

**MERCED IRRIGATION DISTRICT
ASSOCIATE ENGINEER (WATER RESOURCES)**

FLSA Status – Non Exempt

DEFINITION:

Under the general direction, manage individual projects, assessment districts, tasks and/or assignments including subordinate staff, preparation and monitoring of project budgets, encroachment of rights-of-way and other related engineering tasks. Shall also assist the Senior Engineer with the ongoing management of MID water quality programs, comprehensive hydrography functions and data management systems. Shall also support non-engineering MID departments including operations, maintenance and the parks department as necessary.

ESSENTIAL FUNCTIONS OF THE POSITION:

- Review land development construction drawings and plats to generate technical comments regarding adherence to appropriate construction standards and good engineering practice as established by MID and local impacted regulatory agencies.
- Review, comment and prepare miscellaneous legal documents involved with easements, rights-of-way and property grants associated with any encroachment on existing MID facilities or associated with the construction of new MID facilities.
- Provide technical support and direction to MID engineering staff and other departments' staff on an as needed basis or as directed by MID management.
- Supervise subordinate technical staff as assigned by the Senior Engineer or as needed on a project, or task by task basis.
- Provide documentation during all project construction activities, interpret construction drawings and specifications in the field and effectively provide clarification of technical construction issues to MID staff and contractor representatives.
- Review and understand complex groundwater reports or studies involved with both the extraction and recharge of groundwater resources throughout the extended MID service area and region.
- Utilize AutoCAD to prepare complex construction drawings associated with the design of major irrigation distribution system facilities and existing system layouts.
- Prepare design documents for a variety of water delivery system structures and support facilities. Projects may be constructed by contract, by in-house forces, or a combination of both.
- Review plans submitted by private engineers for conformance with District standards and requirements.
- Generate comments which are coordinated with other District personnel to modify designs as required to comply with District requirements.
- Perform research into District rights-of-way, easements, deeds, etc. related to operation of District facilities.
- Perform complex field survey work as needed to support District construction projects, evaluations of legal land boundaries, or special study project (i.e.: groundwater studies, special excavations and mining's, etc.).
- Create design packages for construction of water control structures including engineering calculations required for adequate flow capacity and structural strength.
- Inspect concrete pipelines, open canals, and roadwork to insure correct layout, slope, material usage, strength, compaction, etc. Keeps written record of findings.
- Review design packages from developers and generates verbal and written comments for incorporation into design to insure compliance with District requirements.
- Conduct site visits as required.

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- Understand electronic total station in conjunction with data collector to perform topographic and canal surveys for complex construction projects requiring in-depth knowledge of trigonometry and surveying.
- Perform compass rule or least squares error adjustment of data.
- Perform other duties as requested, directed or assigned.

QUALIFICATIONS:

Any combination of experience and education that would prepare the candidate for the duties and responsibilities of the position is acceptable.

Education:

- Bachelor of Science Degree in Civil or Agricultural Engineering from an accredited college or university.

Experience:

- California registration as an Engineer in Training (EIT), or the ability to acquire within one year of employment.
- Two (2) years of experience as a professional engineer with background in the hydraulic design of both open channel and closed conduit water conveyance systems, and the preparation of technical reports and studies associated with the feasibility and master planning of large water resources and distribution related projects or facilities.
- Significant working knowledge of engineering production and design software including MS Word, Excel, Project and access in addition to AutoCAD and GIS latest used versions.

Ability to:

- Work closely with all MID Engineering Department staff and management, constituents, consultants, contractors, other governmental agency representatives and the general public.
- Exercise leadership, authority and management tactfully and effectively.
- Assist with the negotiations of agreements with various entities.
- Interact effectively with City and County governments serving MID's best interests.
- Independently solve problems and make recommendations to the Senior Engineer regarding the incorporation of standards, procedures, and policies to best serve District constituents.
- Work independently.
- Provide prompt and proper response to public concerns and complaints.
- Communicate effectively both orally and in writing. Work cooperatively with staff, employees and employee organizations.
- Handle confidential information appropriately and professionally.
- Effectively utilize various engineering software associated with spreadsheets, word processing and other typical office software programs.
- Build consensus with the public, be it on a cooperative project or District standard enforcement.
- Appreciate and be sensitive to the political reality in a small public agency.
- Apply common sense based on best engineering practices in resolving nonstandard situations, and field adjustments.
- Attend District directed course work related to daily activities.
- Learn new computer engineering software when the need arises.

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Knowledge of:

- Civil Engineering practices related to water conveyance infrastructure to water conveyance design and hydraulics;
- Hydraulic calculations to determine the capacities of open and closed irrigation distribution systems;
- Above average knowledge of GIS and AutoCAD, knowledge of Civil 3D is a plus;HEC-RAS modeling software is a plus
- Project initiation, CEQA requirements, design and construction;
- Familiarity with Subdivision Map Act, the use of GPS survey equipment and GIS software is a plus;
- Have a thorough understanding of basic PC computer systems and MS software including, but not limited to, Word, Excel, Project, Power Point, and Access;
- Significant understanding of hydrography and SCADA functions of the Engineering Department including stream flow measurements, grower delivery flow rates verification and associated data management and analysis;
- Bid specifications principals, bid and contracting processes and applicable laws.
- Research and analysis methodologies;
- Technical Report Preparation;
- Supervisory skills to effectively lead and direct subordinate engineering staff.

Necessary Special Requirements:

- A valid California Class C Driver License and the ability to maintain insurability under the District's vehicle insurance program.
- Abide by all District policies, guidelines and rules.

ENVIRONMENTAL FACTORS:

- Exposure to the sun: 10% or less work time spent outside a building and exposed to the sun.
- Irregular or extended work hours: Occasionally required to change working hours or work overtime.
- Work performed in an office environment

The mental and physical demands described here 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 functions:

ESSENTIAL MENTAL ABILITIES:

- Exercise independent judgment.
- Self directing and organized.
- Reason objectively.
- Assess, project and plan work activities on a daily and weekly basis.
- Interpret state/ federal/agency regulations.
- Document concisely, accurately and timely.
- Handle a variety of duties which may be interrupted or changed by immediate circumstances.

TYPICAL PHYSICAL DEMANDS:

- Communicate orally and in writing with District management, co-workers, outside auditors, customers, and the public in face-to-face and one-on-one settings.
- Transport, set-up and removal of promotional equipment and materials at various public functions.
- Use of office equipment such as computer, copiers, scanners, and fax machines.

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- Capable of negotiating stairways and uneven ground from time to time.

Sitting: Remains in a seated position for up to eight (8) hours per day
Hands/Arms: Operates computer for up to eight (8) hours per day
Lifting: Raises and lowers boxes and supplies up to twenty-five (25) pounds.
Stooping: Bends body downward and forward by bending at the knees or waist
Talking: Expresses ideas and shares information by means of spoken work in person and by telephone.
Hearing: Hears well enough to receive communications in person and by telephone.
Vision: Reads written and video messages for up to eight (8) hours per day. Operate vehicles and office equipment.

SUPERVISION:

The position receives general supervision from the Manager of Engineering, Water Resources.

I have reviewed this Job Description with my Supervisor and agree with its contents.

Employee Signature/Date

Supervisor Signature/Date

The specific statements shown in each section of this job description are not intended to be all-inclusive. They represent typical elements and criteria necessary to successfully perform the job.