



THE IRONHOUSE INSIDER

www.ironhousesanitarydistrict.com

Emergency line: 925-625-2279

Winter 2017

RETHINKING WASTEWATER

RESOURCE RECOVERY BECOMES NEW GOAL AT IRONHOUSE

For many, our understanding of water and wastewater is rudimentary: turn on the tap, clean water comes out; flush the toilet, dirty water goes away. But for those in the industry, like Ironhouse Sanitary District, the technology behind the treatment, collection and distribution of water is both complex and ever changing.

Modern wastewater management is moving away from merely treating and disposing of wastewater to examining the assets of the process and resource recovery.

The ISD board and staff members are currently working to develop a vision of where the district will maximize the recovery of resources they provide. The most important change in this

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Biosolids are collected for distribution at ISD's Water Recycling Facility.

THE CLEAN FACTS ABOUT BIOSOLIDS

➡ Biosolids are the nutrient-rich organic by-product of domestic wastewater treatment. Biosolids are a beneficial resource that contain essential plant nutrients and organic matter, and can be recycled and applied as a fertilizer and soil amendment, when properly treated and managed. Every person contributes to the production of biosolids — flushing toilets, doing laundry or washing

your hands in a sink. Wastewater treatment creates clean water and residual solid material. The residual material is treated to produce biosolids. Across the United States, thousands of municipalities currently recycle their biosolids and apply them to land. Agricultural and non-agricultural sites benefit from the nutrients and soil conditioning value of biosolids.

New faces join Ironhouse board

Two new directors will join the ISD board Dec. 14, the result of an uncontested election in which both incumbents whose seats were up decided not to run for another term.

The two new board members are Dawn Morrow and Peter Zirkle. Both are long-time Oakley residents and very excited to start their time on the board.

After serving as a board member since May 2011,

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Got an overflow? Let us know

If you suspect a sewage overflow or spill, call ISD right away. There are two ways to reach emergency staff. One is to call ISD's office at 925-625-2279. Someone will be available to assist you 24 hours a day, seven days a week.

Another way is through the district's website at www.ironhousesanitarydistrict.com. Click the button that says "Report A Problem." Fill out the form and ISD staff will respond within 15 minutes. ☐



**"Help
is on
the
way!"**



Hidden below these steel tubes at the ISD Water Recycling Facility are hundreds of microfiltration membranes like the one seen below.

ISD filtration method may set standard for state regulators

On its surface, ISD's state-of-the-art Water Recycling Facility looks like a simple collection of buildings and structures, but hidden behind these walls is a complex of piping and processes designed to turn wastewater into a product that is safe to return to the environment for reuse.

After the technologically advanced facility opened in 2011, the district received an industry award for it, the combination of the membrane filtration system and ultraviolet light disinfection providing arguably some of the cleanest recycled water in the state.

A UNIQUE CLEANING PROCESS

Because of the unique cleaning process, ISD is taking part in a study that may help determine future state regulations.

Currently the district utilizes



both membrane filtration and ultraviolet light for cleaning, but the study questions whether UV light is necessary at all.

All water treatments involve the removal of solids, harmful bacteria, inorganic and organic compounds. Removal of solids is usually done by sedimentation and bacterial digestion. This disinfection process is important to remove harmful pollutants.

Membrane filtration removes contaminants other treatment technologies do not.

JUST PASSING THROUGH

A membrane, by definition, is a selective barrier allowing some things to pass through while not others. In its most basic form, it acts as a sieve, separating solids from the liquids forced through it.

Ultraviolet energy is used to change the DNA in microorganisms preventing reproduction. UV treatment does not alter water chemically. Nothing is added except energy from the UV light.

While UV light has many advantages, there may be a great cost savings for ISD and other districts if the regulators determine that this process is not needed when membrane treatment is utilized. □

BOARD

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David Contreras has decided to enjoy his retirement and spend some time with his family. Contreras was appointed to the board mid-term when Director Don Lew passed away.

He was then elected to the board in 2012. As former general manager of the Mt. View Sanitary District in Martinez, Contreras drew from years of professional experience during his service on the ISD board.

Dr. Michael Painter will also be leaving the board this year. Currently the longest-serving board member, first elected to his seat in November 2000, Painter has worked on many ISD committees and previously served as a board president. A life-long member of the Oakley community, an avid Delta boater and local business owner, Painter has been an advocate for keeping the environment safe and worked to help build the District's Water Recycling Facility. □

WASTEWATER

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vision is that recycled water is, most definitely, a renewable resource.

This means continuing to build on ISD's already technologically advanced treatment of wastewater, as well as moving further ahead in recycled water production and distribution, beneficial reuse of biosolids,

pollution prevention and exploring energy recovery.

Some of these goals have already been a focal point of ISD's mission for many years. In 2011 the district built the cutting-edge Water Recycling Facility. With room to grow, this membrane filtration plant produces exceptionally high-quality recycled water. Approximately half of the water that leaves the

facility is sent to ISD-owned Jersey Island, where it is used to irrigate the district's hay fields.

In 2015, ISD opened its commercial and residential recycled water fill stations to allow limited distribution of the district's recycled water for such uses as dust control on Highway 4 construction projects, new development

construction, as well as local residential use for irrigation of lawns, trees and gardens.

The district is looking for ways to turn these biosolids into a revenue asset.

One idea is to use Jersey Island for sustainable biosolids processing opportunities. Another is to establish a regional composting facility.

These programs

could also provide value to other agencies and a revenue stream to ISD. The district's visioning process is working to develop other revenue-based opportunities for Jersey Island.

Resource recovery isn't just a buzzword for ISD. It is a step toward better pollution prevention and keeping the health and welfare of our community first and foremost. □

STAFF PROFILE

Machinist finds island suits him

Having grown up in the bustling city of South San Francisco, it is hard for ISD machinist **Eduardo Cruz** to believe that there is a place as peaceful as Jersey Island to work. Just the same, every morning he gets up and takes the short drive to his new job on the district's rural 3,500-acre island located between Oakley and Bethel Island.

"Everything is so open space out here," Cruz said. "I've only worked here for a



ISD machinist Eduardo Cruz feels at home on Jersey Island.

month, but I wouldn't trade it for anything."

As a way to dispose of millions of gallons of recycled water that passes through ISD's Water Recycling Facility, the district disperses 51 percent of the water annually to irrigate hay fields that are tended by ISD

staff. The hay is then fed to approximately 2,500 head of Jersey Island cattle.

As part of ISD's maintenance staff, Cruz's job is to make sure the tractors, farm equipment and vehicles are all kept in safe and good working order. Even so, there are times he is called upon to help out tending to the cattle operation.

"I'm available whenever they need me," said Cruz, who also sees occasional duty working on equipment at the district's main headquarters in Oakley.

"Working out here beats working at a desk job any day," he said. □

Commitment to education opportunities is a top priority

Did you know that ISD strives to incorporate educational opportunities into everything we do?

As the general manager, I am very proud to be part of a district that values education and seeks out opportunities to support and influence education within our community and industry.

MORE THAN A FACILITY TOUR

ISD provided a tour of our award-winning facility to all 6th graders in the Oakley Union School District. This tour transcended being just a facility tour.

ISD staff worked with teachers to provide information that could be taken back to the classroom and incorporated into lesson plans allowing education about the environment and conservation to continue.

The district also participates in the Bay Area



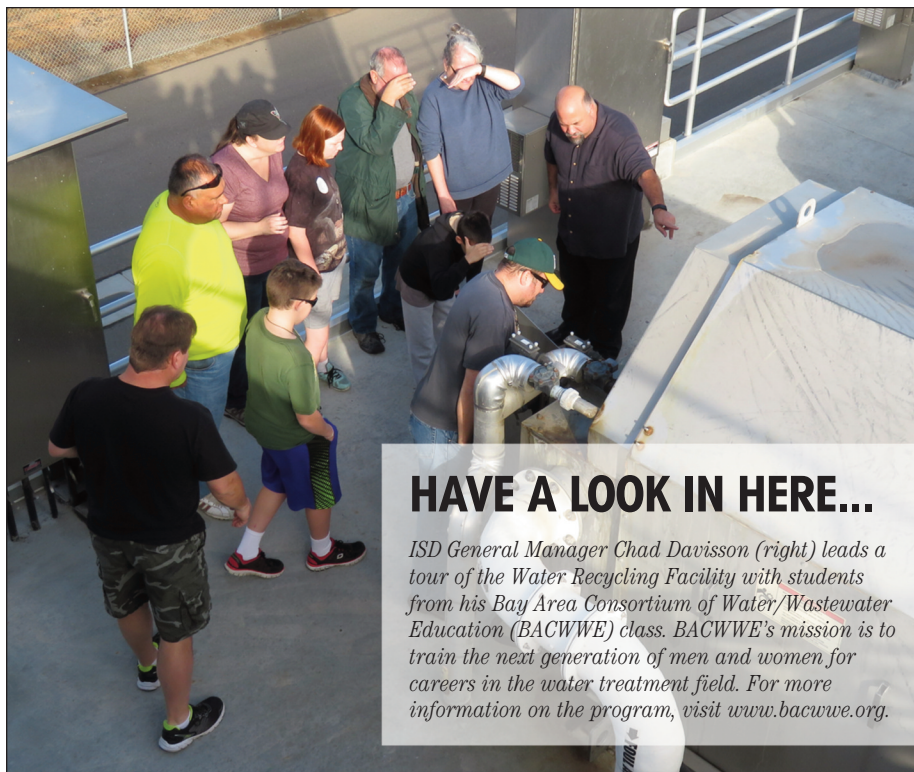
Consortium of Water and Wastewater Education and the Bay Area Consortium for Clean Water Education.

These consortiums establish partnerships with local community colleges and water/wastewater agencies to provide both the classroom and hands-on training required to create a qualified workforce.

COMMUNITY PARTNERSHIPS

Through participation with these organizations, the district helps to provide education and training for the next generation of industry professionals.

For more information about careers in the water and wastewater industry please contact ISD. □



HAVE A LOOK IN HERE...

ISD General Manager Chad Davisson (right) leads a tour of the Water Recycling Facility with students from his Bay Area Consortium of Water/Wastewater Education (BACWWE) class. BACWWE's mission is to train the next generation of men and women for careers in the water treatment field. For more information on the program, visit www.bacwwe.org.

Your toilet is not a trash can

Please don't treat your toilet like a trash can. It may be convenient to flush baby and adult wipes, but those and many other items (even if labeled "flushable") can clog sewer pipes,

damage treatment plant equipment, and contribute to water pollution. Please flush only human waste and toilet paper — and save everything else for disposal in a real trash can. □



THE BOARD

Doug Scheer/President
Susan Morgan/Vice President
David Contreras/Director
Chris Lauritzen/Director
Michael Painter/Director

ISD board meetings

Public meetings are held the first Tuesday of each month at 7 p.m.

IRONHOUSE SANITARY DISTRICT ADMINISTRATION

Chad Davisson/General Manager

Sue Walde/District Secretary
Chris Christean/Plant Manager
Louis Solana/Collections Supervisor
David Dal Porto/Ranches & Levees

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District Transparency
 Certificate of Excellence Recipient





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ECRWSS

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IMPORTANT UPCOMING EVENTS

- Nov. 17: Thanksgiving. Offices closed.
- Dec. 6: ISD Board of Directors meets at 7 p.m. for regularly scheduled meeting.
- Dec. 20: ISD Board of Directors-Planning & Programs, 6 p.m. regularly scheduled meeting.
- Jan. 3: ISD Board of Directors meets at 7 p.m. for regularly scheduled meeting.



This newsletter is printed using recycled paper. Every ton of recycled paper saves 7,000 gallons of water.



Recycled water station remains open for winter

The Farmer's Almanac says it will be cold and snowy, the Weather Channel says it will be unseasonably warm. ISD can't predict the weather this winter, but in any event the district plans to keep the Residential Recycled Water Fill Station open just in case.

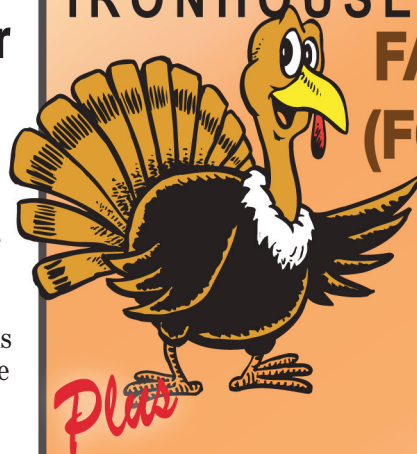
Beginning Nov. 28, however, the plan is to reduce hours at the fill station from the current six days a week to three days a week.

The new regular hours will change to Monday and Wednesday, 11 a.m. to 5 p.m., and Saturday from 8 a.m. to 3 p.m.

As always, on rainy days and for at least 24 hours after rainfall, the fill station will need to be closed due to state water regulations. It is a good idea to check the district's website for alerts about planned closures.

Do you have a picture of your favorite tree or garden that you watered using ISD's recycled water? Send us your success stories so we can share them on the district's website and social media.

Email pictures and comments to isd-outreach@isd.us.com. ☐



IRONHOUSE SANITARY DISTRICT FATS, OILS AND GREASE (FOG) RECYCLING DAY

Don't pour holiday grease down the drain. Recycle it at ISD.

**SATURDAY, DEC. 3
9 A.M. TO 12 P.M.**

MERCURY CFL BULB EVENT

How many people does it take to change this CFL light bulb? As it turns out, just you!

CFL (or compact fluorescent) light bulbs contain mercury vapors that can harm the environment. They require special disposal. When you come to ISD's FOG recycling day, bring your old CFL bulbs and you'll receive a discount coupon for Oakley ACE Hardware to replace your old CFL bulbs with new, energy-efficient LED bulbs.



**DROP-OFF LOCATED AT THE ISD FOG HOUSE, 450 WALNUT MEADOWS DRIVE, OAKLEY
(CROSS STREETS MAIN ST, ROSE AVE, DISTRICTS WAY) RAIN OR SHINE**