



CITY OF WATSONVILLE

APPROVED MARCH 1999

JOB TITLE: Geographical Information Systems (GIS) Analyst

DEFINITION

Under direction, to perform a variety of activities using Geographic Information Systems (GIS) for the creation of maps and reports utilizing spatial and textual data. Performs a variety of high level/complex GIS-related assignments; assigns, coordinates, supervises and formally evaluates the work of others.

DISTINGUISHING CHARACTERISTICS

This job class functions at the full supervisory level of classification and is responsible for all aspects of complex computer GIS applications, as well as database creation and maintenance. An incumbent applies and develops this knowledge and ability to perform a variety of high-level GIS-related duties. This class differs from that of GIS Technician I/II in that an incumbent performs the most complex and difficult geographic systems work, creates and maintains system database structures, and leads or supervises incumbents in the GIS Technician class.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Information Services Manager

Exercises direct supervision over GIS Center staff.

EXAMPLES OF ESSENTIAL DUTIES - Duties may include, but are not limited to, the following:

- \$ Develops, modifies, and implements advanced geographic information applications using GIS computer software
- \$ Prepares, interprets, and applies data, plans, and other material to enter graphic and attribute information into the geographic information system
- \$ Develops and maintains a centralized GIS database along with other related database files
- \$ Operates various types of GIS computer workstations and related equipment including printers, plotters, and digitizers
- \$ Collects, organizes, and analyzes statistical and other data
- \$ Creates reports using GIS applications for a variety of departmental issues
- \$ Prepares graphic materials for integration into GIS, and for presentation
- \$ Identifies and participates in the solution of system hardware and software problems
- \$ Works with City departments and outside agencies to identify GIS opportunities and organize projects and work products
- \$ Supervises GIS Center staff. This includes recruitment of interns
- \$ Makes presentations as required
- \$ Prepares correspondence
- \$ Acts as City representative and liaison at meetings and conferences with public agencies and community groups as assigned
- \$ Sits at a desk and in meetings for long periods of time on a continuous basis
- \$ Uses a telephone, writes, and uses a keyboard to communicate through written means
- \$ Uses near vision for long periods of time
- \$ Distinguishes different colors in GIS maps
- \$ Abides by safety policies and procedures and performs safe work practices
- \$ Intermittently bends and twists to reach equipment surrounding desk
- \$ Intermittently reaches above and below shoulder level to reach books, files, and reports on

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shelves and in filing cabinets

- \$ Grasps electronic equipment, books, and documents with right and left hands
- \$ Works indoors in an environment subject to heat/cold and fragrances such as perfumes
- \$ Performs related duties as required or assigned

EMPLOYMENT STANDARDS

Knowledge of:

- \$ computer-based geographic information systems and their applications
- \$ GIS software development tools
- \$ network-based database systems, maintenance and support
- \$ statistical and research methods as applied to the collection, tabulation, and presentation of data
- \$ computerized applications for research, analysis, and presentation (e.g. spreadsheet, database, and presentation programs)
- \$ IBM compatible micro-computers working in both MS DOS and Windows (NT/95)
- \$ computer printers, plotters, scanners, digitizers, etc. and their operation
- \$ AutoCAD and/or similar products
- \$ budget development
- \$ elements of supervision
- \$ municipal organization and relationships with the municipal government
- \$ modern office practices, procedures, and appliances

Ability to:

- \$ apply the principles and practices of geographic information systems
- \$ read and interpret construction plans and complex maps
- \$ use specific computer systems and software packages required for the job
- \$ collect, organize, and analyze technical, statistical, and related information pertaining to planning and zoning research, and other City functions
- \$ prepare graphics and a variety of maps
- \$ supervise and evaluate assigned staff
- \$ develop and prepare a budget
- \$ assess and understand user needs and to develop the necessary software and/or reports to meet those needs
- \$ use independent judgement to identify and analyze problems and recommend and implement solutions
- \$ think logically and follow detailed instructions
- \$ solve problems in a logical manner
- \$ effectively and clearly communicate in both oral and written forms
- \$ establish and maintain effective work relationships with those contacted in the performance of required duties

Training and Experience:

Any combination of training and experience that provides the skills, knowledge, and abilities shown above is qualifying. A typical way to obtain these requirements would be:

- \$ Equivalent to a Bachelor's degree from an accredited college or university in computer science, engineering, physical science, mathematics, geography, GIS, urban planning or related field. Experience can be substituted for education where relevant.

LICENSE

A valid Class C California driver's license, and a safe driving record.