



July 2019

# BARSscreen BEE

The Official Newsletter of the Northern Sacramento Valley Section  
of the California Water Environment Association



www.nsvs.cwea.org

## Welcome to Orland for Training Wednesday, July 17, 2019

### Glenn Success Square Conference Center 131 E. Walker Street, Orland, CA 95963

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The Barscreen Bee is a  
publication of the Northern  
Sacramento Valley Section of  
the California Water  
Environment Association.

8:30 **SIGN-IN and NETWORK** with your peers over coffee & donuts.

9:00 **IGNITION, THE NEW SCADA FOR THE WASTEWATER UTILITY**,  
Jerry Eppler and Lester Ares, Inductive Automation Software

9:50 **IMPORTANT STEPS TO ENSURE SAMPLING AND FIELD  
ANALYSIS SUCCESS**, Bill Ray, William Ray Consulting

10:40 **INNOVATIVE SLUDGE TREATMENT SOLUTIONS**  
Ross Tate, Director of Sales, Orège Corporation

11:30 **MAXIMIZING BENEFITS THROUGH INTEGRATED WATER &  
WASTEWATER MASTER PLANNING  
(REVISED TITLE)**, Kevin Kennedy, Jacobs Engineering

12:20 **LUNCH \$10.00 cash or check payable to CWEA NSVS**



**Attendees of technical sessions will be issued up to four Continuing  
Education contact hours toward CWEA Technical Certification  
and/or 4 SWRCB education points toward wastewater certification.**

To find out if a class qualifies for CWEA continuing education in your area of certification,  
go to the CWEA web site:

<http://www.cwea.org/pdf/tcp/TrainingRelevancyList.pdf>

All wastewater relevant sessions count as one education point per 50 minute presentation for the purpose of  
SWRCB operator certification.

# Training Day Report from May 22, 2019, Oroville

By Ted Couch, CWEA NSVS Vice-President

The North Sacramento Valley Section (NSVS) of the California Water Environment Association (CWEA) held their second training day of 2019 at the Feather River Tribal Health Center in Oroville, CA.

The first speakers were Mr. Brad Leidecker from Coombs-Hopkins and Mr. Tyler Kunz from Enviromix presenting, "Biomix and Compressed Gas Mixing Technology". Enviromix compressed gas mixing systems are used for mixing of various fluids in the wastewater treatment process, including raw sewage in flow equalization tanks, or lift stations (to break up grease); mixed liquor in anoxic/anaerobic zones in biological nutrient removal applications; and sludge in aerobic or anaerobic digesters.

The mixers employ piping, with a series of units (shown below) at the base of any tank. They release large bubbles at a prescribed frequency based upon the specific process and desired treatment. Normally the gas used for mixing is air but could also be digester gas with some gas scrubbing. The bubbles are much larger than those used for oxygen transfer in aeration applications. There is minimal oxygen transfer due to the bubble size, so the mixing can also be used in anoxic zones. Enviromix's technology saves money on energy costs, up to 75-80%, and on maintenance requirements.



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## Training Day Report from May 22, 2019, Oroville (continued)



The second speaker was Mr. Michael Alvarez from Cal-OSHA titled, "Treatment Facility Industrial Health and Safety". Mr. Alvarez discussed accident and injury prevention at treatment facilities. OSHA's mission is partially enforcement and partially consultation. Enforcement penalties as of September 2017 are up to \$12,471 for a regulatory violation or a general violation, and up to \$25,000 for a serious violation. Perhaps the biggest takeaway Michael wished to for the attendees to have was the Cal OSHA website: **[Dir.ca.gov/dosh](http://Dir.ca.gov/dosh)**

All relevant information is available for free on the website, as well as a model program that facilities can follow. Anyone with any questions or concerns regarding health and safety should visit this website to learn more. There are permitting, and reporting requirements, and visitors can look up info on consultations. Consultations are also free, so those with more specific questions can invite OSHA reps to provide information specific to their situation.

Regarding enforcement, if a person receives a citation, they can take it up with the district office to disagree or appeal it. The most frequently cited items are the injury and illness prevention program (IIPP) and heat illness prevention. The most important element of IIPP is the training to prevent accidents. The IIPP needs to be up-to-date, relevant, and understood by all staff. Michael shared two stories where he issued citations, which also included criminal prosecution as fatalities occurred. Even if construction schedule has to slip, it is essential to follow all health and safety requirements; people have died and those who failed to follow the health and safety requirements will be held legally responsible.

Confined space issues are extremely serious because the consequences can be severe. Lock out/Tag out is essential, not just to have the capability but to always use it when

required. Cal/OSHA has model programs that contractors and agencies can use. Personal Protection Equipment is important, and employees must be trained in its use, maintenance and functionality and limitations



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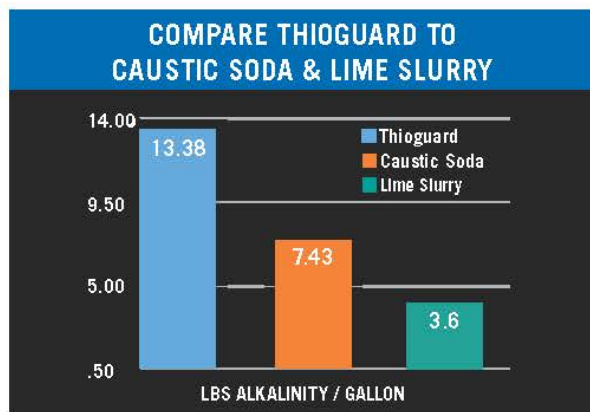
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## Training Day Report from May 22, 2019, Oroville (continued)

The third presentation was by Mr. Quint Pertzsch from Cartegraph database software company titled, "Cartegraph OMS, Asset Management Software for the Wastewater Utility." The term "asset" means anything the utility owns, employs, or uses to perform work. Cartegraph has expertise in the area of wastewater collections. The software makes it easy to collect data on an asset, by having an online database where that data can be entered either in the field or back in an office. This includes pipe, pump, etc. age, materials, manufacturers, costs, maintenance activities and more. Generally, the strategy they suggest is to Collect Data; Assess Condition; and Determine the Value.

The software system provides rating of overall condition, current amount of money that has been spent on the asset to date and can give recommendations on how to prioritize maintenance activities and budgets. It also works with GIS to provide a spatially based database of assets. This asset management tool can be accessed through a computer, tablet, or smartphone. Cartegraph provides a visual representation aids in the form of pipe charts, bar graphs, etc. This software makes it easier to manage a utility, keep track of work orders, plan for the future, and create a reasonable operations and maintenance budget.



The final speaker for the day was Mr. Alex Daijogo, Wastewater Treatment Operator, City of Galt, titled, "Overcoming Dewatering Challenges". The Galt WWTP has a design flow of 3 MGD, and an average flow of 1.7 MGD. Galt employs a microscreen followed by a grit vortex, oxidation ditches and secondary clarifiers. Waste activated sludge was originally dewatered via drying beds, but recently they have employed a screw press for mechanical dewatering. The design and operating criteria for the two dewatering systems is:

**Drying Beds:** 4 Drying beds, 48' X 100'; Capture rate 90%+; Drying time varies greatly from 1 week to months depending on percent solids, amount poured, weather and polymer usage; Loading- 2 lbs./sq. ft

**Screw Press:** Screw Press feed: 1-4%, typically 1.5%; 40-80 gpm; 90-99% solids capture; Cake moisture: 15-20%; Floc quality is sensitive to polymer; Water removed from sludge is pumped back to headworks

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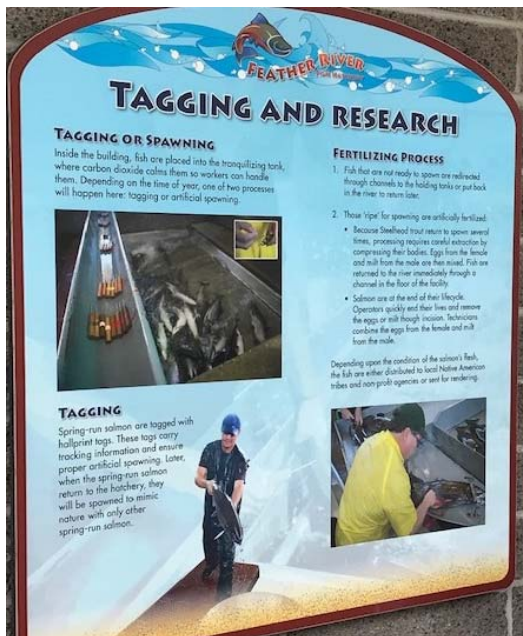
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## Training Day Report from May 22, 2019, Oroville (continued)

The pros of the screw press include: Easy to adjust dosing and fairly quick response time in seeing results; Slow to start, but once press is settled in it will maintain on its own with minimal checking and adjustments; Capture rate is usually 96-99%; Cake percent solids is around 15-18%; Having variable and constant flow settings is extremely handy in different situations; Human machine interface (HMI) is user friendly; Very low maintenance, no major problems since the press was installed.

The cons include: Press can be picky about polymer; Losing the plug causes malfunctions.; Polymer system can get clogs in the check valve.; Polymer pump is almost always on the low end of operating range.; Washing the screen can be difficult; Cake will often retain more water in heavy rains when compared with the drying beds; Cake does not stack, so somewhat inefficient storage.

After lunch, several of the attendees participated in a guided tour of the Feather River Fish Hatchery at 5 Table Mountain Blvd in Oroville.



The fish hatchery is one of the largest in the state of California. We learned about tagging spring run salmon and the spawning activities that take place at the hatchery. Water quality is of great importance to the ability of salmon and steelhead to spawn. These types of tours always remind us that our chosen profession of protecting water quality is so important to the thousands of people and millions of fish who





## NSVS Calendar of Events

- Wed, July 17, Training, Location TBA
- Wed, Aug 14, Board Meeting
- TUESDAY, Sep 17, Training, Redding
- Wed, Oct 9, Board Meeting
- Wed, Nov 13, To be determined
- Wed Dec 11, Board Meeting

- Sat January 18, 2020 Annual Awards and Dinner Banquet

Board meetings held at various locations.  
Contact [twyhliko@cityofredding.com](mailto:twyhliko@cityofredding.com)  
or call 530-224-4319 for location

## Jobs found on City of Redding Website

Project Coordinator	Full-Time	\$78,468.00 - \$110,412.00 Annually
Project Coordinator (Construction)	Full-Time	\$78,468.00 - \$110,412.00 Annually
Public Works Maintenance Worker	Full-time, Temporary, and Seasonal	See Position Description



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**Mike Blumenstein**  
Pipe Sales Manager



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## Job found on City of Chico website

<b>Wastewater Treatment Plant Operator III</b>	Full Time	\$53,185.60 - \$73,403.20 Annually
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Posted July 09, 2019

## Jobs listed on [www.cawaterjobs.org](http://www.cawaterjobs.org)

Posted June 27, 2019

### WWTP Grade I or Grade II

#### Susanville Sanitary District

Susanville, California, USA Full Time

Posted June 21, 2019

### Environmental Compliance Inspector I/II

#### City of Vacaville

Vacaville, California, USA Full Time

Compensation: \$61,736.52 to \$80,660.52 Annually

+ generous benefits package

Posted July 08, 2019

### Wastewater Treatment Superintendent

#### Town of Windsor

Windsor, CA, USA Full Time

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For more information, please contact:

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Posted June 25, 2019

### Maintenance Worker/Senior & Chief Maintenance Worker

#### City Of West Sacramento

West Sacramento, CA, USA Full Time

Compensation: \$3,558 to \$5,439 Monthly





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**NSVS-Northern Sacramento**  
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