



## ASSOCIATE CONTROL ENGINEER

**EXAM CODE:** 6WR47  
**EXAM TYPE:** OPEN/NON-PROMOTIONAL  
**LOCATION:** SACRAMENTO  
**SALARY INFORMATION:** \$8130 - \$10169  
**CLASS & SCHEM CODE:** 3659 HQ45  
**BULLETIN RELEASE DATE:** FEBRUARY 21, 2017



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### EQUAL OPPORTUNITY & DRUG FREE STATEMENTS

The State of California is an equal opportunity employer to all, regardless of age, ancestry, color, disability (mental and physical), exercising the right to family care and medical leave, gender, gender expression, gender identity, genetic information, marital status, medical condition, military or veteran status, national origin, political affiliation, race, religious creed, sex (includes pregnancy, childbirth, breastfeeding and related medical conditions), and sexual orientation. It is the objective of the State of California to achieve a drug-free work place. Any applicant for State employment will be expected to behave in accordance with this objective because the use of illegal drugs is inconsistent with the law of the State, the rules governing civil service and the special trust placed in public servants.

### FINAL FILING DATE

March 24, 2017

Examination Applications (STD 678) must be postmarked or submitted in person no later than the final filing date. Applications postmarked or submitted after 4:30pm on the final filing date will not be accepted for any reason. Dates printed on Mobile Bar Codes, such as the Quick Response (QR) Codes available at the USPS, are not considered Postmark dates for the purpose of determining timely filing of an application. Faxed or emailed applications will not be accepted.

### WHO SHOULD APPLY

Candidates who meet the minimum qualifications of the classification, as stated on this examination bulletin, may apply.

### HOW TO APPLY

It is the personal responsibility of each examination candidate to submit their application materials within the timeframe and in the manner specified on this examination bulletin. Examination Applications (STD 678) may be mailed or submitted in person by the final filing date to:

**MAILING ADDRESS:**

Department of Water Resources  
P.O. Box 942836  
Sacramento, CA 94236-0001

OR

**SUBMIT IN PERSON:**

Department of Water Resources  
1416 9th Street, Room 320  
Sacramento, CA 95814

**DO NOT MAIL OR SUBMIT APPLICATIONS TO THE CALIFORNIA DEPARTMENT OF HUMAN RESOURCES OR DEPARTMENT OF WATER RESOURCES' FIELD OFFICES.**

Examination Applications must be dated and signed with an original signature. Applications must include "to" and "from" dates (month/day/year), time base, and position titles. Applications received without this information will be rejected. Resumes and other attachments will not be accepted in lieu of a completed application.



## IDENTIFICATION REQUIRED

Accepted applicants are required to bring either a photo identification card or two forms of signed identification to each phase of the examination.

## SPECIAL TESTING INFORMATION

If you have a disability and need special testing arrangements, mark the appropriate box in Question 2 of the Examination Application (STD 678). You will be contacted to make specific arrangements.

## EXAMINATION INFORMATION

This examination will consist of a **Qualification Appraisal Interview** weighted **100%**. In order to obtain a position on the eligible list, a minimum rating of 70% must be attained. Competitors who do not appear for the interview will be disqualified.

## EXAMINATION DATE(S)

It is anticipated that interviews will be held during **May/June 2017**.

## ELIGIBLE LIST INFORMATION

An open/non-promotional list will be established for the Department of Water Resources.

The list will be abolished 12 months after it is established unless the needs of the service and conditions of the list warrant a change in this period.

## POSITION DESCRIPTION

This is the full journey level. Under direction, an Associate Control Engineer conducts technical engineering studies related to the development of an automatic, computerized control system; assists in the design and preparation of plans and technical specifications of complex features of control systems; performs difficult engineering analysis of equipment for conformance with operational standards, designs plans and specifications; conducts process computer evaluation and software modifications; assists in the design of operational logic; prepares testing, operation and maintenance procedures, manuals and training programs; directs simulated operational malfunctions and prepares preliminary design and program modifications; advises, assists and instructs operating and maintenance personnel in matters pertaining to automatic control systems; directs and assists technical personnel in performance of assigned tasks and prepares reports on projects.

## REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION

All applicants must meet the minimum qualifications for this examination by the final filing date.

Qualifying experience may be combined on a proportionate basis if the requirements stated below include more than one pattern and are distinguished as "Either" I, "or" II, "or" III, etc. For example, candidates possessing qualifying experience amounting to 50% of the required time of Pattern I, and additional experience amounting to 50% of the required time of Pattern II, may be admitted to an examination as meeting 100% of the overall experience requirement.

### Education:

Graduation from a four-year college curriculum with major work in electrical, electronic or computer engineering. Progressively responsible engineering experience on control system equipment comparable to that of the statewide water facilities, may be substituted for a college education on a year-for-year basis.

Applicants qualifying under an education requirement **MUST** provide a copy of their college diploma and/or transcripts (unofficial are acceptable) by the final filing date as proof of completion of the required education. Competitors who fail to provide proof of completion of the required education will be eliminated from the examination.

### AND

#### Either I

Two years of experience in the California state service performing the duties of a Control Engineer, Range B.



## REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION (CONTINUED)

### Or II

Three years of professional control system, electronic or computer engineering experience in the field of control or process systems, including at least two years in the design, development and application of control systems utilizing complex electronic circuitry, combinations of electronic, electro-mechanical and hydraulic equipment, digital logic techniques, data transmission and interface equipment, at a level of responsibility comparable to that of a Control Engineer, Range B.

## SCOPE OF EXAMINATION

In addition to evaluating the competitors' relative abilities as demonstrated by the quality and breadth of experience, emphasis in the examination will be on measuring competitively, relative to job demands, each competitor's:

### Knowledge of:

- 1) Engineering theory and practices, terminology and trends in control systems engineering, supervisory control and data acquisition of dynamic systems for industrial processes including: dynamic stability, feedback loops, economic and failure analyses, data handling, interfacing, digital logic, computer use and programming, designing, developing, testing, optimizing, maintenance, and modification of control systems similar to those used on the statewide water facilities.

### Ability to:

- 1) Analyze control requirements for flow processes.
- 2) Design and develop control systems, determine operation criteria and select equipment.
- 3) Integrate control systems with communication systems, develop and maintain software, develop test and maintenance procedures and interpret plans and specifications.
- 4) Maintain cooperative relations with those contacted in the course of work, and prepare clear and concise reports.

## EDUCATION AND EXPERIENCE

If conditions warrant, this examination may utilize an evaluation of each candidate's experience and education as compared to a standard developed from the class specification. For this reason it is especially important that each candidate take special care in accurately and completely filling out their application. List all experience relevant to the "Requirements for Admittance to the Examination" shown on this announcement. Supplementary information will be accepted but read the "Requirements for Admittance to the Examination" carefully to see what kind of information will be useful to the staff doing the evaluation.

## ADDITIONAL DESIRABLE QUALIFICATIONS

Possession of a certificate of registration as an Electrical or Control System Engineer issued by the California State Board of Registration for Professional Engineers.

## VETERANS PREFERENCE

Assembly Bill 372, signed into law by Governor Brown on August 12, 2013, changes the way the Veterans Preference process is administered by the State of California. Veterans Preference will be awarded as follows, starting on January 1, 2014: 1) Any veteran, widow or widower of a veteran, or spouse of a 100 percent disabled veteran, who achieves a passing score in an entrance examination, shall be ranked in the top rank of the resulting eligibility list. Any veteran who has been dishonorably discharged or released is not eligible for Veteran's Preference. 2) An entrance exam is defined, under law, as any open competitive examination 3) Veterans Preference is not granted once a person achieves permanent civil service status.

The California Department of Human Resources (CalHR) has information on how to apply for Veterans Preference on their website at [www.jobs.ca.gov](http://www.jobs.ca.gov) and on the Application for Veterans Preference form (CalHR 1093). Additional information is also available at the Department of Veterans Affairs website at [www.cdva.ca.gov](http://www.cdva.ca.gov).

## CAREER CREDITS

Career Credits will be granted.

## GENERAL INFORMATION

The Department of Water Resources reserves the right to revise the examination plan to better meet the needs of the service if the circumstances under which this examination was planned change. Such revision will be in accordance with civil service laws and rules and all competitors will be notified.



## GENERAL INFORMATION (CONTINUED)

**For an examination with a written feature**, it is the candidate's responsibility to contact the Department of Water Resources seven days prior to the test date if he/she has not received his/her notice. For an examination without a written feature it is the candidate's responsibility to contact the Department of Water Resources at (916) 653-4838, TDD (916) 653-1804, three weeks after the final filing/cut-off date if he/she has not received his/her notice.

**Applications** are available at Department of Water Resources' (DWR) offices, the DWR website:

[www.water.ca.gov/jobs/currentexams.cfm](http://www.water.ca.gov/jobs/currentexams.cfm), local office of the Employment Development Department, and California Human Resources (CalHR) at [www.jobs.ca.gov](http://www.jobs.ca.gov).

**If you meet the requirements** stated on this bulletin, you may take this examination, which is competitive. Possession of the entrance requirement does not assure a place on the eligible list. All candidates who pass will be ranked according to their scores.

**General Qualifications:** Candidates must possess essential personal qualifications including integrity, initiative, dependability, good judgment, and ability to work cooperatively with others; and a state of health consistent with the ability to perform the assigned duties of the classification.

**Examination Locations:** When a written or performance test is part of the examination, it will be given in such places in California as the number of candidates and conditions warrant. Ordinarily, qualifications appraisal interviews are scheduled in Sacramento and Los Angeles. However, locations of interviews may be limited or extended as conditions warrant.

**If a candidate's notice** of oral interview fails to reach him/her prior to the day of the interview due to a verified postal error, he/she will be rescheduled upon written request.

**Eligible Lists:** Eligible lists established by competitive examination, regardless of date, must be used in the following order: 1) subdivisional promotional, 2) departmental promotional, 3) multidepartmental promotional, 4) servicewide promotional, 5) departmental open, 6) open eligible list. When there are two lists of the same kind, the older must be used first. Eligible lists will expire in one to four years unless otherwise stated on this bulletin. In the case of continuous testing examinations, names are merged into the appropriate lists in order of final test scores (except as modified by veterans preference credits) regardless of the date of the test, and the resulting eligible lists will be used only to fill vacancies in the area shown on the bulletin.

**Promotional Examinations Only:** Competition is limited to employees who have a permanent civil service appointment. Under certain circumstances other employees may be allowed to compete under provisions of Rules 234, 235, 235.2. State Personnel Board Rules 233, 234, 235, 235.2 and 237 contain provisions regarding civil service status and eligibility for promotional examinations. These rules may be reviewed at departmental personnel offices or at the Information Counter of State Personnel Board offices.

**TDD** is Telecommunications Device for the Deaf and is reachable only from phones equipped with a TDD Device. **California Relay Telephone Service** for the Deaf or hearing impaired: From TDD phones: 1-800-735-2929; From Voice phones: 1-800-735-2922.

## CONTACT INFORMATION

For information regarding this examination, please contact Teresa Bullock at (916) 653-6330.