10,000 YEARS INSTITUTE

watershed ecological services • www.10000yearsinstitute.org

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Job Announcement

JOB TITLE: **GIS Services Specialist**

DATE: **March 2020, onward**

STATUS: **¾ to Full-time**

SALARY: **DOQ**

CONTACT: **email jobs@10000yearsinstitute.org**

Background

10,000 Years Institute (10KYI) is a 501(c)(3) non-profit organization conducting applied research, watershed ecological services, and education. 10KYI works toward community, ecological, and climate resilience in the Pacific Northwest. We evaluate the effects of human activities on the forests, rivers, wetlands, and estuaries that sustain our communities and ecosystems. We develop innovative science-based approaches to restore ecological integrity, and promote sustainable practices in landscapes across the region.

Job Description

Spatio-temporal data is crucial to every activity we undertake within the organization. From the reporting requirements associated with application of herbicide, to the complex forecasting of spreading vegetation, both emerging invasive and resilient natives, these data guide our activities, strategies and successes. Joining our team of resource managers and scientists to fulfill the requirements of a highly technical position specializing in Geographic Information Systems (GIS). Your duties will challenge you to organize, analyze, collect, maintain, upgrade, and manipulate geographic data in an evolving GIS integral to the organization's research, watershed monitoring, restoration, and management objectives.

The organization's GIS houses data related to both invasive species and native vegetation, staff surveys, herbicide applications, research and resource management project metrics, both aquatic and terrestrial habitat characteristics, and numerous other natural resource data types. Ideal candidates must perform relational database management; web server management, assists with network administration

activities, back-ups, and system security; conducts raster, vector, and tabular analysis and associated cartographic duties.

Essential Duties and Responsibilities

- Create maps, graphs, and queries using GIS software, techniques, and related equipment
- Gather, analyze, and integrate spatial data from various internal and external sources
- Cartographic design
- Compile geographic data from a variety of sources including censuses, field observation, satellite imagery, aerial photographs, DEMs, and existing maps.
- Analyze spatial relationships among varying types of data and imagery
- Edits and creates various map layers and shape files including, point, line, and area features; manipulates various raster imagery, LiDAR, and DEM data
- Operates computerized graphic data-entry-systems to enter and verify map data using a GPS, mobile, web, and PC software with an emphasis on quality assurance and accuracy
- Configuration of mobile devices for use with the organizations GIS
- Maintains an understanding of the latest and relevant GIS technology, products, services, and training
- Performs data conversions, regular data back-ups, and archiving
- Administer and maintain web based GIS software and hardware on site and cloud environments, providing scalable GIS services to staff, partner and public users
- Perform scripting of geospatial analysis and data management using Python or other scripting languages on modern computer systems
- Develop, enhance and maintain quality control and quality assurance procedures for publication of spatial and tabular data
- Provide technical support to staff and develop training materials for use of GIS applications
- Assists with budgeting, needs assessment, as well as GIS application development

Qualifications

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Education and Experience

Four-year degree in GIS, Geoinformatics, Remote Sensing, Cartography, or related fields and 3+ years direct experience in using Esri ArcGIS Desktop or Pro software, ArcGIS Enterprise software (or ArcGIS Online), precision GNSS data collection hardware and mobile GIS data collection software. Alternatively, a 2-year degree or certificate in GIS related field and 5+ years direct experience may also be considered.

Earth Sciences

Knowledge of various methods and terms for describing the location and distribution of terrestrial and aquatic natural resources, including their physical locations, relationships, and characteristics. General understanding of the Public Land Survey System, hydrology, geomorphology, soil characteristics, forestry and biology.

Communication

Ability to read, analyze and interpret technical data. Ability to prepare, respond and present to clients including staff members, groups, and government officials. Ability to write routine reports and correspondence using appropriate terminology. Ability to convey GIS/spatial information and concepts to non-GIS/technical people. Ability to act as geospatial liaison with other resource management organizations. Forge and maintain positive working relationships with likeminded professionals at numerous County, State, Federal, and Tribal agencies as well as Non-Profit and Private partners.

Mathematics

Ability to calculate figures and amounts such as proportions, percentages, area, circumference, and volume. Ability to apply concepts of algebra, geometry, statistics, biometrics and trigonometry. The ability to solve problems using GIS software.

Information Gathering

Knowing how to find, obtain and aggregate spatial information, identify essential datasets, and confirm the validity of these data and associated metadata.

Reasoning

Ability to define problems, collect data, establish facts, and draw valid conclusions. Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

Certificates, Licenses, Registrations

Must have a valid Washington state driver's license and be insurable. May be required to safely operate organization and/or personal vehicles to perform job duties. A driving history/background check may be conducted on prospective candidates.

Other Skills and Abilities

Technical Skills

- A full understanding of a GIS, database design, spatial data management and digital mapping processes
- Must be able to read and understand maps, orienteering, and general survey concepts
- Knowledge of current versions of ESRI software, online tools, and "cloud-based" techniques including: various ArcGIS products, mobile apps, Spatial/3D Analyst, and related components
- Knowledge of data collection using latest GPS hardware and software; data correction and control
- Cartographic knowledge necessary to communicate complex spatial concepts through the production of compelling maps and graphic styles
- Familiar with imaging software, satellite imagery, ortho-photo and raster manipulation
- Familiar with plotters, and GIS/DBMS back-up systems
- Knowledge of various PC platforms, emulation software, MS Office Suite, including MS Access and database structures
- Familiar with principles, practices, hardware and software related to the establishment and maintenance of inter/intra networks including LANs and their data integrity and security

- Ability to apply geometric and algebraic concepts, compute complex area calculations

General Skills

- Good analytical and problem-solving skills
- Well organized
- Familiarity with information privacy laws and best-practices
- Project management skills
- An understanding of land management, land use impacts, natural resource management, tribal sovereignty, state and federal resource management agencies
- Ability to perform field work including physically demanding hiking in harsh weather conditions

Work Environment

Generally, duties will be performed in an office environment though the GIS Services Specialist must be capable of providing remote technical support to staff in the field, in remote office locations, or to team members who are traveling.

How to Apply

Please email a cover letter, resume, exemplary cartographic example you are proud of and three references to jobs@10000yearsinstitute.org

Applications will be accepted until EOD **March 15th** (or until the position is filled).

*No phone calls, please.

We conform to all the laws, statutes, and regulations concerning equal employment opportunities and affirmative action. We strongly encourage women, minorities, individuals with disabilities and veterans to apply to all of our job openings. We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, gender, sexual orientation, gender identity, or national origin, age, or disability status.