



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

WATER RESOURCE MANAGEMENT SENIOR ENGINEER

Group-Section: Water Resource Management Group - Resource Implementation Section	FLSA Status: Exempt Bargaining Unit: MAPA	Salary Grade: 060 Job #: 114
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JOB SUMMARY

Responsible for providing technical advice and analysis in the areas of resource planning; developing and implementing resource projects and programs; management of water resource project planning, design, and construction; and using analytical tools. Areas of responsibility include identification, development, management, and protection of water transfer, exchange, storage, conservation, water recycling, groundwater recovery, seawater desalination, energy supply, and quality through implementation of complex computer modeling; identifying issues or factors and analyzing impacts; developing and analyzing policy; and negotiating agreements, resolving issues, providing technical engineering support, and leading project teams to achieve efficiency and productivity.

A project is an endeavor that has a fixed start and end date although the length is typically several years. A project may have a specific project budget or financial scope and impact, milestones to track status and completion, and there are multiple steps required for completion. Some projects, such as operation of the State Water Project are continuous. A project normally involves an internal team from multiple disciplines and external parties and involves negotiation and consensus building as part of the planning and development process.

OVERSIGHT

Supervision Received: Receives direction from the Team, Unit, Section, or Group Manager.

Supervision Given: May exercise technical and/or functional direction over assigned staff.

JOB DUTIES

1. Evaluates assigned water transfer, exchange, storage, conservation, contaminant control, and development projects; and review plans for civil engineering projects to accomplish project goals.
2. Performs project management and project control including project work plan, progress, cost forecasting, variances, change management, scheduling, close-out procedures, and project summary reports; maintains schedules and informs management of potential scheduling conflicts; secures permits and regulatory approvals; and prepares and reviews scope, task, schedules, budgets, and resources.
3. Negotiates agreements for water transfer, exchange, storage, and conservation projects; performs technical analysis, feasibility studies, and economic analysis to determine relative value of projects, document water conservation savings, impact on water quality, and other factors affecting feasibility and value of projects.

4. Represents Metropolitan in negotiations, hearings, committees, meetings, and other proceedings.
5. Administers contracts and agreements; recommends implementation of or exercise of options to increase raw water delivery or improve water quality; assumes administrative responsibility for water quality projects; recommends and administers policies and procedures; and develops and recommends goals, objectives, policies, procedures, and quality assurance standards for the projects.
6. Evaluates short and long-term modeling requirements; and develops complex computer models to simulate a complex water.
7. Prepares technical reports and recommends solutions.
8. Utilizes established models to analyze proposed projects, exchanges, transfers, land use issues, fishery, draws, and storage; and determines impact to salinity, contamination, other water quality issues, environmental issues, water distribution, and quantity issues.
9. Conducts research related to the projects to determine impact of decisions; prepares findings and develops recommendations in support of goals and objectives; monitors and evaluates the efficiency and effectiveness of project administration, service delivery methods, and procedures; and allocates resources accordingly.
10. Participates, meets, and provides technical assistance to negotiation teams; conducts studies and research to obtain information to analyze proposals, factors, and options; develops assumptions and scenarios for analytical purposes; conducts cost benefit analysis; and prepares summaries of findings, reports, and recommendations.
11. Manages internal and interagency technical project teams; assists in identifying the necessary staff and resources to accomplish the intended outcome of a project; organizes the work assignments; assigns activities; reviews and provides input on the standards of performance; and performs professional project management work as a member of a project team.
12. Performs and oversees project management and project control including project work plan, progress, cost forecasting, variances, change management, scheduling, close-out procedures, and project summary reports; and prepares and reviews scope, task, schedules, budgets, and resources.
13. Prepares, reviews, and controls project schedules, activities, and operations; prepares and distributes correspondence as related to project operations; leads and participates in project team assignments; and ensures accuracy and efficiency of work performed.
14. Initiates specified correspondence and signs delegated correspondence; and prepares and presents project status reports to key reviewers, decision makers, and the public.
15. Performs other related duties as required.

EMPLOYMENT STANDARDS

MINIMUM QUALIFICATIONS

Education and Experience: Bachelor's degree from an accredited college or university, majoring in engineering or related field and eight years of related progressively responsible engineering experience in managing large moderately complex engineering and construction projects, in which two years must have been at the Engineer level; or a master's degree from an accredited college or university majoring in engineering or related field and six years of related progressively responsible engineering experience in managing large moderately complex engineering and construction projects, of which two years must have been at the Engineer level.

Required Knowledge of: Civil engineering; environmental planning, documentation, and mitigation; water system operations; water resource engineering, hydrogeology, and hydraulics; cost and benefit analysis; statistical analysis; risk management; basic management and supervisory concepts and techniques; budgetary concepts and procedures; relevant federal, state, and local laws; basic principles of project management; and contract administration.

Required Skills and Abilities to: Plan, organize, and review the work of team members; review work products for quality and adherence to guidelines; encourage and facilitate cooperation; exercise judgment and discretion; interpret and analyze results; communicate orally and in writing on administrative and technical topics; represent Metropolitan to public agencies, regulatory bodies, special interest groups, and members of the public; represent Metropolitan in negotiations or development of joint projects with external organizations; establish and maintain collaborative working relationships with all levels within the organization, other agencies, regulatory agencies, special interest groups, and the public; use business, engineering, and scientific applications; and prepare and present project status for executive management, Board of Directors, member agencies, regulatory agencies, and funding sources.

CERTIFICATES, LICENSES, AND REGISTRATIONS REQUIREMENTS

Certificates

- None

Licenses

- Valid California Class C Driver License
- License in good standing as a California Professional Engineer

Registrations

- None

DESIRABLE QUALIFICATIONS

May require knowledge, skill, or ability in: planning, design, and construction management; principles and practices in water supply; advanced computer modeling; demand forecasting, analysis, and submittal of water order requests; water rights protection and issue resolution; runoff and supply forecasting; treatment and distribution engineering; waste discharge and drinking water quality permitting; electrical energy procurement, administration, and licensing; aqueduct equipment maintenance and rehabilitation; manage water resource and exchange projects; team building; budgetary concepts and procedures; relevant federal, state, and local laws; trends and emerging technologies in water resource; public speaking; hydraulics; surface and groundwater hydrology; diplomacy; project management concepts and techniques; water quality impacts and solutions, environmental issues, and project mitigation; water rights; water law; and principles of drinking water treatment.

PHYSICAL DEMANDS/WORK ENVIRONMENT

The physical demands and work environment characteristics described here are representative of those that must be met or may be encountered 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 functions.

Physical Demands: The work is sedentary. Typically, the employee may sit comfortably to do the work. However, there may be some walking; standing; bending; carrying of light items such as paper, books, or small parts; driving an automobile, etc. No special physical demands are required to perform the work.

Work Environment: The work environment involves everyday risks or discomforts that require normal safety precautions typical of such places as offices, meeting and training rooms, libraries, and residences or commercial vehicles, e.g., use of safe work practices with office equipment, avoidance of trips and falls, observance of fire regulations and traffic signals, etc. The work area is adequately lighted, heated, and ventilated. May travel to various sites requiring overnight stay.

Vision Requirements: No special vision requirements