



SENIOR HYDROELECTRIC POWER UTILITY ENGINEER (SPECIALIST)

EXAM CODE: 5WRAA01
EXAM TYPE: OPEN/NON-PROMOTIONAL/CONTINUOUS
LOCATION: STATEWIDE
SALARY INFORMATION: \$8390 - \$10501
CLASS & SCHEM CODE: 3674 H049



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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 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.

CONTINUOUS TESTING

Testing is considered continuous as Examination Applications (STD 678) will be accepted on a continuous basis and cut-off dates can be set at any time as departmental needs warrant. Cut-off dates will be announced on the "Notice to Announce Cut-off Date." Applications postmarked or submitted in person after the cut-off date will be held until the next administration. 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

Examination Applications must have an original signature. 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 SEND APPLICATIONS TO THE CALIFORNIA DEPARTMENT OF HUMAN RESOURCES OR DEPARTMENT OF WATER RESOURCES' FIELD OFFICES. Applications are available at Department of Water Resources' (DWR) offices, the DWR website:



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

CROSS FILING INFORMATION

If you meet the entrance requirements for this classification and for the Senior Hydroelectric Power Utility Engineer (Supervisor) scheduled with the same final filing date, you may file for two or more examinations on a single application. Please indicate the classification(s) you are applying for.

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.

ELIGIBLE LIST INFORMATION

The names of successful competitors will be merged onto the list in order of final scores. The list will be abolished 24 months after it is established unless the needs of the service and conditions of the list warrant a change in this period. Competitors must then retest to reestablish eligibility.

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

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.

POSITION DESCRIPTION

This is the staff specialist level responsible for conducting assignments which are difficult, controversial, require a high level of specialized expertise or unique technical knowledge and skills relating to: analysis of electric resource requirement and/or making recommendations to management for specific arrangements for acquisition of power supply or exchanges best suited for the operation of the State Water Project, negotiate with high level electric utility representatives for power purchase, sale or exchange agreements; prepare documents and/or testimony regarding power-related activities and present to regulatory agencies; provide guidance to field maintenance personnel about highly specialized maintenance, repair, or testing technologies or for complex database of management information system to improve availability and reliability of hydroelectric plants, machinery, equipment and apparatus; prepare unique procedures and conduct specialized diagnostic, predictive and/or corrective tests for hydroelectric plant machinery, equipment and apparatus using state-of-the-art test equipment; review hydroelectric plant machinery, equipment and apparatus for obsolescence and selecting appropriate replacements; coordinate retrofitting/replacement effort for the Operations and Maintenance Division.

REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION

NOTE: All applicants must meet the minimum qualifications for this examination by the cut-off 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.

Graduation from college with major work in electrical, electronic, mechanical, or civil engineering. (Additional qualifying experience may be substituted for the required education on a year-for-year basis.)

AND

Either I

Two years of experience performing the duties of an Associate Hydroelectric Power Utility Engineer in California state service.

Or II

Five years of progressively responsible engineering experience in the electric utilities field and/or in the operation and maintenance of pumping and generating equipment, at least two years of which shall have been comparable in responsibility to that of an Associate Hydroelectric Power Utility Engineer.



SCOPE OF EXAMINATION

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

Knowledge of:

- 1) Engineering theory and practices relating to power generation, transmission, distribution, and marketing.
- 2) Electric utility operation and management.
- 3) Functions, responsibilities, and procedures of regulatory and government agencies including the Public Utilities Commission, the Federal Energy Regulatory Commission, and the California Energy Commission, in the electric utility field.
- 4) Planning, design, construction, and operation of major generating plants, power transmission systems and pumping plants.
- 5) Methods of determining the optimum capacity and energy output of generating plants.
- 6) Power marketing and economics, including the market for and value of electric power, methods of marketing power and rates, agreements.
- 7) Operating, maintaining and testing of electrical and mechanical equipment and systems for plants, switchyards, reservoir outlets and aqueduct control features.
- 8) Environmental issues and policies.
- 9) Unit operating and loading procedures and criteria.
- 10) Standards of the American National Standards Institute, Institute of Electrical and Electronic Engineers, and American Society of Mechanical Engineers.
- 11) Instrumentation and control circuitry and electrical protection.
- 12) Servo systems and governors.
- 13) Bearings.
- 14) Lubrication.
- 15) Metal working.
- 16) Machining and welding.
- 17) Nondestructive examination.
- 18) Alignment and balancing of rotating machinery including vibration measurement.
- 19) Methods of maintenance, repair, and testing.
- 20) Power system operation and control.
- 21) Power system studies, load flow, stability, and fault analyses.

Ability to:

- 1) Analyze situations accurately and adopt an effective course of action.
- 2) Prepare clear and concise reports.
- 3) Prepare procedures and manuals.
- 4) Make feasibility studies.
- 5) Interpret, prepare and revise electrical and mechanical drawings and schematics and relay and control logic diagrams.
- 6) Assist and advise others on maintenance and repair procedures, materials, and tools.
- 7) Negotiate, administer, and coordinate contracts such as for maintenance, repair, testing, and consultation.
- 8) Conduct and coordinate special test activities.
- 9) Use personal computers.

ADDITIONAL DESIRABLE QUALIFICATIONS

Possession of a valid certificate of registration as a professional engineer.

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 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.

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.

For an examination without a written feature, it is the candidate's responsibility to contact the Department of Water Resources three days prior to the written test date if he/she has not received his/her notice of appointment.

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

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

If you meet the requirements stated on the reverse, 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 Zambia Cain at (916) 653-9568.