

# CITY OF SANTA CRUZ WASTEWATER FACILTIES ELECTRICAL TECHNICIAN I/II

**Reports to** Wastewater Facilities Electrical/Instrumentation Supervisor

**Supervises** Non-supervisory

**Bargaining unit** Service

# **BASIC FUNCTION**

Under general supervision, the <u>Wastewater Facilities Electrical Technician I/II</u> performs a variety of electrical maintenance work in either the Public Works Wastewater Systems division on the City's wastewater treatment plant, wastewater collections system, and remote facilities.

# **DISTINGUISHING CHARACTERISTICS**

The Wastewater Facilities Electrical Technician I is the entry and training level classification of the Electrical Technician series in which incumbents are expected to perform routine preventative and minor repair to electrical systems and support instrumentation maintenance. Incumbents assist journey-level electrical and/or instrumentation technicians or other personnel in a variety of more complex work under direct supervision. This classification is distinguished from the next higher classification of Wastewater Facilities Electrical Technician II in that the latter is the journey level classification in the series and is expected to independently perform the full scope of assigned duties under general direction.

The Wastewater Facilities Electrical Technician II is distinguished from the next higher classification of Wastewater Facilities Electrical/Instrumentation Supervisor in that the latter is the supervisory, advanced journey-level classification responsible for the supervision of staff and full range of instrumentation and electrical projects as well as the performance of the most complex duties assigned to the Electrical Technician series.

The Wastewater Facilities Electrical Technician I/II is alternately staffed. The Wastewater Facilities Electrical Technician I is required to obtain a California Water Environment Association (CWEA) Plant Maintenance (PM) Technologist Grade 1 certification within 18 months of date of hire. Upon obtaining this certification and meeting the minimum experience requirements, an incumbent will be promoted to the II classification. The Wastewater Facilities Electrical Technician II is required to obtain the CWEA PM Electrical/Instrumentation Technologist Grade 2 certification within 12 months of date of appointment.

#### **TYPICAL DUTIES** (May include, but are not limited to, those duties listed below.)

 Installs, tests, calibrates and maintains all electrical systems and equipment including but not limited to any of the following: electrical motors; high, medium, and low voltage manual and automatic motor control centers; panel boards and switch gears; automatic safety controls; pneumatic-electric controls for valve operations; recorders and alarms; transmission lines, rectifiers, receivers, indicators, and recorders for pump control. City of Santa Cruz Wastewater Facilities Electrical Technician I/II

- Troubleshoots, maintains, and repairs high, medium, and low voltage electrical equipment and systems, co-generation systems, solar and emergency power systems.
- Performs emergency repairs to a variety of equipment as necessary.
- Prepares reports and maintains records, such as preventive maintenance tests and repairs.
- Operates a variety of test equipment and use small hand tools in the maintenance and repair of electrical equipment and systems.
- Uses a computerized maintenance management system (CMMS) or other computerized monitoring and operating systems.
- Troubleshoots, repairs, and maintains co-generation electrical systems.
- Review work orders and inspect locations where work is to be performed, noting special equipment needs and difficulties which may be encountered; performs inspections and confirmations on various electrical system repairs and installations; orders necessary equipment and materials; requisitions materials, supplies, and equipment for electrical maintenance.
- Uses portable computers to troubleshoot and repair electrical equipment.
- Occasionally leads a small crew of workers in the work assignments
- May wire or re-wire new or existing facilities, structures, or equipment for service as required.
- May design electrical system components.
- May order and maintain inventory control of parts and materials.
- May train new personnel as required.
- May assist instrumentation technicians in trouble-shooting, repairs, and maintenance.
- Performs other related duties as assigned.

# **WORKING CONDITIONS**

Position requires prolonged sitting, standing, walking on level and slippery surfaces, reaching, twisting, turning, kneeling, bending, stooping, squatting, crouching, grasping and making repetitive hand movement in the performance of daily duties. The position also requires both near and far vision when inspecting work and operating assigned equipment. The need to lift, carry and push tools, equipment and supplies weighing up to 100 pounds while wearing respiratory protection equipment is also required. Additionally, the incumbent in this outdoor position works in all weather conditions, including wet, heat and cold. May use chemicals and cleaning products which may expose the employee to fumes, dust and air contaminants. The nature of the work may also require the incumbent to climb ladders, use power tools and noise producing tools and equipment, drive motorized vehicles and heavy equipment, work in heavy vehicle traffic conditions and enter confined spaces. Some positions require the incumbent to work both in and around oceanic surf to perform assigned duties. Depending on assignment, the incumbent may be required to respond to after hours emergency call outs and to wear a uniform. An incumbent may perform assigned duties while wearing respiratory protection equipment and/or Arc Flash safety equipment. Some of these requirements may be accommodated for otherwise

qualified individuals requiring and requesting such accommodations.

# **MINIMUM QUALIFICATIONS**

### **Knowledge:**

- Theory and practice of electrical design, installation, repair, overhaul, maintenance, testing
  and troubleshooting of high, medium, and low voltage systems and equipment and electrical
  motors.
- Theory and practice of troubleshooting and repairing electrical systems for co-generation and emergency generator systems.
- Pneumatic, hydraulic, electronic, and electro-mechanical systems.
- Basic Microsoft Office computer applications.

#### **Abilities:**

- Use software applications related to electrical schematics.
- Recognize unusual or dangerous operating conditions and make sound judgments within established guidelines.
- Read schematics, blueprints, drawings, and construction diagrams.
- Perform mathematical calculations.
- Follow oral and written instructions.
- Communicate effectively orally and in writing.
- Complete and maintain accurate records.
- Establish and maintain effective working relationships with others.
- Work effectively as a member of a crew.
- Lead a small crew of employees.
- Act in a courteous and tactful manner with members of the public.
- Observe safety principles and work in a safe manner.
- Safely handle hazardous materials
- Perform assigned duties while wearing respiratory protection or ArcFlash safety equipment.

# **OTHER REQUIREMENTS**

- Must successfully complete the city's respirator fit testing protocols; may be required to be clean shaven.
- Willingness to work flexible hours, including holidays, evenings, weekends, split shifts, and overtime as assigned.
- Willingness to perform call back work and standby duty as required; must remain available to be contacted by phone or pager and be able to report to work within a forty-five minute period when standing duty.
- Willingness to wear a uniform.
- Successful completion of training as a forklift operator within one year of appointment.

### **EDUCATION AND EXPERIENCE**

Any combination of education and experience that provides the knowledge, skills, and abilities shown above is qualifying. A typical way to obtain the required qualifications is to possess the equivalent of the following:

# Wastewater Facilities Electrical Technician I

- High school diploma or G.E.D., and
- 1 year of electrical experience that includes the routine maintenance of standard drive or manufacturing equipment such as motors and pumps.

#### Wastewater Facilities Electrical Technician II

- High school degree or G.E.D. equivalent, and either
- 4 years of experience in electrical installation and repair work which included the maintenance and repair of industrial machinery and equipment, or
- 2 years of related experience **as defined above**, with 1 of those years at the training level with a CWEA Grade 1 certification.

Additional higher level education, such as completion of an electrical apprenticeship program, an A.A. degree in electrical technology or engineering technology, may be substituted for experience for applicants that do not have any CWEA certification.

### LICENSES/CERTIFICATES

- Possession at time of hire and continued maintenance of a California Class C driver's license and a good driving record.
- Possession and continued maintenance of First Aid and CPR certification within one year.

# Wastewater Facilities Electrical Technician I

• Must obtain and maintain within 18 months of date of appointment a CWEA Plant Maintenance Technologist Grade 1 certification.

# Wastewater Facilities Electrical Technician II

• Must obtain and maintain within 12 months of date of appointment a CWEA PM Electrical/Instrumentation Technologist Grade 2 certification.

Classification No.: 269/270
Date of Issue: 11/10
Supersedes: NEW

City of Santa Cruz Wastewater Facilities Electrical Technician I/II

# **Career Path**

- Wastewater\_Facilities Electrical/Instrumentation Supervisor
- Wastewater Facilities Electrical Technician II or Wastewater Facilities Instrumentation Technician II
- Wastewater Facilities Electrical Technician I, Wastewater Facilities Instrumentation Technician I, or Utility Maintenance Technician