Operational & Information Technology Manager

DEFINITION:

Under general direction, plans, organizes, manages, maintains, and supports all aspects of the District's Operational and Information Technology systems which include but are not limited to: Supervisory Control and Data Acquisition (SCADA), Geographic Information Systems (GIS), and agency-wide and contractor provided Information Technology; coordinates, supports, and utilizes Computerized Maintenance Management System (CMMS); participates in the planning, design, procurement, installation, operation, maintenance, repair, integration, training, and modification of assigned systems; manages the effective use of assigned resources to improve organizational productivity and customer service.

SUPERVISION RECEIVED AND EXERCISED:

Receives general direction from the Engineering & Operations Manager. Exercises independent and direct supervision to contractors, consultants, and assigned staff. Exercises technical and functional direction and provides training, as necessary, to District staff.

CLASS CHARACTERISTICS:

This is a management classification responsible for the planning, organizing, and oversight of agency-wide and contractor provided Information Technology (IT) services. Incumbents are responsible for performing diverse, specialized and complex work involving significant accountability and decision-making responsibilities which include budget administration, program evaluation, and recommendation and implementation of policies, procedures, goals, objectives, priorities, and standards for the District's Operational and Information Technology systems. Incumbents serve as a professional-level resource for organizational, managerial, and operational analyses and studies. Performance of the work requires the use of considerable independence, initiative, and discretion within broad guidelines.

Strong communication and writing skills are essential. The incumbent must have strong interpersonal skills and be able to build consensus in District-wide concerns and interests. Incumbents work independently, seeking assistance only as new or unusual situations arise. The Operational & Information Technology Manager receives direction from the Engineering and Operations Manager.

EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative Only):

Reasonable accommodations may be made, on a case-by-case basis, to enable individuals with disabilities to perform the essential functions of the job.

➢ Plans, manages, and oversees the daily function of the District's Information Technology Division including all assigned systems, contractors, and/or staff; responsible for development of division budget and infrastructure replacement schedule.

➢ Plans, manages, coordinates, maintains, and utilizes all aspects of the District's specialized Operational Technology (OT) systems which include but are not limited to SCADA and GIS.

- Plans, manages, and oversees District cybersecurity and network technology to ensure secure and stable IT and OT systems; develops, updates, implements, tests, and manages a comprehensive IT and OT disaster recovery plan and secure backup systems; procures and manages supporting contractors, consultants, and vendors.

- Provides support for, coordination with, and utilizes CMMS systems.

- Performs ongoing system support and maintenance; troubleshoots, repairs, programs, configures, and tests systems to ensure optimal operations.

- Oversees third-party systems, licenses, vendor sales, and supports the installation and configuration of professional IT and OT consulting/development projects and complex changes in the implementation of emerging technology.

- Leads and manages short and long-term planning associated with assigned systems and the Capital Improvement Program (CIP) or other programs which require specialized technology; collaborates with District staff and consultants to evaluate the future needs for hardware, software and instrumentation and to develop technology master plans; prepares preliminary cost estimates for improvements and comprehensive budget documents.

- Manages the District's technology infrastructure including the identification of hardware, software and instrumentation best suited to meet the needs of the District for all IT and OT systems; coordinates the acquisition and implementation and installation of systems; software and hardware components including subsequent upgrades.

- Prepares project specifications and related contract documents for Requests for Proposals; evaluates and participates in the selection of consultants and contractors; undertakes project management tasks including developing budgets and schedules; ensuring consultant or contractor compliance with project specifications and quality expectations; monitors budgets and schedules to make certain these are complied with; closes out projects.

- Performs database development, administration and management tasks; maintains databases on a continuous basis; programs and generates system reports.

- Performs and/or oversees programming changes to system software; develops and maintains software and control system logic.

- Performs and coordinates training and or training events for all levels of system users.

- Works closely with other District personnel as applicable on matters involving District IT and OT systems.

- Maintains and updates District utility mapping and map filing systems; oversees mapping projects and approves work of contracted resources.

- Updates existing maps with as-built information; coordinates with various operating groups in the District to gain necessary information to update maps and records; prepares charts, graphs, layouts, maps and visual aids.

- Develops required inventory for replacement parts and consumables for assigned systems.

- Organizes and maintains assigned systems technical documentation; updates as necessary.

- Researches and evaluates new developments in the IT and OT fields.

- Performs other related duties as assigned.

MINIMUM QUALIFICATIONS:

Any Combination of education and/or experience that provides the required knowledge, skills, and abilities to perform the essential functions of the position. A typical combination includes:

EDUCATION AND EXPERIENCE:

Equivalent to a bachelor's degree from an accredited four-year college or university with a major in engineering, computer science, or information systems and five (5) years of professional experience in the administration or management of IT and OT systems with at least three (3) years experience working with SCADA systems.

KNOWLEDGE OF:

➢ Administrative principles and practices, including goal setting, program development, implementation, and evaluation. Principles and practices of budget development and administration.

➢ Principles and practices of employee and contractor supervision, including work planning, assignment, review and evaluation, and training in work procedures.

➢ Principles and practices of leadership.

➢ Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.

➢ Principles and practices of information systems and technology including advanced knowledge of computer systems administration, network infrastructure, and enterprise software administration.

➢ Operations and services of a comprehensive water and wastewater operation as it relates to specialized technology needs.

➢ A diverse range of programming languages.

➢ Principles and practices of database management and administration.

➢ Project management principles and practices, including planning, budgeting, scheduling, control, and contract management.

➢ Industry standard communication protocols for SCADA, including telemetry and networking.

➢ The methods, materials, and techniques commonly used electrical and instrumentation maintenance and repair.

➢ Operational characteristics of programmable logic controllers (PLC) and Human Machine Interface (HMI) as they relate to SCADA system design and implementation.

➢ Network system and affiliated components security measures.

➢ Operational characteristics of GIS system hardware and software.

➢ Methods and techniques of managing data within GIS programs.

➢ Methods and techniques of designing maps and charts using technology programs.

➢ Methods and techniques of evaluating hardware and software effectiveness in meeting District needs.

➢ District and mandated safety rules, regulations, and protocols.

➢ The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.

➢ Modern equipment and communication tools used for business functions as well as program, project, and task coordination, including computers and software programs relevant to work performed.

➢ Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

ABILITY TO:

- Provide professional support to the District's specialized operational hardware and software in IT and OT systems including, but not limited to, SCADA and GIS systems.

- Conduct systems analysis and evaluation and make recommendations for technology improvements to meet changing business needs.

- Provide Engineering support for troubleshooting water and wastewater control systems, equipment and instrumentation.

- Perform project management duties.

- Manage and administer databases.

- Read, interpret, plan and lay out projects from blueprints, electrical diagrams, schematics, manufacturer instructions, directions and verbal instruction.

- Maintain records in the form of manuals, ladder logic, blueprints, plans and specifications for industrial electrical and instrumentation, equipment and devices.

- Perform technical research and make detailed analyses relative to the development and maintenance of assigned District systems.

- Monitor and maintain project and departmental budgets.

- Independently organize work, set priorities, meet critical deadlines, and follow up on assignments.

- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.

- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.

- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.

- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

LICENSES AND CERTIFICATIONS:

- Valid Class C California or Nevada Driver's License; acceptable driving record at the time of appointment and throughout employment.

TOOLS AND EQUIPMENT USED:

Voltmeters, multimeters, logic analyzers, amp meters, infrared pyrometers, digital analyzers, frequency generators, oscilloscopes and other specialized test equipment along with electrical hand tools. Personal computer, and Microsoft Windows based software, Microsoft Project, ArcGIS, CMMS, and various enterprise software programs: fax, copy machine, calculator; motor vehicle; phone; cell phone; mobile radio.

PHYSICAL DEMANDS:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job in compliance with the Americans with Disabilities Act (ADA) requirements. Reasonable accommodations may be made, on a case-by-case basis, to enable individuals with disabilities to perform the essential functions.

Work is performed mostly in office setting. Some outdoor work is required for onsite troubleshooting at District facilities; must be physically able to enter vaults and pump stations, climb ladders, and work over, under, and around equipment in adverse field conditions. Must possess mobility to work in a standard office setting and use standard office equipment, including a computer and to operate a motor vehicle to visit various District and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. The employee must possess the ability required to sit; climb or balance; stoop, bend, kneel, crouch, or crawl; talk or hear; and smell. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. The employee will occasionally be required to lift, carry, push, and pull materials and objects weighing up to 50 pounds.

ENVIRONMENTAL CONDITIONS:

Employees work mainly in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may interact with upset staff and/or public and private representatives over the course of performing the work.

While performing the duties of this job, employees occasionally works in outside weather conditions exposed to hot, cold, wet and/or humid conditions and can be exposed to dust, pollens, and fumes. Employees occasionally work around moving mechanical parts and in high, precarious places and are occasionally exposed to fumes or airborne particles, toxic, or caustic chemicals, risk of electrical shock, and vibration.