



**JULY 2012**  
**FLSA: EXEMPT**

## **SCIENTIST**

*This class specification indicates, in general terms, the type and level of work performed as well as the responsibilities of employees in this classification. The job functions described are not to be interpreted as being all-inclusive to any specific employee.*

### **DEFINITION**

Under general direction, serves as subject matter expert and demonstrates advanced-level technical expertise in several cross-functional areas; serves as a project or team leader; directs daily technical activities of lower-level staff; participates in developing and planning scientific research projects and special studies and ensures the quality and performance of those projects and studies; regularly communicates with senior management at the District and higher-level officials of regulatory and other outside agencies; recommends policy to management; and performs related work as required.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives general direction from assigned supervisory and/or management staff. Exercises no direct supervision of staff. May coach and/or mentor less experienced staff.

### **CLASS CHARACTERISTICS**

This is a highly skilled and specialized classification assigned to various different environmental sciences functions within the District and serves as the subject matter expert in the assigned function(s), often with cross-divisional responsibilities. Incumbents are expected to have the professional background, qualifications, and experience to master all processes, procedures, methods, analyses, instruments, equipment, projects, and programs in their area(s) of specialty. Responsibilities include developing scientific research projects and special studies, participating in optimizing the assigned functions'/divisions' methods, processes, and/or operating policies and procedures, serving as a lead in developing new methods of analyses and/or new processes of environmental compliance in response to new or changing regulations, and serving as project or team leader for other environmental sciences staff. Responsibilities may include guidance on programs and/or projects and leads by example. This class is distinguished from the Senior Scientist in that the latter has overall technical and management responsibility for the quality and performance of assigned programs, special projects, and research activities that do not only affect the District but have regional ramifications. The Scientist is further distinguished from the Regulatory Specialist class series in that the latter serves as District liaison to various regulatory bodies, Federal and State legislatures, and other sanitation districts in order to provide comment, analysis, and testimony to appropriate agencies, boards, and legislative bodies on proposed regulations, legislation, and other official actions in an effort to affect and/or change regulatory developments in the best interest of the District.

### **EXAMPLES OF ESSENTIAL JOB FUNCTIONS** (Illustrative Only)

*Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.*

- Participates in developing and planning assigned programs, special projects, and research studies; assists in developing appropriate study objectives, methodologies, budget, project timeline, and quality assurance/quality control plans; participates in field and office activities to ensure study objectives and compliance activities are met.
- Performs research in support of District analyses and monitoring efforts; conducts literature searches on project related topics; analyzes, evaluates, and interprets collected data such as: hydrologic and oceanographic evaluation and statistical analysis of stochastic and deterministic database; biological evaluation of the effects of the District's discharge on the diversity and abundance of marine species; chemical treatment process and optimization testing; air emissions, monitoring, or control effectiveness; and/or biosolids dewatering, transport, and disposal strategies.
- Conducts Strategic Process Studies (SPS); schedules required samplings for analyses; trains and certifies staff members for certain laboratory analyses.
- Oversees, schedules, and reviews the activities of staff and contractors hired to assist with research activities in performing various analyses; initiates improvements in the work; directs projects independently with regular review by management; assists in the preparation of performance reviews; coordinates project activities with other groups internal and external to the District in accomplishing project goals and objectives.
- Writes technical procedures and validates analytical procedures; prepares technical papers and reports; provides quality control review of applicable compliance reports; prepares and makes presentations to management, staff, the public, and professional groups.
- Interfaces with other Districts and regulatory agencies to provide, monitor, and gather information as part of policy making procedures; formulates and makes recommendations on policy decisions within relevant scientific area.
- Participates in the preparation and administration of operating and capital equipment budgets; monitors budget expenditures.
- As directed, participates in related working groups and committees within the District, with regulatory agencies, and with outside organizations; maintains current knowledge and understanding of scientific advances in assigned area.
- Performs the most highly complex and specialized studies, tests, analyses, and research activities within the assigned functional area(s); participates in optimizing the assigned functions'/divisions' methods, processes, and/or operating policies and procedures.
- Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of science in which specialized; researches emerging products and enhancements and their applicability to District needs.
- When assigned to programs and/or projects, provides leadership and guidance to others. As a program and/or project leader, may direct, assign, train, monitor and review the work activities of team members; determines work priorities; oversees quality and quantity of work performed and ensures adherence to established procedures by instructing employees accordingly; is a reference to employees by possessing specialized skills; develops and implements work improvements.
- Performs related duties as required.

## **QUALIFICATIONS**

### **Knowledge of:**

- Principles, practices, methods, and techniques of assigned area of expertise, such as environmental chemistry, wastewater chemistry, microbiology, organic and inorganic chemistry, marine and pollution ecology, chemical, biological, and physical oceanography, applied physics, and air quality.
- Ocean and atmospheric chemistry and biology, watershed systems, and zone coastal management.
- Principles and practices of program and project management.
- Principles and applications of critical thinking and analysis.
- Principles and practices of field sampling methods, data measuring and management techniques, statistical testing and analysis, and scientific writing.

- Principles and practices used in the deployment, operation, maintenance, calibration, and troubleshooting of monitoring equipment and related systems.
- Principles of quality assurance and quality control programs.
- Occupational hazards and standard safety precautions utilized in an environmental sciences laboratory including principles used in the safe handling of contaminants and hazardous wastes.
- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Principles and procedures of record-keeping and reporting.
- Modern office practices, methods, and computer equipment and applications related to the work, including word processing, database, laboratory information systems, and spreadsheet applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for effectively representing the District in contacts with governmental agencies, community groups, and various business, professional, educational, regulatory, and legislative organizations.
- Techniques for providing guidance and training to less experienced staff.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

**Ability to:**

- Perform chemical, biochemical, biological, bacteriological, and physical analysis.
- Analyze the results of such tests and make appropriate recommendations for District operations.
- Oversee the use and performance of calibration and minor maintenance and repair on a variety of laboratory equipment and instrumentation.
- Interpret, apply, explain, and ensure compliance with Federal, State, and local policies, procedures, laws, rules, and regulations.
- Make effective public presentations.
- Lead subordinate-level staff on programs and projects.
- Demonstrate safe work practices and procedures in the workplace.
- Train others on proper work procedures and lead by example.
- Resolve conflict through supervision in establishing workable solutions and alternative approaches.
- Apply critical thinking and analysis to a broad range of situations.
- Oversee and participate in laboratory operations and related projects and programs.
- Perform difficult mathematical and statistical calculations.
- Collect, chart, compile, and analyze data and participate in the preparation of clear and concise reports.
- Identify problems, research and analyze relevant information, develop and present recommendations and justification for solution.
- Use critical thinking techniques and methods in reaching independent decisions.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and legal guidelines.
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

**Employment Standards:**

Any combination of education and experience that provides the required knowledge, skills, and abilities may be qualifying as determined by OCSD.

1. Possession of a bachelor's degree from a college or university which is accredited by the US Department of Education, with major coursework in science, or a related field; AND,
2. Five (5) years of increasingly responsible experience in area of expertise.

**Licenses and Certifications:**

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

**Disaster Service Workers:**

All Orange County Sanitation District employees are designated Disaster Service Workers through state law (California Government Code Section 3100-3109). Employment with the Orange County Sanitation District requires the affirmation of a loyalty oath to this effect. Employees are required to complete all related training as assigned, and to return to work as ordered in the event of an emergency.

**PHYSICAL DEMANDS**

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification although standing in and walking between work areas may be required. Some positions may work in or around laboratories and/or may be required to perform some fieldwork and may traverse uneven surfaces, walk within the District's treatment plants, and participate in ocean sampling efforts. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment, as well as in some cases, laboratory or other scientific equipment and instrumentation. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds, in some cases up to 50 pounds, depending on assignment.

**ENVIRONMENTAL ELEMENTS**

Employees primarily work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Some positions may work in or around laboratories and/or may be required to perform some fieldwork and may be exposed to hot and cold temperatures, inclement weather conditions, loud noise levels, vibration, road hazards, boating hazards, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances, odors, and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.