

MAJOR FUNCTION

This is professional and supervisory work in overseeing various analytical sections of the Water Quality Laboratory. Work is performed in accordance with established policies and procedures under the general supervision of the Manager-Water Operations, or his/her designee; however, the employee is expected to exercise considerable independent judgment in the performance of duties and the daily operation of the laboratory. Work is reviewed through observation and analysis of performance, productivity and compliance.

ESSENTIAL AND OTHER IMPORTANT JOB DUTIES**Essential Duties**

Supervises and performs complex analyses on water, wastewater, groundwater, sediment, sludge and related environmental samples for the assigned laboratory sections. Duties include oversight, performance and training of the following: complex analysis of environmental samples for physical and chemical parameters such as nutrients, minerals, residue, trace materials and organic chemicals; wet chemistry, including reagent preparation and advanced instrumental analysis using auto-analyzer, atomic absorption and optical emission spectrometers; ultraviolet/visible spectrophotometer (UV/VIS); gas chromatograph/mass spectrometer (GC and GC/MS), and high performance liquid chromatography (HPLC); complex microbiological analysis and microscopic examinations of wastewater, drinking water, stormwater or other waters; identification of common algae and macro invertebrates; and analysis of environmental samples for biochemical oxygen demand (BOD), chemical oxygen demand (COD) and total organic carbon (TOC). Oversees and performs various tests in accordance with Standard Methods, state and local regulations. Directs supervision and training of technicians and analysts, as well as wastewater and water treatment plant operators in the area of sample collection and handling. Performs routine maintenance for electronic analytical equipment used for analyzing samples. Coordinates and schedules advanced maintenance, repair and/or replacement for laboratory equipment. Communicates laboratory equipment and supply needs and analytical problems and procedures to the responsible supervisor. Maintains quality assurance records, performs and reviews quality control tests and reports quality control results to the responsible supervisor. Researches and develops new or more expedient procedures of analyses. Macro programming in Microsoft Excel. Data entry and reporting in laboratory information management system (LIMS). Oversees and trains staff in the proper use of LIMS. Trains subordinates and evaluates performance. Attends meetings as required. Recommends hiring, transfer, promotion, grievance adjustment, discipline and discharge of subordinate personnel. Conducts performance evaluations and recommends the approval or denial of merit raises. Performs related work, as required.

Other Important Duties

Oversees organization of laboratory's stockroom, file storage rooms, equipment storage buildings and sample rooms. Performs related work as required.

DESIRABLE QUALIFICATIONS**Knowledge, Abilities and Skills**

Considerable knowledge of biological testing, inorganic, organic and analytical chemistry. Considerable knowledge of mathematics. Considerable knowledge of gas chromatography, capillary gas chromatography, gas chromatography/mass spectroscopy, liquid chromatography, HPLC, atomic absorption spectrophotometry, flow segmented auto analyzer, UV VIS spectrophotometer, and ion specific electrodes as they relate to the analyses of environmental samples. Knowledge of hazards and safety precautions required in using chemicals and reagents and performing laboratory tests. Knowledge of state and federal laws governing Safe Drinking Water Act and Priority Pollutants analyses. Knowledge of and ability to maintain and repair electrical and mechanical measuring and testing devices commonly used in an analytical laboratory. Ability to organize, train and supervise the

work of subordinates. Ability to make detailed oral and written reports, follow complex oral and written instructions, and communicate effectively, both orally and in writing. Ability to establish and maintain effective working relationships as necessitated by the work. Skilled in the use of microcomputers and the programs and applications necessary for successful job performance.

Minimum Training and Experience

Possession of a bachelor's degree in biology, chemistry, biochemistry, environmental science, or related field and four years of professional work experience in water and/or wastewater monitoring or environmental analysis using EPA protocol; or an equivalent combination of training and experience. A master's degree in one of the above areas may be substituted for one year of experience.

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