Water/Wastewater Technology Program
Advisory Board Meeting
April 29, 2020

Agenda

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I. Introductions

The following Advisory Board Members were present for the April 29 Advisory Board Meeting.

Melita Caldwell-Betties, Faculty Chair Water Supply Technology, San Bernardino Valley College <mcaldwell@sbccd.cc.ca.us>

Patty Duran, Human Resources Analyst, San Diego County Water Authority <PDuran@sdcwa.org>

Gary Gramling, Lead Instructor Water Technology Program, Citrus College <ggramling@citruscollege.edu>

Chris Robbins, Public Information/Conservation Supervisor, Vallecitos Water District <crobbins@vwd.org>

Alan Styles, Director of Water Management and Leadership Program, CSUSM <astyles@csusm.edu>

Palomar College Staff

Jacob Shiba, Program Coordinator, Water/Wastewater Technology Program

II. Mission Statement

The Mission Statement of Palomar College is:
Our mission is to provide an engaging teaching and learning environment for students of diverse origins, experiences, needs, abilities, and goals.

The Water/Wastewater Technology program Mission Statement adopted in 2018:
Our mission is to educate and prepare students for careers and advancement in the water industry.
It was suggested to maybe add something to Water Techs mission statement that mentions inclusions about people from all backgrounds.

III. Overview and Recent History

Palomar's water and wastewater technology program has long been regarded as the premier water program in Southern California. However, in recent years the

program has seen declining enrollment numbers and has been only a night program. Other programs in California have since surpassed Palomar's program, offering many more classes and hands on experience. The water/wastewater technology program recognized a need for a full time faculty member to grow the program and I started in this role in August 2019. It is essential to note that the part-time faculty have been the foundation for the program and the main reason it is still respected today.

IV. COVID-19 Update

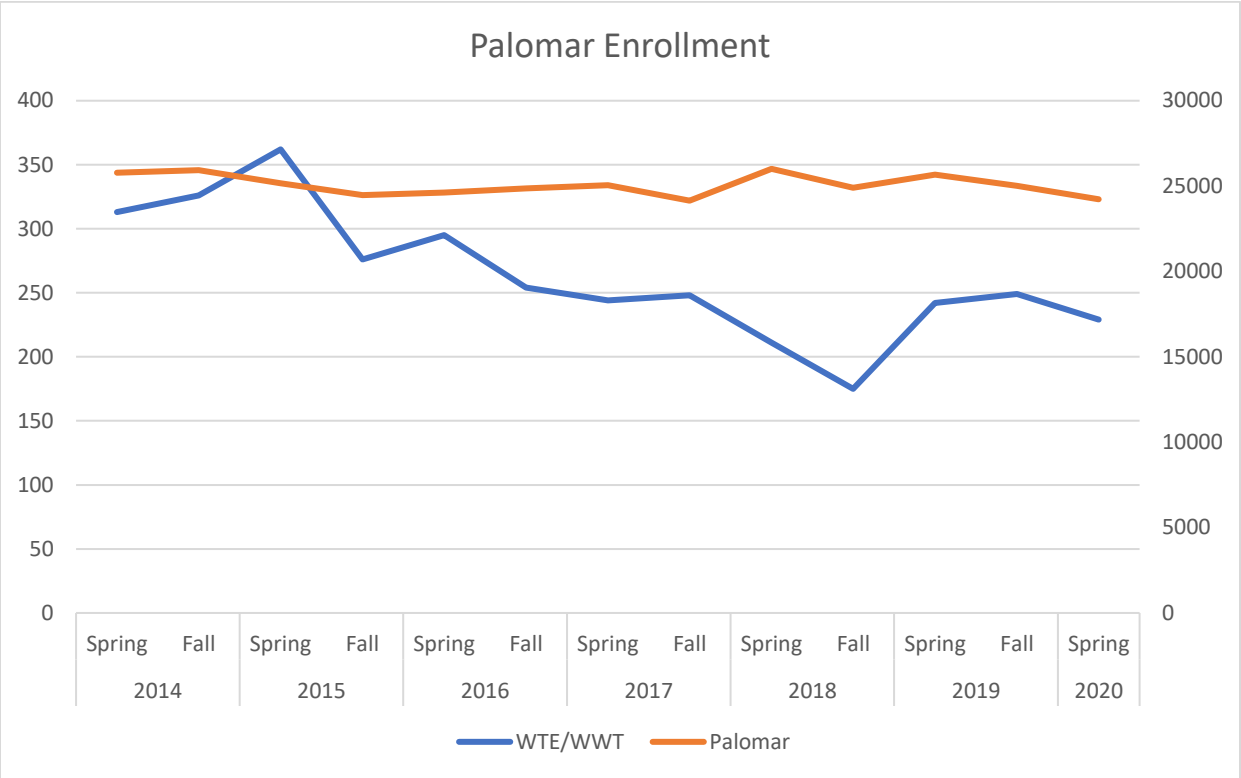
As you are all aware, this unprecedented and rapidly changing situation has dramatically impacted all of life, including life at Palomar College. As of 3/18/2020 at 12pm, classes for this week were cancelled and all classes starting 3/30/2020 will be conducted online.

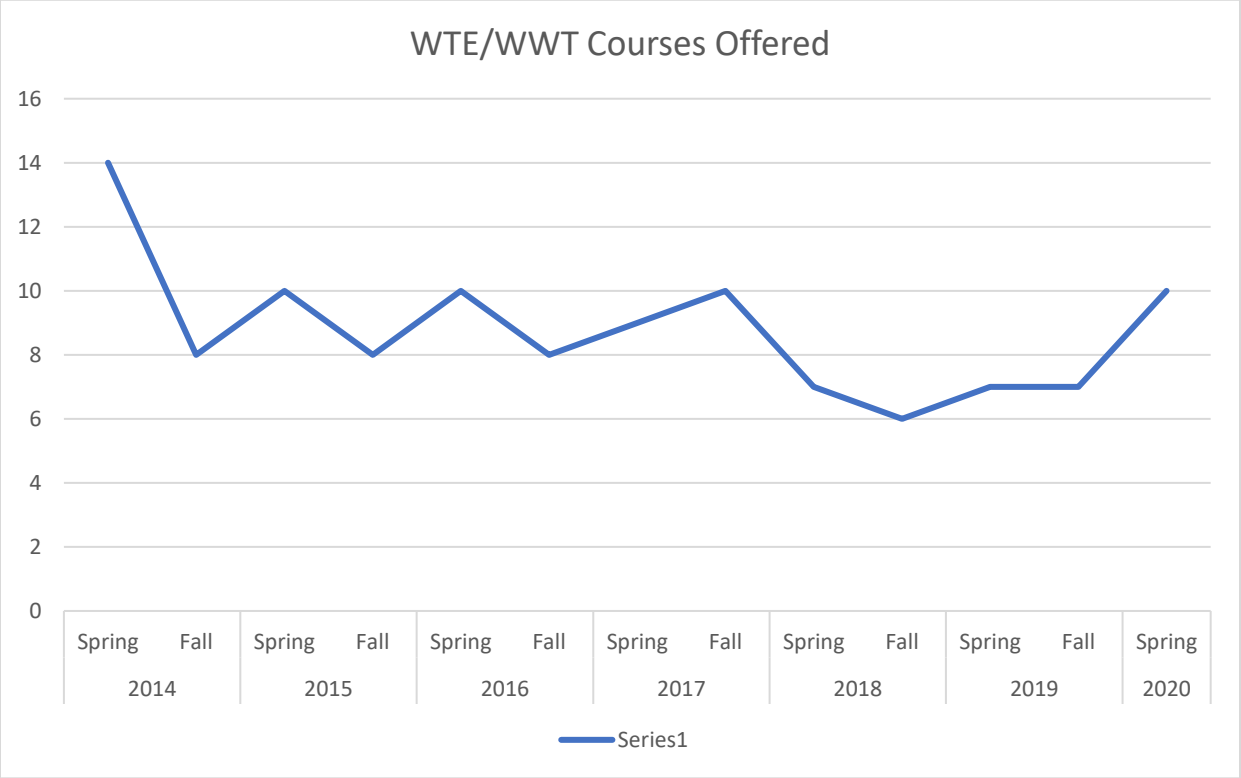
Faculty are currently working to address lab classes that require in person, hands on instruction. The current plan for lab classes is to continue the lecture portions and give students an in-progress for the class at the close of Spring 2020. We will then bring students back to campus, this date is TBD, to finish the necessary lab hours. This will also allow students to change their in-progress to a grade for the Spring 2020 semester.

Palomar will not be offering any 2020 Summer classes in Water/Wastewater Tech. Those programs that are offering Summer classes will be fully online.

Fall 2020 is still up in the air, however we are planning for two scenarios, one involving modified in-person classes and the other fully online.
Other Water Technology Programs are also following similar pathways to complete their lab courses. They are also planning for an uncertain Fall 2020 and may try to move more courses online in the future.

V. Enrollment Trends





It was mentioned that community college enrollment is expected to increase due to the COVID-19 pandemic, as millions of Americans are now unemployed, some seeking more stable careers. The Cal State and UC systems are also considering

encouraging some of their students, specifically those who live in dorm style living on campus, to complete their general education at their local community college.

VI. Course Schedule – 2-Year Plan

Course Schedule					
Calendar 1 (odd)		Calendar Year 2 (even)			
Spring	Fall	Spring	Fall	Units	
WTE/WWT 50	WTE/WWT 50	WTE/WWT 50	WTE/WWT 50	3	Calculations in Water/Wastewater Technology
WTE 52	WTE 52	WTE 52	WTE 52	3	Water Distribution Systems
WTE 54	WTE 54	WTE 54	WTE 54	3	Basic Plant Operations: Water Treatment
WTE/WWT 56		WTE/WWT 56		3	Intro to Electrical and Instrumentation Processes
WTE/WWT 58	WTE/WWT 58	WTE/WWT 58	WTE/WWT 58	3	Backflow Tester Training
WTE/WWT 60		WTE/WWT 60		3	Public Works Management
	WTE/WWT 62		WTE/WWT 62	3	Cross Connection Specialist
	WTE 64		WTE 64	3	Laboratory Analysis for Water/Wastewater
	WTE/WWT 66		WTE/WWT 66	3	Motors, Pumps, and Hydraulics
WTE 72				3	Waterworks Distribution II
		WTE 74		3	Advanced Plant Operations: Water Treatment and Reclamation
	WWT 52		WWT 52	3	Basic Plant Operations: Wastewater Treatment
	WWT 54		WWT 54	3	Wastewater Collection Systems
WWT 64		WWT 64		3	Advanced Plant Operations: Wastewater Treatment
WTE/WWT 97	WTE/WWT 97	WTE/WWT 97	WTE/WWT 97	0.5-4	Water/Wastewater Technology Education Topics
CE 100	CE 100	CE 100	CE 100	3-4	Cooperative Ed *(must be related to Water or Wastewater Technology)*

The 2 year course plan still looks like a good layout, providing students a way to map out their courses and plan their route to completion.

VII. Course and Career Plans

Suggested Course Plan: Water Technology AS Degree					
Academic Year 1 (odd/even)		Academic Year 2 (even/odd)			
Fall	Spring	Fall	Spring	Units	
Required					
WTE 50	WTE 50	WTE 50	WTE 50	3	Calculations in Water/Wastewater Technology
WTE 52	WTE 52	WTE 52	WTE 52	3	Water Distribution Systems
WTE 54	WTE 54	WTE 54	WTE 54	3	Basic Plant Operations: Water Treatment
	WTE 56		WTE 56	3	Intro to Electrical and Instrumentation Processes
	WTE 60		WTE 60	3	Public Works Management
WTE 64		WTE 64		3	Laboratory Analysis for Water/Wastewater
WTE 66		WTE 66		3	Motors, Pumps, and Hydraulics
Electives: Select at least 9 units					
WTE 58	WTE 58	WTE 58	WTE 58	3	Backflow Tester Training
WTE 62		WTE 62		3	Cross Connection Specialist
			WTE 72	3	Waterworks Distribution II
	WTE 74			3	Advanced Plant Operations: Water Treatment and Reclamation
WTE 97	WTE 97	WTE 97	WTE 97	0.5-4	Water Technology Education Topics
CE 100	CE 100	CE 100	CE 100	3-4	Cooperative Education (must be related to Water Technology)
Suggested Career Path					
Apply in Spring. Details at http://www.h2ointerns.com/					San Diego County Water Authority *Regional Water/Wastewater Internship Program*
Apply for next Distribution Exam.					State Water Resources Control Board Drinking Water Operator Certifications
Apply for next Treatment Exam. Details at https://www.waterboards.ca.gov/drinking_water/certlic/occupations/DWopcert.html					
Apply for jobs. Check at http://bcwaterjobs.force.com/ListJobs and water agency web sites.					

Suggested Course Plan: Wastewater Technology AS Degree					
Academic Year 1 (odd/even)		Academic Year 2 (even/odd)			
Fall	Spring	Fall	Spring		
Required					
WWT 50	WWT 50	WWT 50	WWT 50	3	Calculations in Water/Wastewater Technology
WWT 52		WWT 52		3	Basic Plant Ops: Wastewater Treatment
WWT 54		WWT 54		3	Wastewater Collection Systems
	WWT 56		WWT 56	3	Intro to Electrical and Instrumentation Processes
	WWT 60		WWT 60	3	Public Works Management
	WWT 64		WWT 64	3	Advanced Plant Operations: Wastewater Treatment
WWT 66		WWT 66		3	Motors, Pumps, and Hydraulics
Electives: Select at least 6 units					
WWT 58	WWT 58	WWT 58	WWT 58	3	Backflow Tester Training
WWT 62		WWT 62		3	Cross Connection Specialist
WWT 97	WWT 97	WWT 97	WWT 97	0.5-4	Wastewater Technology Education Topics
CE 100	CE 100	CE 100	CE 100	3-4	Cooperative Education (must be related to Wastewater Technology)
Suggested Career Path					
Apply in Spring. Details at http://www.h2ointerns.com/				San Diego County Water Authority *Regional Water/Wastewater Internship Program*	
Apply for next Distribution Exam.				State Water Resources Control Board Drinking Water Operator Certifications	
Apply for next Treatment Exam. Details at https://www.waterboards.ca.gov/drinking_water/certlic/occupations/DWopcert.html					
Apply for jobs. Check at http://bcwaterjobs.force.com/ListJobs and water agency web sites.					

VIII. Course Additions and Changes

Course Changes

Currently all WTE and WWT courses are 50 level courses and therefore non-transferrable. This disables these courses from being taken by students looking to transfer to a 4-year college. By converting all the WTE/WWT courses to 100 level courses, it allows for a whole new section of the student body at Palomar College to take our courses and potentially enter the program. Having all courses at the 100 level also allows for advancement in degrees for those looking to move into management positions. This is a priority for the program and will work in tandem with the new courses we are looking to offer, as well as the mini certificate program that has been proposed in the past.

Other Water Technology programs are also struggling with bringing their courses to 100 level due to the lack of a direct transfer program at a local 4 year college. We will be following the Cuyamaca College and National University partnership very closely, as they attempt to create a bachelors degree program in Business Administration with an emphasis in Water Resources. CSUSM would also like to bring back their Water Resources Certificate program, possible under a different program that may allow for an actual bachelors degree with an emphasis in Water Resources.

New Courses considered being offered:

1. Introduction to Water and Wastewater Technology
2. Career Pathways in Water Technology
3. Water Conservation
4. Water Resources
5. Advanced Water Treatment and Reuse

Mini Certificates recommended by staff in and approved by the 2018 Advisory Board

Distribution Certificate:
- WTE/WWT 50 Calculations in W/WW Tech
- WTE 52 Water Distribution Systems
- WTE 72 Waterworks Distribution 2

Water Treatment Certificate:
- WTE/WWT 50 Calculations in W/WW Tech
- WTE 54 Basic Plant Ops: Water Treatment
- WTE 74 Advanced Plant Ops: Wtr Trmt&Rcl

Wastewater Treatment Certificate:
- WTE/WWT 50 Calculations in W/WW Tech
- WWT 52 Basic Plant Operations: Wastewater
- WWT 64 Advanced Plant Ops: WW Treatment

Cross Connection Certificate:
- WTE 52 Water Distribution Systems
- WTE/WWT 58 Backflow Tester Training
- WTE/WWT 62 Cross Connection

Water/Wastewater Mechanical Technology Certificate:
- WTE/WWT 58 Backflow Tester Training
- WTE/WWT 56 Intro to Elec/Instrumentational
- WTE/WWT 66 Motors, Pumps, Hydraulics

Collections System Operator Certificate:
- WTE/WWT 50 Calculations in W/WW Tech
- WWT 54 Wastewater Collection Systems
- WTE/WWT 66 Motors, Pumps, Hydraulics

It was cautioned that having too many mini certificates can be confusing for students as they try to navigate through the program. It was also asked what the benefit would be for these mini-certs, or who would honor these for a benefit in the workplace and for additional industry certifications.

Grant Funding:

We are currently seeking grant funding and donations to improve our outdoor water lab, increase hands on displays, and set up a SCADA system for students to use.

Funding has a been issue for both Citrus and San Bernardino Valley Colleges for adding hands on infrastructure that students can learn with. This is still seen as a great benefit for students if it can be achieved.

IX. Marketing and Outreach

At the meeting we will discuss the following marketing and outreach efforts:

- New brochures
    - Specific to high school, almost complete

    - General about the water industry
- Fall 2020 Schedule Advertisement scheduled
- Industry visits
- Industry Support
- Letters of support
- Improved website- in progress
- Career fairs and high school visits
    - Fall 2019- attended 8 career fairs and gave 8 career presentations
    - Spring 2020- scheduled 3 career fairs and 3 presentations
- Photos- photos of students and industry workers for outreach
- Videos- applying for funding
- Social media- creation of Instagram in progress
- Student Surveys- in progress. I will send a follow up email asking for specific input on what questions that we would like to ask ALL water tech students.
- Thoughts and suggestions from the Advisory Board

Citrus is beginning to employ similar social media means of outreach as well.

X. Good of the order

The internship program through the SDCWA that Palomar participates in is still highly revered and all would like to see it grow. There was great interest from other Water Tech programs to establish their own internship program as well.