



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

HYDRAULICS & SYSTEM MODELING TEAM MANAGER

Group-Section: Engineering Services Group – Engineering Planning Section	FLSA Status: Exempt Bargaining Unit: MAPA	Salary Grade: 066 Job #: TM025
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JOB SUMMARY

The Hydraulics & System Modeling Team Manager is responsible for managing the preparation of hydraulic analyses and development of computer models to perform capacity analysis of water distribution facilities; evaluate the performance of water treatment plant processes; evaluate the flooding risk associated with hypothetical dam failures; and manage the preparation of hydraulic plan and profile and facility dewatering profile drawings, reports, technical memorandums and presentations in support of capital investment plan and operations and maintenance projects.

OVERSIGHT

Oversight Received: Receives direction from the Unit Manager, Section Manager, Assistant Group Manager or Group Manager.

Oversight Given: Manages and supervises a staff of professionals, technicians, paraprofessionals, and administrative support.

JOB DUTIES

1. Supervises staff including selection, assignment, and monitoring of work, coaching, mentoring, counseling, and performance assessment; determines priorities and aligns work load; reviews work for thoroughness, adherence to applicable standards, constructability, and accuracy; assesses employees' competencies and develops training plans; trains subordinates in applicable techniques and methodologies; and ensures staff compliance with applicable health and safety standards and requirements.
2. Provides general administration of the organization including establishing and tracking organizational goals and objectives; analyzes organizational activities and prepares reports; develops and monitors the budget; evaluates resource needs and prepares staffing and consulting requests; provides input re: policy and procedures; and reviews and approves time, reimbursement requests, and purchases.
3. Leads staff in development of organizational vision, strategies, goals, and objectives for customer support and service; plans, develops, and approves schedules, priorities, and standards for achieving organizational goals; and reviews and reports on status of all organizational activities.
4. Meets with key customers to work on projects and initiatives and supports applicable customer satisfaction feedback mechanisms.

5. Plans and manages the preparation of computer modeling simulations of complex water distribution and treatment facilities, including: modeling scenarios related to the design and troubleshooting of water treatment plant unit processes, modeling scenarios to evaluate the impact of water distribution system modifications to develop solutions to mitigate losses to system capacity, modeling scenarios to troubleshoot system performance, modeling scenarios to evaluate the impacts of operations on water quality, modeling scenarios to evaluate the hypothetical failure of dams to evaluate downstream flooding extents for the preparation of dam-break inundation maps, modeling scenarios related to hydrology and sediment transport analysis, and modeling scenarios related to hydraulic transients and surge analysis.
6. Plans and manages the preparation of hydraulic plan and profile drawings and pipeline and reservoir dewatering profiles; plans and manages the hydraulic design of CIP projects including the preparation of preliminary and final design reports; reviews new service connection designs to evaluate hydraulic impacts; responds to inquiries regarding system pressures and flow rates; coordinates field tests and site investigations; reviews consultant submittals; oversees responses to operational problems and technical issues; and maintains Metropolitan's hydraulic design standards.
7. Plans and manages professional services contract agreements; prepares scope of work in requests for proposals; evaluates and selects consultants for professional services; prepares and negotiates agreements with consultants; administers and tracks consultant performance; and audits work for compliance and approves contracted work.
8. Writes technical memorandums and preliminary design reports to support complex facility modeling studies and analysis.
9. Oversees the technical work of the team.
10. Performs other related duties as required.

EMPLOYMENT STANDARDS

MINIMUM QUALIFICATIONS

Education and Experience: Bachelor's degree from an accredited college or university with a major in engineering or related field and ten years of increasingly responsible relevant experience, of which two years must have been in a project management, supervisory, or lead capacity; or a master's degree from an accredited college or university with a major in engineering or related field and eight years of increasingly responsible relevant experience, of which two years must have been in a project management, supervisory, or lead capacity.

Required Knowledge of: Hydraulic engineering principles and practices; design and analysis of water distribution and treatment facilities; and value engineering. Application and use of state-of-the-art 1-D and 2-D hydraulic modeling software (i.e., Mike Urban/Mouse, Flow 2-D); Hydraulic modeling concepts and techniques; and Hydraulic model development principles and

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Revised: 07/31/20

Supersedes: 04/01/12

practices. Management and supervisory methods and techniques; principles of organizational and strategic planning; team building; personnel and general disciplinary policies and practices; relevant federal, state, and local laws; principles of budgeting, cost monitoring, and accounting; project management including planning, scheduling, and costing; report writing; performance measurement tools and metrics; policies and procedures related to procurement, contract administration, and other business activities; Metropolitan organizations; and Metropolitan facilities and operations.

Required Skills and Abilities to: Resolve complex hydraulic engineering problems; write preliminary design reports to support complex hydraulic studies and analysis; and use hydraulic, business, and project management applications. Develop 1-D water distribution system hydraulic models; develop modeling scenarios to evaluate the impacts of system modifications on system capacity; and develop solutions to regain lost system capacity. Lead a diverse work force; resolve organizational and resource problems; perform financial analysis; plan, organize, and evaluate the work of subordinates and/or project team members; mentor, develop, and motivate staff; determine training needs of staff; review work products for detail and adherence to guidelines; encourage and facilitate cooperation; establish and maintain collaborative working relationships with all levels within the organization, other agencies, regulatory agencies, special interest groups, and the public; use business and project management applications and methodologies; communicate orally and in writing on administrative and technical topics; negotiate and build consensus; exercise judgment and discretion; devise long term planning strategies; prepare reports and presentations for all levels of management; interpret and analyze results; interpret policies, rules, and regulations relative to the section and group; and represent Metropolitan on various business transactions as needed.

CERTIFICATIONS, LICENSES, AND REGISTRATION REQUIREMENTS

Certificates

None

Licenses

- License in good standing as a California Professional Engineer
- Valid California Class C Driver License that allows you to drive in the course of your employment

Registrations

None

PHYSICAL DEMANDS, WORK ENVIRONMENT, AND VISION REQUIREMENTS

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

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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.