



## JOB DESCRIPTION

### Electrical Technician

**Date Prepared:** August 2014

**SUMMARY:** Under general supervision, maintains, diagnoses, and repairs electrical, instrumentation, and automation equipment used by the City Water District's Supervisory Control and Data Acquisition (SCADA) system, industrial motor controls, pump drives, and chemical feed systems.

**ESSENTIAL FUNCTIONS:** -- *Essential functions, as defined under the Americans with Disabilities Act, may include any of the following representative duties, knowledge, and skills. This is not a comprehensive listing of all functions and duties performed by incumbents of this class; employees may be assigned duties which are not listed below; reasonable accommodations will be made as required. The job description does not constitute an employment agreement and is subject to change at any time by the employer. Essential duties and responsibilities may include, but are not limited to the following:*

- Maintain, repair, and upgrade the electrical distribution infrastructure for the Water Supply Division; perform thermography of motor control and electrical distribution panels; collect and analyze power quality data to troubleshoot problems.
- Perform comprehensive troubleshooting down to component levels to extend the life of obsolete equipment and conserve funds.
- Install, maintain, troubleshoot, and repair 480 volt motors, control centers, and de-energized higher voltage equipment.
- Maintain and repair engine generators; perform work on associated control circuit equipment.
- Install, maintain, and repair building circuits and related equipment.
- Maintain electrical pneumatic and electronic controls, alarm and SCADA systems, programmable controls, and related equipment.
- Perform related welding, carpentry, pipe fitting, valve repair, and cement work.
- Requisition parts and supplies; maintain records and prepare reports.
- Oversee and inspect work performed by outside vendors.
- May participate in emergency on-call duty on a rotational basis.
- May cross-train with other City division staff.

#### MINIMUM QUALIFICATIONS:

##### Education, Training and Experience Guidelines:

High school diploma OR GED equivalent; AND two years journey-level industrial electrical installation, maintenance, and repair experience.

**Knowledge of:**

- City policies and procedures.
- Electrical theory and practices.
- Networking and microwave data.
- RTU/PLC programming methods and software.
- Computer hardware maintenance methods and techniques.
- NEC standards and state codes.
- NFPA Arc-Flash safety regulations.
- Programmable logic controllers and ladder logic.
- Schematics and ladder logic diagrams; calibration methods and standards.
- Principles and practices of system troubleshooting.
- SCADA software and hardware systems.

**Skill in:**

- Using initiative, discretion, and judgment within established procedures guidelines and rules.
- Defining problems, establishing facts, and drawing valid conclusions.
- Managing situations requiring diplomacy, fairness, firmness, and sound judgment.
- Using power and hand tools.
- Reading and interpreting blueprints and schematics.
- Providing efficient customer service.
- Communicating effectively, both verbally and in writing.
- Operating a personal computer and various software applications.
- Establishing and maintaining cooperative working relationships with supervisors, employees, vendors, suppliers, contractors, external public agencies, community groups and the general public; and applying safe work practices.

**LICENSE AND CERTIFICATION REQUIREMENTS:**

- Must possess a valid California class "C" driver's license upon hire and maintain throughout the length of employment with the City of Victorville.
- California Water Treatment Operator Grade I Certification within two years of hire.
- California Water Distribution Operator Grade I Certification within one year of hire.

A Journeyman Electrician's Certificate, State of California Electrical Contractor's License (C10, Electrical Contractor), or documentation verifying completion of a recognized electrician apprenticeship/certification program is desirable.

**PHYSICAL DEMANDS AND WORKING ENVIRONMENT:**

Work is performed in a variety of environmental conditions, both indoors and outdoors, with exposure to wide temperature variations, noise, vibrations, fumes, odors, dust, machinery and its moving parts; occasional exposure to hazardous conditions and harsh chemicals. Incumbent must be physically able to perform strenuous work on a regular basis. Physical demands are light to moderate, consisting of sitting, using hands and fingers to handle or feel objects, tools, or controls; reaching, standing, walking, stooping, kneeling, crouching, and crawling; occasional heavy lifting up to 75 pounds, climbing ladders and entering confined spaces; occasionally exposed to electric hazards. Incumbent wears Personal Protective Equipment (PPE) as required in the NFPA70E Standard for Electrical Safety in the Workplace; specific vision capacity includes: close, distance, peripheral, depth perception, color differentiation, and the ability to adjust focus. Incumbent must be able to hear in the normal range, with or without correction; must have the stamina to work long hours and overtime, if assigned; must be willing to work an irregular schedule, which may include weekends, holidays, nights or varying shifts. Incumbent will be required to participate with the standby/non-duty-hour emergency response rotation, as assigned; will be required to respond to callouts and emergencies during non-duty hours, on weeknights, weekends, and holidays.

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Department Head

\_\_\_\_\_  
Date

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Personnel Officer

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Date