

October 2023



BARSCREEN BEE

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



<http://nsvs.cwea.org/>

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<http://nsvs.cwea.org/>

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

Welcome to In-Person Training
Tuesday, October 17, 2023 8:30 a.m. - 3:00 p.m.
McConnell Foundation, 800 Shasta View Dr, Redding CA
and Shasta Dam Visitor's Center
16349 Shasta Dam Blvd, Shasta Lake, CA 96019

8:30 SIGN IN and NETWORK with your peers over coffee and pastries

9:00 Introduction to Collaborative Delivery on Water and Wastewater Projects
Presenter: Michael Randall, Jacobs Engineering

9:50 Data Science for Gravity Main Maintenance
Presenter: Lars Stenstedt; V&A Consulting Engineers

10:40 Break

10:50 Anaerobic, Aerobic & ATAD – Process Basics and Digestion Innovation
Presenter: Matthew Williams; Thermal Process Systems

11:40 Programmable Logic Controllers (PLCs) An overview"
Presenter: Jon McClain, P.E., MCC Engineering

12:30 LUNCH \$15, cash or check payable to CWEA NSVS

1:30 SHASTA DAM TOUR,
Shasta Dam Visitor's Center, 16349 Shasta Dam Blvd, Shasta Lake
Including the introductory video presentation in the visitor's center
and the "Top of the Dam" guided outdoor tour.

Questions?

Contact Pratyusha Reddy Reddy, President (contact info on left side-bar)

Attendees of technical sessions will be issued Continuing Education contact hours toward CWEA Technical Certification

CWEA 2023 NORTHERN SAFETY DAY



8
NOV

NORTHERN SAFETY DAY

EVENT INFO

DATE

WEDNESDAY, NOV. 8, 2023

TIME

8:00 a.m. to 3:45 p.m.

REGISTER BY OCT. 20TH TO
SAVE \$15

YOLO COUNTY FAIRGROUNDS
1250 E Gum Avenue
Woodland, CA 95776

Weather in Woodland can be unpredictable. Please dress in layers in case of warm, cold or inclement weather. Lunch will be served outside.

REGISTER ONLINE

events.cwea.org

Photos by Audrey McCann

Join us for the highly anticipated **Northern Safety Day**.

The event is back at the **Yolo County Fairgrounds** and is brought to you by the CWEA Safety Committee, chaired by Andrew Corral from the Association of California Water Agencies Joint Powers Insurance Authority (ACWA JPIA).

This annual safety training day brings together a diverse community of wastewater professionals, all dedicated to **making safety the highest priority**. Northern Safety Day offers a unique opportunity to not only **enhance your professional knowledge** around safety but also to **engage in hands-on equipment demonstrations** and **connect with fellow attendees and exhibitors** from the industry.

WHO SHOULD ATTEND

- O&M Leaders
- Mechanics
- Electricians
- Instrumentation Technicians
- Inventory Managers
- Maintenance Schedulers
- Wastewater Operators
- Collection Systems Crews



NORTHERN SAFETY DAY

SCHEDULE AT-A-GLANCE

(subject to change)

TIME	EVENT	
7:00 - 8:00	REGISTRATION, COFFEE & INTRODUCTIONS	
8:00 - 8:50	OPENING GENERAL SESSION The Safe Operator Escape Room Joseph Blackman, Vitendo Training Solutions	
	BREAKOUT SESSIONS I	
8:55 - 9:45	Real-Time Protection for Your Collection - How Inland Empire Utilities Agency Turbocharged Their Collection System Lucia Diaz, Inland Empire Utilities Agency Brogan Quist, SmartCover	Maintaining a Resilient Safety Program Robin Flint Association of California Water Agencies Joint Powers Insurance Authority
9:45 - 10:25	EXPO & NETWORKING	
	BREAKOUT SESSIONS II	
10:30 - 11:20	Inland Empire Utilities Agency's Mutual Aid Program Efforts for Regional Sanitary Sewer Spill Simulations Lucia Diaz and Edward Makowski Inland Empire Utilities Agency	Safety Culture Improvement ("Safety vs. Compliance and the Importance of Both!") Paul Andersen OSHA Compliance Services
11:25 - 12:15	GENERAL SESSION PRESENTATION Protection from Wildfire Smoke - Adapting to Smoky Circumstances Colton Rogers, Contra Costa Water District	
12:15 - 1:55	LUNCH WITH EXHIBITORS	
	BREAKOUT SESSIONS III	
2:00 - 2:50	Safety by Design in Pump Stations and Plant Facilities Jerry Ledbetter Central Contra Costa Sanitary District	Safety Incident Reporting - A Simple, Streamlined Program Sarah Bogner Contra Costa Water District
2:55 - 3:45	CLOSING GENERAL SESSION Understanding the 811 Dig Alert / USA North System Paul Andersen, OSHA Compliance Services	

**Earn up to 6 contact hours approved
for all CWEA certifications**

REGISTRATION FORM

NORTHERN SAFETY DAY

Register online: events.cwea.org

Early bird deadline ends Oct. 20th

(PLEASE PRINT OR TYPE)

First Name: _____ Last Name: _____

Agency/Company: _____ Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-Mail: _____

Emergency Contact: _____ Emergency Phone: _____

CWEA MEMBER WEF MEMBER CA-NV AWWA MEMBER # _____
 (Must have current membership for member rates.)

Special Accommodations to Participate: _____

Dietary Restrictions: _____

Tell us a bit about you. Please select one response for each question.

1. WHAT IS YOUR CAREER STAGE?			2. WHAT IS YOUR PRIMARY PRACTICE AREA?			
<input type="checkbox"/> Student	<input type="checkbox"/> Job Seeker		<input type="checkbox"/> Collection Systems	<input type="checkbox"/> Electrical/Instrumentation		
<input type="checkbox"/> Entry-level	<input type="checkbox"/> Journey-level		<input type="checkbox"/> Engineering	<input type="checkbox"/> Laboratory	<input type="checkbox"/> Plant Maintenance	
<input type="checkbox"/> Supervisor	<input type="checkbox"/> Management		<input type="checkbox"/> Plant Operations	<input type="checkbox"/> Pretreatment	<input type="checkbox"/> Public Outreach	
<input type="checkbox"/> Executive	<input type="checkbox"/> Retiree	<input type="checkbox"/> Other	<input type="checkbox"/> Safety	<input type="checkbox"/> Stormwater	<input type="checkbox"/> Utility Executive	<input type="checkbox"/> Other
3. WHAT TYPE OF ORGANIZATION DO YOU WORK FOR?						
<input type="checkbox"/> Municipal - Large (400K+ customers)			<input type="checkbox"/> Municipal - Medium (50K-400K customers)			
<input type="checkbox"/> Municipal - Small (< 50K customers)			<input type="checkbox"/> Non-municipal - Consulting Firm			
<input type="checkbox"/> Non-municipal - Manufacturer or sales representative	<input type="checkbox"/> Non-municipal - Regulator, State or Federal	<input type="checkbox"/> Other				

REGISTRATION		For assistance contact: MEMBER SERVICES 510.382.7800 option 4 or memberservices@cwea.org	
		Member	Non-Member
<input type="checkbox"/> EARLY BIRD RATE (By Oct. 20)		\$195	\$245
<input type="checkbox"/> REGULAR RATE		\$210	\$260
<input type="checkbox"/> STUDENT Provide proof of college attendance w/minimum of 9 units.		\$0	\$0
Fee Total \$			

PAYMENT INFORMATION

For payments by check or money order, make payable to: **CWEA NSD23**

For payments by credit card, please print clearly.

Credit card: VISA MASTERCARD DISCOVER AMEX Signature: _____

Credit card number: _____ Expiration date: _____

Name of account holder: _____ Billing zip code: _____

REGISTRATION OPTIONS:

1. Register online at events.cwea.org
2. Send registration form and payments to:
CWEA Workshops
 7677 Oakport Street, Suite 1030
 Oakland, CA 94621-1935

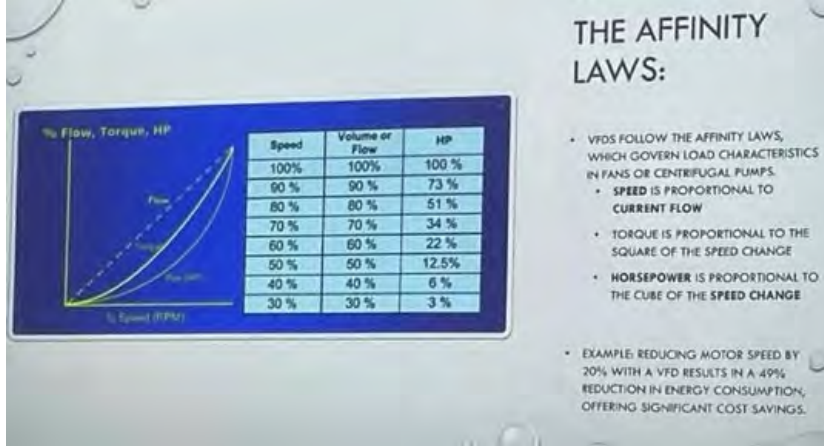
GROUP REGISTRATIONS: we're here for you to make this easy!
 Contact Member Services at memberservices@cwea.org for group registration assistance.

All cancellation requests must be submitted in writing or via email. **Cancellation or Substitute Deadline:** Cancellations and Substitutes must be received at least 3 business days prior to the date of the workshop. **Credit Eligibility:** To be eligible for credit, a written notice must be received one week prior to the program date. **Cancellation Fee:** A 25% cancellation fee will be deducted from the refunded amount. **Day of Program Cancellation/No-Show:** Cancellations or no-shows on the day of the program will not receive a refund or credit. **Refund Process:** Refunds, minus the applicable cancellation fee, will be processed within 3 days after receiving the cancellation request once approved.

CALIFORNIA WATER ENVIRONMENT ASSOCIATION NORTHERN SACRAMENTO VALLEY SECTION

Training Day Report, City of Chico
June 28, 2023, By Tracy Wyhlidko

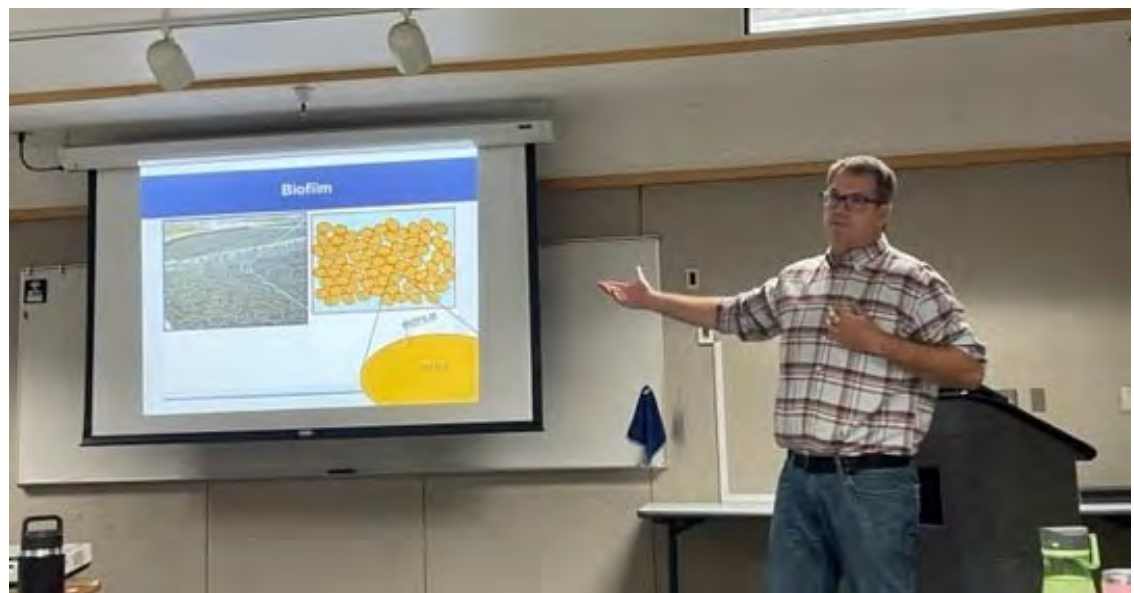
We would like to thank the City of Chico and staff for hosting the CWEA NSVS training day on June 28, 2023. The attendance was great with 32 members present.



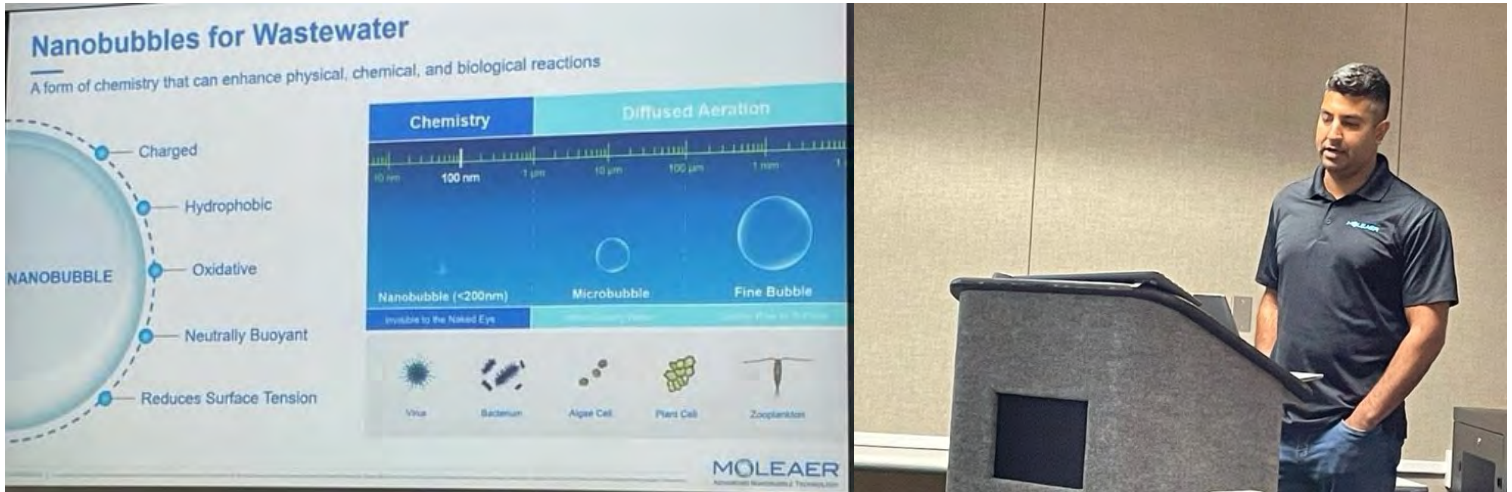
Mr. Dwight Summers, Regional Sales Director for Control Technologies presented the training, “Variable Frequency Drives in Wastewater Treatment”. Variable Frequency Drives, affectionately known as VFD’s, can help reduce

energy usage and improve cost efficiencies at wastewater plants. A treatment plant in South Carolina was able to reduce their energy usage by 50%. VFD’s can also reduce blockages and ragging in pump impellers because modern VFD’s have a de-ragging function. Mr. Summers explained that since horse power (energy usage) is proportional to pump speed, running at 80% speed saves 51% horse power. Pumps are also typically oversized by the designers. Switching to a VFD could save enough energy to create a 9 month – 3-year payback period. Modern VFD’s can also detect vibrations, bearing issues, and other maintenance issues before the failures occur, thus saving money on pump repairs or replacements.

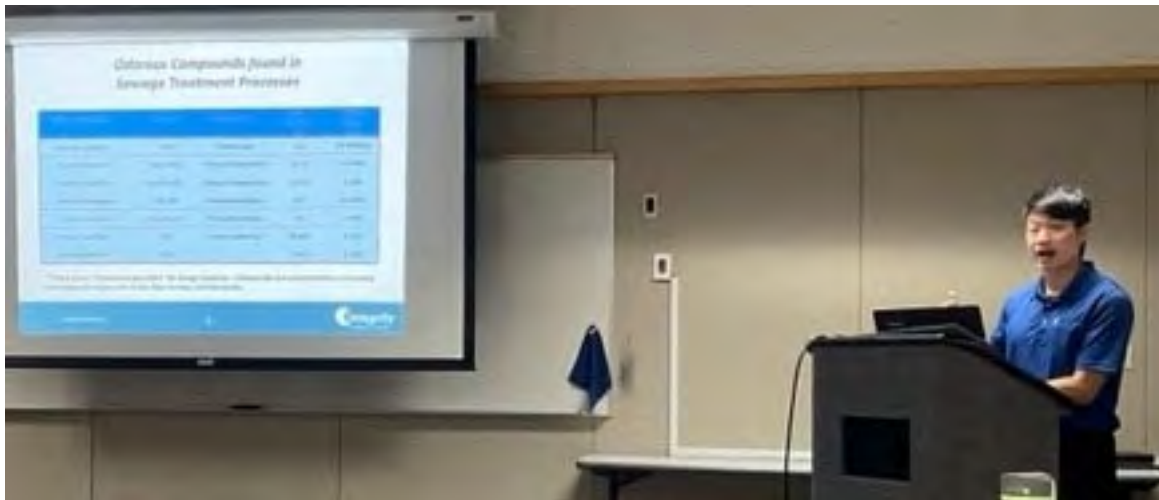
“Biofilm Reactors, An Overview of Technologies and Applications” was the presented by Mr. Doug Barber, Process Engineer at Jacobs Engineering. Mr. Barber described moving bed biofilm reactors (MBBR’s) as a treatment technology that uses rigatoni-like plastic media beds to support a thin layer of biofilm which can create an environment to allow both nitrification and denitrification to occur simultaneously. However, the plastic media does have to be replaced occasionally due to wear and tear. Another type of biofilm reactor is the Biological Active Filters which consist of a thin biofilm supported by polystyrene balls (similar to those in a beanbag chair), or angular media. There are new developments in the “media” used for the biofilm support structures including avoiding plastics and using organic substrates such as jute, hemp, or other plant-based materials as an organic ballast core to hold the biofilm. There may also be benefits to using an organic material that could also provide a “seeding” spot to assist with settling floc in a treatment plant.



CALIFORNIA WATER ENVIRONMENT ASSOCIATION
 NORTHERN SACRAMENTO VALLEY SECTION
 Training Day Report Continued



The third speaker was Mr. Jas Pannu with Moleaer, Inc. discussing advanced nanobubble technology titled, “Mitigating the Toxic Effects of QAC’s, Surfactants, and FOG with Nanobubble Pretreatment”. Nanobubble pretreatment systems are being tested at the headworks of treatment plants and have reduced the energy usage in the secondary treatment system by up to 40%. Nanobubbles are not visible and are in the 100-200 nm range, similar to the size of a virus. The bubbles are so small, that they are hydrophobic, neutrally buoyant, and act more like chemicals than bubbles. The pressure inside the nanobubble can cause a reaction that breaks down carbon chains to shorter chains, allowing activated sludge systems to become more effective. The use of nanobubble pretreatment at the headworks has created a 10% reduction in chlorine demand and increased TSS removal from 70% to 80% at one treatment plant. Installation of this technology is occurring in Santa Barbara during 2023.



The final speaker of the day was Mr. Kingston Leung of Integrity Municipal Systems (IMS) giving us an “Evaluation of Odor

Control Technologies”. Wastewater treatment facilities need odor control equipment more than they did 30 years ago because homes and businesses are being built closer to wastewater plants, odors can be a health hazard, and odors can cause corrosion. Hydrogen sulfide, H₂S, can be treated in the liquid phase to mitigate how much H₂S is produced, or in the vapor phase after H₂S has left the wastewater. Activated carbon can absorb H₂S, but the media has a lifespan. Chemical scrubbers are versatile and reliable, but have a high maintenance cost. Biological odor control is designed to promote the growth of sulfur oxidizing bacteria to “eat” H₂S. These have a lot of advantages in cost & maintenance. Each technology has its niche. There is no one size fits all application to reducing sewer odors, but careful planning can choose the correct technology for the situation.



Special thanks to James Carr for the tour of the City of Chico Wastewater Treatment Plant.

NSVS Calendar of Events

- Training Meeting, Tuesday, October 17, Redding
- Award Nominations open Oct 1-31, 2023. See pages 11-12.
- Board Meeting Wednesday November 1, 2023, 10-12, Blue Plate Special Restaurant, Orland
- Northern Safety Day, Wednesday, November 8, 2023, Yolo County Fairgrounds, Woodland, CA.
- Training Meeting, Wednesday, December 6, 2023, location TBD
- Board Meeting January 2024, date TBD, 10-12, Blue Plate Special Restaurant, Orland

Board meetings are held either online or at the Blue Plate Special Restaurant,
900 Newville Rd, Orland,
CA 95963.

Members are always welcome to attend the board meetings.

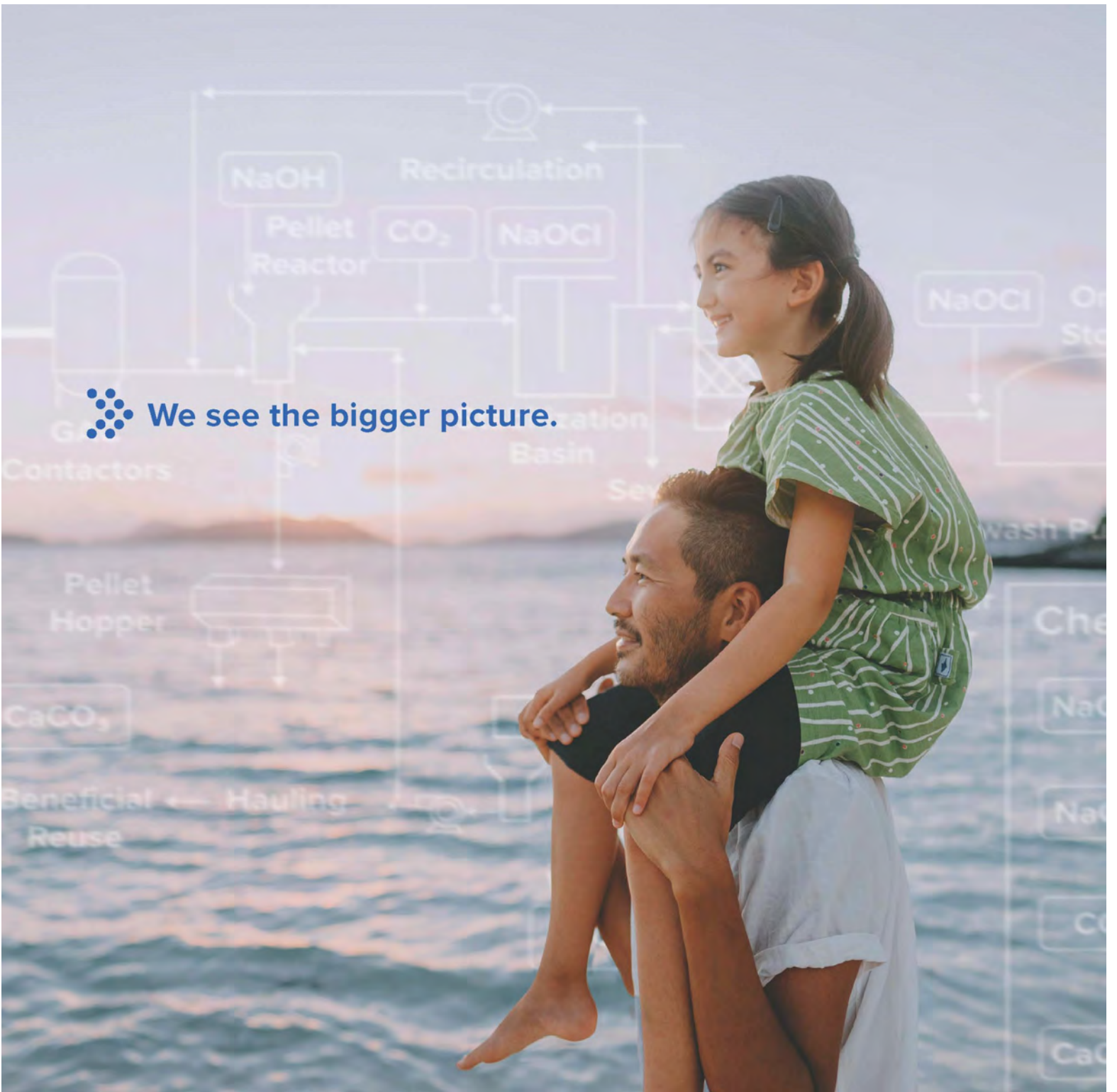
Contact
twyhliidko@cityofredding.org or
530-224-4319, or any of the NSVS
Executive board members for
information regarding board meetings.



Jessica L Chandler, CE
SENIOR ENGINEER

530.244.0202
jchandler@PaceEngineering.us

5155 Venture Pkwy.
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Pumps Ragging?

Problem Solved

Case Study: Half Moon Bay CA

Problem:

- Pumps clogging usually twice per week and took 1 hour to clean each pump.
- Risk to employees lifting pumps & exposed to waste, sharps etc.
- Excess energy consumption & high energy bills.

Solution:

- DeRagger+ and Keypad installed in control Panel.
- *Real Time Pump Protection* used to detect rags and run pump reversal via VFD.

Result:

- Energy Savings: 19% or \$500 per month in PG&E bills
- Near complete reduction in ragging.
- Big savings on manpower now effectively utilized rather than for cleaning pumps. Savings at \$735 per month.
- Reduced pump Run Time with clean pump

Total cost savings as projected by sewer authority: \$14,820 per year.

"We found that the energy usage has decreased to approximately 20% which shows a \$500 savings on our PG&E bill. This is besides the fact that we have been able to save manpower and utilize them for other activities instead of the constant cleaning."

- Kishen Prathivadi, P.E, PMP, Sewer Authority Mid-Coastside

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CWEA



2023-2024

CALL FOR NOMINATIONS CWEA AWARDS

STEPS TO APPLY

- STEP 1**
Find your Local Section and their award deadline, typically fall/winter.
- STEP 2**
Review the criteria at awards.cwea.org and gather the detailed information.
- STEP 3**
Click Apply.
- STEP 4**
Select the category.
- STEP 5**
Complete the online application.
- STEP 6**
Local Section winners announced in December and January and forwarded to the State for review.
- STEP 7**
State winners announced in March. Good luck!

The CWEA awards have been **recognizing excellence for over 94 years, honoring individuals, agencies, and companies across the state** that are leading California in engineering, wastewater operations, collection systems, laboratory, and pretreatment programs.

The highest score in each section for each category will move on to the State level automatically. There is no need to submit another application at the state level with the exception of Collection System of the Year and Safety Plant of the Year where a second round of questions will be made available to complete the application.

Northern Sacramento Valley Section Award nominations are open from October 1-31, 2023.

Please contact
Nikki Ong, Secretary/Treasurer (910) 576-4726 nong@carollo.com or Tracy Wyhlidko, Newsletter Editor (530) 224-4319 twyhlidko@cityofredding.org with any questions.

IT'S EASY TO GET STARTED AT
awards.cwea.org



**GAIN THE
RECOGNITION
YOU DESERVE**

NOMINATE YOUR CO-WORKERS FOR CWEA NSVS AWARDS! Due October 31, 2023.

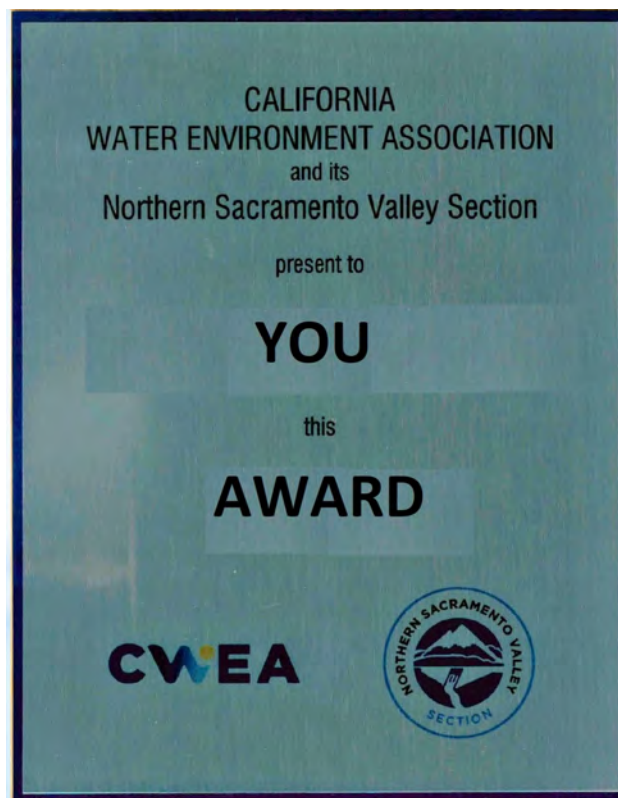
NSVS award winners are automatically forwarded to the larger CWEA state competition.

- 1) Visit the website
<https://www.cwea.org/awards/award-listings/>
 - 2) Find Category information
 - 3) Click APPLY button on category page
 - 4) Log in using the same credentials as [MyCWEA.org](https://www.cwea.org)
(typically you log in with your email address and your CWEA membership number as the password)
 - 5) Fill Out Application
 - 6) Click **Save and Finalize** to submit
- Community Engagement & Outreach
 - Tertiary Recycled Water Plant of the Year
 - Photo Contest
 - Gimmicks and Gadgets
 - Emerging Leaders
 - Safety Plant of the Year (Small, Med, Large)
 - Supervisor of the Year
 - Plant of the Year (Small, Med, Large)
 - Golden Manhole
 - Quarterly Century
 - Outstanding Young Professional of the Year
 - P3S (Pretreatment) Person of the Year
 - Laboratory Person of the Year
 - Collection System Person of the Year
 - Operator of the Year
 - Mechanical Technician of the Year
 - Electrical Instrumentation Person of the Year
 - Collection System of the Year (Sm, Med, Lg)
 - Laboratory Person of the Year
 - Outstanding Young Professional of the Year
 - Dr. Jenkins Research Achievement
 - Dr. Jenkins Engineering Achievement

The CWEA Northern Sacramento Valley Section has four additional awards that for local competition only. The nomination form for these awards is through the online link, below.

- CWEA NSVS - 2023 Award Nomination Form for any of the following four awards:
- Outstanding Service
 - Inspirational Award
 - Lifetime Achievement Award
 - Administrative Professional of the Year

[Nomination Form](#)



Job Postings around the Northern Sacramento Valley

City of Redding: Public Works Maintenance Worker, continuous recruitment
Regular Full-Time Positions \$26.85 - \$28.20 per hour
Temporary Full-Time /Part-Time Positions \$18.24 - \$20.68 per hour

City of Anderson jobs: <https://www.ci.anderson.ca.us/departments/personnel/index.php>
City of Anderson: MAINTENANCE WORKER, Salary Range: \$20.16 - \$27.01/Hour, Closing
Date: June 21, 2023

City of Chico jobs: <https://www.governmentjobs.com/careers/chico>

City of Chico, Senior Civil Engineer, Public Works Engineering, \$108,368.00 - \$149,364.80

City of Chico, Equipment Mechanic II, Public Works Operations & Maintenance, Salary \$45,989 - \$63,419

City of Dunsmuir jobs: <http://www.ci.dunsmuir.ca.us/employment>

The City of Dunsmuir is Hiring Maintenance Worker, Senior Maintenance Worker, Lead Maintenance Worker, or Maintenance Foreman. Multiple Positions available. Experience in the construction trades, road maintenance, water distribution, wastewater treatment, heavy equipment operations. Pay Range \$23.37 to \$36.07 per hour plus benefits, Health, Dental, Vision and CALPERS retirement. Pay and Position will be based on experience and/or certifications. Water Distribution I/II and/or Wastewater Treatment I/II/III certifications, Winter Snow removal operations is a plus, with potential for overtime pay. On-Call/Holidays/weekends may be required. All positions are subject to the Operating Engineers Local No. 3 Memorandum of Understanding with the City of Dunsmuir.

City of Dunsmuir, Lead Wastewater Treatment Plant Operator, job description is posed on the <http://www.ci.dunsmuir.ca.us/employment> website.

Jobs posted on CWEA CA Water Jobs website: <https://jobs.cwea.org/>

The Susanville Sanitary District is seeking a WWTP Operator Grade Operator In Training OIT/I/II/III.

http://susanvillesanitarydistrict.com/job_opportunities1.aspx
\$3,585 - \$5,868 per month

Wastewater Operator OIT/I/II or III, Sewerage Commission Oroville Region (SC-OR)
Oroville, California, Compensation: \$24.78 to \$42.16 Hourly

City of Woodland, Environmental Compliance Inspector I / II, Salary: \$4,041.49-\$5,693.57 Monthly,
Close Date: 10/13/2023 5 pm.



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**2023
Northern Sacramento Valley Section
Advertising**

Advertisements in the bi-monthly Northern Sacramento Valley Section (NSVS) "Barscreen Bee" newsletter may be purchased for:

- \$75 per year for a business-card size advertisement,
- \$150 per year for a half page advertisement (8.5 x 5.5 inches), or
- \$300 per year for a full page advertisement (8.5 by 11 inches).

APPLICATION (check one):

NSVS Advertisement for \$75/year _____ or \$150/year _____ or \$300/year _____

DATE: _____

NAME _____

AGENCY _____

TITLE _____

MAILING ADDRESS _____

CITY _____ **STATE** _____ **ZIP** _____

PHONE _____

E-MAIL ADDRESS _____

Submit application and payment to the NSVS Secretary/Treasurer:

Nikki Ong
Carollo Engineers, Inc.
 2880 Gateway Oaks Drive, Suite 300, Sacramento, CA 95833
 D: 916-576-4726
 Email: NOng@carollo.com

Make checks payable to: **CWEA NSVS**

Enclose a business card or submit electronic advertisement (jpg, gif, or pdf) to the Newsletter Editor at: Newsletter.Editor.CWEA.NSVS@outlook.com.