

Water/Wastewater Technology Program
Advisory Board Meeting Minutes
March 5, 2024

Call to order at 11:33am

Agenda

- I. Introductions
- II. Mission Statement
- III. Overview/Recent History
- IV. Enrollment Trends
- V. Course Formats
- VI. Program Additions and Improvements
- VII. Water Lab Improvements
- VIII. Pathways
- IX. CSU San Marcos: Certificate of Specialized Study in Water Management & Leadership
- X. NSF Grants
- XI. Marketing and Outreach
- XII. Good of the Order

I. Introductions

The following Advisory Board Members accepted the March 5th Advisory Board Meeting invitation:

- a. Robbie Brown, Chief Plant Operator, WASPO, Cal Fire- Present
- b. Chris Clemens, System Operations Supervisor, SDCWA- Present
- c. Melita Caldwell-Betties, Faculty Chair-Water Supply Technology, San Bernardino Valley College- Present
- d. Patty Duran, Human Resources Analyst, SDCWA- Present
- e. Steven Garner, Director of Certification, CA-NV AWWA- Present
- f. James Mattern, Chief Plant Operator/Operations Manager, Encina Wastewater Authority- Present
- g. Sue Mosburg, Executive Director, CA-NV AWWA- Present
- h. Michelle Peters, Director of Operations, Channelside Water Resources- Present
- i. Chris Robbins, Public Information/Water Conservation Supervisor, Vallecitos Water District- Present
- j. Alan Styles, Director, Certificate of Specialized Study in Water Management & Leadership, CSU, San Marcos- Present
- k. Christopher Trees, Director of Operations, San Elijo JPA- Present
- l. Phil Zamora, HR Manager, Vista Irrigation District- Present

Palomar College Staff

- a. Jacob Shiba, Water Technology Program Coordinator- Present
- b. Ashley Wolters, Department Chair, Trade and Industry
- c. Susan Wyche, Dean, Career Technical and Extended Education- Present

II. Mission Statement

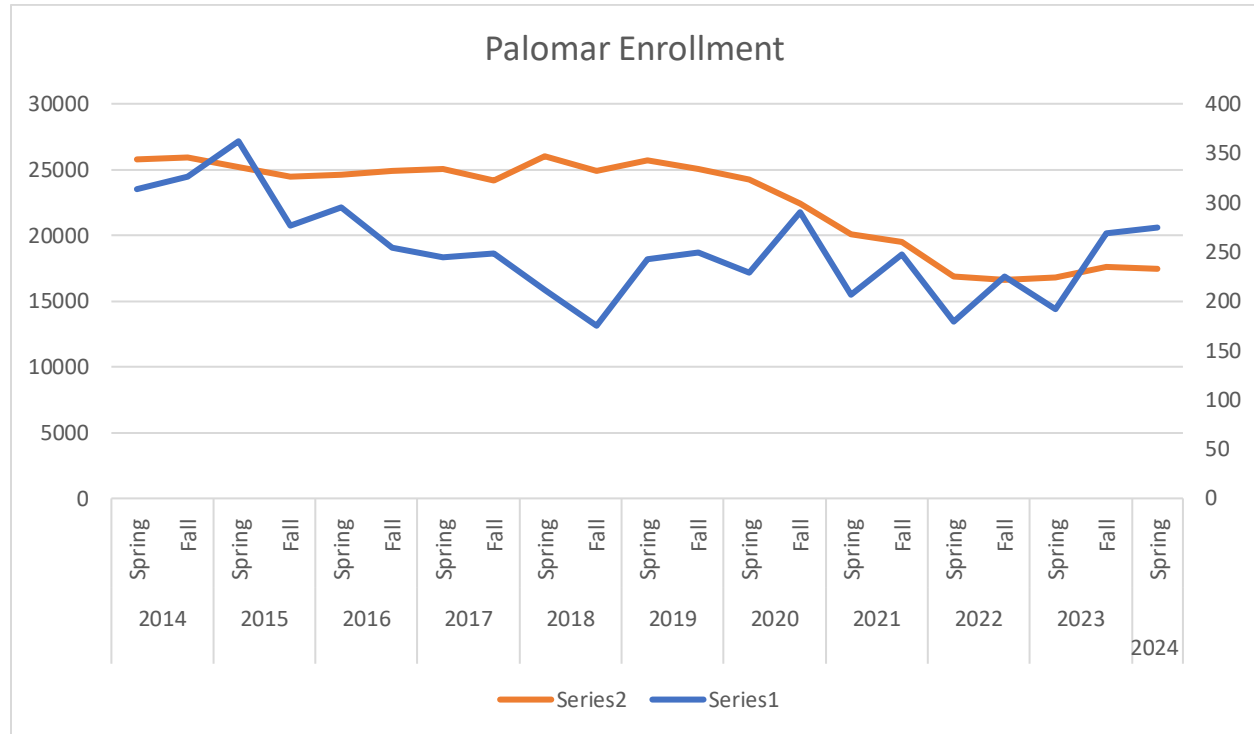
The Water/Wastewater Technology Mission Statement is:

Our mission is to educate and prepare students of diverse backgrounds, experiences, and abilities for careers and advancement in the water industry. Our committed, highly trained faculty and partnerships with Local, State, and National entities ensure that our graduates will have successful careers that improve their lives, their communities, and the economy.

III. Overview and Recent History

There are currently 9 active part-time faculty members. Water technology recently offered 10 and ran all classes in Spring 2024 and plans to offer 12 classes in Fall 24. This Spring is the strongest Spring enrollment we have seen since 2016. I am continuously working with our Dean, Susan Wyche to lower course offering minimums and extended deadlines.

IV. Enrollment Trends



Comments: Zamora asked how student population breaks down, Shiba reported that about 25% of students are recent High School graduates, 35% are already working in the water industry and the remaining 40% are switching careers. Styles mentioned that 4 year universities see a cliff coming where the number of high school students entering universities will decrease and will be heavily competing for students.

V. Course Format Updates

As of Spring 2024, 46% of classes at Palomar College are online and all labs are in-person. Backflow and Instrumentation are in-person for Water Tech, and water treatment continues the hyflex format which allows students to choose to attend class in-person or on zoom for most lectures.

We are still taking tours with students and are continuing an open house for students taking online classes to network in-person and check out what the water lab has to offer.

Comments: Garner shared that ACE 24 has a veterans initiative that allows veterans to attend free on Tuesday June 11th. Shiba will promote and share with students.

VI. Program Additions and Changes

Proposed Technician and Online Degree Pathways

Introduction of a fully online degree pathway and a technician pathway with a required number of contact/lab hours.

AS degree in Water Technology Education- 30 units of water courses

AS degree in Wastewater Technology Education- 30 units of wastewater courses

AS Degree in Water Technician Education 30 units of water courses, with a minimum of XXX lab hours/units

AS Degree in Wastewater Technician Education 30 units of wastewater courses, with a minimum of XXX lab hours/units

CA in Water Technology Education- 30 units of water courses

CA in Wastewater Technology Education- 30 units of wastewater courses

CA in Water Technician Education- 30 units of water courses, with a minimum of XXX lab hours/units

CA in Wastewater Technician Education- 30 units of wastewater courses, with a minimum of XXX lab hours/units

Current In-person/Hybrid Classes: WTE 149, 154, 156, 158, 164

Current Online Only Classes: WTE 51, 149, 152, 153, 155, 160, 162, 166, 197, 263, 272, 274

Comments: Overall, separating the degrees may be convoluted and difficult for HR and others to discern the difference. Will a fully online program cannibalize the in-person program? Garner mentioned that Learning Outcomes need to be clearly defined to be successful. Zamora commented that there is value added for students with hand on experience. The HR professional needs to ask those questions, Robbins agrees. Shiba asked if micro-certifications were a better route and majority agreed. Duran commented that the burden lies on the individual to showcase their courses and experiences like micro-certs. Garner informed us that he sees micro-credentialing expanding, we just need to educate people on the value of these credentials and educate businesses as well. Trees thinks one degree pathway is better. Styles commented that in-person classes are still very important for networking, Clemens agrees. Garner asked about making on-site activities optional vs required. Mattern added that the

current degree is very comprehensive and very good already. Maybe the focus should be on increasing internship hours. Trees would like a single program with a certain amount of lab hours and internship opportunities. Garner talked about how microcredentials build success and achievement for students. Shiba tabled this discussion and will look into microcredentials instead of a new degree pathway.

New Courses being offered:

1. Water Use Efficiency/Water Conservation- Currently a Topic, but will be an elective
2. Safety In the Water Industry- Currently a Topic, but will be an elective
3. Advanced Water Treatment- working with Applied Membranes Inc. on donation of an RO demonstration set up.
4. We would also like to offer accelerated Summer courses and refresher courses now that enrollment is strengthening.
5. We would like to create our own Palomar VPN for a mock SCADA system to implement into existing classes, not just WTE 156: Instrumentation. We could also create a new advanced SCADA course, WTE 256 that can be taken after taking WTE 156.
6. Discussion: Other Suggestions?

Requirements

Water Technology Program Requirements

WTE 149	Calculations in Water/Wastewater Technology
WTE 152	Water Distribution Systems
WTE 154	Basic Plant Operations: Water Treatment
WTE 156	Intro to Electrical and Instrumentation Processes
WTE 160	Public Works Management
WTE 164	Laboratory Analysis for Water/Wastewater
WTE 166	Motors, Pumps, and Hydraulics

Water Technology Electives (Select 9 units)

WTE 51	Career Pathways in Water Technology
WTE 102	Fundamentals of Water and Wastewater
WTE 158	Backflow Tester Training
WTE 162	Cross Connection Specialist
WTE 197	Water Technology Education Topics
WTE 272	Water Distribution II
WTE 274	Advanced Plant Operations: Water Treatment and Reclamation
CE 100	Cooperative Education*

Requirements

Wastewater Technology Program Requirements

WTE 149	Calculations in Water/Wastewater Technology
WTE 153	Basic Plant Operations: Wastewater Treatment
WTE 155	Wastewater Collection Systems
WTE 156	Intro to Electrical and Instrumentation Processes
WTE 160	Public Works Management
WTE 166	Motors, Pumps, and Hydraulics
WTE 263	Advanced Plant Operations: Wastewater Treatment

Wastewater Technology Electives (Select 9 units)

WTE 51	Career Pathways in Water Technology
WTE 102	Fundamentals of Water and Wastewater
WTE 158	Backflow Tester Training
WTE 162	Cross Connection Specialist
WTE 164	Laboratory Analysis for Water/Wastewater
WTE 197	Water Technology Education Topics
CE 100	Cooperative Education*

VII. Water Lab

- a. We are currently remodeling the classroom with new desks and chairs, and will have a computer at each desk for each student.
- b. We are continuing the planning phase for building our own on-site wastewater treatment plant. The College is moving forward with a potential bond for the November 2024 election and I am seeking a portion of those funds for this project. We are currently measuring and monitoring wastewater flows at the San Marcos campus.

Comments: Trees cautioned that this would be very difficult from a regulatory and reporting perspective. And once it's built it needs to be constantly monitored and maintained.

- c. We are still in the process of remodeling the water lab. Since 2020 Water Tech has been awarded over \$120,000 in grant funding, but we were not awarded any funding last year from Strong Workforce or Perkins. This has delayed the outdoor remodel and since then we are considering adding more mobile displays, such as the process control training system below. We currently have mobile training systems for pipe tapping, vertical centrifugal pump dissectible, gate valve packing system, and gate valve dissectible.

4-Variable Advanced Process Control Training System



VIII. Pathways

- a. Creation of a summer bridge program that will bring together a local high school, their water provider, and Palomar College for a summer education and outreach program.

Comments: Consider asking San Marcos High Tech High to the Bridge Program

- b. We are currently working with SMUSD to pilot a water technology pathway at the high school level. Students will take Fundamentals and career classes for high school and college credit. They will also visit water agencies throughout the semester.
- c. Currently recruiting for our Fall 2024 Internship with Vallecitos Water District, resumes due 3/17/24, see attachment A. Currently for academic credit, but are offering a \$2,000 scholarship for the intern for Fall 2024.

Comments: Robbins mentioned that we currently have a 5th intern at VWD who was just hired on as a full-time temp to assist with lead testing.

- d. Continued participation in the Regional Internship Program. The 2024-2025 program application will be open from April 8 through May 31, 2024. Please consider encouraging your agency to participate.

- IX. Alan Styles: CSU San Marcos: Certificate of Specialized Study in Water Management & Leadership Alan has received approval from CoBA Dean's Office to restart/resume the program. The next stage is to garner the level of support in the regional water community for a program restart/resume. Comments: Please email Alan if you have any thought or interest in restarting this program.

X. NSF ATE Grant Opportunities

- a. Currently in a grant mentorship program with the National Science Foundation's Advanced Technological Education Program (NSF ATE) and we will be applying for \$350,000 for the following three objectives:
 - i. Objective 1: Update existing curriculum to align with new technology and regulations.
 - ii. Objective 2: Diversify the workforce pipeline through strategic recruitment and retention strategies.
 - iii. Objective 3: Improve career readiness through a continuum of work-based learning activities.
- b. What should we prioritize to meet these objectives? Addition of new curriculum like AWT/AWP, Summer bridge programs, Dual enrollment, Internships, etc.
Comments: Garner suggested we include the military on Objective 2.

XI. Marketing and Outreach

- Cal-NV AWWA Meter Committee hosted at Palomar in July 2024
- Water Tech Newsletter- Feel free to forward any info to me that you'd like shared
- Industry visits and guest speakers
- Military Outreach focused on Credit for Prior Learning
- Improved website- Added a certification and jobs page
- Career fairs and high school visits
- Social media- Instagram
- Student Surveys- Ongoing
- Other Avenues?

XII. Future Advisory Board Meetings

Would we be interested in resuming in-person meetings for the future? Online very convenient and preferred by most.

XIII. Good of the order