

Humboldt Bay Municipal Water District

WATER OPERATIONS SPECIALIST – OM1

GENERAL PURPOSE

This position is somewhat unique in that it contains an element of another District position (the Operations and Maintenance Technician), but it also performs and is responsible for a variety of highly technical and specialized work related to the District's network and computer systems, including the District's Supervisory Control and Data Acquisition System (SCADA).

Under general supervision, programs, organizes, administers, and maintains automated process control, data acquisition and software systems, microcomputer networks and related peripheral equipment. Acts as technical resource to other staff on use of automated equipment and software. Performs full range of Operations and Maintenance Technician duties, and other related work as required.

ESSENTIAL FUNCTIONS AND DUTIES

1. Performs water system operations duties and responsibilities of the Operations and Maintenance Technician position. Operational duties include:
 - Monitoring and controlling the operation of water pumping, treatment and distribution facilities to achieve proper processing and distribution of water within mandated operating requirements;
 - Starting and controlling plant processes and chemical systems to treat water in accordance with DHS' Permit and other operating requirements;
 - Assisting in handling and storage of water treatment chemicals;
 - Performing water sample collection and various laboratory testing and analytical procedures;
 - Responding to alarms, identifying operating problems, and initiating or implementing appropriate response and corrective actions.
2. Monitors, starts and controls power generation equipment in a safe manner.
3. Uses process control, data acquisition, and special application software to meet District operational needs.
4. Responsible for networked systems which includes over 40 computers and multiple peripheral devices. Responsible for the District's Supervisory Control and Data Acquisition System (SCADA). The control system is a local area network of approximately 20 programmable logic controllers (PLCs) linked through ethernet, fiber-optic, wireless radio communications and modems. The administrative system is a network of PC computers linked to each other through an ethernet LAN, and also linked to the control system. Acts as network supervisor for plant operations, and assists electricians with physical maintenance of the control network.
5. Installs and activates sensors and other instrumentation. Assists in the setup and configuration of automated equipment, computers and related peripherals. Adds ladder logic and HMI programming to display and data log these sensors and related SCADA inputs. Performs software upgrades to the PLC and HMI, including sensor calibrations and range programming.
6. Performs daily checks and analyses to maintain complete functionality of computer systems. Performs routine cleaning of computers and printer equipment. Interacts as requested with computer

consultants to identify and resolve computer/network problems. In the event of system or network failure, expedites professional trouble-shooting procedures to return the system to full capability.

7. Performs Database Administrator functions. Diagnoses and responds to varying symptoms evidenced in the data that could result in production, water quality and/or environmental concerns. Performs PC archiving and backup duties. Provides data acquisition services and produces special reports and graphs.
8. Utilizes the VBA programming language to improve software and user interfaces. Innovates to introduce new systems and/or processes to improve capability or efficiency of operations.
9. Acts as resource for the entire organization on operation of computers and peripheral equipment. Provides technical assistance and training for personnel in the use of computers, HMI and related hardware and software. Sets up procedures for a variety of office support, record keeping, disc handling and system library tasks.
10. May periodically fill-in and act as Assistant Water Operations Supervisor
11. Responsible for both administrative and control system backups. Review and update backup policies and procedures to make sure the district is protected from new and emerging threats.

REQUIRED KNOWLEDGE, SKILLS, and ABILITIES

- Principles and practices of programming
- Standard desktop operating system and Microsoft Office applications (spreadsheet and database).
- Specialized program applications, including Allan Bradley Ladder Logic and HMI languages, SCADA, VB, VBA
- Mathematical and analytical skills necessary for a Network Administrator. Ability to maintain and troubleshoot , fiber-optic, wireless communications and ethernet/CAT5 LAN systems
- Design and implementation of new systems or procedures for process control automation
- Operation of water pumping, treatment and distribution facilities. Principles and practices of water quality and water treatment.
- Interpreting gauges, recording devices, and other monitoring equipment for plant operations.
- Basic water sample collection and laboratory testing procedures.
- Repair and maintenance of water pumping, treatment and distribution equipment.
- Interpreting repair manuals, schematic diagrams, blueprints, and preventative maintenance programs.
- Safety program and safe work practices
- Cooperative working relationships. Teamwork to solve practical problems and coordinate work among a small, close-knit workforce

TRAINING AND EXPERIENCE:

Any combination of training and experience that provides the required knowledge and abilities is qualifying. A typical way to obtain the requisite knowledge and abilities would be:

- High school diploma or GED

- Community College, technical or other course work relevant for this position highly desirable. A Bachelors Degree, or equivalent professional-level coursework, in data processing, computer systems analysis, symbolic programming, is beneficial and desirable.
- Five-to-seven years of increasingly responsible experience in the operation of water distribution, treatment, and pumping facilities, with particular experience in process control and data acquisition systems, and related network and computer application software.
- Grade IV Treatment and/or Distribution certificates

SPECIAL REQUIREMENTS

1. Must possess the category of California Driver's license required by the State Department of Motor Vehicles to perform the essential duties of the position. Job incumbents must maintain a driving record acceptable to the District and its insurance carrier. Compliance with these requirements and established District vehicle operation standards are a condition of continuing employment.
2. May work odd shifts, weekends, or holidays and perform standby duties as assigned. Must be available to respond to emergencies which affect the District such as earthquakes, power outages, pipeline breaks, high water events, and chlorine leaks.
3. In order to wear respiratory protection or other safety equipment, facial hair must be maintained as to keep hair growth out from between the skin and the facepiece sealing surface (such as stubble beard growth, beard, mustache or sideburns). Must be able to participate in confined space operations.
4. Must possess and maintain a Grade IV Water Treatment Operator's Certificate and a Grade IV Water Distribution Certificate pursuant to State drinking water regulations. If an incumbent does not initially possess this level of certification, the District will allow a period of time for the incumbent to obtain the required certifications. Job incumbents must also meet the State's continuing education requirements to maintain certifications. Compliance with the State certification requirements is a condition of continuing employment.
5. Must acquire basic American Red Cross First Aid/CPR certificates during the initial year of employment.

ESSENTIAL PHYSICAL ABILITIES

Persons selected for appointment to this position must pass a pre-employment medical examination which the District pays for. Because this position **is** considered "safety sensitive" in nature, the person selected for appointment to this position must pass a pre-employment drug screening which the District also pays for. The medical examination and drug screening is intended to evaluate the applicant's ability to meet the physical and health requirements for this classification.

A person employed in this position must be able to:

- a) sit for extended periods of time;
- b) operate a variety of office equipment (computer, copy machine, fax, etc.);
- c) operate motor vehicles and other equipment;
- d) operate a variety of hand and electric tools;
- e) perform a variety of physical activities which may involve reaching, bending, squatting, kneeling, crouching, crawling, and climbing, and also manual dexterity;

- f) perform additional physical activities to position or move tools, equipment, and supplies which may involve lifting, and pushing or pulling motions;
- g) wear a respirator and other personal protective equipment;
- h) understand and carry out oral and written directions;
- i) communicate well with others, verbally and in writing;
- j) work cooperatively and get along well with other people;
- k) investigate and solve complex problems which involves ability to perform visual inspections, ability to hear normal versus abnormal noises, ability to view and respond to operational control screens including alarms, and ability to think critically.