

## **BIO-CHEMIST**

**DISTINGUISHING FEATURES OF THE CLASS:** This is a high-level administrative and professional position involving responsibility for planning, coordinating and directing all water treatment and purification activities of the Upper Mohawk Valley Regional Water Board. The work is performed under general supervision, in accordance with established policies and procedures, and requires the exercise of independent judgement in coordinating a variety of technical, operational and maintenance activities. The work also requires the exercise of professional judgement in handling complex water analysis problems. Errors in judgement may result in danger to the health of the citizens of the community. Super-vision is exercised over the activities of technical, maintenance and other employees. Does related work as required.

**TYPICAL WORK ACTIVITIES:** (Illustrative Only)

Plans, coordinates and directs all water purification and treatment activities;  
Supervises, and participates in, the sanitary analysis of water including physical, chemical, bacteriological and microscopic examinations;  
Determines presence or absence of pathogenic bacteria;  
Interprets results of sanitary analyses, and determines type and amount of treatment and control necessary to ensure potable water;  
Supervises preparation of reagents, standard solutions and stains;  
Makes special studies relating to corrosion control and filter efficiency;  
Supervises the operation and maintenance of chlorine and ammonia plants, lime slaking and soda ash machines, water softeners, filters and related water treatment and purification facilities;  
Supervises, and participates in, the inspection of industrial plants to ensure cross-section control of potential hazardous or polluted water;  
Supervises the disinfecting of water mains, tanks and all new equipment before it is put into service to ensure sterilization;  
Supervises, and participates in, the maintenance of technical records and preparation of related activity reports;  
Confers with superiors on difficult or unusual problems;  
Analyzes and makes recommendations for improved water analysis treatment and purification procedures.

**FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:** Thorough knowledge of modern techniques, testing practices, equipment, safety precautions and terminology used in a water analysis laboratory; thorough knowledge of the principles of bacteriology, biology, chemistry and physics as they relate to water analysis; thorough knowledge of Federal, State and local laws, regulations and code requirements relating to water treatment and purification; thorough knowledge of the principles of the operation and maintenance of water treatment and purification systems; good knowledge of current developments in water analysis, treatment and purification; ability to interpret sanitary analyses of water, and determine proper type and amount of treatment and control; ability to plan, layout and supervise the work of others; ability to maintain technical records and prepare related activity reports; ability to analyze technical procedures and recommend improved methods relating to water treatment and purification; ability to secure the cooperation of others; initiative and resourcefulness; dependability; thoroughness; a high degree of accuracy; good professional judgement.

**MINIMUM QUALIFICATIONS:** Either:

- (A) Graduation from a regionally accredited or NYS registered college or university with a Master Degree in public health, sanitary, chemical, or in any other appropriate engineering curriculum, or in chemistry, **AND** two (2) years of supervisory water analysis and treatment experience; **OR**
- (B) Graduation from a regionally accredited or NYS registered college or university with a Bachelor Degree as listed in (A) above **AND** four (4) years of supervisory water analysis and treatment experience **OR** six (6) years of supervisory experience as a chemist, bacteriologist or related scientist; **OR**
- (C) An equivalent combination of training and experience, as defined by the limits of (A) and (B) above.