



# GAVILAN COLLEGE

*Research, Planning, and  
Institutional Effectiveness*

## Program Integrated Planning and Review

### Instruction

Program Name:	<b>Water Resources Management</b>
Academic Year:	<b>2019 - 2020</b>

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# Gavilan College

## Program Integrated Planning and Review

### Instruction

Academic Year 2019-20

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# Purpose, Standards and Resources

## Purpose

The fundamental purpose of ongoing, Program Integrated Planning and Review (PIPR) is to maintain and if possible improve the effectiveness of every College program and service, and of the institution as a whole, based on the results of regular, systematic assessment. The ultimate beneficiaries of program integrated planning and review are our students and the community we serve.

Specifically, program review facilitates:

- Creation of a three-year plan for each program
- Institutional & program improvement through the comprehensive self-study, peer review, and planning process
- Development of a three-year budget request plan, including data to support annual budget requests
- Creation of a living document that provides all basic information and forward planning for each program; can be referenced by stakeholders via public website
- Program leadership continuity of expertise (e.g., a department chair change)
- A baseline for the integrated planning process and cycle
- Assessment of program viability
- Accreditation compliance; board policy / administrative procedure compliance (c.f. [BP/AP 4020](#))

Another purpose of the process is to focus available resources—staff time, budget, technology, space - on the achievement of goals and objectives intended to maintain or improve effectiveness of the program itself, but also the programs' contribution to the College's Strategic Plan. Achieving some objectives requires resources over and above what is available, which means that a resource request is necessary. But achieving others requires no extra resources—only the reallocation of existing ones.



Whenever this symbol appears, consider creating a goal on this topic in your three year planning grid at the end of the document.

## Resources:

Please refer to the accompanying PIPR Handbook which you can find [here](#). In addition, there are links and paths to information throughout the document.

## Program Plan and Review Timeline

When	Description	Participation
2019 Aug	Program Lead training, including website 'tour', GavDATA and other data site overview.	PIPR Chair All Program Leads in Review Cycle
Sept	Program Lead provides budget codes to PIPR for submission to Business Office (Sept 20).	Program Lead
Sept - Nov	Program Lead seeks assistance from support team, department faculty, Dean, others to gather information for report (on-going, as needed). Write Program Report draft (Sept 2 – Nov 15).	Program Lead
Nov	Initial draft due (Nov 15). Peers review report, make suggestions, and identify areas of improvement. Sign off on last page of report (No later than Nov. 22). First Draft revision begins (Nov. 19).	Program Lead Peer Review Team
Dec	2nd draft due to Dean to review, request additions/ clarifications (Finals Week).	Program Lead Supervising Admin
2020 Feb	Dean-reviewed document returned to Program Lead with revision and planning recommendations, if needed. If report is complete and approved, Dean signs and forwards completed report to PIPR (Jan 27-31). If report needs revision, Dean returns to Program Lead.	Program Lead PIPR Supervising Admin
Feb - March	<b>If needed</b> , Program Lead makes edits as needed to report (Feb 3-28). Final report sent to Dean for approval and signature (March 2-6). Dean forwards approved document to PIPR (March 13).	Program Lead Supervising Admin
Feb - May	PIPR reviews final documents. Approves final report (Feb 3 – May 22).	PIPR
June	PIPR Chair presents annual report to Board	PIPR Chair, Board
June-Aug	Final reports submitted to President's Cabinet as information item.	Deans Council, Cabinet
Sept	Final documents to Academic Senate and ASGC as information item.	Academic Senate, ASGC

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## A. Executive Summary

*(Complete this section last).*

1. Please provide a brief executive summary regarding program trends and highlights that surfaced in the writing of this report. Summarize, using narrative, your program goals for your next three years. Your audience will be your Peer Review Team, the PIPR Committee, President's Cabinet, Dean's Council, ASGC, Academic Senate, Budget Committee and Board of Trustees (300 words or less).

The College's Water Resources Management degree/certificate program started in spring 2012 in response to the needs identified through statewide and regional assessments. It is funded by categorical funding from the Strong Workforce budget and supported financial from the college budget.

The success rate for the WTRM program is approximately 10% higher than the college. This trend has been consistent since 2013-14 (except for 2015-16). For success rate by age, in 2017-18 the college was 21% higher for students 18-20; but the WTRM program was higher for most other ages, including 25% higher for 21-25 year olds.

The program has been working on several new ventures including: the Improving Online CTE Pathways Grant; internships with Valley Water; another student survey to determine the number of students who are seeking and/or completing certifications; a resume workshop as well as additional events such as practicing mock interviews; working with Bay-works to bring industry leaders to our campus to do on the spot interviews with our students; and scheduling classes at off campus water company sites.

Our goals for the next 3 years are: (1) Complete the SLO assessments for courses that have been taught and have not been assessed. (2) Complete the assessment of all PLOs for the WTRM degrees and certificates. (3) Increase the number of students who participate in WTRM internships. (4) Provide a variety of opportunities for students to participate in panel discussions by water industry professionals. Additionally, it is imperative that the college hire a full-time instructor to anchor the program.

We look forward to continuing to work with our students to improve their educational experience and increase their opportunities for professional and economic success, work with our colleagues to accomplish our shared goals and objectives, and work with the college to provide a quality Water Resources Management program.

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## B. Program Mission and Accomplishments

### Gavilan College Mission Statement

*Gavilan College actively engages, empowers and enriches students of all backgrounds and abilities to build their full academic, social, and economic potential.*

1. Provide a brief overview of how the program contributes to accomplishing the mission of Gavilan College. In addition to a basic overview of your program's structure and services, be specific in connecting your program's services to elements of the mission statement (300 words or less).

The Water Resources Management program is designed to prepare students for employment by municipal drinking water and wastewater treatment departments or industrial treatment facilities. Careers in water/wastewater technology generally involve the administration, operation and maintenance of both drinking water and wastewater treatment facilities as well as distribution and collection systems. Courses prepare students for certification examinations administered by the State of California as well as those administered by professional associations within the water and wastewater industry. Current instructors are experienced water and wastewater professionals. Classes are built around practical examples of real-world scenarios, demonstrations, and field trips whenever possible. Internships are available through Cooperative Work Experience.

The WTRM program provides the opportunity for students to engage in building their social potential by developing internship opportunities and by inviting area water industries into the classroom for panel presentations. Student's academic as well as economic potential is being developed by the pathways that were created from High School to College to the Industry. As well as the implementation of Phase 2 and Phase 3 of the WTRM program plan which included four additional courses and four new degrees/certificates.

Students enrolling in the program who are not currently employed in the water industry have the opportunity to develop job skills for immediate employment. According to the State of California Employment Development Department website, jobs as Water and Liquid Waste Treatment Plant and System Operators in California (also called Process Operators, Wastewater Operators, Wastewater Treatment Operators, Wastewater Treatment Plant Operators, Water Plant Operators, and Water Treatment Plant Operators) are "expected to increase by 6.9 percent, or 700 jobs between 2012 and 2022." And those students in the program who are currently working in the industry have the opportunity to take industry certification tests which will help improve their earning power.

### Response and follow-up to previous program reviews

On the [PIPR website](#), locate and review your previous program plan and review (self-study) and subsequent program plan updates. After studying, please complete the following questions:

2. Briefly describe the activities and accomplishments of the department with respect to
- Each goal since the last program plan and review and
  - PIPR recommendations.

To add additional rows, click in the bottom cell on the right and push 'tab' on the keyboard.

IEC Recommendation or PIPR Program Goal	Accomplishment
Our goals for the short term are to: (1) Complete the Student Learning Outcome assessments for all courses that have been taught.	Not completed.
(2) Assess the Program Learning	Not completed.



Outcomes for all WTRM degrees and certificates.	
(3) Expand the opportunities for student internships.	The CE and Strong Workforce Senior Program Specialist has been working with employers to increase the number of student internships available. An internship with Valley Water, where they are looking to train 4 Gavilan water students at their facility will be happening Spring 2020.
(4) Increase the number of students who participate in WTRM work experience.	Increasing internships will also help increase student participation in work experience.
Additionally, long term goals are to: (1) Hire a full-time instructor to anchor the program.	Not yet.
(2) Increase the number of students who complete the WTRM program, earning A.A. Degrees and Certificates of Achievement.	A comparison of the numbers from the 2017-18 IEC report with this report's figures show no increase in degrees/certificates earned.
(3) Provide the opportunity for current workers in the water and wastewater management industry the courses required for them to increase their economic earnings.	Established a sequence of course offerings to ensure that the students have the opportunity to take the classes required to earn their degrees and/or certificates.  Course scheduling has also been modified to provide a variety of days and locations when and where class have been offered. Friday course offerings began in Spring 2017, as well as summer session classes.  Beginning in Fall 2016 the program has begun offering courses off site in areas that service our program. Examples include: Silicon Valley Clean Water site in Redwood City, San Benito Water District site in Hollister, Central Contra Costa Sanitary District site in Martinez, and California American Water site in Pacific Grove.
(4) Continue to develop staff networks to maximize financial and technical assistance.	Support has been ongoing through the Advisory Committee, local and state water boards, as well as the Industry Driven Regional Collaborative grant awarded through the Economic and Workforce Development Program by the CCC Chancellor's Office and other grant funding.
(5) Funding, both through the college budget process and grants.	Money to support the program has been available through both the college budget process and grants.

3. Have the services of your program changed over the past three years? Please explain (300 words or less).

In the fall and spring of 2015 – 16, as a part of Phase 2 and Phase 3 of the Water Resources Management program's 3 Phase process, four new courses and four new degrees/certificates were developed. The College now offers A.A. Degrees and Certificates of Achievement in Wastewater Collection Technology Education, Wastewater Technology Education, Water Distribution Technology Education, Water Resource Management, and Water Technology Education.

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## C. Program Overview

1. List program degrees and certificates under this department according to the [college catalog](#).

*To add additional rows, click in the bottom cell on the right and push 'tab' on the keyboard.*

Wastewater Collection Technology Education A.A.
Wastewater Technology Education A.A.
Water Distribution Technology Education A.A.
Water Resource Management A.A.
Water Technology Education A.A.
Wastewater Collection Technology Education Certificate of Achievement
Wastewater Technology Education Certificate of Achievement
Water Distribution Technology Education Certificate of Achievement
Water Resource Management Certificate of Achievement
Water Technology Education Certificate of Achievement

2. List any collaboration you have had with external community stakeholders, for example – advisory committees, articulation agreements, community partnerships, etc. If this does not apply, enter N/A. (200 words or less).

Collaboration with the Water Resource Management Advisory Committee has led to: (1) The College developing engineering classes for the "Green" Engineering Academy at San Jose High School. (2) Establishment of a Gavilan Community College District High School to College Course Articulation Agreement between the college and the ESUHSD for 3 engineering classes. (3) Development of an OSHA Safety course that will be taught at Independence High School as part of a dual credit program. (4) Approval of a WTRM Occupational Work Experience class so students completing internships can earn credit.

Santa Clara Valley Water District created an internship for Gavilan's students. An internship with Valley Water, where they will train four Gavilan students will happen this Spring 2020. Spring 2017 semester, representatives from the Santa Clara Valley Water District and Cal Water talked to students in the WTRM 205 class about current needs and future employment opportunities. November 21, 2019 two water classes will be joining for a resume workshop in preparation for an industry panel in the Spring. Working with Bay-works to bring industry leaders to our campus to do interviews. To prepare we are hosting resume workshops as well as planning additional events such as mock interviews

The college is involved with the Water Career Pathways Advisory Committee which is working to encourage enrollment from the high schools into the college's WTRM program.

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## D. Student and Program Outcomes

### College Goal for Student Achievement

#### *Increase Scorecard Completion Rate for Degree and Transfer*

The College has a primary aspirational goal of increasing the Completion rate from 46% to 53.5% on the **CCCCO Scorecard Completion Rate for Degree and Transfer** [\[view\]](#) by 2022. The completion rates in the Scorecard refers to the percentage of degree, certificate and/or transfer-seeking students tracked for six years who completed a **degree, certificate, or transfer-related outcomes (60 transfer units)**.

As you answer the questions below, please consider how your program is helping the college complete this aspirational goal of increasing the Gavilan College Degree, Certificate, and Transfer Completion rate by 7.5 percentage points on the CCCCCO Scorecard by 2022.

### Success

The following questions refer to data regarding student achievement.

**Path:** [GavDATA](#) → Program Review/ Equity → D1. Course Success Rates by Group

Find your discipline's course success information. Consider your department success rate trends over the last three years. Compare your overall-success to the college average.

1. Are these rates what you expected after comparing with the college average? Are there any large gaps? Is there anything surprising about the data? What trends are suggested by the data (200 words or less)?

WTRM Success Rates: F '16 78%, F '17 81%, F '18 75%; College Success Rates: F '16 67%, F '17 69%, F '18 68%. The success rate for the WTRM program is, on average, approximately 10% higher than the college as a whole. This trend has been consistent since 2013-14 (except for 2015-16) and is contained in the 2017-18 IEC Self Study.

By Group:

Gender – 2018-19 the colleges success rate for males was 71% while the WTRM program was 80%. In 2017-18 the colleges success rate for females was 72% while the WTRM program was 91%.

Age – 2018-19 the college and WTRM program were equal to or within 2%-5% of each other. But in 2017-18 the college was 21% higher for students 18-20; but the WTRM program was higher for most other ages, including 25% higher for 21-25 year olds.

Ethnicity – Generally the WTRM program's success rates were higher than the colleges for both years. Two groups that were much higher are African-Americans and Hispanic.

Now find your division persistence information. Consider your retention rate trends over the last three years. Compare your overall retention to the college average.

**Path:** [GavDATA](#) → Program Review/ Equity → D2. One Year Persistence Rate

2. Are these rates what you expected after comparing with the college average? Are there any large gaps? Is there anything surprising about the data? What trends are suggested by the data (200 words or less)?

CE Persistence Rates: F '16 48%, F '17 50%; College Persistence Rates: F '16 48%, F '17 47%. The CE Programs persistence rates are equal to or slightly above the college's rate.

3. What are your set goals for course success? Do your individual course and department rates meet this goal? Helpful Question: If your rates for success are lower than your goals, what are your plans to improve them (200 words or less)?

**Path:** [GavDATA](#) → Program Review/ Equity → D3. Course Rates by Unit

The CE course rates by unit for 2017-18 and 2018-19 were not lower than the overall college's rate, they were about equal to them. For 2017-18 the WTRM programs success rate for the category African-American, Latinx, and Filipinx students was 8% points higher than the college. This is also shown in the statistics for question #1.

4 – 6: N/A



**Consider addressing success goals in your Three-Year Program Plan at the end of this document.**

## Equity

Gavilan College has identified the following populations as experiencing disproportionate outcomes: Males (African American, Asian, White, Two or More Races, and First Generation), Students with Disabilities, Veterans and Foster Youth.

7. Using the path above, locate your program in GavDATA. Examine your equity results over the last three years. If there are differences in success rates and/ or retention across groups, comment on any differences in success rates across groups. Helpful Questions: What current factors or potential causes can be connected to these areas of disproportional impact? How might your program or department address student equity gaps (200 words or less)?

**Path:** [GavDATA](#) → Program Review/Equity → D7. Disproportionate Impact with Margin of Error by Year. Locate your department. Filter by Year

Contact your support team for any needed assistance in using GavDATA.

As is shown in earlier data, the WTRM program has been successful with the African American population. Other populations, which the data was reviewed over 3 years, was for Foster Youth and Veterans. For Foster Youth the WTRM program has gone from +18 in 2016-17 to -2 in 2018-19. While for the Veteran group they have gone from 0 to +3.

The WTRM program should continue their outreach into the different sectors of our district communities to target the identified populations. Working with Dean Carr on the larger CE outreach efforts will be a part of this plan.

8. [BP 3420](#) (Equal Employment Opportunity) states:

The Board supports the intent set forth by the California Legislature to assure that effort is made to build a community in which opportunity is equalized, and community colleges foster a climate of acceptance, with the inclusion of faculty and staff from a wide variety of backgrounds. It agrees that diversity in the academic environment fosters cultural awareness, mutual understanding and respect, harmony and respect, and suitable role models for all students. The Board therefore commits itself to promote the total realization of equal employment through a continuing equal employment opportunity program.

How does your department align with the District's Equal Opportunity Board Policy? Helpful Question: How do you plan to address EEO outcomes in your employee hires (300 words or less)?

All instructors who teach in the WTRM program are part-time and most of them currently are employed in the water industry. They regularly attend industry related conferences/workshops, which could be an avenue for the department and the college HR department to make contact with potential employee hires. The part-time faculty who make up the program are currently a mix of males and females; however, they are ethnically predominately white.

9. Find your Distance Education success information. If distance education is offered, consider any gaps in success rates between distance education and face-to-face courses. Do you notice any trends? Do these rates differ?

**Path:** [GavDATA](#) → Program Review/ Equity → D9. Course Success Rates → Locate your department. Filter by Delivery Methods

Helpful question: If disparity exists, how do you plan on closing the achievement gaps between distance education and face-to-face courses (300 words or less)?

In the Fall of 2018, all WTRM courses were modified, adding alternative teaching methods so that they can be taught online. However, to this date, no courses have been offered via distance education.

10. N/A

## Conferred Award Trends

11. Review the number of certificates and/ or associate degrees awarded in your program. Please supply the number of degrees and certificates awarded for the past three years. For reference, review the "[Majors by Program, 2008-2019](#)" for declared majors by year, unduplicated headcount.

**Path:** [GavDATA](#) → Program Review and Equity → D11. Count of Degrees and Certificates Awarded

To add additional rows, click in the bottom cell on the right and push 'tab' on the keyboard.

Year	Degree/ Certificate	Goal for Completion	Actual Degree Completion
2016-17	12		
2017-18	12		
2018-19	11		

12. What is your set goal for degrees and certificates awarded? Do your totals meet this goal? Helpful question: If your totals for degrees/ certificates awarded are lower than your goals, what are you plans to improve them (200 words or less)?

Long term goal number two, as stated in our 2017-18 Self Study is to (2) Increase the number of students who complete the WTRM program, earning A.A. Degrees and Certificates of Achievement. Based on the data in that report: 14 degrees/certificates were awarded in 2013-14, 13 in 2014-15, 15 in 2015-16 and 11 in 2016-17.

A review of current GavDATA, as displayed in the chart above, show students earned 12 degrees/certificates in 2016-17, 12 in 2017-18, and 11 in 2018-19. So, no measurable difference. The department would like to increase those numbers and has addressed some ways to do so in their new three-year program plan.



**If your totals for degrees/ certificates awarded are lower than your goals, consider addressing this in your Three-Year Program Plan at the end of this document.**

## [curriQunet](#)

Click Link above and go to Intranet page in My.Gav

13. Are your SLOs, PLOs and ILOs mapped in [curriQunet](#)?

Yes:

No:

14. Are your SLOs and PLOs up to date in [curriQunet](#) AND on the [reporting website](#) (←requires your email log-on)?

Yes:

No:

15. Have all of your SLOs and PLOs been assessed in the last five years?

Yes:

No:

16. Have you reviewed all of your SLOs to ensure that they remain relevant for evaluating the performance of your program?

Yes:

No:

17. If you answered no to any of the above questions, what is your plan to bring SLOs/ PLOs into compliance (200 words or less)?

In the Fall of 2017, all WTRM course SLOs and certificate and degree PLOs were revised/reduced/updated. However, they have not been mapped. According to the IEC 2017-18 Self Study, WTRM PLOs were to be assessed by the end of 2018-19 and SLOs by 2017-18. Unfortunately, that has not happened.

As the current WTRM Program Lead is overwhelmed/swamped between their full-time job and Gavilan College responsibilities, perhaps it would be helpful if another part-time WTRM faculty member was hired to work with other faculty in the program, and the Faculty SLO/PLO Liaison, to complete the course and degree/certificate level SLOs/PLOs. The data attained from these assessments may be helpful with future program plans.



**Consider addressing this in your Three-Year Program Plan at the end of this document.**

## Learning and Outcomes Assessment

Review Learning Outcomes data located in the Course and Program Reports for your area (path below).

After you have examined your results, reflect on the data you encountered. Please address the student learning outcomes (SLO), program outcomes (PLO), and institutional outcomes (ILO) in your analysis.

### Student Learning Outcomes (SLO)

**Path:** Gavilan College Intranet → [curriQunet](#)

18. What are your individual course goals for SLO success? If you don't have set goals, what should they be? Helpful question: If your SLO results are lower than your goals, what are your plans to improve them (200 words or less)?

No data available to complete this question. That is why we are making the recommendation in question 17.

### SLO Disaggregation

19. How do your SLO results vary across your courses? Are there any patterns that stand out (200 words or less)?

No data available to complete this question. That is why we are making the recommendation in question 17.

### Program Learning Outcomes (PLO)

**Path:** [Gavilan College Intranet](#) → Program Planning → Student Learning Outcomes Assessment Reporting → Program Level SLO (Far left) → Instructional → Select program

20. What is your set goal for PLO success? Helpful question: If your PLO results are lower than your goals, what are your plans to improve them (200 words or less)?

No data available to complete this question. That is why we are making the recommendation in question 17.

### **Institutional Learning Outcomes (ILO)**

21. How aligned are your SLOs and PLOs to the ILOs (200 words or less)?

They have not yet been aligned. That is why we are making the recommendation in question 17.

22. N/A



**Consider addressing LOs in your Three-Year Program Plan at the end of this document.**

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## E. Curriculum and Course Offerings Analysis

### Curriculum Analysis

1. Are there plans for new courses or educational awards (degrees/certificates) in this program? If so, please describe the new course(s) or award(s) you intend to propose (200 words or less).

Not at this time.

2. Provide your plans to either inactivate or teach each course not taught in the last three years (200 words or less).

Of the 27 courses offered in the WTRM program, only 2 (WTRM 233 and WTRM 236) have not been offered. These are two of the more recently developed classes and may be ones that could be considered for distance education offerings.

### Course Time, Location and Delivery Method Analysis

Using the copy of the Master Schedule from [Argos](#), find the information regarding when, where, and in which method the courses in this program are taught.

**Path:** Gavilan Intranet→Argos→Gavilan Schedule→Schedule by Division and Department→Select term, division and your department then press 'run dashboard'.

**To Create a PDF of your results above:** After obtaining results, go to the top of the screen: Reports→Schedule Reports by Division and Dept svc→Run

#### Location/Times/Delivery Method Trend Analysis:

3. Consider and analyze your location, time, and delivery method trends. Are classes offered in the appropriate sequence/ available so students can earn their degree or certificate within two years? Are courses offered face-to-face as well as have distance education offerings? Are they offered on the main campus as well as the off-site areas? Different times of day? (300 words or less).

Working with the Dean and CE Counselor, a sequence of course offerings were developed to ensure that the student's needs are met and that they have the opportunity to take the classes required to earn a degree and/or certificate.

Since the WTRM Program was established as a credit program in the Spring of 2012, classes have been offered Fall and Spring semesters Monday – Thursday evenings from 6 – 9 pm on the Gilroy campus. There have been a few exceptions: In Spring 2014, 2 courses (WTRM 204 and WTRM 205) were offered in the late afternoon/evening 3:20 to 9 pm. In Spring 2015 a Friday evening 6 – 9 pm course (WTRM 205) and Saturday morning 9 am – 12 noon class (WTRM 203) were scheduled. Friday courses continue to be offered: Spring 2017, Fall 2017, Fall 2018, and Spring 2019.

Courses have been offered during the summer session in 2017, 2018, and 2019.

Beginning in Fall 2016 the program has begun offering courses off site in areas that service our program. WTRM 201 – Silicon Valley Clean Water site in Redwood City and WTRM 215 – San Benito Water District site in Hollister. Spring 2017: WTRM 201 – Central Contra Costa Sanitary District site in Martinez and WTRM 207 - Silicon Valley Clean Water site in Redwood City. Fall 2017: WTRM 202 - Central Contra Costa Sanitary District site in Martinez and WTRM 211 - Silicon Valley Clean Water site in Redwood City. Fall 2019: WTRM 202 – California American Water site in Pacific Grove.



In the Fall of 2018, all WTRM courses were modified, adding alternative teaching methods so they can be taught online. However, to this date, no courses have been offered via distance education.



**Consider goal creation around more efficient and beneficial locations, delivery method and/or time of day trends in your Three-Year Program Plan at the end of this document.**

## F. Program and Resource Analysis

### Program Personnel

1. Please list the **number** of Full and Part Time faculty in this program for the past **two** years

\* **Path:** [GavDATA](#) → Program Review/ Equity → F1. Faculty workload (FTEF) by Full-time/ Part-time → Find Program

Academic Year	Number of Full Time faculty	Number of Part Time faculty	Faculty Workload* FT PT	Overall FTEF*
2017-18	0	9	FT: 0 PT: 2.0	2.0
2018-19	0	7	FT: 0 PT: 2.8	2.8
			FT: PT:	

How have and will faculty with reassigned time, grant commitments and activity, projected faculty retirements and sabbaticals affected personnel and load within the past in the next three years? What future impacts do you foresee (200 words or less)?

N/A

### Departmental Productivity Measurements

2. Use the Enrollment Trends section of your Program Review Data Sheet to determine information for below. Please review and enter data for the past three years.

\* **Path:** [GavDATA](#) → Program Review/ Equity → F2. Enrollment Variables and Trends → Find Program

Year	Total FTEF	Total FTES*	Productivity *(WSCH/FTEF)	Total Dept. Allocated Budget	Total Departmental Spending
2016-17	Not Available on GavDATA	31 (2017-18 IEC Self Study Report)	345 (2017-18 IEC Self Study Report)	\$33,158.00	\$58,686.81
2017-18	2.0	22	184	\$33,473.00	\$48,846.20
2018-19	2.8	26	156	\$49,194.00	\$66,146.64

Your Program Cost per FTES average is: 2018-19 \$2,544.10; 2017-18 \$2,220.28; and 2016-17 \$1,893.12

College-wide Cost per FTES average is: \$7,203.44

Statewide Funding per FTES: \$3,727.00

3. Evaluate your program cost per FTES. Is your cost in alignment with your FTES generation? If not, what improvements can be made (200 words or less)?

The program recognizes that they overspent, so that is an area that can be improved upon. But they were still way below (65% - 69%) the College-wide Cost per FTES average: 2018-19 \$2,544.10; 2017-18 \$2,220.28; and 2016-17 \$1,893.12 while the college-wide average is \$7,203.44. In fact, they were even below Statewide Funding per FTES.

## Evaluation of Resource Allocations

4. List the resource allocations from all sources (e.g., annual college budget request appropriations, Guided Pathways funds, grant funds, etc.) received in the last three years. For annual college budget request appropriations, reference your previous three-year plan and annual updates.

Please evaluate the effectiveness of the resources utilized for your program. How did these resources help student success and completion? For college budget request appropriations, list the result of the evaluation strategy outlined in your previous three-year plan and annual updates. For all other sources of funding, list the results of the evaluation strategy contained within the program or grant plan.

To add additional rows, click in the bottom cell on the right and push 'tab' on the keyboard.

Resource Allocated	Funding Source	Academic Year	Purpose of Funding	Result
\$110,000	SWP (Strong Workforce Program)	2017-18	Updated a classroom for the WTRM program; including installing sinks, purchasing equipment charts, added a bank of computers, and provided hands-on lab equipment to aide/enhance learning.	WTRM Success Rate increased from 78% in Fall 2016 to 81% in Fall 2017.
\$2,100	SWP	2017-18	Hired professional expert to work with Lead Faculty member on IEC Self-Study for water program.	Study was completed in a timely manner and the program was able to highlight its accomplishments and state its needs.

## Integrated Planning and Initiatives

5. What other areas is your program partnering with (i.e. guided pathways, grant collaboration) in new ventures to improve student success at Gavilan College? What is the focus of this collaboration? Helpful question: What are the department and your Integrated Planning/ Guided Pathways partners' plans for the next three years (200 words or less)?

We have been working on several new ventures: an internships with Valley Water, where they are looking to train 4 Gavilan students at their facility this Spring; doing another student survey about certifications (Results located in Appendix Question #4.); placing more emphasis on resume writing and student presentations to prepare students for job interviews, November 21st two classes will be joining for a resume workshop in preparation for an industry panel in the Spring. Working with Bay-works to bring industry leaders to campus to do interviews. To prepare we are hosting resume workshops as well as planning additional events such as practicing mock interviews.; possibly providing an employment seminar with Bay Works in our service area; and the Improving Online CTE Pathways Grant.

The Grant's "overarching goal is to improve employment equity by enabling and empowering low income and underrepresented students to access high and higher wage career pathways and jobs, or to develop skills to advance in their current job." This grant works to: increase access to existing online certificates, credentials or

programs; improve quality of existing online certificates, credentials or programs; and create online programs using industry content, Zero Textbook Cost Materials, and Open Educational Resources.



**Consider addressing this in your Three-Year Program Plan at the end of this document.**

## Other Opportunities and Threats

6. Review for opportunities or threats to your program, or an analysis of important subgroups of the college population you serve. Examples may include environmental scans from the [Educational Master Plan](#), changes in matriculation or articulation, student population, community and/ or labor market changes, etc. Helpful Question: What are the departmental plans for the next three years (200 words or less)?

No full-time faculty member to anchor the program.



**Consider addressing this in your Three-Year Program Plan at the end of this document.**

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## G. Career Education Questions

### External Regulations

1. Does your program have external regulations and/ or accreditation requirements? If yes, list the regulatory body. What is your current status? When is your next renewal **(200 words or less)?**

The State Water Resources Control Board requires certification by those who work in the profession. Instructors who teach in Gavilan's program hold certifications related to the water and wastewater industry. Certifications are based on grade and continuing education units and renewed every 1 – 3 years depending on the agency.

### Employment

The following questions can be answered using the labor data from Cal-PASS Plus on [Launchboard](#). **You will need to create an account before accessing [Launchboard](#).**

**Path:** Once you have a Launchboard account, go to the main page, hover over the Community College tab, and from the drop down menu select 'Launchboard'. On the next screen, scroll down to 'Doing What Matters' and press on the 'Explore' button under Strong Workforce Program. Now enter Gavilan College, your program TOP code, and the latest academic year in the cells provided to gather information regarding your program.

2. Are students obtaining and keeping gainful employment in their field **(100 words or less)?**

**Path:** Under the Strong Workforce Program Metrics page (path listed above), click 'Job Closely Related to Field of Study' AND 'Employed in the Fourth Fiscal Quarter after Exit' for information.

There was not enough information available to provide any data.

As stated in the 2017-18 WTRM IEC Self Study report: According to the State of California Employment Development Department website, jobs as Water and Liquid Waste Treatment Plant and System Operators in California (also called Process Operators, Wastewater Operators, Wastewater Treatment Operators, Wastewater Treatment Plant Operators, Water Plant Operators, and Water Treatment Plant Operators) are "expected to increase by 6.9 percent, or 700 jobs between 2012 and 2022."

3. What percentage of students is attaining a living wage **(100 words or less)?**

**Path:** Under the Strong Workforce Program Metrics page (path listed above), click 'Attained a Living Wage' for information.

There was not enough information available to provide any data.

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# Appendix

## Optional Questions

Please consider providing answers to the following questions. While these are optional, they provide crucial information about your equity efforts, training, classified professional support, and recruitment. **All replies should consist of 100 words or less.**

1. What training does your program provide for faculty and/ or classified professionals regarding professional development?

Lead instructor Leslie Jordan has attended several conferences/workshops related to the industry, including the 2016 CE Faculty Training Institute.

WTRM faculty regularly attend industry related conferences/workshops and the knowledge gained is shared with the students as well as helping improve the instructor's skills in teaching their class(es).

2. Is there a need for more faculty and/ or classified professional support in your area? Please provide data to justify this request. Is there a need for expanded support services (i.e. counseling, security, tutoring or math lab at the off-sites, in the evening, etc.) in your area? Indicate how it would support the college mission and college goals for success, and completion.

There is a need for a full-time faculty member who can anchor the program. Currently there are 7 – 9 part-time instructors, including the Program Lead, who teach in the water program but also hold down full-time jobs in the profession. Unfortunately, as a result, there has not been someone to spearhead SLO and PLO assessment, which could provide data for improving student success.

3. What, if anything, is your department doing to assist the District in attracting and retaining faculty and classified professionals who are sensitive to, and knowledgeable of, the needs of the continually changing constituencies, and reflect the make-up of our student body.

4. Provide any additional information that has not been mentioned elsewhere in this program plan, if necessary.

Besides degrees and certificates, the CE program strives to provide students with the opportunity to earn licensure/industry certifications in their field of study. By doing so the students have the ability to gain employment and/or improve their earning power. Gavilan's WTRM program prepares students for obtaining employment in the industry (water/wastewater) and gives them the knowledge base to take industry certification tests and pass them.

Spring 2017 a survey taken in the WTRM 205 class indicates the number of students who have completed the following industry certifications. In addition, 5 students gained employment during the semester as a result of Gavilan's WTRM program. The student's success on these exams was due in great part to the classes taken at the college. 26 students completed the survey.

Certification	1st Semester Students	2nd Semester Students	2 Year Students
D 1	2		
D 2			
T 1	1		
T 2		3	
OIT		2	
WW 1	1		
WW 2			
LAB			

i.e. Distribution 1 (D 1) and 2 (D 2), Water Treatment 1 (T 1) and 2 (T 2), Wastewater Operator in Training (OIT), Wastewater 1 (WW 1) and 2 (WW 2), and Laboratory Analysis (LAB).

A similar survey was done this Fall 2019 in the WTRM 201: Introduction of Water, Wastewater Technology class. 18 students took the survey. All the students were aware of all the available certifications that are on the California Water Boards website. Out of 18 students, 2 students were not interested in becoming certified. A majority of the students became aware of all the options available to them during the first lecture of this class.

**Survey Results of 10/25/2019 WTRM 201: Introduction to Water, Wastewater Technology**

	Distri bution (D1)	Distri bution (D2)	Water Treat ment (T1)	Water Treat ment (T2)	Wastewater Operator in Training (OIT)	Waste water (WW1)	Waste water 2 (WW2)	Laboratory Analysis (LAB)
Planning to take Cert	9	3	2	5	8	9	3	3
Signed up to take Cert	1	1	3	1	2	2		
Attempted Cert exam	1				2	1		
Passed certificatio n exam					1			

## Review Process Feedback

1. Please share any recommendations for improvements in the Program Integrated Plan and Review process, analysis, and questions. Your comments will be helpful to the PIPR Committee and will become part of the permanent review record.

The red exclamation icon with “**Consider addressing this in your Three-Year Program Plan at the end of this document.**” was helpful. Although it was not always easy, having a word limit is a good idea.

Setting up a work around account for GavDATA was great. Thanks.

The PIPR site had a lot of valuable information. The Exemplary PIPR Document was helpful to review but there was only a Student Services program example. Having an example of an Instructional program, for those working with that document would be nice.

Sydney was available and provided help as needed and that was appreciated.



## Example Three-Year Program Plan Goal Setting Worksheet

To add additional rows, click in the bottom cell on the right and push 'tab' on the keyboard.

**E  
X  
A  
M  
P  
L  
E  
S**

<p style="text-align: center;"><b>Goal</b></p> <p>One sentence limit.</p>	<p>Connection of Goal to Mission Statement, <a href="#">Strategic Plan</a> and SAO Results.</p> <p>Use one sentence for each item.</p>	<p>Proposed Activity to Achieve Goal</p> <p>One sentence limit.</p>	<p>Responsible Party</p> <p>One sentence limit.</p>	<p>Fund amount requested.</p> <p>If a collaboration, what % required from each partner?</p> <p>If applicable, list each budget partner / source separately</p>	<p>Timeline to Completion</p> <p>Month / Year</p>	<p>How Will You Evaluate Whether You Achieved Your Goal</p> <p>Two sentence limit.</p>
<p>Increase proportion of EOPS students completing degrees by five percentage points</p>	<p>Mission statement: engages students of all backgrounds. Strategic Plan: Goal 4 SAO Results: Outcome 1; 76% of students completed 3 counseling visits</p>	<p>Increase counseling touch points from three times per semester to five times per semester by restructuring appointment and communication schedule</p>	<p>Dean, Special Programs</p>	<p>None</p>	<p>December 2021</p>	<p>In three years, compare EOPS student graduation rates from before the touchpoint increase to graduation rates after the increase</p>
<p>Eliminate ENGL1A course success rate achievement gap between Foster Youth and general student population</p>	<p>Mission statement: Supports innovate practices Strategic Plan: Goal 4: Improve Equity SLO Results: No direct connection</p>	<p>Partner with EOPS to create a Foster Youth ENGL1A intervention team</p>	<p>Chair, Department of English</p>	<p>None</p>	<p>September 2020</p>	<p>Compare foster youth success rates in ENGL1A before the intervention and after implementation of the intervention</p>

## Three-Year Program Plan Goal Setting Worksheet

### Water Resources Management

**\*\*Personnel-related requests must follow the hiring practices of the appropriate area and will not be considered through Program Review**

To add additional rows, click in the bottom cell on the right and push 'tab' on the keyboard. ude

<p style="text-align: center;"><b>Goal</b></p> <p style="text-align: center;">One sentence limit.</p>	<p style="text-align: center;">Connection of Goal to Mission Statement, <a href="#">Strategic Plan</a> and SAO Results.</p> <p style="text-align: center;">Use one sentence for each item.</p>	<p style="text-align: center;">Proposed Activity to Achieve Goal**</p> <p style="text-align: center;">One sentence limit.</p>	<p style="text-align: center;">Responsible Party</p> <p style="text-align: center;">One sentence limit.</p>	<p style="text-align: center;">Fund amount requested.</p> <p style="text-align: center;">If a collaboration, what % required from each partner?</p> <p style="text-align: center;">If applicable, list each budget partner / source separately</p>	<p style="text-align: center;">Timeline to Completion</p> <p style="text-align: center;">Month / Year</p>	<p style="text-align: center;">How Will You Evaluate Whether You Achieved Your Goal</p> <p style="text-align: center;">Two sentence limit.</p>
<p>Complete the SLO assessments for all courses that have been taught and have not been assessed, including mapping them to the PLOs and ILOs.</p>	<p>Mission Statement: build their full academic potential. Strategic Plan Goals 1 and 2: increase achievement and improve efficiency. SLO Results: No direct connection.</p>	<p>The next time the course is taught assess SLOs.</p>	<p>Program Lead, all WTRM faculty, SLO/PLO Faculty Liaison</p>	<p>\$150 per course x 20 unassessed courses = \$3,000.</p>	<p>May 2021</p>	<p>Review of SLO site.</p>
<p>Complete the assessment of all PLOs for the WTRM degrees and certificates, map them, and align them to the IOLs.</p>	<p>Mission Statement: build their full academic potential. Strategic Plan Goals 1 and 2: increase achievement and improve efficiency. SLO Results: No direct connection.</p>	<p>Once the courses that make up the degree/certificate have their SLOs assessed, use the data to assess the PLOs.</p>	<p>Program Lead, all WTRM faculty, SLO/PLO Faculty Liaison</p>	<p>\$200 per degree/certificate x 5 = \$1,000.</p>	<p>December 2021</p>	<p>Review of PLO site.</p>

Increase the number of students who participate in WTRM internships.	Mission Statement: enriches students of all backgrounds. Strategic Plan Goal 3: improve employment. SLO Results: Could affect some, TBD.	Publish class handouts, post information on appropriate sites to inform students about internships as well as creating more student internship opportunities.	CE Counselor, CE and Strong Workforce Senior Program Specialist	None	May 2023	Compare the number of student internship participants from Fall 2019 to May 2023.
Increase the number of opportunities by 50% for students to participate in panel discussions by water industry professionals; where the student will have the opportunity to experience mock job interviews, participate in resume writing, and hear about job opportunities.	Mission Statement: engage students to build their full social and economic potential. Strategic Plan Goals 1 and 3: increase achievement and improve employment. SLO Results: Could affect some, TBD.	Invite representatives from Santa Clara Valley Water District, San Benito Water District, Cal Water, and other water districts to talk to students about current needs in the field and future employment opportunities.	Program Lead, all WTRM faculty	None	December 2021	List the number of courses that provided panel presentations by the water industry and/or the agencies that were involved in the program and compare the number to Fall 2019.

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## Signature Page

Program being reviewed: [\\_\\_Click here to enter text.](#)

Date: [Click here to enter text.](#)

### How to use form:

Sign off after final review and no later than:  
Peer Reviewers: Nov. 27, 2019  
Dean: Mar. 6, 2020

Role	Name	Assignments/ research assigned, if any	Initial and Date upon final review
Team Lead/ Chair	Susan Dodd, author		
Dean			
Peer Reviewer			
Peer Reviewer			
Student			
PIPR Support Team	Sydney LaRose		12-2-19
PIPR Support Team	Simone Reyes		