
GIS SPECIALIST

DEFINITION

Under general supervision, builds, maintains, and manages the Authority's geographic information system (GIS) databases; performs research and analyses, spatial modeling, cartography, remote sensing, and field surveys in support of open space planning, land acquisition, and land management programs and projects; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from the Planning Manager. Exercises no direct supervision over staff. May provide technical and functional training and direction to assigned staff or interns. May supervise and administer contacts with consultants.

CLASS CHARACTERISTICS

This is a journey-level classification responsible for overseeing and administering the Authority's GIS Program, including development and maintenance of comprehensive databases. Successful performance of the work includes the use of initiative, resourcefulness, and independent judgment. This also requires skill in defining procedures and proactively evaluating the GIS Program based needs of the agency to meet program and project goals and objectives. Positions work independently, exercise judgment and initiative, receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the department.

EXAMPLES OF TYPICAL JOB FUNCTIONS *(Illustrative Only)*

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the typical job functions.

- Oversees the maintenance and management of the Authority's GIS databases; identifies, designs, and develops GIS applications, strategies, and procedures for integrating GIS data and analyses to support Authority programs; develops and maintains GIS standards and protocols.
- Performs GIS analysis, spatial modeling, cartography, and remote sensing in support of a wide variety of planning, conservation, land acquisition, and real property projects, as well as grant applications; recommends and develops solutions, standards, and procedures for applying GIS technology to program and project objectives.
- Consults with other Authority staff regarding GIS needs and requirements, including identifying, designing, and developing GIS applications, strategies, and procedures for integrating GIS data and analyses to support Authority programs; develops and maintains GIS standards and protocols.
- Develops and standardizes procedures and methods to improve and continuously monitor the efficiency and effectiveness of assigned programs and projects; identifies opportunities for improvement and recommends to the Planning Manager.

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- Performs a variety of research, mapping, and technical work in support of the Authority's open space planning, land acquisition, conservation, communications, community engagement, and land management programs.
- Oversees management of contracts for services related to GIS program; initiates solicitations to provide materials and services; facilitates pre-proposal meetings; coordinates and participates in the evaluation of submittals; administers contracts and oversees review of documents, reports, and other work products prepared by consultants and provides feedback and corrections; assists assigned staff with analysis and problem resolution for consultant issues that may arise.
- Participates in the development and administration of and oversees GIS program budgets.
- Coordinates the purchase and maintenance of equipment, software, and supplies used to support GIS services.
- Attends and participates in professional group meetings; stays abreast of new trends and innovations in GIS and conservation programs; researches emerging products and enhancements and their applicability to Authority needs. Prepares reports of changes to management and provides recommendations on implementation and impact of changes.
- Identifies, acquires, and integrates data from other agencies and organizations into the Authority's data library; maintains and updates the Authority's data catalogue to reflect the agency's land holdings, natural resources, built infrastructure, and other critical data sets; creates and maintains government-compliant metadata; and develops procedures to share appropriate data.
- Creates and maintains a variety of maps and tabular data from a variety of sources; coordinates and conducts field surveys and integrates Global Positioning System (GPS) data into GIS format; develops applications to facilitate field-based data collection; explains technical information to non-technical system users, including assisting them in accessing and interpreting GIS information; develops quality control procedures.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Principles and practices for developing and coordinating a broad-based GIS program with other utilized applications; advanced principles, practices, and technologies of computer based mapping and geographic related data systems.
- GIS software such as ESRI ArcGIS products including ArcGIS Pro and ArcGIS Online; technologies employed by the Authority's GIS, including servers, personal computers, global positioning system, tablets, plotters, printers, and related software; advanced principles, practices, and technologies of computer based mapping and geographic related data systems; principles, practices, and techniques of GIS development.
- Advanced principles and techniques of spatial analysis, relational GIS database management, script and query development, and cartography.
- Principles of research and data collection pertaining to property evaluation and familiarity with site plans, property descriptions, deeds, and survey data.
- Project management principles and practices, including goal setting, work plan development, implementation, and evaluation.
- Principles and techniques of cartography and publication-quality map production using GIS software.
- Principles of mathematics and statistics and their application to planning and GIS support work.

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- Applicable federal, state, and local laws, codes, and regulations concerning the operation of the assigned function.
- Principles and procedures of record keeping and reporting.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Techniques for providing a high level of customer service by effectively interacting with staff, representatives of outside organizations, and members of the public, including individuals of diverse socioeconomic, ethnic, religious, and cultural backgrounds, physical ability, and sexual orientation.
- 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 and GIS programs, projects, and task coordination including servers, personal computers, global positioning system, tablets, plotters, printers, and related software.
- Computers and software programs (e.g., Microsoft software packages) to conduct, compile, and/or generate documentation.

Ability to:

- Develop and implement goals, objectives, practices, policies, procedures, and work standards.
- Administer complex, technical, and sensitive GIS related projects in an independent and cooperative manner.
- Coordinate a broad-based GIS program that includes effective database development, management, and accessibility.
- Design GIS integrated business solutions and geospatial solutions, including geodatabase design, business workflow programming, and web applications and mapping.
- Compile, integrate and analyze data from a variety of sources, including aerial photography, terrain, topographic, hydrologic, and time-sequenced event data into clear maps and graphics.
- Use GIS to create clear and effective maps, graphics, StoryMaps or other products.
- Perform complex modeling, mapping, database maintenance, and other GIS professional-level tasks.
- Conduct statistical research and analyze data pertaining to a wide variety of conservation and other open space matters, evaluate alternatives, and make sound recommendations.
- Interpret and explain GIS projects and programs to the general public; identify and respond to issues and concerns from the public, Authority staff, Board of Directors, and other boards and commissions.
- Establish and maintain a variety of filing, record keeping, and tracking systems.
- Read, interpret, apply, and explain technical written material and complex Federal, State, and local policies, procedures, laws, regulations, ordinances, and Authority planning policies and procedures.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Demonstrate sensitivity to and understanding of the diverse socioeconomic, cultural, physical ability, and ethnic backgrounds of individuals encountered in the execution of Authority services and mission.
- Effectively use computer systems, software applications, 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.

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

Education and Experience:

Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to a Bachelor's degree from an accredited college or university with major coursework in GIS, Computer Science, Geography, Urban Planning, or related field; and four (4) years of increasingly responsible experience in the management and administration of a Geographic Information System. Knowledge of or education in environmental science or resource management is desirable.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License.
- Possession of, or ability to obtain, a GIS Certificate

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect Authority development sites, including traversing uneven terrain, to operate a motor vehicle, and to visit various Authority and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification although standing and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

ENVIRONMENTAL ELEMENTS

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may work in the field and may occasionally be exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, mechanical and/or electrical hazards, and/or hazardous physical substances and fumes. Employees may interact with staff and/or public and private representatives on sensitive matters and in interpreting and enforcing Authority policies and procedures.

EFFECTIVE: April 2022
REVISED: N/A
FLSA: Exempt
FORM 700: No