

# ***CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT***



## ***WATER RECLAMATION PLANT OPERATOR TRAINING PROGRAM***

## Introduction

The City of San Bernardino Municipal Water Department (SBMWD) operates the Margaret H. Chandler Water Reclamation Plant (WRP) and the Colton/San Bernardino Rapid Infiltration and Extraction (RIX) Tertiary Treatment Facility. The SBMWD WRP is staffed 24 hours a day by certified operators licensed by the State of California Water Resources Control Board. Certification is required to ensure operators have received the education and training necessary to effectively operate the facility to meet regulatory and discharge requirements. The number of certified operators expected to leave the workforce over the next few years is expected to increase. This will create an immediate demand for those interested in a career in the wastewater industry. The expected shortage of certified operators required the SBMWD to explore the feasibility of developing a program to provide the training necessary to adequately prepare those interested to fill the anticipated vacant positions.

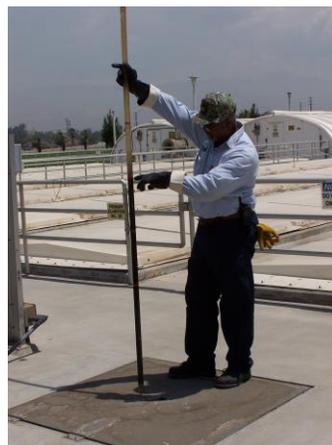
Following numerous meetings, the SBMWD, in cooperation with San Bernardino Valley College (SBVC), developed an Operator in Training (OIT) program to provide the necessary experience for potential wastewater treatment plant operators. The OIT program was designed to provide formal instruction to SBVC students who are considering a career as a wastewater treatment plant operator. Those selected to participate in the OIT program will be provided an opportunity to acquire the hands on training necessary to complete the duties to operate a wastewater treatment facility. Students currently enrolled in one of the SBVC Water Supply Technology Certificate Programs (WSTCP) are invited to submit an application to participate in the SBMWD OIT Program. Those that successfully complete the OIT Program will be well positioned to become the next generation of wastewater treatment plant operators.



## Program Overview

The SBMWD Operator Training Program was developed as an applied field training course to augment the WSTCP currently offered by SBVC. Practical knowledge gained through coursework completed at SBVC is put to immediate use during the training program. The experience received during the OIT program is invaluable as the students confirm the lessons received in the classroom. Those selected to participate in the program are afforded the opportunity to use this knowledge in a real world setting where decisions and the corresponding actions immediately impact the SBMWD WRP. The training includes a rotation through various treatment processes of the wastewater treatment facility to gain a better understanding of each of the responsibilities necessary to operate and maintain the wastewater treatment plant. Students who are interested in participating in the SBMWD Operator Training Program are required to meet the following requirements:

- ◆ Candidates must submit a written SBMWD Operator Training application form
- ◆ Candidates must submit a completed “Operator-in-Training Application for Wastewater Treatment Plants” application (California State Water Resources Control Board)
  - [http://www.waterboards.ca.gov/water\\_issues/programs/operator\\_certification/docs/forms/oper\\_in\\_training.pdf](http://www.waterboards.ca.gov/water_issues/programs/operator_certification/docs/forms/oper_in_training.pdf)
- ◆ Candidates must be currently enrolled in a SBVC work experience course
- ◆ A grade of “C” or higher must be earned for each course to remain eligible to participate
- ◆ Candidates must have a current drivers license and complete a DMV records check
- ◆ Candidates may be interviewed by SBMWD staff during the final selection process
- ◆ Candidates must commit to a minimum of 16 hours of operator training each week
- ◆ Candidates must obtain an Operator-in-Training certificate from the State of California



## Operator Training Program

The State Water Resources Control Board (SWRCB) Office of Operator Certification (OOC) requires an OIT certificate for those operating a water recycling facility while obtaining the experience necessary to acquire operator certification. The OIT application must be completed and signed by the SBMWD WRP Chief Plant Operator for anyone participating in the OIT Program (Grade I OIT certification fee: \$170.00; please refer to the State's website regarding current fees:

[http://www.swrcb.ca.gov/water\\_issues/programs/operator\\_certification/oit\\_info.shtml](http://www.swrcb.ca.gov/water_issues/programs/operator_certification/oit_info.shtml)).

A minimum of one year (1,800 hrs) of OIT field experience performing the duties of a wastewater treatment plant operator is required to meet the experience requirements necessary to qualify for the Grade 1 Wastewater Treatment Plant Operator certificate. The SBMWD OIT Program was developed to provide those selected with the opportunity to earn the job experience to qualify for the Grade 1 test/certification.

The SBMWD OIT Program can accommodate a maximum of 12 students during each training session. The students selected to participate are required to commit to a minimum of 16 hours of training each week during the program. The training hours are 7:00 am to 3:30 pm Monday through Friday (hours may be adjusted after satisfactory completion of a training session). Each student is assigned a licensed WRP operator who is responsible to mentor the student during the training. The mentors are available to answer any questions and assist the students in preparing for the Grade 1 operator certification test. The mentors are also responsible to complete periodic performance evaluations for each student to identify specific strengths and weaknesses observed during the training session. The performance evaluations, attendance records, and the written training exam must meet acceptable standards to remain eligible to participate in the OIT Program.



## Operator Training Program (Cont.)

Wastewater treatment plant operators are required to perform complex duties to ensure the wastewater received at the WRP is adequately treated to meet required discharge standards. These responsibilities are dependent on each other, as an upset in one treatment area can severely impact the operation of others and the overall treatment process. The SBMWD Operator Training Program has been developed to provide selected candidates with the training necessary to perform these difficult tasks. The program has been divided into four unique modules following a safety and facility review which is completed during the first week of training.

WEEK 1	General Plant Safety, Permits, Regulations, and Security Procedures
	Chemical Safety and MSDS Review
	Process Schematic Review and WRP Site Orientation
WEEK 2 – 5	Preliminary Treatment Processes
	Primary Treatment Processes
	Secondary Treatment Processes
WEEK 6 – 9	Sludge Thickening Processes
	Digester and Gas Production Processes
	Belt Filter Press/Centrifuge and Solids Handling Processes
WEEK 10 – 13	Supervisory Control and Data Acquisition (SCADA) System
	Maintenance and Calibration of Monitoring Equipment
	Sample Collection and Laboratory Testing
WEEK 14 – 17	Rapid Infiltration and Extraction (RIX) Process
	Dynasand Filter Process
	Aquadisk Filter Process



Operator Training Program Application

PERSONAL INFORMATION			
Last Name	First	Middle	Date
Street Address		City	Zip Code
Home Phone	Business Phone	Cell Phone	E-Mail
Operator-in-Training Application for Wastewater Treatment Plants attached: <input type="checkbox"/>			
Work Days: <input type="checkbox"/> Mon. <input type="checkbox"/> Tues. <input type="checkbox"/> Wed. <input type="checkbox"/> Thurs. <input type="checkbox"/> Fri. <input type="checkbox"/> Sat. <input type="checkbox"/> Sun.			
Have you had any moving traffic violations in the last 3 years, not including violations of less than a \$50.00 fine? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please give violation and date received:			
Have you ever been convicted of a felony or misdemeanor? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, state the date, location and nature of each offense including the penalty. Please attach a separate sheet of paper if you need additional space.			
EDUCATION			
High School	Relevant Courses		Graduation Date
College	Relevant Courses		Graduation Date
Technical/Trade School	Relevant Courses		Graduation Date
PREVIOUS EXPERIENCE, TRAINING, and QUALIFICATIONS			
Previous Wastewater Experience:			
Previous Wastewater Courses:			
Relevant Certifications/Licenses:			
Computer Skills:			
Additional Qualifications:			

I hereby certify that all information contained in this application is true and correct.

Signature	Date
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## Operator Training Program Application (Cont.)

### COMMITMENT OF AGREEMENT

Students selected to participate in the SBMWD OIT Program agree to commit to the following conditions during the term of the training program:

### CERTIFICATION

The information provided in the OIT Program application is true and correct to the best of my knowledge. I understand that any information determined to be incorrect may result in the immediate disqualification or removal from the OIT Program. I agree to undergo a criminal background check, DMV records check, drug testing, and a physical; if required to participate in the OIT Program.

### WORK DEMANDS

The physical duties of a wastewater treatment operator require those selected candidates to regularly walk throughout the plant, climb ladders, stoop, crouch, and crawl to complete required tasks. Students chosen to participate in the OIT Program are expected to lift and/or move up to 75 pounds and to stand for long periods. The mental duties require significant oral and written communication skills, the ability to read and interpret data and information, to analyze problems and develop solutions, and to operate computers. Students are also expected to respectfully interact with other employees, organizations, and the general public.

### WORK ENVIRONMENT

The work environment for a wastewater treatment plant operator is varied and can include outdoor settings, as well as, indoor office settings. Outdoor activities can include extreme weather conditions, slippery or uneven surfaces and loud noises that require hearing protection. Indoor activities can include repetitive computer data entry and sitting for long periods.

“I hereby certify that I have read, understand, and agree to the conditions identified above required to participate in the OIT Program. I further acknowledge that failure to abide by these conditions will result in my immediate dismissal from the OIT Program.”

Signature	Date
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## Operator Training Program Application (Cont.)

### TRAINING SCHEDULE and HOURS

The OIT Program commences on the first day of classes for the SBVC work experience course and ends upon the conclusion of the course. Continued SBVC work experience enrollment is required to remain eligible to participate in the OIT Program. Students are advised to maintain enrollment during fall and spring semesters, as well as the summer break, to expedite the minimum one year (1800 hour) OIT training necessary to qualify for the SWRCB Wastewater Treatment Plant Operator certificate. The OIT Program requires selected candidates to complete a minimum of 16 hours of training each week.

### SBVC ENROLLMENT

Students are required to be concurrently enrolled in an approved SBVC Work Experience course to remain eligible for the OIT Program. Additional courses in the WSTCP may be required by SBVC. A minimum grade of “C” in all courses is required to maintain eligibility in the program.

### COMPENSATION

Students selected to participate in the OIT Program receive no monetary compensation, benefits, or insurance from the SBMWD. Workers compensation is provided by SBVC for students enrolled in a SBVC work experience course while receiving training.

### EXPENSES

Students are responsible to provide their own safety work boots and suitable work clothing which is deemed acceptable for the tasks performed. Students are also expected to provide any necessary books or other training materials not provided by the SBMWD.

“I hereby certify that I have read, understand, and agree to the conditions identified above which are required to participate in the SBMWD OIT Program. I further acknowledge that failure to abide by these conditions will result in my immediate dismissal from the OIT Program.”

Signature	Date
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## Operator Training Program Application (Cont.)

### TRAVEL REQUIREMENTS

Students are expected to provide their own transportation to and from work. The inability to secure transportation to report to work may result in being disqualified from the OIT Program.

### CALIFORNIA DRIVERS LICENSE

A valid driver's license, issued by the State of California, is required of all students applying for the OIT Program. A revoked or suspended driver's license will result in the immediate dismissal from the program.

### PLACEMENT OF NEW HIRES

Students who are hired as a Water Reclamation Operator I are eligible to start at the second pay step, provided a minimum of 900 hours have been completed in the SBMWD OIT program and a Water Technology Certificate in Wastewater Treatment has been issued to the student by SBVC.

### MENTORS

All candidates selected to participate in the OIT Program will be provided with a mentor who will be available to offer instruction and answer any questions that may develop during training.

### SAFETY

Students are expected to follow all prescribed safety procedures while performing required duties in order to protect themselves and WRP employees from injury. The safety practices reviewed during the first week of training must be followed at all times to minimize any accidents or injuries.

“I hereby certify that I have read, understand, and agree to the conditions identified above which are required to participate in the OIT Program. I further acknowledge that failure to abide by these conditions will result in my immediate dismissal from the OIT Program.”

Signature	Date
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