CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
OPEN EXAMINATION - CONTINUOUS TESTING
RESEARCH SCIENTIST III (VARIOUS SPECIALTIES)

LR12	**5591**	**(CHEMICAL SCIENCES)**	**2H1AM**
LR12	**5594**	**(EPIDEMIOLOGY/BIOSTATISTICS)**	**2H1AN**
LR14	**5596**	**(FOOD & DRUG SCIENCES)**	**2H1DL**
LR15	**5599**	**(MICROBIOLOGICAL SCIENCES)**	**2H1AP**
LR16	**5604**	**(PHYSICAL/ENGINEERING SCIENCES)**	**2H1DM**
LR17	**5605**	**(SOCIAL/BEHAVIORAL SCIENCES)**	**2H1AR**
LR18	**5606**	**(VETERINARY SCIENCES)**	**2H1AS**

Bulletin Release Date: October 8, 2014
This bulletin supersedes the bulletin released on August 25, 2014

California State Government supports equal opportunity to all regardless of race, color, creed, national origin, ancestry, gender, marital status, disability, religious or political affiliation, age, or sexual orientation. It is an 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.

WHO SHOULD APPLY: Persons who meet the minimum qualifications (entrance requirements) as stated on this announcement may take this examination, which is competitive.

HOW TO APPLY: Applications must be submitted to the address listed below via the U.S. Postal Service, or hand delivered to the Department of Public Health Human Resources Office (hours are 8:00 AM to 5:00 PM). Standard State Applications (STD. 678) can be found at: **http://jobs.ca.gov/pdf/std678.pdf.**

Mailing Address:
California Department of Public Health
Selection & Certification Unit
MS 1700-1702
P.O. Box 997378
Sacramento, CA 95899-7378

File in Person Address:
California Department of Public Health
Selection & Certification Unit
1501 Capitol Avenue, Suite 71.1501
Sacramento, CA 95814
Telephone: (916) 552-9212

DO NOT SUBMIT APPLICATIONS TO THE STATE PERSONNEL BOARD OR THE CALIFORNIA DEPARTMENT OF HUMAN RESOURCES. ALSO, THE DEPARTMENT OF PUBLIC HEALTH WILL NOT ACCEPT APPLICATIONS SENT ONLINE, VIA INTER-AGENCY MAIL OR FAX.

FINAL FILING DATE: The testing office has established the following application cut-off dates: January 17, March 17, May 17, July 17 and September 17. November testing for this classification has been postponed until 2015. Submission of applications after the cut-off dates will not be accepted for the current examination, but will be held for the next scheduled examination.

TESTING PERIOD: A candidate may be tested only once during any testing period. The testing period for this classification is January 1 through December 31.

ANTICIPATED EXAMINATION DATES: February, April, June, August, October and December

SALARY RANGES: $5,796 - $7,255 per month

EMPLOYEE BENEFITS:
In addition to the salary above the California Department of Public Health offers benefits in the following areas:

- Health, Dental, and Vision
- Cash Benefit Programs
- Disability Insurance
- Work, Home, and Family
- Beneficiary and Survivor Benefits
- Awards
- Retirement and Separation Benefits
- Flexible Schedules
- Public Transit Reimbursement (limits apply)

A complete description of all benefits may be viewed at http://www.calhr.ca.gov/Pages/home.aspx

POSITION DESCRIPTION: Under supervision of senior scientific research personnel, incumbents plan, organize, and carry out scientific research studies of limited scientific scope and complexity; may serve as a team member on public health projects and investigations or act as a technical scientific consultant on a specific phase of a more complex scientific study; make independent decisions in a very limited or restricted area of a specific scientific field; solve problems using standard principles, procedures, and techniques for their scientific area of expertise when fully trained, and perform other related work. The incumbent's work is reviewed to see that it conforms to established policies and procedures.

CHEMICAL SCIENCES: Incumbents in this parenthetical are distinguished from other Research Scientists by being required to analyze and draw conclusions from research studies of chemistry as related to public and environmental health. This work requires broad knowledge of chemistry in the areas of analytical chemistry, physical chemistry, organic chemistry, and biochemistry. Scientific research and investigation can also be conducted in pharmacology, toxicology, drug chemistry, food chemistry, biochemistry, environmental chemistry, clinical chemistry, immunochemistry, and molecular biology. Research study conclusions are used to improve detection and identification of chemicals and biochemicals including toxic chemicals, metabolites, nutrients, pharmaceuticals, and enzymes; assess environmental fate and transport of chemical pollutants; assess exposure pathways and body burdens of chemical pollutants in humans and biological receptors; assess relationships between body burdens and resultant health or ecological effects; evaluate environmental or human exposures, effects, or risks; and investigate methods and technologies that have the potential to prevent adverse public and environmental health effects of chemical exposures.

EPIDEMIOLOGY/BIOSTATISTICS: Incumbents in this parenthetical are distinguished from other Research Scientists by being required to design, conduct, analyze, and draw conclusions from epidemiologic or biostatistical investigations. These investigations apply statistical and survey techniques and biologic theory for the purpose of describing and understanding the distribution and determinants of disease, health, and genetic conditions in the population and the response of the health care system. Subspecialties focus on infectious agents (general communicable diseases, zoonotic diseases, food borne diseases, vector borne diseases): nutrition and lifestyle factors; social or environmental factors; health promotion; chemical and physical agents in the environment; chronic diseases and injuries; detection, distribution, and treatment of genetic disorders; other genetic influences on disease; and the efficacy of public health, clinical medical, and other interventions in modifying these influences. Scientific research, disease surveillance, and epidemiologic-based investigations are conducted to identify the source of human illness or injury, to prevent or control its occurrence, and to measure the effectiveness of those controls. Scientific research, disease surveillance, and epidemiologic investigations could evaluate the entire ecology of illness occurrence at the molecular or genetic level using molecular epidemiology.

FOOD AND DRUG SCIENCES: Incumbents in this parenthetical are distinguished from other Research Scientists by being required to analyze and conduct research studies on food, cosmetic, and consumer product safety, and drug and medical device consumer product safety and effectiveness. Subspecialties in this parenthetical focus on food product safety, drug product safety, cosmetic product safety, or medical device product safety. Work in a subspecialty requires advanced knowledge in a specific area of food microbiology, nutrition, food technology, food biochemistry, food or drug chemistry, drug pharmacology, biomedical device engineering sciences, or risk assessment. Research studies and investigation conclusions are used to ensure the production of safe foods, drugs, cosmetics, and medical devices. In food borne illness outbreaks, investigations are conducted and, using scientific risk assessment procedures, the potential sources of contamination are identified and controlled through scientific research on the source of contamination and the implementation of new food manufacturing procedures. Incumbents, working in drug, cosmetic, or medical device safety have knowledge of the technologies used to uniformly assure the safety and effectiveness of these consumer products; locate, review, and evaluate current relevant scientific information and expert opinion to determine whether investigational new drug or device studies are adequately designed and controlled to generate scientifically valid and useful data; consult with other scientists, evaluate scientific data, and recommend necessary control measures to minimize adverse health outcomes; and verify that all scientific data submitted in support of industry claims is accurate and that foods and cosmetics are safe and drugs and medical devices are safe and effective.

MICROBIOLOGICAL SCIENCES: Incumbents in this parenthetical are distinguished from other Research Scientists by being required to analyze and draw conclusions from research studies of the microbial, viral, and immunologic aspects of infectious diseases. Work in a subspecialty requires broad knowledge in a specific area of bacteriology, parasitology, mycology, virology, microscopy, molecular biology/microbial genetics, food, and water microbiology. Research study conclusions are used to improve detection and identification of infectious disease-causing microorganisms; define mechanisms and modes of infectious disease transmission; identify mechanisms of tissue injury; support improved investigation of infectious disease outbreaks; and improve methods to prevent infectious disease transmission.

PHYSICAL/ENGINEERING SCIENCES: Incumbents in this parenthetical are distinguished from other Research Scientists by being required to analyze and draw conclusions from research studies of the physical and engineering sciences relevant to public and/or environmental health. This work requires broad knowledge in Physical/Engineering Sciences in areas such as non-industrial indoor air quality, community air quality, occupational air quality, air pollution control, mechanical or ventilation engineering, atmospheric pollution, atmospheric physics, microscopy, material sciences, and industrial hygiene.

Engineering and physical science research and investigations can be conducted in areas such as radiation safety, environmental safety, occupational safety, and water safety. Research study conclusions are used to improve detection and identification of physical agents of public and/or environmental health significance; identify sources, environmental fates, and transport of physical agents; assess exposure pathways and body burdens of physical agents in human and biological receptors; assess the relationships between body burdens and resultant health and ecological effects; and investigate technologies which have potential to protect public health and the environment from effects of exposures to physical agents. Incumbents provide consultation to industry and other governmental agencies on the scientific technological aspects of water safety, radiation safety, environmental safety, and occupational safety as appropriate to technical expertise.

SOCIAL/BEHAVIORAL SCIENCES: Incumbents in this parenthetical are distinguished from other Research Scientists by being required to apply the theoretical models and research methods of the social/behavioral sciences, particularly the disciplines of psychology, sociology, anthropology, economics, and political science as they relate to public health issues. Work in this parenthetical requires knowledge in one or more of these disciplines to conduct analyses of personality, community, cultural, family, economy, and policy on health, health behavior, treatment, and disease prevention in California. This specialty carries out scientific work related to the evaluations of public health programs. Among the factors the incumbent examines for health behavior implications are: social and economic trends, race, social and economic inequality, economic impacts and cost factors of policies, ethnic diversity, personality and psychological factors, individual and organizational performance, community dynamics and structure, and community and statewide decision making and policy development. The results of this research would be used in developing new effective public health prevention programs focused on preventing unhealthful behaviors and promoting health by behavior modification through health education.

VETERINARY SCIENCES: Incumbents in this parenthetical are distinguished from other Research Scientists by being required to design, conduct, analyze, and draw conclusions from research studies and scientific investigations in veterinary public health and food safety and security. Scientific research and investigations will use epidemiologic techniques requiring an understanding of the clinical and laboratory aspects of zoonotic disease (transmission of disease from animals to human). Work in a subspecialty requires advanced knowledge in veterinary preventive medicine, food safety and security, toxicology, pathology, and lab animal medicine. Incumbents have responsibility for the design, conduct, and analysis of complex scientific research or investigational activities involving the ecology of disease transmission through humans, animals (domestic, wildlife, and laboratory), the environment, and/or food sources. In food borne illness outbreaks, investigations are conducted and, using scientific risk assessment procedures, the potential sources of contamination are identified and controlled though scientific research on the source of contamination and the implementation of new food production and biosecurity procedures. Incumbents are required to analyze and draw conclusions from scientific investigations that apply statistical and surveillance techniques for the purpose of understanding the distribution, determinants, and control of infectious zoonotic agents and food borne illnesses.

Positions exist with the Department of Public Health in the following Counties: Alameda, Contra Costa, Los Angeles, Sacramento, San Diego, and San Francisco.

REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION: It is your responsibility to make sure you meet the education and/or experience requirements stated on this announcement on the date you submit your application. Your signature on your application indicates that you have read, understood, and possess the basic qualifications required.

> NOTE: Applications **must** include "to" and "from" dates (month/day/year), time base, job titles and/or civil service class title(s), and range (if applicable) for all work experience. College course Information **must** include title, number of semester or quarter units, name of institution, completion dates, and degree. **Applications received without this information will be rejected. Applicants must submit a copy of official transcripts along with the application when using education to meet the entrance requirements for this examination.**

MINIMUM QUALIFICATIONS:

ALL LEVELS: **Either I**

Experience: One year of experience in the California state service performing scientific research duties comparable to a Research Scientist II in the stated specialty or a closely related field.

AND

Education: Possession of a master's degree in the stated specialty or a closely related field.

Or II

Experience: One year of progressively responsible scientific research experience in the stated specialty or a closely related field. This experience must have included either: (1) experience with major responsibility for the design and execution of a complex, highly specialized research project; or (2) experience in the coordination and direction of a complex

and difficult scientific research effort. This experience must be at a level of responsibility equivalent to that of a Research Scientist II.

AND

Education: Possession of a doctoral degree in the stated specialty or a closely related field.

The required degree must have been obtained from a recognized U.S. university or from a foreign university approved by the Bureau of Private Postsecondary and Vocational Education under the provision of California Education Code Chapter 3, Part 59, Division 10.

GENERAL QUALIFICATIONS: In addition to the scope defined on this announcement, candidates must possess essential personal qualifications including integrity, initiative, dependability, good judgment, 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.

EXAMINATION INFORMATION: The examination will consist of a Qualifications Assessment and is the sole component of the Research Scientist III (Various Specialties) examination. To obtain a position on the eligible list, a minimum score of 70% must be received. The Qualifications Assessment is designed to elicit specific information regarding each candidate's education, training, and experience relative to the testing classification. Responses to the questionnaire will be assessed based on pre-determined rating criteria. The Qualifications Assessment package will be emailed to the applicant in the form of a survey.

The Department of Public Health reserves the right to revise the examination plan to better meet the needs of the service if the circumstances under which this examination has changed. Such revision will be in accordance with civil service law and rules and all competitors will be notified.

SCOPE OF EXAMINATION:

Knowledge of:

1. Data management
2. Current scientific literature applicable to the research area
3. Preparation of scientific reports
4. Basic research methodologies
5. Study design
6. Laboratory sampling techniques
7. Population sampling techniques
8. Statistical software applications
9. Database design
10. Surveillance methods
11. Research proposal development and/or grant preparation
12. Operational definitions of scientific measures
13. Evaluation principles
14. Quality assurance and quality control methods and procedures
15. Scientific principles
16. Key concepts in philosophy of science
17. The fundamental information resources in one's specialty field

Skill to:

1. Write effectively for various purposes
2. Communicate orally to various audiences
3. Evaluate and apply estimation techniques and avoid bias in research results
4. Execute statistical analyses using software packages
5. Maintain professional and scientific integrity

Ability to:

1. Perform elementary statistical analysis
2. Perform literature review
3. Write scientific reports and manuscripts
4. Manage a database
5. Develop survey instruments to collect information
6. Perform quality assurance to maintain the integrity of the data
7. Interpret the validity of scientific information
8. Interpret the findings of an analysis
9. Communicate effectively both orally and in writing research findings for various audiences
10. Apply existing laboratory and/or modeling methods
11. Collaborate with others
12. Work independently
19. Empirically define and standardize scientific measures
20. Extract and analyze data for use in complex scientific studies
21. Listen well and be responsive to requests for assistance
22. Apply own specialized technical knowledge to others' projects as requested
23. Provide quality assurance/quality control of existing, new, and modified procedures, equipment, and data
24. Evaluate statistical software capabilities and limitations
25. Generate accurate and complete laboratory reports
26. Evaluate the adequacy of existing programs and feasibility of planned programs
27. Coordinate and fulfill ad hoc and ongoing data requests

13. Apply near real-time field analysis methods
14. Prepare tables and graphs
15. Critically evaluate and synthesize a body of scientific information
16. Develop innovative laboratory and/or modeling methods
17. Design a database
18. Identify equipment, supplies, and other resources needed to perform duties
28. Maintain accurate and complete records and logs
29. Develop appropriate recommendations/solutions based on an analysis of a problem
30. Prepare budget recommendations for equipment, supplies, and other resources needed to perform duties
31. Act as a project lead
32. Provide scientific guidance to colleagues
33. Contribute to a positive professional collaborative work environment.

NOTE: Please be aware that not all KSAs are required for each specialty.

ELIGIBLE LIST INFORMATION: Possession of the entrance requirements does not assure a place on the eligible list. In order to obtain a position on the eligible list, a minimum rating of 70% must be attained. Names of successful competitors are merged into the open list established for use by the Department of Public Health in order of final scores regardless of testing date. Eligibility expires **18** months after it is established unless the needs of the service and conditions of the list warrant a change in this period.

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, and 6) open. When there are two lists of the same kind, the older must be used first.

VETERANS' PREFERENCE: Will be awarded in 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; 3) Veterans' Preference is not granted once a person achieves permanent civil service status.

HOW TO APPLY FOR VETERANS' PREFERENCE: 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.

TDD is Telecommunications Device for the Deaf and is reachable only from phones equipped with a TDD device.
The California Relay (Telephone) Service for the deaf or hearing impaired:
MCI from TDD: 1-800-735-2929 MCI from voice telephone: 1-800-735-2922
Sprint from TDD: 1-888-877-5378 Sprint from voice telephone: 1-888-877-5379

CONDITIONS OF EMPLOYMENT (631)

Examination Title: Research Scientist III (Various Specialties) **FFD:** Continuous

Name: _____
(Print: first, middle initial, last)

If you are successful in your examination your name will be placed on the active employment list and certified to fill vacancies according to the conditions you specify on this form. If you are unwilling to accept work or do not reply promptly to communications your name will be placed on the inactive list.

Locations in which you are willing to work:

Please indicate your choices - you will not be offered a job in locations not checked.

Sacramento (3400) _____

Los Angeles County (1900) _____

Contra Costa (0700) _____

Alameda (0100) _____

San Francisco (3800) _____

San Diego (3700) _____

TYPE OF EMPLOYMENT DESIRED:

ON A PERMANENT BASIS, I AM WILLING TO WORK:

_____ Full Time _____ Part Time (regular hours less than 40) _____ Intermittent (on call)
_____ Limited Term

ON A TEMPORARY BASIS, I AM WILLING TO WORK:

_____ Full Time _____ Part Time (regular hours less than 40) _____ Intermittent (on call)
_____ Limited Term

It is your responsibility to notify the Department of Public Health, Selection and Certification Unit, of any changes in your address or availability for employment. All correspondence must include your examination title, identification number and Social Security number.

Signature: _____ Date: _____