



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

## **SENIOR 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, has senior-level technical and management responsibility for the quality and performance of assigned programs, special projects, and research activities that have regional impact and are recognized by peers within the industry and scientific discipline; assumes the role of subject matter expert and person-in-charge of large scientific projects and programs and sets goals, objectives, and direction through senior management approval; provides highly complex and specialized scientific expertise to senior management and serves as a mentor to less experienced scientific and other District staff; recommends policy to senior 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 exercise functional and technical leadership in assigned workgroups or teams and coach and/or mentor less experienced staff.

### **CLASS CHARACTERISTICS**

This class is the highest level in either the laboratory or environmental sciences functional areas. Incumbents lead and manage scientific projects, programs, and studies that do not only affect the District but have regional ramifications. This class level requires incumbents to be regionally and/or nationally renowned and recognized by their peers, within the same and other scientific disciplines, as an industry expert and resource within the field of science in which the incumbent specialized. This class is distinguished from supervisory and management classifications in that, while considered a technical expert, manages large efforts, may be in charge for project/program budgets, and, through management approval, sets project/program goals, objectives, and policy, it does not supervise or manage staff. The Senior Scientist is the highest-level professional/technically specialized classification that can be attained without the responsibility of managing other staff. Responsibilities may include the oversight of programs and/or projects and leads by example. The Senior 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.*

- Develops and manages assigned District-wide and regional programs, special projects, contracts, and research projects; performs and provides oversight to specialized research and compliance activities

and projects; ensures that all District policies and procedures are followed and necessary approvals are attained before project commencement; ensures that the District meets program compliance requirements while receiving value, accuracy, and completeness of required programs; ensures that systems (such as contracts, training, program documentation, and modes of communication) are in place to collect and deliver samples.

- Prepares program/project budgets and establishes monitoring and reporting procedures for assigned projects; monitors, evaluates, and ensures completion of tasks as defined by project schedule.
- Directs, monitors, and reviews the activities of other staff and contractors hired to assist with research activities in performing various analyses and/or fieldwork and sample collection; initiates improvements in the work; directs projects and/or programs independently with review by management; provides guidance, support, and direction to staff; 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; ensures that results are communicated appropriately; prepares and makes presentations to management, staff, the Board of Directors, regulators, and other public agencies, the public, and professional groups.
- Assists management in developing ongoing strategies for monitoring and research in the District.
- Formulates and makes recommendations on policy decisions within relevant technical area.
- Interfaces with Federal, State, and local governmental agencies to provide and gather information; serves as an industry and District advocate; participates in regulatory meetings and conferences.
- As directed, participates in related working groups and committees involved in the development of monitoring and research standards, guidelines, and regulations.
- Participates in the preparation and administration of operating and capital equipment budgets; monitors budget expenditures.
- 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:**

- Advanced 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 regional program and project management.
- Advanced principles and applications of critical thinking and analysis.
- Advanced 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.
- Basic principles and practices of employee supervision.
- 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 a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

**Ability to:**

- Plan, schedule, assign, and oversee activities of efficient laboratory operations or regulatory compliance programs and projects; demonstrate strong leadership and project management skills.
- Plan, schedule, assign, and oversee activities of assigned workgroups or teams.
- Oversee programs and/or projects and by example promote the individual professional growth and development of less experienced staff.
- Resolve conflict through workable solutions and alternative approaches.
- Inspect the work of others and maintain established quality control standards.
- Demonstrate safe work practices and procedures in the workplace.
- Train others on proper work procedures and lead by example.
- Apply critical thinking and analysis to a broad range of situations.
- Identify and implement effective course of action to complete assigned work.
- Design research and monitoring projects and independently perform chemical, biochemical, biological, bacteriological, and physical analysis in appropriate area.
- Analyze the results of such tests and make appropriate recommendations for District operations.
- Interpret, apply, explain, and ensure compliance with Federal, State, and local policies, procedures, laws, rules, and regulations.
- Identify problems, research and analyze relevant information, develop and present recommendations and justification for solution.
- Use critical thinking techniques and advanced methods in reaching independent decisions.
- Maintain confidentiality and be discreet in handling and processing confidential information and data.
- Make effective public presentations.
- Perform difficult mathematical and statistical calculations.
- Collect, chart, compile, and analyze data and participate in the preparation of clear and concise reports.
- 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. Seven (7) 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.