



1001 I Street, Sacramento, 95814 (916) 341-5127  
Exams@waterboards.ca.gov

## ENGINEERING GEOLOGIST EXAMINATION INTRODUCTION

The State Water Resources Control Board's, Engineering Geologist (Range A, B, C and D) examination consists entirely of a **TRAINING AND EXPERIENCE EXAMINATION**, which will be used to evaluate your education, training, experience and familiarity with or understanding of a particular subject or task. Candidates who meet the minimum qualifications as listed in the examination bulletin may take this examination. Meeting the minimum qualifications **does not** assure you a place on the eligible list.

**All competitors who are successful in this examination will be eligible to be considered for a job opening with the State Water Resources Control Board and the nine (9) Regional Water Quality Control Boards. The eligible list consists of 3 ranks and will remain in existence for 1 year.** Once your eligibility expires, you must reapply by submitting a new examination. Please be aware that placement on the eligibility list does not guarantee that you will be selected for a job opening.

As this examination is administered on a periodic basis, **candidates may participate only once during a 12 month period.** Therefore, if you are unsuccessful in this examination, you must wait 12 months to re-compete. If a candidate submits a second examination prior to the expiration of the 12 months, it will not be accepted.

**Your responses are subject to verification.** Applicants successful in this examination will be required to provide documentation of all education (**transcripts and a diploma verifying your major field of study**) and other documentation necessary to verify your responses to the State Water Resource Control Board's Human Resources Branch. Providing false information on a State examination is a violation of State law, and could result in an individual being removed from an employment list and banned from future employment with the State.

**Veteran's Preference Points** – Are you a veteran, disabled veteran, spouse of a disabled veteran or widow of a veteran and have not previously been a permanent State of California employee? You may obtain a Veteran's Preference Eligibility form by accessing the State Personnel Board's website at [http://www.spb.ca.gov/jobs/faq/veterans\\_information.htm](http://www.spb.ca.gov/jobs/faq/veterans_information.htm) or by calling 916-341-5127. Instructions on how to apply for the additional points are on the form.

**Contact Information** – You are responsible for keeping your contact information up to date. **To update your name, address, phone number or location preference** you must log on to [www.spb.ca.gov](http://www.spb.ca.gov) and log in to your account.

RETAIN THIS PAGE FOR YOUR RECORDS

**ENGINEERING GEOLOGIST**

**SUPPLEMENTAL APPLICATION  
AND EXAMINATION**

Thank you for your interest in California State civil service employment. The State of California is an Equal Employment Opportunity Employer. The Engineering Geologist examination will consist of a supplemental application/examination, which will be used to evaluate your knowledge, experience, education, training, familiarity or understanding of a particular subject or issue.

This is a scored test and will account for 100% of your score. It is important that you fill the examination out completely and accurately. **YOUR RESPONSES ARE SUBJECT TO VERIFICATION.**

To process your application and conform to requirements for statistical information from a number of State and Federal agencies, we need your Social Security Number, age, ethnic, disability, and gender information.

LAST NAME: \_\_\_\_\_ FIRST NAME AND MI: \_\_\_\_\_  
Please Print Please Print

STREET ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_  
Please Print

HOME PHONE: ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_

SOCIAL SECURITY #: \_\_\_\_\_

(Providing your Social Security Account Number is voluntary in accordance with the Federal privacy act of 1974 (PL-93-579). In this exam, your Social Security Number is required to process applications for Veteran’s Preference Points, check for eligibility to retake the examination, and verify statements regarding prior employment. Your Social Security Number is used as your identification number for all exams. Failure to provide your SSN could result in substantial delays in establishing your eligibility for employment.)

This question applies to individuals who have been previous State of California employees. Rule 211 provides that a DISMISSED State employee (an employee who previously worked for the State of California and was dismissed) may only participate in State Civil Service examinations if he or she has obtained prior consent from the State Personnel Board. If this pertains to you, do you have written permission from the State Personnel Board Executive Officer to take this examination?

Yes (**Letter of permission must be attached**)       No       Not Applicable

IF YOU WERE DISMISSED AND DO NOT HAVE PERMISSION FROM THE EXECUTIVE OFFICER OF THE STATE PERSONNEL BOARD TO TAKE THIS EXAMINATION, STOP HERE! DO NOT TAKE THIS EXAMINATION! You must receive permission and attach letter to this examination.

**THIS AFFIRMATION MUST BE COMPLETED:**

I hereby certify and understand that the information provided by me on this questionnaire is true and complete to the best of my knowledge and contains no willful misrepresentation or falsifications. I also understand that if it is discovered that I have made any false representations I will be removed from the list resulting.

Signature (REQUIRED) \_\_\_\_\_

**RETURN ALL COMPLETED FORMS AND THE EXAMINATION TO:  
SWRCB Human Resources Branch  
1001 I Street, 18<sup>th</sup> Floor  
Sacramento, CA 95814  
YOUR EXAMINATION RESULTS WILL BE MAILED TO YOUR HOME.**

## AGE, ETHNICITY, AND DISABILITY FORM

**The information collected on this page will be filed separately and only used for the purposes specified.**

To aid the State of California in its commitment to equal employment opportunity, all applicants are asked to voluntarily provide gender, age, ethnic, and disability information for statistical analysis.

### Age - Select the age group that corresponds to your age

- 1  Under 21                      3  30 - 39                      5  50 - 59                      7  70 and over  
2  21 - 29                      4  40 - 49                      6  60 - 69

Specify your gender:             Male                       Female

### Specify your ethnicity

- 1  **Black**—Persons having origins in any of the black racial groups of Africa.
- 2  **Asian**—Persons having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian Subcontinent. This includes China, Japan and Korea.
- 4  **Hispanic**—Persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- 5  **White**—Persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.
- 6  **Pacific Islander**—Persons having origins in the Pacific Islands, such as Samoa.
- 7  **American Indian or Alaskan Native**—Persons having origins in any of the tribal peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.  
ENTER TRIBAL IDENTIFICATION OR AFFILIATION \_\_\_\_\_
- 8  **Filipino**—Persons having origins in any of the original peoples of the Philippine Islands.
- 3  **Other**—Not Listed  
(specify) \_\_\_\_\_
- Y  **DISABLED**—A person with a disability is an individual who (1) has a physical or mental impairment that substantially limits one or more life activities, such as walking, speaking, breathing, performing manual tasks, seeing, hearing, learning, caring for oneself or working,...; (2) has a record of such an impairment; or (3) is regarded as having such an impairment.

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### HOW DID YOU LEARN OF THIS EXAMINATION?

- JOB FAIR AT \_\_\_\_\_
- ADVERTISEMENT IN \_\_\_\_\_
- WORD OF MOUTH
- EXAMINATION BULLETIN LOCATED AT \_\_\_\_\_
- INTERNET

**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE**



YOUR NAME (PLEASE PRINT): \_\_\_\_\_

**MINIMUM QUALIFICATIONS SECTION**

You are REQUIRED to complete the following section. To continue with this examination, you must meet the minimum requirements for the classification of Engineering Geologist detailed in the examination announcement. If you indicate “none of the above” to the minimum qualification questions in this section, do not continue with this examination.

**REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION**

**NOTE: All applicants must meet the education requirements for this classification prior to submitting this examination.**

**Education:** Equivalent to graduation from college with major work in geology, engineering geology, or a closely related field that includes coursework in geology. (Additional qualifying experience may be substituted for the required education on a year-for-year basis.) (Registration as a senior in a recognized institution will admit applicants to the Engineering Geologist examination, but they must produce evidence of graduation or its equivalent before they can be considered eligible for appointment.)

**INDICATE ALL THAT APPLY**

- Registered Senior.
- Bachelor’s degree in one of the majors listed below.
- Master’s Degree in one of the majors listed below.
- PhD in one of the majors listed below.
  
- Registration as a Geologist or Geophysicist issued by the California Board of Geologists and Geophysicists

Number: \_\_\_\_\_ Expiration date: \_\_\_\_\_

**APPROVED COLLEGE DEGREES**  
(Please mark your degree(s) below)

- Geology
- Engineering Geology
- Earth Science
- Geophysics
- Hydrogeology
- Geological Engineering
- Other closely related field:

\_\_\_\_\_

Please identify the names and locations of the Colleges or Universities you attended:

\_\_\_\_\_  
Name of College or University Address

\_\_\_\_\_  
Name of College or University Address

## EXAMINATION FOR ENGINEERING GEOLOGIST

### TECHNICAL SKILLS

USE THE FOLLOWING RATINGS TO RESPOND TO THE NEXT THREE QUESTIONS.

- A. I am proficient in the use of advanced features.
- B. I am proficient in the use of basic features.
- C. I have minimal or no knowledge.

Not answering a question will be scored as an “I have minimal or no experience with the following products” answer.

### YOUR RESPONSES ARE SUBJECT TO VERIFICATION

IN YOUR RESPONSES YOU MAY INCLUDE COLLEGE COURSES, PAID OR  
VOLUNTEER WORK EXPERIENCE

#### COMPUTER SKILLS

##### 1. Spreadsheet software

- A. I am proficient in the use of advanced features.
- B. I am proficient in the use of basic features.
- C. I have minimal or no knowledge.

##### 2. Database software

- A. I am proficient in the use of advanced features.
- B. I am proficient in the use of basic features.
- C. I have minimal or no knowledge.

##### 3. Word processing software

- A. I am proficient in the use of advanced features.
- B. I am proficient in the use of basic features.
- C. I have minimal or no knowledge.

##### 4. Geographic Information Systems (GIS) software.

- A. I am proficient in the use of advanced features.
- B. I am proficient in the use of basic features.
- C. I have minimal or no knowledge.

##### 5. Groundwater/Vadose zone modeling

- A. I am proficient in the use of advanced features.
- B. I am proficient in the use of basic features.
- C. I have minimal or no knowledge.

USE THE FOLLOWING RATINGS TO RESPOND TO ALL REMAINING QUESTIONS.

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

Not answering a question will be scored as an “I have received little or no education or training in this task” answer.

IN YOUR RESPONSES YOU MAY INCLUDE COLLEGE COURSES, PAID OR  
VOLUNTEER WORK EXPERIENCE

**GENERAL KNOWLEDGE**

**1. Analyze and interpret engineering geological literature.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**2. Assessing quality of geological data.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**3. Principles of risk assessment.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**4. Application of statistical methods of analysis.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**5. Principles of land use practices with reference to their general effect on human health and the environment.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**6. Principles of scientific research.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**7. Principles of slope stability.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**8. Knowledge of seismic hazards in California.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**9. Knowledge of cross-media environmental impacts.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

## **SURFACE WATER**

### **10. Develop a surface water sampling plan.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **11. Collect surface water samples.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **12. Identify sources of pollutants in surface water.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **13. Determine interaction between surface water and groundwater.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

## **GROUNDWATER AND VADOSE ZONE**

### **14. Develop a groundwater monitoring plan.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **15. Collect groundwater samples.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **16. Measure groundwater elevation.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **17. Draw groundwater elevation contours.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **18. Determine hydraulic conductivity.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **19. Evaluate results of slug tests in the field for hydraulic conductivity.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

### **20. Evaluate results of pump tests in the field for hydraulic conductivity.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**21. Review groundwater sample analytical data.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**22. Evaluate results of percolation or infiltration testing.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**23. Determine groundwater flow direction.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**24. Determine groundwater flow gradient.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**25. Well construction.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**26. Well abandonment.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**27. Identify pathways for migration of contaminants.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**28. Determine contaminant fate and transport.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**29. Determine aquifer storativity.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**30. Determine aquifer transmissivity.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**31. Evaluate potential sources of groundwater contamination.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**32. Understand factors affecting natural attenuation of contaminants.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**33. Evaluate behavior of organic chemicals in groundwater.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**34. Evaluate behavior of inorganic chemicals in groundwater.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**35. Evaluate options for groundwater remediation.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**WATERSHED MANAGEMENT**

**36. Develop a study design for identifying sources of pollutants within a watershed.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**37. Develop recommendations or planning tools for pollutant reduction in a watershed.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**38. Calculate water balance within a watershed.**

- A. I am technically proficient to the point where I can perform this task independently.
- B. I have received education or training but would need guidance to perform the task.
- C. I have received little or no education or training in this task.

**END**

**DO NOT SEND ELECTRONICALLY OR BY FAX. ORIGINAL SIGNATURE IS REQUIRED.**