TAHOE CITY PUBLIC UTILITY DISTRICT
Job Description

Job Title:	**Geographic Information System Administrator**
Department:	**Engineering**
Division:	**Technical Services**
Supervised By:	**Technical Services Manager**
FLSA Status:	**Exempt**
Revision Date:	**December 2022**

JOB SUMMARY

To plan, implement, coordinate and administer the District's geographic information systems (GIS) resources and infrastructure; to manage all aspects of the programs' structures and designs for effective use; and to provide strategic planning, project management, implementation and oversight for GIS infrastructure and projects throughout the District.

SUPERVISION RECEIVED AND EXERCISED

Receives administrative direction from the Technical Services Manager; and technical and functional supervision from assigned professional staff.

Exercises technical and functional supervision over assigned technical personnel and consultants.

ESSENTIAL FUNCTIONS

The duties listed are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.

- Develop and implement the District's GIS and technology goals, objectives, policies and procedures.
- Collaborate with District departments to implement GIS technologies and processes to improve operational efficiency.
- Prepare and monitor GIS-related budget items as related to staffing, equipment, software licensing/maintenance, materials and supplies.
- Direct, oversee and participate in the development of a GIS workplan; assign activities, projects and programs, monitor workflow; review and evaluate work products, methods and procedures - both of assigned staff and/or outside consultants.
- Manage the District's GIS technology infrastructure; including servers, databases, and updates to end user devices.
- Manage, develop, administer, update and implement the District's Esri ArcGIS software program, asset management database, system mapping and related engineering information system applications.
- Develop, administer, update and implement the District's GraniteNet Utility Inspection software program.

- Maintain and update the District's property rights database and other engineering document databases, including District record drawings and maps.
- Manage, develop, maintain, administer and update District GIS asset databases, develop new data sets and GIS layers, using as-built plans or sketches of sewer, water, parks and recreation facilities, including field collection of required facility data.
- Maintain and support District Global Positioning System (GPS) units and train staff in their use; oversee data collection procedures; including quality assurance/quality control for collected data and transfer of data into GIS databases; review and recommend updates for District GPS units.
- Create and maintain new GIS web applications and provide support for District departments.
- Develop, maintain and support GIS integrations with other District enterprise software systems.
- Evaluate current District technology and databases; evaluate and recommend software and hardware acquisition.
- Oversee and manage higher level technical support issues with various software platforms including but not limited to Esri ArcGIS, VUEWorks Maintenance Management System and GraniteNet.
- Serve as a technical resource to District departments, including providing assistance and training in the proper use of GIS technology and systems.
- Prepare requests for proposals, negotiate and administer professional services and maintenance contracts, and oversee the work of independent contractors.
- Conduct studies, analyze data, make recommendations and prepare reports and presentations on a variety of subjects.
- Evaluate operations and activities of assigned responsibilities; recommend improvements and modifications; prepare various reports on operations and activities.
- Participate in budget preparation and administration; prepare cost estimates for budget recommendations; submit justifications for and monitor and control expenditures.
- Maintain regular attendance and adhere to prescribed word schedule to conduct job responsibilities.
- Establish, maintain and foster positive and effective working relationships with co-workers and all others contacted in the performance of assigned duties.
- Utilize appropriate safety procedures and practices for assigned duties.
- Work safely and cooperatively with others.

ADDITIONAL DUTIES AND RESPONSIBILITIES

- Provide advanced level user support for District systems and technology resources, including hardware and software.
- Perform facility and asset location and mapping for a variety of District assets using GPS surveying equipment and software.
- Attend meetings, conferences, workshops and training sessions to remain current on principles, practices and new developments in assigned areas of responsibility.
- Assist Information Systems & Technology Administrator with development, implementation, testing, and updating of a comprehensive information technology disaster recovery plan.
- Monitor changes in GIS technology and software applications, recommend improvements and upgrades and implement changes upon approval.
- Monitor other agencies' projects in areas where District's water distribution and sewer mains are located to ensure District facilities/properties are not damaged or customer service disrupted; act as liaison with public agencies and contractors as necessary.
- Attend and participate in public and internal meetings.
- Perform all other duties as assigned.

EMPLOYMENT STANDARDS

1. **Knowledge of:**
   - Principles and practices of geographic information systems and technology.
   - Relevant software applications to include Esri ArcGIS, GraniteNet, VueWorks and AutoCAD software suites.
   - Sewer, water, parks, and facilities mapping.
   - GIS principles and practices as applied to utilities, parks, facilities and other public works.
   - Computer-Aided Design and Drafting (CADD) principles and practices as applied to utilities, parks, facilities and other public works.
   - Principles and practices associated with GPS equipment used to survey asset locations.
   - Methods, materials and procedures used in the construction and inspection of public works projects.
   - Modern developments, current literature and sources of information regarding GIS, Utility Inspection software, CADD, information systems, technology and other related areas.
   - Language, terminology and equipment used in survey and office engineering.
   - Language, terminology and equipment used in computer networking.
   - Relational database software, including SQL Server and SQL Express.
   - Modern office practices, methods, and computer equipment, including relevant software applications.
   - Principles and practices of customer service.
   - Safe work practices.

2. **Ability to:**
   - Read, comprehend and interpret plans, details, specifications, reports, easements, ordinances, policies, procedures and any other document within the expertise of the incumbent.
   - Apply technical engineering principles and practices.
   - On a continuous basis, know and understand all aspects of the job; intermittently analyze work papers, reports and special projects; identify and interpret technical and numerical information; observe and problem solve operational and technical policy and procedures.
   - On a continuous basis, sit at desk for long periods of time; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone, and write or use a keyboard to communicate through written means; and lift or carry weight of 50 pounds or less.
   - Utilize Esri suite of software at an advanced level, including ArcGIS Desktop, ArcGIS Enterprise (Database and Server), ArcGIS Pro, and ArcGIS Online.
   - Utilize other engineering software including CADD, Computerized Maintenance Management System (CMMS) and asset management.
   - Analyze spatial data for exhibits or reports, with use of Geoprocessing tools.
   - Apply property location methodology and property description practices effectively.
   - Prioritize and exercise sound judgment within areas of responsibilities.
   - Understand and apply District policies, procedures, standards, ordinances and practices to work assignments.
   - Understand, interpret and apply Federal, State and local laws and codes and regulations pertaining to work assignments.
   - Perform all job duties in an organized and efficient manner with the ability to adjust priorities and perform multiple tasks.
   - Operate a personal computer in a workgroup server environment, including proper file management.

- Perform mathematical and engineering calculations including basic algebra, geometry and trigonometry.
- Review or prepare any work product in a clear, accurate and concise fashion in conformance with accepted engineering practice and District standards.
- Monitor own work product for quality and accuracy.
- Interpret and apply safety rules and regulations to work assignments.
- Utilize appropriate safety procedures and practices for assigned duties.
- Read, write and comprehend the English language at a level necessary for effective job performance exercising correct English usage, vocabulary, spelling, grammar and punctuation.
- Communicate effectively, tactfully and positively in both oral and written form.
- Understand both oral and written instructions and carry out in a positive manner.
- Establish, maintain and foster positive working relationships with those contacted in the course of work.
- Operate and use modern office equipment including computers and applicable software.
- Read, write and comprehend the English language at a level necessary for effective job performance exercising correct English usage, vocabulary, spelling, grammar and punctuation.
- Communicate effectively, tactfully and positively in both oral and written form.
- Understand both oral and written instructions and carry out in a positive manner.
- Establish, maintain and foster positive working relationships with those contacted in the course of work.

EDUCATION AND TRAINING REQUIREMENTS

1. **Education and Experience Requirements:**
   Any combination of education and experience which would likely provide the necessary knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

   Education: Equivalent to a Bachelor's degree from an accredited college or university in engineering, surveying, GIS, computer science or a closely related field.

   Experience: Five (5) years of progressively responsible experience performing GIS related work utilizing ESRI software products.

2. **Certification & Licensing Requirements:**
   - Possession of appropriate and valid driver's license and driving record that complies with District policy.
   - Certification as a GIS Professional (GISP) from the GIS Certification Institute or an ArcGIS Desktop Professional Certification from Esri, or ability to obtain within 18 months of appointment.
   - Advanced knowledge of ESRI software applications, geodatabase administration, and integration of enterprise software with GIS.

ENVIRONMENTAL CONDITIONS

Work is performed in a typical temperature-controlled office environment subject to typical office noise and conditions.

Position requires working beyond normal business hours, attendance at evening meetings and/or weekend work, telework and/or remote work, and the ability to travel.

Work may be performed in an outdoor field environment with exposure to hot and cold temperatures; inclement weather; solvents and chemicals; water and electricity; and excessive noise.

Work may be performed at heights above or below the ground.

PHYSICAL JOB ANALYSIS

Daily Occurrence defined as: RARELY ≤ one hour per day; OCCASIONALLY one to three hours per day; FREQUENTLY three to six hours per day; CONTINUOUSLY six to eight hours per day.

1. Gross Body Movement

Activity	Daily Occurrence
Sitting	Continuously
Standing	Occasionally
Walking	Occasionally
Walking on uneven terrain	Occasionally
Driving	Occasionally
Hearing	Occasionally
Speaking	Occasionally
Seeing	Continuously

2. Job-Specific Body Movement

Activity	Daily Occurrence
Bending at waist	Occasionally
Climbing (stairs/ladders/etc.)	Occasionally
Crawling	N/A
Crouching	Occasionally
Kneeling	Occasionally
Pushing (10-30 lbs.)	Occasionally
Pulling (10-30 lbs.)	Occasionally
Stooping	N/A
Working at heights (6 feet above/below ground)	Occasionally
Working/Reaching above shoulder level	Occasionally
Working/Reaching below shoulder level	Occasionally
Working/Reaching at desk level	Continuously

3. Lifting

Weight	Daily Occurrence
1 to 10 lbs.	Occasionally
11 to 25 lbs.	Occasionally
26 to 50 lbs.	Occasionally
51 to 75 lbs.	N/A

76 to 100 lbs.	N/A
Over 100 lbs.	N/A

4. Hand Coordination

Activity	Daily Occurrence
Hand	
Pulling	Rarely
Pushing	Rarely
Fine Manipulation	
Typing/Keyboard	Continuously
Calculator	Occasionally
Writing	Occasionally
Hand tools	Rarely
Equipment (nuts/bolts, etc.)	Rarely
Simple Grasping	
Files	Occasionally
Computer mouse	Occasionally
Phone receiver	Continuously
Power Grip	
Power tools	Rarely
Equipment (shovel, etc.)	Rarely
Arm	
Lateral	Rarely
Rotation	Rarely

5. Height of Objects Reached/ Used

Object	Height
Filing cabinets	1-4 feet
Shelves/Storage	1-6 feet
Other – Books/Documents	1-6 feet

6. Mental Requirements

Activity	Daily Occurrence
Analyzing	Frequently
Identifying	Frequently
Interpreting	Continuously
Knowing	Continuously
Observing	Frequently
Problem Solving	Frequently
Remembering	Frequently

Understanding

Explaining

Continuously

Frequently

APPROVED BY: <u>Sean Barclay, General Manager</u> on <u>November 17, 2022</u>