

WATER MICROBIOLOGIST, 7857

Summary of Duties : Uses a variety of microbiological methods and techniques in performing special studies of microbiological activities which affect the City's water system; prepares reports and recommendations on the impact of such activity on water quality and/or public safety; researches and develops improvements in bacteriological methods of analysis; may direct technical employees engaged in routine laboratory bacteriological tests; and does related work.

Distinguishing Features : A Water Microbiologist uses a variety of microbiological methods and techniques to examine microorganisms and to report the significance of the results. An employee in this class usually works without technical supervision and is responsible for designing and conducting special studies of microbial activities within various water systems. This class is distinguished from the class of Water Biologist in that the former is responsible for developing special microbiological studies and using a variety of complex microbiological culturing and staining techniques.

Example of Duties : Determines the effect of microbiological processes on water quality and treatment, system operating facilities, materials and equipment; investigates and develops bacteriological testing methods and laboratory media for use in determining water quality; evaluates effectiveness of water treatment programs; performs microscopic studies to isolate and identify microorganisms using complex culturing and staining techniques; correlates and interprets results of investigations; develops and monitors a comprehensive quality assurance program to assure reliability of data generated; prepares reports, graphs, charts, statistical studies and recommendations relating to microbiological laboratory activities; reviews and analyzes literature relating to microbiology; confers with representatives of universities, research groups and microbiological research laboratories; recommends changes or improvements in laboratory techniques, laboratory procedures, quality control and treatment;

May assign and review the work of a group of technical personnel engaged in using a variety of standard and special laboratory techniques on water and other samples for such purposes as isolation, differentiation, enumeration and study of microorganisms; and may occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications : A good knowledge of the microbiological principals and techniques applicable to the separation, preservation and identification of microorganisms; a good knowledge of state-of-the-art methodologies and of the proper use and care of laboratory equipment; a good knowledge of safe working practices and procedures; a working

knowledge of laws and regulations related to equal employment opportunity and affirmative action; a general knowledge of the California Department of Health Services and the Environmental Protection Agency regulations for bacterial testing of public water supplies; a general knowledge of City personnel rules and policies; a general knowledge of memoranda of understanding as applied to subordinate employees; the ability to prepare a variety of culture media, dyes and reagents used in a water microbiology laboratory; the ability to prepare clear and concise reports and recommendations; and the ability to direct a small group of laboratory employees.

Graduation from a recognized four year college or university with specialization in microbiology or bacteriology.

License : A valid California driver's license may be required.

Physical Requirements : Strength to perform average lifting up to 5 pounds and occasionally over 15 pounds; good speaking and hearing ability; and good eyesight. Persons with handicaps may be capable of performing the duties of some of the positions in this class. Such determination must be made by the medical examiner on an individual basis.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what the duties and responsibilities of any position shall be.