

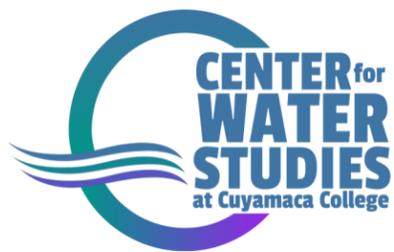


### Faculty

Our instructors bring broad water and wastewater industry experience, professional knowledge, and passion for teaching to Cuyamaca's individual courses, certifications and programs of study. All instructors are either currently working in the industry or recently retired water and wastewater professionals who are experts in their field and understand current, industry best practices. Classes are built around practical examples of real-world scenarios, classroom discussions, and simulations/demonstrations.

**Joe Young, Program Chair**  
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**CenterForWaterStudies.org**

Or visit the Cuyamaca College website:  
[cuyamaca.edu/academics/departments/wwtr/default.aspx](http://cuyamaca.edu/academics/departments/wwtr/default.aspx)

### Student Testimonials

"Choosing which career path to take was a pivotal moment in my life. I wanted a career that was challenging, had good benefits, involved skill, required a variety of work, and allowed me to work outdoors. After researching different fields, I learned that the Water/ Wastewater industry satisfied all of those requirements. I can say with confidence that starting courses at the Center for Water Studies was one of the best decisions I have ever made.

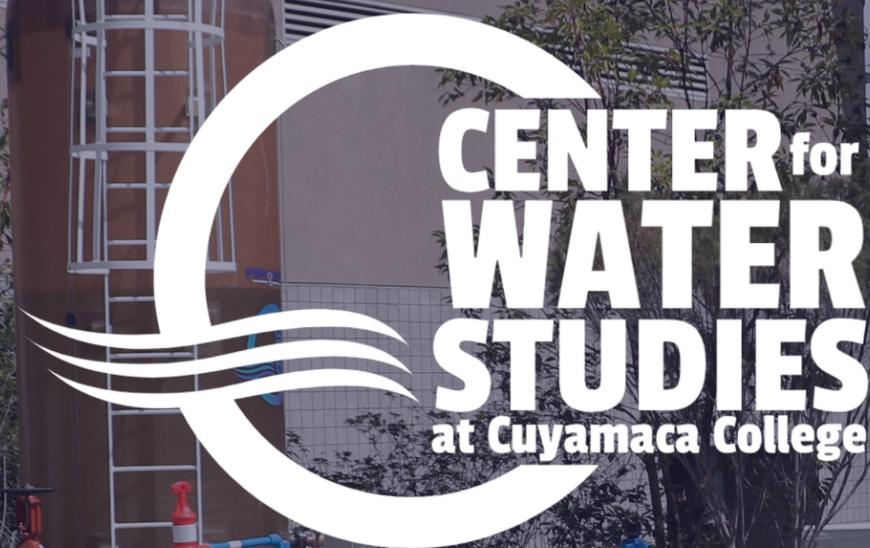


The courses were challenging but also had content that I found interesting and enjoyable to learn about. The professors equipped me with the proper knowledge and industry skills necessary to obtain a job. I was able to pass my state exam my first attempt, land an internship within 6 months, and begin working at a Water Municipality within a year. I now have a job I am passionate about in an industry that has endless opportunity." - Sarah M. Hargis

"If it were not for the Center for Water Studies Program I would not be where I am today; the teachers are top industry professionals who have invaluable real world experience. These classes not only helped me obtain my T-3 and D-3 State Certifications but gave me the knowledge and confidence to land a job as a Water Treatment Plant Operator. If you're considering a career in the water industry this is the place to go." - Jesse Bartlett-May

"The Center for Water Studies Program at Cuyamaca College is first rate. The instructors are all veterans of the water/wastewater industry and keep current on the evolving technologies, procedures, and regulations involved in the water field. I was reluctant at first to return to school, but with the help of key instructors I developed into a serious student and gained a wealth of knowledge about the field of water. The knowledge I gained through the program helped me to pass State required certifications and I was able to find full-time employment at a local water treatment facility. I am now beginning a new career path in water treatment with great potential for my future. I can't say enough about how this program has benefited me." - Anthony Allen

Nothing is more vital to California's economic development and quality of life than water and wastewater services.



**PROGRAM OVERVIEW  
&  
HIGHLIGHTS**

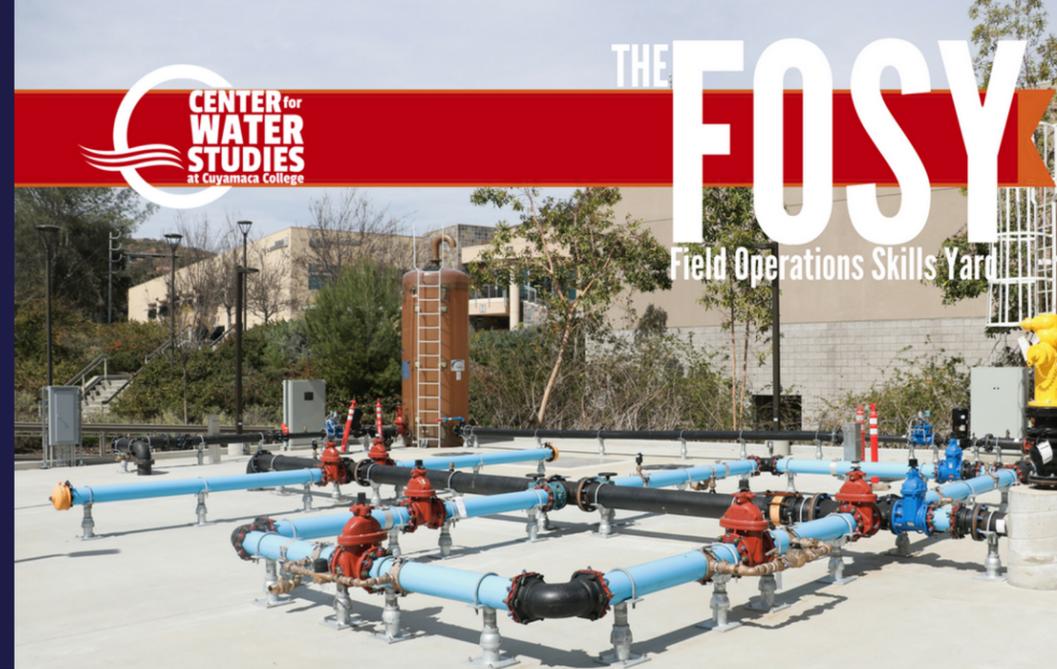
# CENTER FOR WATER STUDIES at CUYAMACA COLLEGE

**GOT WATER?** California's 40 million residents and businesses count on our state's complex water and wastewater infrastructure to perform its functions over one billion times per day. With our population projected to reach 60 million by 2050, it's essential that we effectively manage our water and wastewater resources, and that's going to require more trained water professionals. Are you looking for a career that matters? There's never been a better time to explore careers in water.

**IN DEMAND** Water jobs will increasingly support efforts to reduce our reliance on imported water. We must diversify our water resources portfolio by expanding water conservation efforts; improving wastewater reclamation and reuse and grey water utilization; improving watershed management practices, tapping groundwater reserves, and employing new technologies for advanced water purification and seawater desalination. Many water and wastewater jobs require specialized certifications from state regulatory agencies and/or industry associations. Center for Water Studies courses prepare students to qualify for and successfully pass required certification examinations.

**TRAINING INNOVATION MEETS INDUSTRY DEMAND** The Center for Water Studies (CWS) at Cuyamaca College is the oldest continuously operating educational program for this critical industry sector in the entire California community college system. With nearly 30 different courses leading to Certificates of Achievement and Associate of Science Degrees in six majors, the program is the most comprehensive of its type in California.

**FROM ENTRY LEVEL TO SEASONED PROFESSIONAL** CWS programs address the needs of industry professionals at every point of their career, from preparing individuals for entry level jobs and certifications to helping veteran industry broaden and hone their knowledge, skills and career advancement opportunities. Our robust program offers students unique opportunities to visit key water and wastewater facilities, meet industry professionals, participate in cooperative work experience and/or internship programs, and train in a real-world state-of-the-art facility.



## Degrees & Certificates

### WATER TREATMENT PLANT OPERATIONS

The USEPA Safe Drinking Water Act requires that all potable drinking water must be fully treated prior to being distributed to end users. Local water agencies in San Diego County operate water treatment plants that produce up to 750 million gallons per day. Students enrolled in this major learn the key steps, processes, and current technology involved in operating these modern water treatment plants. Students who satisfactorily complete the required courses in this certificate and/or degree program will qualify to take the California State Water Resources Control Board (SWRCB) Grade T-1 through T-4 Water Treatment Plant Operator examinations required for certification and employment at water treatment plants. Most Water Treatment Plant Operator positions require shiftwork

### BACKFLOW & CROSS-CONNECTION CONTROL

San Diego County public agencies operate a complex system of pipelines which transport hundreds of millions of gallons each day of treated and untreated drinking water, treated and untreated wastewater, reclaimed wastewater, and storm-water runoff. It's essential that these separate systems are protected from one another so that cross contamination cannot occur. Students study the technical processes, procedures, and methods used in the production, use, and distribution of recycled and reclaimed waste-water including backflow protection, legal, administrative and permitting issues, the treatment process, health and safety concerns, and the cross connection control (shut down) test as performed in San Diego County. Courses consist of both classroom lecture and hands-on sessions which cover all aspects of cross connection

control and recycled water shut down testing. The major also covers the effective use of backflow prevention devices and the testing procedures required for backflow prevention assemblies. Students will qualify to take the Backflow Prevention Assembly Tester Certification examinations offered by the American Backflow



Prevention Association (ABPA) and/or the American Water Works Association (AWWA), and the AWWA Cross-Connection Control Specialist certification examination.

### WATER RESOURCES MANAGEMENT

Since nearly 60% of our urban water demand is used for landscaping, irrigation, and other outdoor uses, students in this major are required to take selected core and elective courses from both the Center for Water Studies and the Ornamental Horticulture curriculum. This major prepares students to design, implement and evaluate water conservation/water resources management programs and to assist in developing more diversified water resource portfolios in the water and wastewater sector, or in the landscape and property management fields. Emphasis is on emerging technologies and methods that lead to long-term sustainability of our water and wastewater resources. Earning a certificate or degree in this major prepares you to enter careers in water conservation, watershed management, water resources & groundwater, public information, and community education. Careers in landscape and facilities maintenance, irrigation system design, urban water management, and landscape design are also options. Students successfully completing the core requirements for this major will qualify to take the American Water Works Association's Water Use Efficiency Practitioner certification examination, the Landscape Water Management certification offered by the California Landscape Contractor's Association, and the Certified Landscape Water Manager certification offered by the Irrigation Association.



### WATER DISTRIBUTION OPERATIONS

State and Federal regulations require that Water District employees operating the extensive network of pipelines, pumping stations, reservoirs, and storage tanks must be certified by the State Water Resources Control Board (SWRCB). Water agencies in San Diego County operate and maintain more than 10,000 miles of water distribution pipelines, hundreds of storage reservoirs and pumping stations, and many other related facilities. Students in this major learn the methods, processes, technology, and current practices involved in operating and maintaining these modern, complex water distribution systems. Students who satisfactorily complete the required courses for this certificate and/or degree program will qualify to take the SWRCB Grade D-1 through D-5 Water Distribution Operator examinations required to obtain certification and employment with a water district.

### WASTEWATER TREATMENT OPERATIONS

The USEPA Clean Water Act and the California State Water Resources Control Board (SWRCB) require that all personnel who operate wastewater treatment and/or wastewater reclamation facilities be certified as Wastewater Treatment Plant Operators. Students who satisfactorily complete the required courses for this certificate and/or degree program qualify to take the SWRCB certification examination for the Grade I Wastewater Plant Operator as well as nearly a dozen wastewater related certification examinations offered by CWEA. There are over 80 wastewater treatment and reclamation facilities in San Diego County that are currently licensed and regulated by the SWRCB.



### WASTEWATER COLLECTION SYSTEMS

Once water in San Diego County has been used for residential, commercial, & industrial needs, over 500 million gallons per day is collected through a complex system of pipelines and lift stations and transported to wastewater treatment and/or reclamation plants for processing. Students completing the required courses for this major will qualify to take nearly a dozen wastewater related certification examinations offered by the California Water Environment Association (CWEA). Although current State regulations do not require certification of wastewater collection system personnel, many public sector employers either require or prefer job applicants who have obtained the CWEA Wastewater Collection and Maintenance certifications.



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