

# Program Review/Follow-up Transmittal

## General Information

The attached report is (check one):  Program Review (published every 4<sup>th</sup> year)  
 Program Review Follow-up (submitted annually)

The report is submitted for the Academic Year (select one): 2009-10

The report contains information on the follow unit(s) (enter names of all units/programs):

Water/Wastewater

## Report Abstract:

The water/waste water program has tripled in size over the last three years. This has happened as a response to the industry need and the affiliation through Contract Education with the Bay Area Consortium for Water and Wastewater Education (BACWWE).

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**James Dekloe**  
Faculty / Staff Representative

Signature: \_\_\_\_\_ Date: 7/14/10

**Joseph Conrad**  
Dean / Director

Signature: \_\_\_\_\_ Date: 15 JUL 10

**Thomas Watkins**  
President, Academic Senate

Signature: \_\_\_\_\_ Date: 7/15/2010

**Arturo Reyes**  
Vice President

Signature: \_\_\_\_\_ Date: 07-15-10

**Jowel Laguerre**  
Superintendent / President

## Program Review and Analysis

### Part I Outcomes

1. **What are the Student Learning Outcomes (SLOs) and Institutional-Level Outcomes (“Core Four”) of the program? List each along with descriptions of the appropriate indicators of program success (i.e., measures of outcomes). Include both quantitative and qualitative measures.**

Outcome(s)	Qualitative Measure(s)	Quantitative Measure(s)
To provide training for students to satisfy the requirements of certification of water and wastewater treatment operators.		The total course enrollment for the last three years is over 700.
To provide training for individuals to upgrade employed industry operators to current industry standards.		Over 50 students have been hired or promoted in agencies associated with BACCWE.

2. **The specific SCC Strategic Direction and Goal(s) supported by this program:**

### Part II Analysis

1. **Identify and explain the trends in:**

**Enrollment—** The FTES has risen steadily over the last four years with a huge increase (160 to 471) in enrollment in the last year with data (08 – 09). This reflects the contribution of the contract education portion of the program.

**Retention—** The retention rate for the last two years has been 85% reflecting a stable retention rate. The rate actually increased from 65% in 2005 – 06.

**Fill rate—** As the demand for the program has increased, so has the fill rate. While it was in the mid-70% range five years ago, in 2008 – 09, the fill rate was 102%

**Other Factors—** The greatest factor in the recent expansion of the program has come from the involvement of the Bay Area Consortium for Water and Wastewater Education (BACWWE). This is a consortium of 17 Bay Area water and wastewater agencies that have combined to offer our classes in order to address the need for plant personnel that exists now and is expected to increase dramatically as 50% of the current personnel are projected to retire in the next ten years. Since August 2007, over 500 students have enrolled in 26 BACWWE-sponsored classes.

**Outcome Data—** Graduation rates have been low averaging only two degrees or certificates per year. However, this grew to eight (six degrees and two certificates) in 2009 -10 academic year and is expected to rise even more as the BACCWE students progress through the program.

**2. How do the above trends relate to the factors and outcomes identified during the last review?**

- a.
- b.
- c.

**Part III Conclusions and Recommendations**

**1. What are the major accomplishments of the program during the past four years?**

The last program review identified the need for course and program revision to upgrade to industry standards and licensing requirements. In the fall of 2009, all the courses and the program were reviewed by the faculty and the advisory committee. This review resulted in the development of four new courses: WATR 101, Basic Chemistry for Water/Wastewater; WATR 103, Biological Principles of Water/Wastewater; WATR 108, Water Treatment II; and WATR 112, Wastewater Treatment II. Several existing courses were also revised. The program was revised and an additional option for completion was created. All these proposals were submitted and approved by the Curriculum Committee and the school board.

This work was done, in large part, due to the association with the BACCWE group who act as an advisory committee. This association has produced an explosion of section offerings through the contract education program. Since fall 2007, there have been 26 sections offered through this program while only 10 have been offered on campus. The college has offered its website and streamlined registration to assist BACCWE in administering the program.

**2. Based on the analysis above, are there any changes needed in order to meet program goals or to improve program effectiveness? Explain.**

- Solano College must follow through with assisting BACCWE with administration of the program. The college has worked with BACCWE to establish a website hosted on the school servers and that must be completed and have it linked to registration procedures.
- The curriculum and program changes should be monitored to see if they satisfy expectations.
- Working with BACCWE, internship programs should be expanded as this is necessary for students to begin the state certification process.
- A long-range schedule of course offerings at the Fairfield campus should be established to ensure that on-campus students have the opportunity to complete the program in a timely manner.