Engineer, Water Resources

Exam Code: 4PBD2

Department: Department of Water Resources
Exam Type: Departmental, Open
Final Filing Date: Continuous

CLASSIFICATION DETAILS

Engineer, Water Resources - $5,540.00 - $10,377.00 per month.

View the Engineer, Water Resources classification specification

APPLICATION INSTRUCTIONS

Final Filing Date: Continuous

Who Should Apply:

Applicants who meet the minimum qualifications as stated on this bulletin may apply for and take this examination.

Once you have taken this examination, you may not retake it for six (6) months.

How To Apply:

The link to connect to the Training and Experience Evaluation is located farther down on this bulletin in the “Taking the Exam” section.

Special Testing Arrangements:

If you require assistance or alternative testing arrangements due to a disability, please contact the testing department listed in the Contact Information section of this bulletin.
SALARY INFORMATION

Range A: $5,540.00 - $6,606.00 per month.
Range B: $6,344.00 - $7,937.00 per month.
Range C: $7,337.00 - $9,180.00 per month.
Range D: $8,293.00 - $10,377.00 per month.

Alternate Range Criteria

Range A. This range shall apply to incumbents who do not meet the criteria for Range B, Range C, or Range D.

Range B. This range shall apply to incumbents who have satisfactorily completed either:
1. In State service, satisfactorily completed one year of experience performing duties equivalent to an Engineer, Water Resources, Range A. OR
2. Two years of professional civil engineering experience outside State service. AND A bachelor's degree in a civil engineering curriculum accredited by the Accreditation Board of Engineering Technology. (Possession of a valid certificate as an Engineer-in-Training issued by the State Board of Registration for Professional Engineers and Land Surveyors or issued by another jurisdiction and accepted by the State Board in lieu of the first division of the registration examination as a professional engineer may be substituted for the required education.) OR
3. Four years of professional civil engineering experience outside State service. AND A bachelor's or graduate degree in a civil engineering curriculum which is not accredited by the Accreditation Board of Engineering Technology. OR
4. A master's or doctorate degree in a civil engineering curriculum from a college or university that has a baccalaureate degree program in a civil engineering curriculum which is accredited by the Accreditation Board of Engineering Technology.

Range C. This range shall apply to persons who have either:
1. In State service, satisfactorily completed two years of experience performing duties equivalent to an Engineer, Water Resources, Range B. OR
2. Three years of professional civil engineering experience outside of State service. AND A bachelor's degree in a civil engineering curriculum accredited by the Accreditation Board of Engineering Technology. (Possession of a valid certificate as an Engineer-in-Training issued by the State Board of Registration for Professional Engineers and Land Surveyors or issued by another jurisdiction and accepted by the State Board in lieu of the first division of the registration examination as a professional engineer may be substituted for the required education.) OR
3. Five years of professional civil engineering experience outside State service. AND A bachelor’s or graduate degree in a civil engineering curriculum which is not accredited by the Accreditation Board of Engineering Technology. OR

4. Two years of professional civil engineering experience. AND A master’s or doctorate degree in a civil engineering curriculum from a college or university that has a baccalaureate degree program in a civil engineering curriculum which is accredited by the Accreditation Board of Engineering Technology.

**Range D.** This range shall apply to persons who:

1. Possess a valid certificate of registration as a civil engineer issued by the State Board of Registration for Professional Engineers and Land Surveyors.

**Note:** "Professional civil engineering experience" for the purpose of Alternate Range Criteria 351 is defined as actual work experience gained after graduation from a four-year college or university with a degree in a civil engineering curriculum or actual work experience gained after graduation from a four-year college or university with a degree in a civil engineering curriculum or actual work experience gained after possession of a valid certificate as an Engineer-in-Training issued by the State Board of Registration for Professional Engineers and Land Surveyors or issued by another jurisdiction and accepted by the State Board in lieu of the first division of the registration examination as a professional engineer.

### MINIMUM QUALIFICATIONS

All applicants must meet the education and/or experience requirements as stated on this exam bulletin to be accepted into the examination. Part-time or full-time jobs, regardless of whether paid or volunteer positions, and inside or outside California state service will count toward experience.

**Engineer, Water Resources**

**Either 1**

**Education:** Graduation from a curriculum in civil engineering accredited by the Accreditation Board for Engineering Technology. (Registration as a "senior" in such a curriculum will admit an applicant to the competition, but he/she must produce evidence of graduation before he/she will be considered eligible for appointment.)

**Or 2**

**Education:** Graduation from an engineering curriculum which includes the basic engineering courses normally covered in a standard four-year course, and by qualifying in a written examination covering basic civil engineering. (Registration as a "senior" in such a curriculum will admit an applicant to the qualifying examination, but he/she must
produce evidence of graduation before he/she will be considered eligible for appointment.

**POSITION DESCRIPTION**

**Engineer, Water Resources**

This is the entry, first working, and journey level of professional engineering work in the Department of Water Resources. At the journey level and with registration, incumbents may be in a responsible charge capacity. Under the direction of a registered engineer, incumbents perform a wide variety of professional engineering work in either an office, field, or laboratory setting in any phase of the State water resources program. As incumbents progress in experience, they will be assigned more difficult work and may function as a lead person over the activities of various engineering and technical personnel; and do other related work. Incumbents assist in engineering work in connection with projects relating to land, hydraulics, roads, bridges, buildings, wharves, piers, dams, levees, sanitary facilities, and similar works; prepare designs, plans, specifications, estimates, and reports for various types of construction projects including bridges, roads, dams, aqueducts, levees, ditches, retaining walls, and similar structures; revise or prepare maps, plans, charts, and diagrams; act as a member of a survey party; keep survey and construction notes; make engineering calculations in connection with field or office work; prepare simple design work and draft working plans and detail drawings and tracings and produce drawings using CADD; oversee the work of several office and field assistants engaged in conducting studies of water supply, water quality, snow conditions, flood control, groundwater analysis, and irrigation surveys; act as inspector on a variety of construction projects such as road construction and structural steel, concrete, and timber construction; inspect structures under construction; make hydrographic and irrigation investigations; inspect, make field or laboratory tests, or take samples for laboratory analysis on materials being used for construction projects; make field inspections of existing structures to determine extent of damage, deterioration, or defects; assemble data and make reports from field investigations; may assist in the development or maintenance of computer programs; may perform engineering calculations and/or prepare other documents using a personal computer or a work station; assist in preparing environmental impact analyses, environmental impact reports, and environmental impact studies; prepare memoranda and reports; may use underwater diving equipment in connection with underwater quality control investigation.

**Positions exist in various locations throughout the State with the Department of Water Resources.**
EXAMINATION SCOPE

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

Testing periods are from January 1 – June 30; July 1 – December 31. Candidates may be tested only once during a testing period.

This examination consists of the following components:

NO INTERVIEWS WILL BE CONDUCTED. This examination will consist of a Written Test (if required) weighted pass/fail and a Training and Experience Readiness Evaluation weighted 100%. In order to obtain a position on the eligible list, a minimum rating of 70.00% must be attained in each phase of the examination.

1. Written Test – Weighted Pass/Fail (IF REQUIRED)

Knowledge of:

1. Civil Engineering Fundamentals.

NOTE: Aids, such as slide rules or pocket calculators will not be allowed in this examination.

A written test will be required of candidates who did not graduate from a civil engineering curriculum accredited by the Accreditation Board of Engineering and Technology (ABET). To ascertain whether your educational institution is accredited by ABET; please visit their web site at www.abet.org.

If you have any questions concerning how to take the written test, please contact Selection Services at the Department of Water Resources, P.O. Box 942836, Sacramento, CA 94236-0001, (916) 653-4838.

WRITTEN TEST WAIVER

The written test will be waived for applicants who are “seniors” in or have graduated from a curriculum in civil engineering accredited by the Accreditation Board for Engineering and Technology. Individuals who have passed the Engineer, Water Resources test within the past 12 months will not be scheduled for the written examination. Also, individuals possessing an Engineer-in-Training Certificate will not be required to take the written examination.

It is anticipated that once a passing score is achieved on the Engineer, Water Resources written test, it will be good for one year (or longer if considered to be in the best interest of State service.) Success in this test will permit competition in future examinations for this class during the period without retaking the test.
2. **Online Training and Experience Readiness Evaluation – Weighted 100%**

In addition to evaluating applicants’ relative knowledge, skills, and ability, as demonstrated by quality and breadth of education and/or experience, emphasis in each exam component will be measuring competitively, relative job demands, each applicant’s:

**Knowledge of:**

1. Soil mechanics, hydrology and hydraulics, stress analysis, design of simple structures and mechanics.
2. Methods and equipment of engineering construction.
3. Engineering economics.
5. Environmental principles as they pertain to engineering practices.

**Ability to:**

1. Prepare clear and concise computations and engineering notes.
2. Use computers and CADD.
3. Prepare clear and concise reports.
4. Prepare detailed plans and specifications.
5. Inspect construction projects.
6. Analyze situations accurately and take effective action.
7. Maintain friendly relations with those contacted in the course of work.

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**ELIGIBLE LIST INFORMATION**

A departmental, open eligible list for the **Engineer, Water Resources** classification will be established for:

**California Department of Water Resources**

The names of **successful** competitors will be merged onto the eligible list in order of final score regardless of exam date. Eligibility expires **twelve (12) months** after it is established. Applicants must then retake the examination to reestablish eligibility.

Veterans’ Preference will be granted for this examination. In accordance with Government Codes 18973.1 and 18973.5, whenever any veteran, or widow or widower of a veteran achieves a passing score on an open examination, he or she shall be ranked in the top rank of the resulting eligible list.

Veteran’s status is verified by the California Department of Human Resources (CalHR). Information on this program and [the Veterans’ Preference Application](#) (Std. form 1093)
is available online. Additional information on veteran benefits is available at the Department of Veterans Affairs.

Career Credits will not be added to the final score of this examination.

**ADDITIONAL DESIRABLE QUALIFICATIONS**

Competitors will be required to provide proof of graduation before eligible for appointment. The following are acceptable as proof of graduation:

1. A copy of a Bachelor’s degree diploma (specifying the major);
2. Copies of transcripts indicating the award of a Bachelor’s degree (with the specific major); **OR**
3. A letter from a recognized college or university that states the candidate has been awarded a Bachelor’s degree (with a specific major).

**EXAMINATION INFORMATION**

**Preview of the Engineer, Water Resources Training and Experience Evaluation**

**PREPARING FOR THE EXAMINATION**

Here is a list of suggested resources to have available prior to taking the exam.

**Employment History:** Employment dates, job titles, organization names and addresses, names of supervisors or persons who can verify your job responsibilities, and phone numbers of persons listed above.

**Education:** School names and addresses, degrees earned, dates attended, courses taken (verifiable on a transcript), persons or office who can verify education, and phone numbers of persons or offices listed above.

**Training:** Class titles, certifications received, names of persons who can verify your training, and phone numbers of persons listed above.

**TAKING THE EXAMINATION**

Take the [Engineer, Water Resources examination](#).

**TESTING DEPARTMENTS**

California Department of Water Resources
CONTACT INFORMATION
If you have any technical questions concerning this examination bulletin, please contact:

California Department of Human Resources
Attn: Examination Services
1515 S Street
Sacramento, CA 95811
Phone: 1-866-844-8671
California Relay Service: 1-800-735-2929 (TTY), 1-800-735-2922 (Voice)

TTY is a Telecommunications Device for the Deaf, and is reachable only from phones equipped with a TTY Device.

EQUAL OPPORTUNITY EMPLOYER
The State of California is an equal opportunity employer to all, regardless of age, ancestry, color, disability (mental and physical), exercising the right of 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.

DRUG-FREE STATEMENT
It is an objective of the State of California to achieve a drug-free State 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.

GENERAL INFORMATION
Examination and/or Employment Application (STD 678) forms are available at the California Department of Human Resources, local offices of the Employment Development Department, and through your CalCareer Account.

If you meet the requirements stated on this examination bulletin, you may take this examination, which is competitive. Possession of the entrance requirements does not assure a place on the eligible list. Your performance in the examination described in this bulletin will be rated against a predetermined job-related rating, and all applicants who pass will be ranked according to their score.

The California 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 applicants will be notified.

General Qualifications: Applicants must possess essential personal qualifications including integrity, initiative, dependability, good judgement, the ability to work cooperatively with others, and a state of health consistent with the ability to perform the assigned duties of the class. A medical examination may be required. In open examinations, investigation may be made of employment records and personal history and fingerprinting may be required.

Eligible Lists: Eligible lists established by competitive examination, regardless of date, must be used in the following order: 1) sub-divisional promotional, 2) departmental promotional, 3) multi-departmental promotional, 4) servicewide promotional, 5) departmental open, 6) open. 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 the bulletin.

High School Equivalence: Equivalence to completion of the 12th grade may be demonstrated in any one of the following ways: 1) passing the General Education Development (GED) Test; 2) completion of 12 semester units of college-level work; 3) certification from the State Department of Education, a local school board, or high school authorities that the competitor is considered to have education equivalent to graduation from high school; or 4) for clerical and accounting classes, substitution of business college work in place of high school on a year-for-year basis.