

REVISED EXAMINATION ANNOUNCEMENT

JANUARY 29, 2020

EXAM TITLE: WATER AND SEWAGE PLANT OPERATOR
EXAM CODE: 9FS15
EXAM BASE: OPEN
DEPARTMENT: DEPARTMENT OF FORESTRY AND FIRE PROTECTION
FINAL FILING DATE: **FEBRUARY 20, 2020***

The bulletin announcing the above examination has been amended as follows:

*The final filing date has been extended to **FEBRUARY 20, 2020**
Applications postmarked after FEBRUARY 20, 2020 will **NOT** be considered for this examination.

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.



WATER AND SEWAGE PLANT OPERATOR, DEPARTMENT OF FORESTRY AND FIRE PROTECTION (SAFETY)

9FS15

DEPARTMENT(S): Department of Forestry & Fire Protection
OPENING DATE: JANUARY 7, 2020
FINAL FILING DATE: FEBRUARY 20, 2020*
EXAM TYPE: OPEN
SALARY: \$6,501 - \$6,826
LOCATIONS: Statewide

EQUAL EMPLOYMENT & 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 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.

WHO CAN APPLY

Persons who meet the minimum qualifications of the classification, as stated on this examination bulletin. All applicants must meet the education and/or experience requirements by the final filing date of **February 20, 2020** unless otherwise noted on the class specification.

SPECIAL TESTING ARRANGEMENTS

If you have a disability and need special testing arrangements, mark the appropriate box on the application and/or contact the Department of Forestry and Fire Protection at (916) 445-7824.

HOW TO APPLY

To apply for this examination, please complete and return the following:

Include all in packet:

- [Examination/Employment Application \(STD.678\)](#). This can also be found on the California Department of Human Resources' (CalHR) website. *You may submit your application by mail or in person.*
- Copy of all certifications used to qualify in all patterns listed, (State of California Wastewater and Water Treatment Plant Operator Certification).
- Transcripts showing units completed or a copy of degree earned.
- Certification grades and numbers must be listed on application (STD. 678) under section title "Licenses".

SUBMIT BY MAIL OR IN PERSON:

Department of Forestry and Fire Protection
1300 U Street
Sacramento, CA 95818
Examination Unit – (Attn: Carol Anderson)

DO NOT SUBMIT APPLICATIONS VIA E-mail

Applications postmarked or personally delivered after the final filing date, **February 20, 2020** will not be accepted for any reason.

All applications/resumes must include "from" and "to" employment dates (month/day/year), time base, and applicable civil service class titles. Applications/resumes received without this information will be rejected.

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.

EXAMINATION INFORMATION

To obtain a position on the eligible list, applicants must receive a minimum rating of 70% on the examination. *This exam will consist of the following:*

STRUCTURED INTERVIEW (QUALIFICATIONS APPRAISAL PANEL) WEIGHTED AT 100%

In this type of exam candidates will be asked pre-determined, job-related questions by a three-person panel and rated against pre-determined benchmarks. *Candidates will be provided with scratch paper and a pencil.*

It is anticipated exams/interviews will be held in **March/April, 2020.**

PLEASE NOTE: All exam questions are based on the Knowledge, Skills and Abilities listed in this bulletin and the [Water and Sewage Plant Operator \(Safety\)](#) classification specification which is located on the CalHR website. Use this information when preparing for this exam and retain this bulletin for your reference.

CANDIDATES WHO DO NOT APPEAR FOR THE STRUCTURED INTERVIEW (QUALIFICATIONS APPRAISAL PANEL) EXAMINATION WILL BE DISQUALIFIED.

MINIMUM QUALIFICATIONS

Possession of a valid State of California Wastewater and Water Treatment Plant Operator Certification issued by the State Water Resources Control Board (Grade I or Grade II) and State Department of Health Services (Grade 1 or Grade 2), (Applicants who are within six months of obtaining the required certification will be admitted to the examination but must secure and provide evidence of certification prior to appointment) **AND**

EITHER I

Completion of a recognized apprenticeship for Stationary Engineers. (Apprentices who are within six months of completing their apprenticeship program may be admitted to the examination but must provide evidence of completion prior to appointment.)

OR II

EXPERIENCE: Four years of experience performing duties which may include the operation and maintenance of water and sewer systems; maintenance and repair of plumbing, boiler, heating, refrigeration, ventilation, laundry, and shop and power equipment of commercial, industrial, or institutional buildings, including the operation and maintenance of air conditioning systems involving the use of automatic controls; and repair of various mechanical equipment, in addition to performing minor building construction and maintenance **AND**

EDUCATION: Completion of 670 hours of formalized technical instruction relating to Stationary Engineering in training offered by such established programs as: Job Corps; Skill Centers; ROP; Trades Schools; Military; and Joint Training Partnership Act. (An Associate of Arts or Certificate in Mechanical Electrical Technology, which must have included at least 12 semester units of instruction in heating, ventilation, and refrigeration systems involving the use of automatic controls, may be substituted for the 670 hours of technical instruction. Students who are within six months of completing their degree will be admitted to the examination, but they must provide evidence of completion prior to appointment.) (Two years of additional qualifying experience may be substituted for the required education.)

JOB CHARACTERISTICS

Positions in this class are in Department of Forestry and Fire Protection conservation camps which are located in remote, isolated areas of California that preclude using existing local municipal water or wastewater systems. The camps have their own drinking water supply and treatment systems, along with on-site wastewater disposal systems that serve the inmate population as well as State staff. Assignments may include sole responsibility for the lead and instruction of inmates, wards, or resident workers and/or the protection of personal and real property.

Water/wastewater certificate requirements vary among camps. Specific camp needs will indicate which license is required.

ELIGIBLE INFORMATION

A Departmental eligible list will be established for the Department of Forestry and Fire Protection. This 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.

REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION

Accepted applicants are required to bring either a photo identification card or two forms of signed identification to each phase of the examination **AND** the notice to appear showing the scheduled date and time of the exam.

POSITION DESCRIPTION

A Water and Sewage Plant Operator, under general direction in a conservation camp in the Department of Forestry and Fire Protection, is to perform a variety of skilled work in the operation, maintenance, and repair of a water/wastewater treatment plant, water, sewer, heating, boiler, air conditioning, ventilating, lighting, power, and other mechanical systems normally found in a State conservation camp facility; to work closely with Region, Headquarters facility planners, and various control agencies on facility maintenance problems and code requirements; to maintain order and supervise the conduct of inmates or wards; to instruct or lead inmates, wards, or resident workers in facilities maintenance while protecting and maintaining the safety of persons and property; and to do other related work.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

1. Proper sampling and handling techniques for water and/or wastewater laboratory testing to comply with regulatory guidelines, specifications, and operational needs.
2. Water and wastewater treatment principles to ensure compliance with all health standards.
3. Routine test techniques (e.g., chlorine residual, pH, turbidity) on water samples to ensure proper operation of water treatment processes.
4. Chemical dosages used for the treatment of water to ensure proper disinfection and maintain chlorine residual in the distribution system.
5. Chemical dosages used for the treatment of water to ensure compliance with water quality standards.
6. Applicable laws and regulations (e.g., Federal, State, local) that apply to the Department's water and wastewater treatment plants.
7. Water and/or wastewater treatment and effluent disposal to ensure safe and effective operation.
8. Water distribution systems to ensure safe and effective operation.

9. Wastewater treatment processes (e.g., activated sludge, ponds, septic tanks) to ensure operational effectiveness.
10. Routine tests, Sludge Volume Index (SVI) techniques on wastewater samples to ensure proper operation of wastewater treatment processes.
11. Appropriate use of Personal Protective Equipment (PPE) (e.g., gloves, eye protection, hardhats) to ensure health and safety.
12. Water treatment processes (e.g., sand filter, conventional flocculation/sedimentation/filtration) to ensure compliance with drinking water safety standards.
13. Personal Protective Equipment (PPE) (e.g., gloves, eye protection, hardhats) maintenance to ensure health and safety.
14. Potential risks (e.g., health, workplace violence, personal security) associated with working a prison environment.
15. Troubleshooting techniques to diagnose electrical and mechanical equipment problems associated with water and/or wastewater treatment plants (e.g., voltage, electrical control panels, pump failure) to ensure operational readiness.
16. Specialized equipment [e.g., filters, chlorinators, Supervisory Control and Data Acquisition (SCADA)] used for the treatment of potable water to ensure compliance with all health standards.
17. The materials (e.g., tanks, valves, backflow distribution) and principles (e.g., high/low pressure zones, loop systems, hydraulics) used in the operation of water distribution systems in accordance with applicable laws and regulations.
18. The Department's safety procedures and programs [e.g., Injury and Illness Prevention Program (IIPP), Occupational Safety and Health Administration (OSHA), Respiratory Protection Program (RPP)] to ensure personnel safety and compliance with Federal and State law.
19. Maintenance and repair techniques and procedures of water distribution systems to ensure effective operation in accordance with applicable laws and regulations.
20. Jobsite safety practices to ensure personnel safety while completing assignments to ensure compliance in accordance with the Department's Injury and Illness Prevention Program (IIPP).
21. Confined spaces as they apply to water and wastewater plants to ensure compliance in accordance with applicable laws and regulations and Department policies and procedures.
22. Applicable laws and regulations as it pertains to inmates/wards interaction and supervision to ensure safe work environment.
23. The equipment (e.g., filters, pumps, valves) used for the disposal of wastewater effluent to ensure safe and effective operation in accordance with applicable laws and regulations and Department policies and procedures.
24. Basic mathematical calculations (e.g., addition, subtraction, multiplication) for effective job performance.

25. Federal and State health and safety practices to maintain a safe work environment in accordance with Department policies and procedures.
26. Safe handling and disposal of hazardous materials used for maintenance and repairs to ensure a safe and well maintained plant.
27. Safety procedures (e.g., trench shoring, confined space, fall protection) to ensure safe and effective operation in accordance with Department policies and procedures.
28. Tools and equipment (e.g., hand tools, power tools, diagnostic) to ensure safe and effective repairs are completed.
29. The maintenance of wastewater collection systems to ensure safe and effective operations in accordance with Department policies and procedures.
30. The repair of wastewater collection systems to ensure safe and effective operations in accordance with Department policies and procedures.
31. Materials (e.g., piping, couplers) and tools (e.g., manhole hook, hydro flushers, augers) used in the maintenance and repair of wastewater collections systems in accordance with applicable laws and regulations.
32. Industry specific terminology to communicate effectively.
33. Advanced mathematical calculations (e.g., algebra, geometry, hydraulic calculations) for effective job performance.
34. Equipment inventory management to maintain adequate supplies (e.g., parts, chemicals, tools) for common repairs to ensure safety and operational readiness.
35. Basic supervisory principles and practices (e.g., motivation techniques, training, leadership) to ensure the efficient operation of the water and/or wastewater treatment plant.
36. Parts and supply requisitioning (e.g., procurement, contracts, surplus) to conduct efficient and timely repairs.
37. Writing elements (e.g., spelling, grammar, sentence structure) to ensure that written materials are complete, concise, and error free.
38. Non-hazardous materials used for maintenance and repairs to ensure safe and well maintained plants.
39. Computer programs (e.g., Microsoft Office, Internet browsers, Open Office) as needed for job performance to ensure compliance with department policy.
40. Defensive driving techniques (e.g., traffic laws, intersection approach, utilization of warning devices) to safely operate Department vehicles.
41. Required training (e.g., industry, safety, other government agencies) to enhance knowledge, skills, and abilities.
42. Inspection methods and criteria to approve the work of others (e.g., vendors, Department, personnel, inmates/wards).
43. Mobile communication devices (e.g., cell phones, radios) for effective communication.

Skill to:

1. Efficiently operate water and/or wastewater plants.
2. Maintain the safety and security of an area and inmates/wards assigned.
3. Operate equipment to ensure safe and effective operation.
4. Read, write, and speak English at a level required for successful job performance.
5. Properly utilize Personal Protective Equipment (PPE) (e.g., gloves, hardhat, eye protection) for safe and effective operation and use.
6. Effectively supervise the work of inmates/wards.
7. Properly lift tools and equipment (e.g., pumps, motors, chemicals) to prevent personal injury and damage to equipment.
8. Operate various tools (e.g., power, hand, diagnostic) for safe and effective use.
9. Operate a personal computer in order to accomplish job duties and ensure effective job performance.
10. Communicate effectively (e.g., verbal, written, electronic) in order to exchange and/or provide information and/or direction.
11. Effectively instruct and train (e.g., safety, repair, procedures) inmates/wards on duties as assigned.
12. Multitask during emergency and non-emergency situations.
13. Move in various ways (e.g., twist, kneel, squat) in order to complete jobs, tasks, and projects.
14. Produce written correspondence (e.g., emails, letters, forms) to effectively convey information.
15. Use communication equipment (e.g., radio, cell phone) for effective communication in emergency and non-emergency situations.

Ability to:

1. Maintain water integrity (e.g., sampling, testing, chemical dosing) in storage vessels and distribution systems to ensure safety and health standards are met.
2. Interpret laboratory test results and analyses to determine if water and/or wastewater treatment plants meet compliance with regulatory permit requirements.
3. Properly store and transport prepared water and/or wastewater samples in appropriate timeframe for delivery to testing facility as required by Federal and State guidelines.
4. Properly collect and label water and/or wastewater samples for laboratory and routine testing.
5. Complete proper water and/or wastewater sample documentation (e.g., chain of custody, labeling, shipping) for laboratory testing.
6. Ensure water and/or wastewater samples are tested and analyzed at State certified laboratories to meet compliance with regulatory permit requirements.

7. Perform routine tests (e.g., chlorine residual, pH, turbidity) on water samples to ensure proper operation of water treatment processes.
8. Interpret permits issued by the regulatory agencies [e.g., State Water Resources Control Board (SWRCB), Local Primacy Agency (LPA), U.S. Forest Service] to ensure compliance with discharge permits.
9. Keep accurate records to successfully complete documentation and follow record retention schedules.
10. Operate equipment associated with water and/or wastewater treatment systems (e.g., dosing pumps, electrical controls, motors) to ensure safe and effective operation.
11. Follow directions (e.g., written, verbal) to ensure successful completion of work assignments.
12. Communicate effectively (e.g., written, verbal) with peers, staff, inmates, and control agencies to ensure safe and effective operation.
13. Monitor and evaluate effluent disposal to meet discharge requirements.
14. Ensure the installment of equipment associated with water and/or wastewater treatment systems (e.g., pumps, motors, aerators) to ensure effective operation.
15. Ensure repairs are made to equipment associated with water and/or wastewater treatment systems (e.g., dosing pumps, electrical controls, pumps) in order to keep systems operational.
16. Recognize and report the need for changes of the water and/or wastewater processing systems to ensure compliance in accordance with regulatory laws, regulations, and permits.
17. Read and understand various written materials (e.g., policies, procedures, reports) to ensure proper completion of work assignments.
18. Ensure the repair of equipment associated with water and/or wastewater treatment systems (e.g., dosing pumps, electrical controls, valves) to keep systems operational.
19. Ensure the repair of electrical and mechanical equipment problems relating to water and/or wastewater treatment processes (e.g., low voltage, electrical control panels, pump failure) to meet regulatory requirements.
20. Perform routine tests [e.g., Dissolved Oxygen (DO), Chemical Oxygen Demand (COD), Sludge Volume Index (SVI)] on wastewater samples to ensure proper operation of wastewater treatment processes.
21. Analyze situations and take appropriate action in emergency and non-emergency situations to ensure a safe and effective work environment.
22. Recommend changes needed of the water and/or wastewater processing systems to ensure compliance in accordance with regulatory laws, regulations, and permits.
23. Identify potential problems that may impact work performance and present solutions in order to minimize operational interruptions.
24. Use tact and diplomacy when working with people of different perspectives and viewpoints.

25. Use and direct the use of appropriate Personal Protective Equipment (PPE) to ensure personnel safety.
26. Troubleshoot electrical and mechanical equipment problems relating to water and/or wastewater treatment processes (e.g., low voltage, electrical control panels, pump failures) to meet regulatory requirements.
27. Ensure the installment of equipment associated with electrical systems (e.g., breakers, switches, fuses) to maintain water and/or wastewater treatment plants.
28. Evaluate water flow needs (e.g., yield, demand) required by individual facility usage.
29. Implement and enforce workplace safety procedures (e.g., trench, confined space, lockout/tag out) as they apply to excavating situations.
30. Maintain cooperative relationships with individuals and organizations to meet Department goals and objectives.
31. Train inmates and/or wards on safety practices [e.g., inmate/ward orientation, Safety Data Sheet (SDS), tailgate safety sessions] to ensure safe and effective operation.
32. Interpret plan, drawings, and specifications to successfully complete work assignments.
33. Train inmates/wards in the proper operation of water treatment plants to ensure compliance.
34. Write documents (e.g., letters, memos, emails) to communicate with various audiences.
35. Train inmates/wards in the proper collection and handling of water and/or wastewater sampling for analysis to ensure water quality and compliance.
36. Train inmates/wards on laboratory procedures (e.g., dissolved oxygen, chemical oxygen demand, pH) to ensure water quality and compliance.
37. Train inmates/wards as an Operator in Training (OIT) in the proper operation of wastewater treatment plants to ensure compliance.

VETERANS' PREFERENCE

Veterans' Preference will be granted for this examination, pursuant to Government Code section 18973.1, effective January 1, 2014 as follows: 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 Veterans' Preference. 2) An entrance examination is defined, under the law, as any open competitive examination. And 3) Veterans' Preference is not granted once a person achieves permanent civil service status. Veteran status is verified by the California Department of Human Resources (CalHR).

Directions to apply for Veterans' Preference are on the Veterans' Preference Application (Std. Form 1093), which is available at [CalHR Veterans Information](#), and the [Department of Veterans Affairs](#).

CONTACT INFORMATION

Department of Forestry and Fire Protection
(916) 445-7824

CALFIREexams@fire.ca.gov

TDD is Telecommunications Device for the Deaf and is reachable only from phones
Equipped with a TDD Device

1 (800) 735-2929 (TT/TDD) 1 (800) 735-2922 (Voice)

STS is Speech-to-Speech Service for persons with a speech disability and is
reachable at

1 (800) 854-7784 (California) or 1 (800) 947-8642 (Nationwide)

GENERAL INFORMATION

For all examinations (with or without a written feature), it is the candidate's responsibility to contact the Department of Forestry and Fire Protection, (916) 445-7824, three weeks after the cut-off/final filing date if he/she has not received a progress notification or notice to appear.

If a candidate's notice of oral interview or performance test fails to reach him/her three days prior to their scheduled appointment due to a verified postal error, he/she will be rescheduled upon written request.

Examination Locations: When a written test is part of the examination, it will be given in such places in California as the number of candidates and conditions warrant. However, locations of interviews or performance evaluations may be limited or extended as conditions warrant.

Applications are available online at CalHR, local offices of the Employment Development Department and the testing Department on this job bulletin.

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. Your performance in the examination will be compared with the performance of the others who take this test, and all candidates who pass will be ranked according to their scores.

The Department of Forestry and Fire Protection 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 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. 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) service-wide 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.

Confidentiality and Security: Pursuant to Government Code Sections 19680(c) and 19681(b) it is unlawful to copy and/or furnish confidential examination material for the purpose of either improving or injuring the chances of any person or to obtain examination questions or other examination material before, during, or after an examination. Every person violating these provisions is guilty of a misdemeanor, and adverse action will be pursued. This may result in the person being barred from competition in future examinations, withheld from certification lists, or cancellation of eligibility for employment in State civil service.