



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

OPERATIONS & MAINTENANCE PLANNING SENIOR ENGINEER

Group-Section: Integrated Operations, Planning & Support Services

FLSA Status: Exempt

Bargaining Unit: MAPA

Salary Grade: 060

Job #: 114

JOB SUMMARY

Responsible for managing and executing projects or programs to improve the overall effectiveness and efficiency of maintenance practices. This position also represents Water System Operations interests during capital project design to ensure that water system operations policies, standards, and requirements are being met. This position may lead investigations and analysis of complex technical, maintenance, and operational issues and situations. The Senior Engineer provides technical and project management expertise to address day-to-day problems of the maintenance organization; including developing and implementing solutions that employ engineering principles and methods to ensure system reliability as well as effective and efficient maintenance practices. Areas of responsibility include: development and refinement of the preventive and predictive maintenance program in a systematic and professional manner; development of engineering solutions to repetitive equipment failures and other maintenance problems; and analyzing and implementing ways of reducing or modifying the need for maintenance and ultimately eliminating the occurrence of avoidable failures. Other areas include: the review of predictive maintenance and other inspections; analysis of equipment histories, maintenance costs, and equipment failure reports; and review of service and inspection records and analysis of work order data. Responsibilities also include the preparation of technical reports and operating plans, preparation, and presentation of information and recommended courses of action on maintenance issues to internal and external audiences. May lead and work on projects, programs, and studies related to maintenance with other agencies, government agencies, consultants, including negotiations and contract development.

OVERSIGHT

Supervision Received: Receives general direction from a Team Manager or above.

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

JOB DUTIES

1. Takes the lead in providing specialized expertise in the areas of maintenance and maintenance management.
2. Takes the lead in ensuring reliability and maintainability of equipment, processes, facilities, and other operational systems.
3. Takes the lead in providing value analysis to make maintenance decisions by repair, replace, redesign, or run to failure.

4. Compares maintenance frequencies to downtime and equipment histories to identify where frequencies require adjustment (up or down). Adjusts these frequencies on an "economic" basis to avoid "over maintenance."
5. Takes the lead in developing an overall preventive and predictive maintenance program and updates existing programs.
6. Specifies repair techniques for major repetitive tasks such as component replacements and develops standards specifying the end product and the resources needed for these tasks.
7. Takes the lead in reviewing all equipment failures in order to determine what preventative actions might have been taken to prevent failure and to protect against reoccurrence.
8. Reviews downtime reports and equipment histories to identify recurring maintenance problems requiring engineering attention and engineers' solutions to identified situations.
9. Takes the lead in analyzing, reducing, and improving maintenance work wherever feasible; and assures efficient and productive operations of facilities, process, and equipment while protecting and prolonging the economic life of operational assets including at least costs.
10. Routinely contributes to the planning of realistic operational capacity based on analysis of preventative maintenance time needs, repair histories, inspections reports, etc.
11. Analyzes and monitors latest developments in maintenance engineering, planning, methods, and maintenance management.
12. Manages projects or programs related to system maintenance and maintenance planning or maintenance management related projects.
13. Takes the lead in representing Water System Operations on capital projects working with affected Water System Operations sections, units, or teams and ensures Water System Operations requirements are being met.
14. Works with Water System Operations and Engineering Services technical resources in analyzing and developing solutions to equipment, processes, or system problems, and/or failures.
15. Reviews equipment failures in order to determine what preventive actions might have been taken to prevent failure and to protect against reoccurrence.
16. Performs other related duties as required.

EMPLOYMENT STANDARDS

MINIMUM QUALIFICATIONS

Education and Experience: Bachelor's degree from an accredited college or university in engineering or a related field and eight years of increasingly responsible experience, of which two years must have been at the Engineer level; or an Advanced degree from an accredited college or

Job Title: Operations & Maintenance Planning Senior Engineer

Job Code: 114

Adopted: 05/10/06

Effective: 03/17/25

Revised: 03/17/25

Supersedes: 06/19/16

Page: 2

university in engineering or a related field and six years of increasingly responsible experience, of which two years must have been at the Engineer level.

Required Knowledge of: Water distribution systems; basic water system objectives; principles of mechanical engineering or principles of maintenance management; budgetary concepts and procedures; relevant federal, state, and local laws; negotiation techniques; project management; and contract administration.

Required Skills and Abilities to: Lead a diverse work force; plan, organize, and review the work of peers and subordinates; review work products for detail and adherence to guidelines; encourage and facilitate cooperation; mentor, develop, and motivate staff; determine training needs of staff; 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; and use business applications such as word processing and spreadsheets.

CERTIFICATES, LICENSES, AND REGISTRATIONS REQUIREMENTS

Certificates

- None

Licenses

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

Registrations

- None

DESIRABLE QUALIFICATIONS

- Experience in successfully delivering projects, communicating effectively, and being proactive in dealing with issues that would impede the progress of project's assigned.
- Principles of mechanical engineering, engineering solutions to repetitive equipment failures, and other maintenance problems or principles of maintenance management.
- Knowledge of current trends and emerging technologies in the area of maintenance management.
- Expertise and experience in evaluating and analyzing equipment, equipment preventive maintenance cycles, analyzing equipment problems or failures, total life cycle cost analysis, and making cost effective and practical recommendations.
- Expertise and experience with reliability centered maintenance, root-cause-analysis techniques, and other analytical methods used to determine and optimize the reliability of equipment, systems, or processes.
- Experience in applying vibration, infrared, and other predictive maintenance techniques.

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

Job Title: Operations & Maintenance Planning Senior Engineer

Job Code: 114

Adopted: 05/10/06

Effective: 03/17/25

Revised: 03/17/25

Supersedes: 06/19/16

Page: 3

MWD

Metropolitan Water District of Southern California

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.

Job Title: Operations & Maintenance Planning Senior Engineer

Job Code: 114

Adopted: 05/10/06

Effective: 03/17/25

Revised: 03/17/25

Supersedes: 06/19/16

Page: 4