

## **WATER DEPARTMENT SCIENTIST**

### **DEFINITION**

Scientist specializing in vegetation, hydrology, or soils.

### **EXAMPLES OF DUTIES**

Direct research and monitoring activities related to scientific specialty; develop and lead interdisciplinary research projects to improve monitoring and management; coordinate with senior scientific and management staff to determine and implement Owens Valley management goals and strategies; collect and analyze field and laboratory data; prepare written and oral technical reports; supervise and train department field staff; prepare staffing and budgets for activities and studies related to scientific specialty; participate in department program development; obtain funding for projects; manage grants and contracts related to monitoring and research; assist in preparation and management of departmental budgets; and represent the department before the Board of Supervisors, the Water Commission, the Standing Committee, the Technical Group, other governmental governing bodies and organizations, private organizations and the public.

### **EMPLOYMENT STANDARDS**

#### **Qualifications:**

A Masters of Science or higher in botany, plant ecology, hydrology, soil science, or related environmental or earth science field. Three years experience in specialty field, or equivalent post-graduate study beyond masters level.

#### **Knowledge of:**

Water Department Scientist may specialize in vegetation, hydrology, or soil science:

*Vegetation.* Scientific research principles, methods, and procedures; concepts of botany, plant ecology, plant physiology, and related aspects of soils science and hydrology; revegetation; multivariate statistics; vegetation mapping and sampling techniques; state and federal protocols relating to rare and endangered plants and wetlands; management of invasive species; Owens Valley flora, vegetation, geography, ecology and water issues; current vegetation, ecology and related literature; computer literacy;

geographic information systems; principles and practices of supervision and project management..

*Hydrology.* Scientific research principles, methods and procedures; analytical and numerical methods for evaluating hydrologic flows; geochemical processes and water quality standards; principles of eco-hydrology and vegetation-groundwater interaction; local geology, hydrogeology and hydrology; California water laws and regulations and relevant ordinances and agreements; computer literacy; geographic information systems, groundwater modeling programs, data base software, computer programming languages, statistical analysis and graphical presentation of data; principles and practices of supervision and project management.

*Soil Science.* Scientific research principles, methods and procedures; principles of soil physics and chemistry; methods of soil water measurement; pedogenesis and soil taxonomy; soil/groundwater/vegetation water relations; computer literacy; geographic information systems, data base software; principles and practices of supervision and project management.

**Ability to:**

Develop, administer and lead research projects and monitoring programs; prepare research reports and proposals; communicate effectively both orally and in writing, statistically analyze data; use field and laboratory equipment; operate computer equipment and software for data management and word processing; coordinate activities with other department staff; work independently as well as with other people; work outdoors in extreme weather conditions; obtain and administer grants; develop and manage budgets, consultant contracts, and grant contracts.

**Special Requirements:**

Must possess or obtain by appointment date a valid California vehicle operator's license.