Building a Framework for Potable Reuse Operator Certification in California
Who is CUWA?

Population Served 26 million (in 2013)

**Retail Agencies:**
- Alameda County Water District (ACWD)
- East Bay Municipal Utility District (EBMUD)
- Los Angeles Department of Water and Power (LADWP)

**Retail/Wholesale Agencies:**
- Contra Costa Water District (CCWD)
- City of San Diego (San Diego)
- San Francisco Public Utilities Commission (SFPUC)

**Wholesale Agencies:**
- Metropolitan Water District of Southern California (MWDSC)
- Santa Clara Valley Water District (SCVWD)
- San Diego County Water Authority (SDCWA)
- Zone 7 Water Agency (Zone 7)
Training of potable reuse operators is critical to maintain high-quality reuse supplies protective of public health. Certification gives utilities, regulators and the public confidence that staff is qualified to operate potable reuse systems.
Existing exams do not cover advanced water treatment or potable reuse concerns

- More robust treatment train
- Unique O&M
- Enhanced risk
CUWA developed a white paper as a collaborative effort with several partners

- **Step 1**: Literature review and survey to establish understanding of existing programs and knowledge gaps
- **Step 2**: Facilitated workshop to gain consensus on a framework for potable reuse operator training and certification
- **Step 3**: Finalize white paper
Current Certification Practices
Wastewater Operator Certification Program

1 track
5 levels
• 5 Grade levels (treatment & collection)

Drinking Water Operator Certification Program

2 tracks
5 levels
• Inside the fence
• Outside the fence
• 5 T-grade levels (water treatment)
• 5 D-grade levels (distribution)
Possible Paths Forward
1. Separate Potable Reuse Operator Certification

2. Potable Reuse or AWT Operator Certification Supplement to a Wastewater License

3. Potable Reuse or AWT Operator Certification Supplement to a Water License

4. Potable Reuse or AWT Hybrid Supplement
Workshop Outcomes and Subsequent Framework
Industry stakeholders agreed on a Hybrid Approach

4 POTABLE REUSE OR ADVANCED WATER TREATMENT SUPPLEMENT TO EITHER LICENSE

Verifies that a certified water treatment or wastewater operator has a defined level of knowledge, skill and experience in advanced water treatment and related drinking water, wastewater, and potable reuse rules and practices.
Strategic Recommendations for an Industry-Supported Framework

**Focus** the certification program on advanced water treatment technologies used in purification of wastewater effluent for potable reuse and include risk management concepts.

**Give** one test for each level of certification regardless of the candidate’s qualifying background, and develop training to address any gaps in background knowledge or experience for water or wastewater candidates.

**Offer** certification as an “add on” available to both wastewater and water treatment operators with an acceptable level of training and experience.

**Provide** an adequate population of certified operators from which utilities can hire new potable reuse treatment plant operators, and broad enough to draw a sufficiently large and viable testing population.
Focus on the Following Advanced Processes

- Ozone and biologically active carbon (BAC)
- Membrane filtration (MF/UF)
- Reverse osmosis (RO)
- UV/AOP
Next Steps

• Program development and implementation
  ➢ AWWA CA-NV and CWEA are collaborating on an effort that to develop an AWT certification program.
    ➢ Workshops with subject matter experts (ongoing)
    ➢ Job analysis (completed)
    ➢ Decision to move forward with examination development (~October 2017)
    ➢ If approved, exams available in 2019

• Curriculum development
  o Water Reuse Research Foundation (WRRF 15-05) – Developing Curriculum for Advanced Treatment in DPR Applications
    o Hazen and Carollo
Questions?

The white paper is available for download at the CUWA website (www.cuwa.org).