh chemicals, and since gutters and storm drains empty directly into local waterways and eventually into the Bay, those chemicals can get into the ecosystem and seriously harm fish and other aquatic creatures.

Here's an idea: your spa, fountain, and pool waters can easily be dechlorinated by exposure to the sun, then used to irrigate your landscape. As a general rule, you can irrigate landscaped areas if the chlorine concentration is at or below 0.1 parts per million (ppm) and within a pH of 6.5 to 7.8.

If you must drain your pool into the sanitary sewer system, you can only do so after obtaining a low-cost permit from the District. Please call (415) 472-1734 for more information.

While it can be a challenge to keep your swimming pool, spa, or fountain free of algae, there are ways to accomplish this AND protect local waterways from harm.

Never use copper algaecides to control algae. These are highly toxic to aquatic life and can enter creeks and marshes when uncovered pools and spas overflow into storm drains during the rainy season.

Maintaining proper chlorine levels and regular cleaning are better ways to control algae, and reduce or eliminate use of algaecides. And, a high quality "safety" pool cover not only protects children from accidental drowning, but also keeps out leaves, saves water and chemicals from evaporation, and protects the environment by preventing rainwater from getting into the pool and overflowing — thus keeping chemically treated pool water from spilling into the storm drains when it rains. Water collected on the pool cover can be captured for reuse in your landscape. Your pool should not be plumbed to drain to your sewer lateral.



Department Spotlight: Collections System

The District's sanitary sewer collections system is a combination of pumps, pipelines, and other equipment that transports household and commercial wastewater to the District's treatment facility. But it's far more than hardware — it's also a group of trained, specialized employees who work to maintain the system for the protection of public health and safety and the environment.

The Collections System Department has three Collections System Operators, one Lead Operator, and the Collections/Safety Manager. This staff is responsible for the day-to-day operation and maintenance of 105 miles of gravity sewer lines and almost seven miles of force mains, serving a population of nearly 30,000 residents and businesses within the District's service area.

Some of their Preventative Maintenance tasks include hydroflushing, root-cutting, and CCTV (closed circuit television) inspection of pipelines. Other responsibilities include lateral repair/replacement inspections, Underground Service Alert (USA) locating, customer inquiries and incident reports, air release valve maintenance, and monitoring/maintaining 15 pump stations within the District — in short, they are protecting the capital investment that the community has made in the collections system, so that it performs as intended.

Meet the Collections System Department staff:



Greg Pease, Collections/
Safety Manager



Bob Buchholz,
Lead Operator



Rob Fernandes
Operator III



Chris Gill
Operator III



Manuel Cardenas,
Operator I

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Board of Directors

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Board Meetings are

held at 4:30 PM on
the first and third
Thursday of each month

ECRWSS – Postal Customer

District Administration

Mike Prinz, General Manager

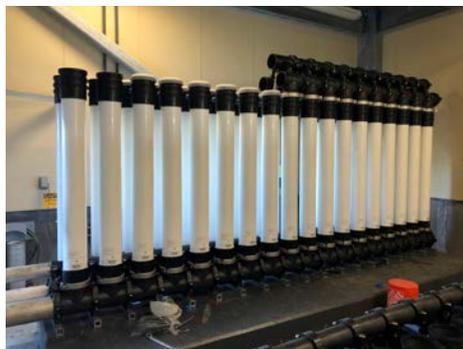
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- Rehabilitate and upgrade the existing solids gravity thickening process by adding a dissolved air floatation thickener, to improve solids processing efficiency and increase energy production from the anaerobic digesters
- Expand the Recycled Water Plant's treatment filtration capacity from 1.4 to 5.4 MGD; this will be funded primarily by the Marin Municipal Water District (MMWD) which will then retire its recycled water plant, creating much needed space for elements of the Project. This will reduce MMWD's capital, operations and maintenance costs for providing recycled water.



Aeration basin interior walls formwork and rebar.



New membrane filters in the Recycled Water Treatment Facility.

Remember — whenever you are on District property during this construction project:

- **Be Cautious** — watch in all directions for equipment, trucks, and work crews
- **Be Aware** of lane changes and temporary closures of Smith Ranch Road

- **Observe all safety and traffic signage** and follow directions from construction workers

- **Do not park or walk on Smith Ranch Road**

Thank you for your continued patience — we apologize for any inconvenience as we work to bring you the highest level of service possible.