

WATER DEPARTMENT ASSOCIATE SCIENTIST

TITLE

Water Department Associate Scientist

DEFINITION

Associate Scientist specializing in vegetation, hydrology, soils, or analysis of spatial data.

EXAMPLES OF DUTIES

Conduct research and monitoring activities related to scientific specialty; assist in development of interdisciplinary research projects to improve monitoring and management; coordinate with senior scientific and management staff to implement Owens Valley management goals and strategies; collect and analyze field, laboratory, and data as appropriate to specialty discipline; 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 Bachelors of Science or higher in botany, plant ecology, hydrology, soil science, geography or related environmental or earth science field. Three years experience in specialty field, or equivalent post-graduate study beyond Bachelors level.

Knowledge of:

Water Department Scientist may specialize in vegetation, hydrology, soil science, or analysis and management of spatial data:

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.

Spatial data analysis. Scientific research principles, methods, and procedures; geographic information systems, remote sensing, and database software; analysis and management of spatial data sets using geographic information systems; analysis of satellite imagery, aerial photography, digital elevation models, hydrologic, vegetation, and other spatial data; acquisition and management of databases including those for geographic information systems; principles and practices of supervision and project management.

Ability to:

Develop research projects and/or monitoring programs with other Department staff; 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.