Proposed Agenda:

8:00AM – 8:30AM: Registration
- Sign-in and distribution of workshop materials.
- Light Breakfast and Beverages

8:30 AM - 9:15 AM: Welcome
-Exam Preparation Tips from CWEA's Norah Duffy and Lydia Guerra.
- Overview of the day's objectives and schedule.

9:15 AM - 10:45 AM
Session 1: Gas Chromatography-Mass Spectrometry (GC-MS) Basics, Demo and QC
- Basics: Principles of GC-MS operation and its applications in wastewater analysis.
- Demonstration: Step-by-step walkthrough of running a sample on the GC-MS.
- Quality Control: Calibration techniques, method validation, and troubleshooting common GC-MS issues.

10:45 AM - 12:00 PM
Session 2: Ion Chromatography (IC) Basics, Demo and QC
- Basics: Principles of ion exchange chromatography and detector types.
- Demonstration: Live demonstration of running a sample on the IC system.
- Quality Control: Best practices for calibration, method validation, and resolving common IC issues.

12:00 PM - 1:00 PM: Lunch Break (Sponsored by Thermo)

1:00 PM – 2:50 PM
Session 3: Inductively Coupled Plasma Mass Spectrometry (ICP-MS) Basics, Demo and QC
- Basics: Overview of ICP-MS components (plasma torch, ion optics, mass analyzer) and its role in trace metal analysis.
- Demonstration: Hands-on demonstration of sample preparation and instrument operation.
- Quality Control: Discussion on calibration curves, detection limits, and troubleshooting common ICP-MS challenges.
- DSRSD Laboratory Instrument Overview

2:50 PM - 4:00 PM
Session 4: Panel and Q&A Session
- Panel discussion on how the knowledge from the workshop applies to Grade 2, 3, or 4 laboratory exams.
- Open floor for questions about the instruments or methods covered during the day.
- Summary of key takeaways from each session.
- Feedback collection to improve future workshops.

Speakers:

1. 
Kevin Bowen is a Chemist with Central San where he specializes in segmented flow analysis. Prior the Central San, Kevin worked at McCampbell Analytical Inc. for 10 years, specializing in method development, analyzing Dioxins and PCBs by high resolution mass spectroscopy, and volatile and semi-volatile analysis by GC-MS. He also worked for 3 years as an Aquatic Ecotoxicologist at Pacific Eco Risk where he performed various acute and chronic bioassays. Kevin graduated from University of California, Santa Barbara with a Bachelor's in Hydrologic Science and Policy with a minor in Chemistry.

2. 
Heidi Birdsell is the Temporary Laboratory Supervisor at Dublin San Ramon Services District where she plays a key role in maintaining the highest standards of laboratory

accuracy, compliance, and operational excellence. With over 20 years of laboratory experience, Heidi brings a wealth of expertise in environmental and analytical chemistry. She has been with DSRSD for six years, ensuring rigorous quality assurance protocols and regulatory compliance for water and wastewater analysis. Prior to joining DSRSD, Heidi honed her analytical skills in the metals department at TestAmerica, specializing in trace metals analysis. She also has experience conducting metals testing in a pharmaceutical laboratory utilizing ICP-OES, ICP-MS, CVAA, GFAA and FAA instruments.

Heidi holds a Bachelor of Science in Chemistry and was the 2023-2024 CWEA Laboratory Person of the Year.

3. Camnga H. Thach is the Senior Environmental Chemist and Quality Assurance Manager Designee at the City of Sunnyvale, where she ensures the highest standards of water quality compliance and laboratory efficiency. She began her career in commercial laboratories; with over a decade of experience in environmental and analytical chemistry, she specializes in wet chemistry, inorganic analysis, and semi-volatile extractions. She has extensive expertise with advanced instrumentation, including ICP-AES, spectrophotometers, and gas chromatography. Before joining Sunnyvale, she held key roles at Dublin San Ramon Services District, Monterey One Water and the City of San Mateo. Camnga holds a B.S. in Geological Oceanography with a Minor in Geology from Humboldt State University. Having grown up in Vietnam, where access to clean water was not always guaranteed, Camnga is grateful for the opportunity to pursue a career dedicated to safeguarding water quality and environmental sustainability. Through her expertise in laboratory science, she remains committed to ensuring safe and reliable water resources through precise analytical practices. Outside of work, Camnga enjoys yard work, cooking, reading philosophy, and playing with her dogs.

4. 

Terry Jeffers is a seasoned analytical chemist with over three decades of experience specializing in environmental analysis. He began his career as an Analytical Bench Chemist at the State of Florida Health Department, mastering EPA methodologies for indoor air and drinking water analysis using Gas Chromatography (GC) and GC-Mass Spectrometry (GC-MS). He then spent a decade at Teledyne Tekmar as a Global Training Specialist, focusing on Volatile Organic Compounds (VOC) and Total Organic Carbon (TOC) techniques while developing training and support materials. For the past 19 years, Terry has served as a Senior GCMS Application Scientist at Thermo Fisher Scientific, providing expertise in GC, GC-MS, and GC-MS/MS for environmental air, water, and soil analysis. His work includes instrument demonstrations, application development, pre-sales presentations, and post-sales training. A co-author of numerous application notes, Terry has played a key role in advancing environmental analytical technologies and EPA compliant software solutions for Thermo Fisher Scientific.

5. 

Marshall Allin has 13 of experience in elemental analysis. He has specialized in ICP-MS and ICP-OES instruments from many different angles; as an Analytical Chemist in a pharmaceutical lab, as a Field Service Engineer, as an Application Scientist and Trainer, and now as the Technical Specialist for the Trace Elemental product line with Thermo Fisher Scientific. He covers the western half of the United States in his current role where he enjoys sharing his wide perspective on these instruments and their many different applications.