



*County of Lassen*  
Department of Planning and Building Services

• Planning • Building Permits • Code Enforcement • Surveyor • Surface Mining

December 7, 2018

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TO: Board of Supervisors  
Agenda Date: December 18, 2018

FROM: Maurice L. Anderson, Director

A handwritten signature in black ink, appearing to read "M. Anderson", is written over the name "Maurice L. Anderson, Director".

SUBJECT: Geographic Information System Coordinator class specification.

ACTION REQUESTED:

Approve specification

SUMMARY:

The 2018/2019 Fiscal Year Budget includes funds to secure a Geographic Information System (GIS) Coordinator. Remarkably, this will be the first GIS position in Lassen County. As such, the Board must approve the job specification because this is a new position. The proposed specification for this position is attached. The specification was submitted to the Management and Professional Association for comment (see attached letter) but no comment was received. The job specification is very detailed in regard to the potential responsibilities of this position. Accordingly, to better understand the position, this Board letter attempts to describe some of the specific tasks that the position would initially be responsible for.

The definition of the position provided in the specification is as follows:

*Under the direction of the Planning and Building Services Director, plans, coordinates, oversees and participates in the development, implementation, integration, operation, and maintenance of the County's geographic information system (GIS) and permit system; designs and implements information systems for provision of access to GIS data; develops and implements specialized GIS applications; oversees the design and development of all databases associated with the GIS base map; and performs a variety of technical tasks relative to assigned area of responsibility.*

***What is a GIS?***

Commonly, some form of the following definition of a GIS is used:

*"A geographic information system (GIS) is a framework for gathering, managing, and analyzing data. Rooted in the science of geography, GIS integrates many types of data. It analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes. With this unique capability, GIS reveals deeper insights into data, such as*

*patterns, relationships, and situations—helping users make smarter decisions.”* (esri, November 29, 2018, <https://www.esri.com/en-us/what-is-gis/overview>).

The public expects to have access to and be able to interact with spatial information. GIS is used for land use; zoning; subdivision and parcel boundary records; taxation and property values; supervisorial districts; county road system information; school district boundaries and other jurisdictional boundaries; floodplains; emergency management and many other uses. The insight that can be achieved through use of a GIS can be very broad or highly focused. It is the ease and speed that this information can be made available that is appealing to the public and decision makers. It is common for counties and other jurisdictions to have an interactive map to present this information to the public via the internet. A good example of an interactive map showing much of the above information is for San Benito, and can be viewed at the following URL:

<https://cosb.maps.arcgis.com/home/index.html>

Lassen County will not be starting from the beginning in terms of development of a GIS program, as there has already been an investment in the hardware, software, and data development. For example, GIS is being utilized to map zoning and land use information. In addition, GIS is used in the Sheriff's Department to improve response to emergencies. One layer of critical importance already developed is the Assessor Parcel Layer. This layer shows the boundary of Assessor Parcels and provides a foundation for much of the mapping and analysis for various projects. While there is an imperative need for the maintenance of these layers by a GIS professional, the position will be able to capitalize on the investments that have already been made.

A GIS position is common throughout most jurisdictions, and Lassen County may be the last, or amongst the last, California County without a GIS professional on staff. In fact, it is very common to have a GIS Department or Division. Functioning without a GIS professional has presented a challenge and opportunities have been lost by not having a professional on staff. An example of this lost opportunity is that we have not been able to construct the web based interactive map discussed above. Another example is our zoning layer, which existing non-GIS professional staff (e.g. planners) have been unable to make public through the internet with existing GIS knowledge, despite the fact that the layer was essentially completed approximately five years ago. Last, we are also deficient in terms of the quality control for the layers we do have. For example, the existing Parcel Layer has some significant errors in terms of property lines. We are seriously behind other jurisdictions in terms of our GIS program and are not meeting the needs of the public.

While this position will initially be placed in the Planning and Building Services Department, it is anticipated that, as the duties evolve to include multiple Departments, it may be appropriate to transfer the position to the Information Services Department in the future.

#### ***Some Initial GIS Coordinator Duties:***

The attached job specification is very detailed and thoroughly describes the responsibilities the GIS Coordinator may have. That said, the job is very technical and, certainly in the beginning, not all of the duties will initially be assigned. Consequently, the following list is intended to summarize some

of the specific initial tasks and duties that will be assigned in a way that can be more easily understood. This is a working list that will grow and change as this position settles into their role:

- Responsible for managing, maintaining, editing and improving the County GIS geodatabases (e.g. layers) currently in existence. This includes the Assessor parcel layer, zoning, transportation and others.
- Develop or coordinate the development of new layers that are determined to be beneficial to the County GIS program.
- Build and maintain a public portal map. This will be an interactive map where the public will be able to go to the County website to view zoning, land use, flood plain, fire hazard and other information. Most other counties and agencies already have some type of GIS interactive web map for use by the public to show much of the data discussed and staff is routinely asked if Lassen County has this resource available.
- Maintain and improve the linkage between the CREST database (where the Assessor keeps current data on parcels, ownership, etc.) and the GIS Parcel Layer geodatabase.
- Make or oversee the necessary updates to the GIS infrastructure (hardware and software).
- Make recommendations to decision makers on GIS matters (e.g. analysis of spatial data).
- Develop, manage and facilitate a connection between SMARTgov and the County GIS program. The County has invested in permit tracking software (SMARTGov) and linking it with GIS would provide valuable insight. This could include such things as code enforcement, inspection schedules, analysis of development, and issuance of some building permits online.
- Coordinate the interdepartmental administration of the GIS program. GIS data involves several Departments, so it is important to have an understanding what all the Departments are doing, and need, in terms of GIS so that efforts are coordinated and resources are optimized.
- Train staff in the use and improvement of the County GIS program. GIS is used as a tool in multiple professions within the County (e.g. planning, assessment staff, emergency management, public works, environmental health, etc.). This position will serve as a vital resource for staff training and development. Improving the skill set of existing staff will allow the position to focus on more difficult harder to achieve goals.
- Assist in the development of a GIS strategic plan. While GIS is already being utilized in the County, this position will help shape the vision of the program so that it develops in the most efficient way.

MLA:gfn  
Enclosure

Pla/admin/files/600/605.111/12-18-18 Board letter

County of Lassen  
PERSONNEL SERVICES

☐ PERSONNEL

☐ RISK MANAGEMENT



November 16, 2018

Richard Egan, County Administrative Officer  
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Steve Allen, Labor Representative  
Management and Professional Association  
1800 Park Marina Drive  
Redding, CA 96001

Dear Mr. Allen:

The County intends to establish the classification of Geographic Information System Coordinator, a new position that would be represented by the Lassen County Management and Professional Association. The proposed class specification for the position is attached.

Please let me know if you have any questions or concerns about this position. If we do not hear from you by November 30, 2018, we will assume the class specification is acceptable and will present the specification to the Board of Supervisors for their consideration.

Sincerely,

A handwritten signature in black ink, appearing to be "ME", is written over a horizontal line.

Richard Egan  
County Administrative Officer

RE:MLA:gfn  
Enclosure

Pla/admin/files/600/605.111/offer to confer

COUNTY OF LASSEN

JOB DESCRIPTION

CLASS TITLE:	Geographic Information System Coordinator	CLASS CODE	
DEPARTMENT:	Planning and Building Services	UNIT	MPA
REPORTS TO:	Director of Planning and Building Services	FLSA STATUS	NON
LAST REVISED		RANGE	24

**DEFINITION**

Under the direction of the Planning and Building Services Director, plans, coordinates, oversees and participates in the development, implementation, integration, operation, and maintenance of the County's geographic information system (GIS) and permit system; designs and implements information systems for provision of access to GIS data; develops and implements specialized GIS applications; oversees the design and development of all databases associated with the GIS base map; and performs a variety of technical tasks relative to assigned area of responsibility.

**DISTINGUISHING CHARACTERISTICS**

Positions in this class perform the most complex professional geographic information system work and may direct lower level professional and technical staff, as assigned. Employees at this level are required to have full knowledge of the County GIS program and coordinate the development and maintenance of the County-wide GIS and associated databases, long range plans and/or specialized knowledge and training in unique issues particular to Lassen County. This includes management, development and update of the County Assessor Parcel Layer.

Performs difficult technical work developing and maintaining the County's geographic information system.

To perform the design, operation, and administration functions related to the development and analysis of various geographic information systems (GIS) data pertaining to the County and to perform related work as required.

The position is responsible for the creation and analysis of spatial data layers in large spatial relational database system. This includes but is not limited to the maintenance and complex analysis of digital spatial data to support decision making.

This is the lead/supervisory position. Under direction, this class provides technical guidance and leadership to professional staff and may supervise professional staff within the Department.

**SUPERVISION RECEIVED AND EXERCISED**

Receives direct supervision from the Director of Planning and Building Services and/or Assistant Director.

May exercise technical and functional direction and training to less experienced technical staff.

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Geographic Information System Coordinator

**EXAMPLE OF DUTIES** - Duties may include, but are not limited to, the following:

1. Plan, direct, and participate in the acquisition, installation, administration, and operation of the County's geographic information system (GIS) and permit system; oversee software release installs and updates for both systems.
2. Coordinate, train, and instruct staff in the operation of the geographic information system and permit system.
3. Oversee and participate in providing graphic services including preparation, layout, and design of a variety of reports, displays, literature, maps and computer graphics; ensure the accuracy and completeness of digital GIS maps and data files.
4. Supervise the use, care and operation of GIS equipment.
5. Verify the work of assigned employees for accuracy, proper work methods, techniques and compliance with applicable standards and specifications.
6. Serve as project lead for special GIS projects including the planning, system integration, database development, implementation and application development; meet with various GIS users and Information Services management to plan and discuss system requirements; provide project status updates as needed.
7. Serve as system administrator for GIS ensuring that application software and hardware operates efficiently and meets the County's needs for information technology; update layers as changes occur.
8. Integrate GIS with other computer applications; meet with users and review requests; develop and tailor applications to meet user needs; prepare documentation.
9. Oversee the design and development of all databases associated with the GIS base map including relational databases; develop standards and strategies for maintaining database security.
10. Plan and develop County-wide user training for geographic information systems and permit systems; develop policies and procedures for users and output requirements for GIS services.
11. Coordinate the design and development of user-specific GIS databases and permit types; configure system operational functions; prepare reports as necessary.
12. Research and investigate geographic information system industry techniques and products; evaluate and recommend GIS software and hardware systems.
13. Coordinate with software and hardware vendors as well as service consultants on planning issues, price quotes, problem reporting, and contracts.
14. Coordinate GIS and permit system activities with other staff, the public and private agencies as needed.
15. Represent County geographic information systems interests to various governmental agencies, professional organizations, and to the community as needed.

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Geographic Information System Coordinator

16. Attend and participate in professional group meetings, seminars and trainings in order to stay abreast of new trends and innovations in the field of geographic information systems technology.

17. Perform related duties as required.

**Knowledge, Skills and Abilities:**

- Knowledgeable in the operations, services, and activities of a geographic information system program.
- Understand the uses, capabilities, and operational characteristics of geographic information systems equipment and specialized hardware including ArcInfo, ArcView, ArcMap, ArcGIS online, Google Earth and other computer mapping applications.
- Understand cartographic standards, principles and procedures.
- Familiar with the methods and techniques of engineering, land surveying, planning, and spatial analysis as it relates to geographic information systems.
- Proficient on the operation and maintenance of computer software and hardware, operating systems, local and wide area networks, internet and remote access computer systems.
- Understand concepts of relational database systems.
- Familiarity with Computer Aided Drafting
- Understand database design and development.
- Familiar with the principles and practices of supervision and training.
- Familiar with pertinent federal, state and local laws, codes and regulations.

**Ability to:**

- Provide highly technical support to geographic information systems programs.
- Provide direction and training to assigned staff.
- Oversee multiple projects, tasks, and priorities to achieve desired goals.
- Analyze spatial data by linking tabular information from ArcInfo, ArcView and ArcMap.
- Create geographically referenced data sets.
- Design, implement, maintain and administer relational database management systems.
- Prepare accurate maps and records.
- Operate system software and database programs.
- Troubleshoot GIS network and application problems.
- Read, comprehend, and interpret complex scientific and technical information as it relates to geographic information systems.

- Provide instruction and assistance in using various computer applications.
- Use independent judgment and initiative in making recommendations regarding database applications.
- Install software and hardware components.
- Communicate clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.

### **MINIMUM QUALIFICATIONS**

#### **Education and Experience**

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

##### ***Education:***

Bachelor's degree or advanced degree with a major in geographic information systems, information technology, civil/structural engineering, architecture, or a closely related field is preferred (job related geographic information experience may be substituted on a year-for-year basis).

##### ***Experience:***

Four years of increasingly responsible geographic information systems experience.

##### **License or Certificate**

Possession of, or ability to obtain, a valid California driver's license.

##### **Physical Demands and Working Conditions**

The physical demands and work environment described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to talk or hear. The employee frequently is required to sit. The employee is often required to travel to and make outside visits – occasionally on uneven surfaces with potential access barriers; to use hands to finger, handle, or feel; reach with hands and arms; and to stoop, kneel, or crouch. Specific vision and hearing abilities required by this job include hearing and vision adequate to observe human interaction, and vision to input and access information from a computer system.

Work is normally performed in an office environment. However, work may be performed outside in inclement weather conditions. The noise level is usually quite. The employee may come in contact with members of the public who are agitated, argumentative, or verbally abusive.

Hearing: adequate to hear under both quiet and noisy conditions with the ability to distinguish from which direction a sound is coming.

Vision: adequate to meet DMV criteria for required licensing.

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Geographic Information System Coordinator

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Coordination: coordination and balance to walk on uneven surfaces or steep inclines, and ascend/descend ladders. Must have sufficient range of motion to lift arms above the head for extended periods or to bend and reach while inspecting buildings or machinery.

Physical strength: ability to climb, crawl, lift weights up to 25 lbs., and drive for extended periods of time.