

**POSITION DUTY STATEMENT**

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Research Data Specialist II	OFFICE/BRANCH/SECTION NR Division of Environmental	
WORKING TITLE GIS Analyst	POSITION NUMBER 928-801-5758-XXX	REVISION DATE

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

**GENERAL STATEMENT:**

Under general direction of the branch chief, a Senior Environmental Scientist, the incumbent will perform a wide variety of the more complex geographic information systems (GIS) work. As a member of the North Region Environmental branch the incumbent will perform research and analysis based on geographic information systems (GIS) techniques and methodologies. With an advanced level of knowledge the incumbent will lead and develop projects that study, analyze and develop conclusions based on the spatial analysis of various subjects, some of which are land use, transportation planning, land surveying, environmental resources, and project development.

**CORE COMPETENCIES:**

As a Research Data Specialist II, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- **Creativity and Innovation:** Thinks beyond the confines of traditional models to recognize opportunities, seek creative solutions and take intelligent risks. (Prosperity - Innovation, Stewardship)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Prosperity - Integrity, Stewardship)
- **Initiative:** Ability to identify what needs to be done and doing it before being asked or required by the situation. Seeks out others involved in a situation to learn their perspectives. (Prosperity - Innovation, Stewardship)
- **Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Prosperity - Innovation, Stewardship)
- **Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Employee Excellence - Collaboration)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Prosperity - Pride, Stewardship)
- **Interpersonal Effectiveness :** Effectively and appropriately interacts and communicates with others to build positive, constructive, professional relationships. Tailors communication style based on the audience. Provides and is receptive to feedback. (Employee Excellence - Collaboration)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Prosperity - Innovation, Stewardship)
- **Computer literacy and application:** Appropriate knowledge of computer applications and other tools necessary to successfully perform tasks. (Prosperity - Innovation, Stewardship)

**TYPICAL DUTIES:**

Percentage  
Essential (E)/Marginal (M)<sup>1</sup> Job Description

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35%	E	Incumbent develops and performs advanced geographic information systems (GIS) research and analysis on project development and asset management efforts in support of the North Region of Caltrans. This advanced research and analysis is complex in nature, utilizing geographic information systems (GIS) methods and techniques which include python scripting, java scripting, C#, SQL, Arcade, development of geospatial data, imagery, applications, tools and models. Incumbent uses this advanced research and analysis to identify, assess and develop spatial data and application needs. Using sound conclusions the Incumbent develops applications, data management plans, and innovative technology based solutions to meet these needs.
30%	E	Incumbent designs, develops and maintains geographic information systems (GIS) services utilizing the Departments Enterprise GIS system operated and maintained by the HQ GIS unit. Working in conjunction with the HQ GIS unit the incumbent will use advanced knowledge of server based geographic information systems (GIS) systems to publish and create Internet based geographic information systems (GIS) web maps. Incumbent would be the primary data steward of NR Environmental GIS program.
25%	E	Incumbent performs research and statistical studies to determine the need for data collection applications. Using this knowledge the incumbent determines gaps and develops data collection applications to fill them. Utilizing existing geographic information systems (GIS) data collection applications the incumbent designs, develops and maintains North Region Environmental GIS applications.
5%	M	Incumbent provides ArcGIS desktop and geographic information systems (GIS) tool training specific to Caltrans data and participates in outreach to identify user needs. The incumbent engages in partnership activities within North Region of Caltrans, Caltrans HQ, local government agencies and other partners related to the development of geospatial data and products.
5%	M	Incumbent will prepare reports and correspondence based on conclusions of the research and analysis performed using spatial analysis from geographic information systems (GIS).

<sup>1</sup>ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned.

MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others.

**SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS**

The incumbent works under the general supervision of a Senior Environmental Scientist (Branch Chief). The incumbent may also lead research projects. This position does not supervise other employees.

**KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS**

This position requires the ability to independently and successfully perform complex research and analysis projects involving various types of digital spatial data, techniques, and methodologies associated with geographic information systems (GIS). The position requires the ability to work cooperatively and effectively with others. The position requires general understanding of journeyman level research and statistical methods. The work is complex, frequently requiring innovation, flexibility, good organization, teamwork and problem solving skills.

A RDS must have an advanced knowledge of GIS techniques and methodologies to develop data, tools, and models.

The following are the knowledge, abilities, and analytical requirements necessary for this position:

Experience with Environmental Systems Research Institute, Inc. (ESRI) enterprise and desktop GIS software products; Communicate effectively at a level required for successful job performance; Interact in a professional manner with all levels of department staff; Compiles, makes or revises geospatial products, maps, charts, and diagrams; Exercises good judgment in providing assistance, consultation, and communication with all levels of departmental staff and management, including external entities such as consultants or vendors; Assists in mentoring other staff who may be less knowledgeable or less experienced in GIS technology; Advanced knowledge of GIS software and strong familiarity with relational database design as it applies to GIS software; Strong knowledge of cartographic principles, spatial analysis, and databases; Analyze situations accurately and take effective action; Ability to train team members and end users on GIS data and applications; Ability to conduct research into GIS issues and products as required; Prepare reports; Understand and practice current Safety procedures as described in the Code of Safe Surveying Practices and the Caltrans Illness and Injury Prevention Program; Recognize and immediately report any possible hazards or safety violation that may adversely affect property, employees, or the general public. Ability to work independently and without direct supervision.

**RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR**

The RDS is responsible for assisting the supervisor in an office setting. Errors in judgment or decisions could result in project delays, rework or the production of unnecessary work. Inaccurate or incomplete work may result in added costs, or litigation, and reflect negatively on the Environmental Program, North Region Environmental Planning, and the Department. The effects of poor decisions relating to any of these items could translate into additional delays, costs, or claims against the State of California.

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### PUBLIC AND INTERNAL CONTACTS

The employee will routinely contact other Caltrans personnel, environmental/surveying/engineering consultants, personnel from other State agencies, personnel from other government agencies and the public.

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### PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employee may be required to sit for long periods of time using a keyboard and video display terminal. He or she may also be required to move large or cumbersome plans and diagrams from one location or another. He or she may be required to stand for periods of time operating data collection instruments or office devices such as optical scanners. May be required to drive long distances.

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### WORK ENVIRONMENT

While at their base of operation, employees will work in a climate-controlled office under artificial lighting. Incumbent may be required to travel and work outdoors and when doing so can expect to be exposed to traffic, dirt, noise, uneven surfaces, and extreme heat or cold.

Possession of a valid driver's license is required when operating state owned or leased vehicles.

I have read, understand and can perform the duties listed above. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

I agree that by providing my electronic signature for this form, I agree to conduct business transactions by electronic means and that my electronic signature is the legal binding equivalent to my handwritten signature. I hereby agree that my electronic signature represents my execution or authentication of this form, and my intent to be bound by it.

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EMPLOYEE (Print)

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EMPLOYEE (Signature)

DATE

I have discussed the duties with, and provided a copy of this duty statement to the employee named above.

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SUPERVISOR (Print)

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SUPERVISOR (Signature)

DATE