

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

WATER RESOURCES ENGINEER

Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the job.

DEFINITION

To perform professional engineering duties involving comprehensive watershed management, water supply projects, and hydrologic analysis; to implement major engineering and environmental management programs to restore and enhance Carmel River streamside resources; and to perform a variety of technical tasks relative to assigned area of responsibility.

DISTINGUISHING CHARACTERISTICS

This is the journey level of professional engineering job classes. Positions at this level are characterized by the performance of technically-advanced, professional-level research studies, and/or management of some complex District projects. Employees perform responsible types of duties assigned to classes within this series and function with minimal supervision and guidance. Employees at this level are required to be fully trained in all procedures related to assigned area of responsibility. This position is distinguished from the Senior Water Resources Engineer by the latter position's management responsibility for program development, management of more complex projects involving multiple agencies and parties, and representation of District interests in official proceedings (such as before the SWRCB, Superior Court, or CPUC).

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from the Planning and Engineering Manager/District Engineer; coordinates activities of other District staff, consultants, and contract employees on special projects.

ESSENTIAL AND MARGINAL FUNCTION STATEMENTS

The following duties are typical for positions in this classification. Any single position may not perform all of these duties and/or may perform similar related duties not listed here:

Essential Functions:

1. Conduct field and office engineering studies related to the planning, design, and construction of civil engineering projects and confer with other District staff and consultants to coordinate projects and activities. Such projects include, but are not limited to well construction, water pipeline construction, water quality testing, use of recycled water, use of recirculating aquaculture systems, construction of fish passage facilities, reservoir maintenance, modification of stream bank stabilization and repair, or riparian sediment management.
2. Manage, oversee and participate in engineering projects identified in paragraph 1, including the preparation of plans, specifications, cost and quantity estimates; secure appropriate permits; maintain accurate records, and prepare periodic and special reports; negotiate terms and fees; approve contractor and consultant pay requests.
3. Plan, prioritize, assign, supervise and review the work of consultants responsible for projects identified in paragraph 1 above.
4. Participate in construction field activities including mark and layout field work locations; interpret plans and resolve problems during construction; enforce permit conditions; prepare and review as-built plans to ensure compliance with original plans and specifications; perform long-term monitoring including photo documentation, surveys, and prepare periodic reports.
5. Provide technical assistance to private property owners regarding stream bank stabilization and repair; coordinate authorizations and permits from Federal, State, and local regulatory agencies for new stream restoration projects.

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6. Review applications for river work permits and make recommendations to the Planning & Engineering Manager regarding conformance to District standards; inspect authorized work; make recommendations to permittee and/or the Planning and Engineering Manager regarding conformance with river work permits.
7. Gather and interpret hydrologic data including photos, cross-sections, profiles and sediment transport.
8. Inspect the Carmel River to identify and document erosion hazards, riparian ordinance violations, and opportunities for enhancement; make recommendations to the Planning and Engineering Manager regarding appropriate corrective projects and actions.
9. Make presentations to public agencies and private groups concerning projects.
10. Prepare drafts of the following documents: requests for proposals and calls for bids; contract plans and specifications; review contract bids and proposals; participate in the review of contractor work activities.
11. Maintain constant awareness of progress on assigned projects to ensure compliance with designated time and cost schedules for project completion.
12. Inspect construction projects and perform a full range of construction contract administration duties; document onsite conditions; represent the District on site; provide reports and recommendations to senior staff as required to complete project construction.
13. Participate in budget preparation; prepare cost estimates for project budget recommendations; monitor and control expenditures on assigned projects.
14. Establish schedules and methods for providing assigned services; identify resource needs; review needs with appropriate management staff; allocate resources accordingly.
15. Coordinate and manage the District's Water Distribution System Permit program.
16. Represent the District to other governmental and regulatory agencies, professional and community groups and others; answer questions and provide information to the public; investigate complaints and recommend corrective actions as necessary to resolve complaints.
17. Perform related duties and responsibilities as required.

QUALIFICATIONS

Knowledge of:

Civil engineering principles and practices related to one or more of the following activities: planning, design, construction, and construction management skills relevant and applicable to well construction, water pipeline construction, water quality testing, use of recycled water, use of recirculating aquaculture systems, construction of fish passage facilities, reservoir maintenance projects, stream bank stabilization, repair, and other streamside corridor enhancement projects, river mechanics, or fluvial geomorphology.

Principles and practices of project and construction management.

Principles and practices of engineering design.

Principles and practices of engineering surveying.

Terminology, methods, practices, and techniques used in technical civil engineering report preparation.

Principles and practices of budget preparation and control.

Principles of mathematics as applied to engineering work.

Recent developments, current literature, and sources of information regarding civil engineering of stream and river restoration projects, construction of new and recycled water supply projects, and projects to enhance anadromous fisheries.

Modern office procedures, methods, and computer software and hardware as related to the solution of

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engineering problems.

Pertinent federal, state, and local laws, codes, and regulations governing civil engineering, construction, and water quality including Section 401 and 404 of the federal Clean Water Act, the federal and state Endangered Species Acts, the California Environmental Quality Act, the California Department of Fish and Wildlife Code, and Monterey County Ordinances.

Ability to:

Plan, organize, and supervise the work of technical staff and consultants.

Manage complex engineering projects.

Administer and coordinate various projects and activities simultaneously.

Ensure project compliance with appropriate federal, state, and local rules, laws, and regulations.

Coordinate phases of construction projects and prepare progress reports.

Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.

Conduct comprehensive engineering studies and develop appropriate recommendations.

Perform technical research and solve difficult engineering problems.

Prepare and maintain technical civil engineering records and prepare comprehensive reports.

Compile rough technical data and prepare statistical and narrative reports from field studies.

Develop, review and modify civil engineering plans, designs, and specifications.

Exercise professional engineering judgment to achieve results consistent with objectives.

Identify threatened and endangered species in the field.

Understand pertinent sections of the federal and state Endangered Species Acts.

Incorporate measures to protect threatened species into project designs and project maintenance.

Use sophisticated word processing, spreadsheet, modeling, and graphical design programs.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

Maintain physical condition appropriate to the performance of assigned duties and responsibilities.

Experience and Training Guidelines — *Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

Experience

Four years of increasingly responsible professional civil engineering experience and one year of project management responsibility.

Training

Equivalent to a Bachelor's degree from an accredited college or university with major course work in civil engineering or closely related field.

License or Certificate:

Possession of or ability to obtain a valid certificate of registration as a Professional Civil Engineer in the State of California within 18 months of hire, or possession of a certificate of registration by any state or Board for Professional Engineers.

Possession of, or the ability to obtain, an appropriate, valid driver's license.

WORKING CONDITIONS

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

Environmental Conditions:

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Office and field environment; travel from site to site; exposure to atmospheric conditions; work around moving water; work with computers.

Physical Conditions:

Essential functions may require maintaining physical condition necessary for sitting, standing and walking for prolonged periods of time in and around river beds; operating motorized vehicles.

Vision:

See in the normal visual range with or without correction; vision sufficient to read small print, computer screens and other printed documents.

Hearing:

Hear in the normal audio range with or without correction.