



WESTERN STATES
WATER COUNCIL

Water Data Exchange (WaDE) Data Scientist/Technical Lead Position at Western States Water Council

Position: The Western States Water Council (WSWC) is soliciting applications for a full-time data scientist/technical lead position with experience in the fields of hydrology, computer science, data science and visualization, hydroinformatics, and application development to work its office, located in Murray City, Utah, for a limited 2-year term. The position is grant-based, but there is a potential for a longer term with continued program funding. This position is salaried and provides excellent leave and healthcare benefits.

Overview of the WSWC: The WSWC is a non-partisan government entity created by the Governors of 18 western states to serve as a resource and advisory body on water policy issues. For more information about WSWC, please see www.westernstateswater.org. The collaborative nature of the organization has allowed it to act as a trusted broker in the development of a data-sharing initiative, in an effort to better inform regional assessments and estimation methodologies related to water availability and water use in the West.

Overview of the Water Data Exchange (WaDE) Program: The WSWC has been developing a data exchange platform with assistance and participation of its member states to provide better access to water allocation, supply, and demand data at a regional scale. All WSWC members are participating in the program (from Texas to North Dakota to Alaska to California), with strong engagement with each states' program and IT managers.

Each state agency hosts a “node” of WaDE-related information, which is accessed by WSWC’s Central Catalog. The Central Catalog and Central Portal act as the data discovery and accessibility interface for users interested in viewing HTML-based tables and charts, and for developers who wish to create more sophisticated decision support tools based on WaDE web services. WSWC members support WaDE as a mechanism for data transfer to interested parties, including USGS (as part of the National Water Census and Water Use Data Research (WUDR) programs), the National Labs (for water/energy nexus studies), electricity transmission councils such as the Western Electric Coordinating Council (WECC) and the Electric Reliability Council of Texas (ERCOT), and other public and private stakeholders. Please see wade.westernstateswater.org for more information about the history, development, and governance of the program, and to access the current Central Portal.

Duties: The position will oversee updates to the technical aspects of the WaDE data-sharing system, comprised of GitHub repositories, data servers, MSSQL and PostgreSQL databases, web services code, ESRI and R/Shiny-based data-discovery mapping applications and other visualizations. Candidate will be involved in refinement of regional controlled vocabularies, API re-development, assisting state water resource agency staff with installation of updates, and monitoring performance and maintenance of the system. Other knowledge, skills, and abilities are as follows:

- Identify data formats and understand how current state data are reported (via websites and reports). Documentation, retrieval, and maintenance of state agency water data (including maps and GIS data) for WSWC-hosted state “nodes”.

- Use GitHub and SwaggerHub for system/code maintenance, documentation, and API definition development.
- Familiarity with Extensible Mark-up Language (XML), Water Mark-up Language (WaterML) and other data-transfer standards.
- Work with other collaborative data-sharing interests including CUAHSI, Internet of Water, USGS, the Open Geospatial Consortium (OGC), and the Open Water Data Initiative (OWDI) on data-transfer standards setting and greater interoperability between platforms
- Familiarity with cloud-based platforms and computing, including application load balancing, performance monitoring, and usage/performance metric.
- Create data visualization applications based on WaDE web services using R, Plotly, Tableau, Qlik, or other software.

Preferred Qualifications:

- Bachelor of Science degree from an accredited college with a computer science degree or natural resources related degree (with computer/data science emphasis)
- One to two years of experience as a data developer or technician, or equivalent combination of education and experience
- Proficiency with a subset of the following: GitHub, SwaggerHub, PostgreSQL, MSSQL, SQL/pgSQL scripting, PHP, XML, ArcGIS, ArcGIS Online, QGIS, R, Shiny, JavaScript, C++, Python, HTML, Leaflet, Wordpress, cloud application deployment, and server/web server configuration
- Excellent analytical, verbal, and written communication skills
- Familiarity with western water law and policy issues
- Ability to organize and oversee both in-person and webinar-based technical development meetings
- Travel is required, approximately once every 2-3 months.

Compensation:

- Rate of pay is \$50,000 - \$65,000 annually depending on experience. This is a full-time position with benefits that include:
- Paid time off allowance (8.5 hours/month)
- Paid sick leave (8.67 hours/month)
- Generous holiday policy (12 observed holidays a year)
- Group health, dental, life, long-term healthcare, and disability insurance

To apply: Send a cover letter and resume/CV to

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 Western States Water Council
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