

Job Title: Lead Geospatial Hydrologist/Geomorphologist

Location: Seattle, WA (possible remote option)

Employment Type: Full-time

About Us

TealWaters provides a breakthrough solution for mapping and modeling wetlands and quantifying their benefits to society. Our interactive visual platform -- using topographic and satellite imagery, hydrology, and machine learning -- will empower natural resource managers, from the neighborhood to continent-scale, govern and restore wetlands as nature-based solutions. Our collaborative work with local and sovereign governments, the private sector, and mission-driven organizations provides decision support for aquatic ecosystem management, ranging from flood protection and water quality enhancement to carbon storage and biodiversity conservation.

We're a fast-paced, mission-driven science start-up—born out of the National Science Foundation's Convergence Accelerator program in 2024—that blends the creativity of academic research with the urgency of solving real-world problems. Our team is interdisciplinary, collaborative, and ambitious. We thrive on problem-solving, rapid iteration, and turning cutting-edge science into tools that make a tangible difference for people and the planet.

Position Overview

We seek a driven and creative scientist with a passion for using quantitative analytics to understand landscape dynamics and apply insight to create practical, scalable tools. The ideal candidate is excited to work as a member of an adaptive, user-focused team, grounded in decades of academic research, and committed to responsive, action-oriented problem solving.

The Lead Geospatial Hydrologist/Geomorphologist position will contribute to the development of advanced tools and models that integrate hydrology, geomorphology, and remote sensing. We offer an exciting opportunity to collaborate on groundbreaking projects aimed at unraveling the complexities of Earth systems, with a particular focus on mapping and modeling wetland landscapes and their functions.

This role is ideal for someone who thrives at the intersection of scientific curiosity, computational innovation, and real-world applications - and who is excited to grow with an emerging organization that values both rigor and real-world impact.

Key Responsibilities

- Lead the Science Team in planning work flows that keep deliverables on time and on budget.
 - Design and test algorithms for geospatial data analysis, drawing on physics-based principles of geomorphology and hydrology coupled with robust statistics.
 - Develop and refine geospatial tools and models to define a watershed context for wetlands, focusing on wetland and channel network dynamics and interactions.
 - Conduct terrain and flow modeling using LiDAR, DEMs, and advanced hydrologic principles.
 - Collaborate with interdisciplinary teams to integrate geospatial insights into decision-support tools for conservation and restoration.
 - Work on the development of open-source or proprietary geospatial tools, inspired by state-of-the-art platforms such as NetMap or Whitebox Tools.
 - Engage in fieldwork as needed to ground-truth models and validate findings.
 - Communicate results through technical documentation, reports, and presentations.
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Qualifications

Required:

- 3-5 years of experience designing and testing algorithms for geospatial data analysis.
- Demonstrated skills in leading teams to plan and execute work flows.
- Master's degree (M.S.) or higher in hydrology, geomorphology, geology, environmental science, civil/environmental engineering, or a closely related field.
- Strong experience with geospatial analysis.
- Proficiency in programming languages such as Python or R, for geospatial applications and numerical problem solving.
- Familiarity with GIS platforms such as QGIS, ArcGIS, or related tools.
- Strong curiosity and motivation to apply scientific principles to solve practical environmental problems.
- Effective communication skills for technical and non-technical audiences.
- Enthusiasm and capacity for working in the context of an emerging organization, which requires clear communication around work agreements, adaptability, and a collaborative work ethic.

Preferred:

- Field experience with environmental data collection and hydrologic measurements.
- Knowledge of wetland ecology or ecosystem services.
- Passion for interdisciplinary collaboration and real-world problem-solving.
- Statistics background or experience.
- Experience with machine-learning workflows and data analysis.

- Design and implement algorithms for numerical problem-solving, developing efficient code in low-level languages, and integrating the results into Python and R packages.
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What We Offer

- An opportunity to work at the leading edge of wetland science and landscape dynamics.
 - For early-career scientists, mentorship from experienced scientists and practitioners in geospatial tool development and user-centered research
 - For early and mid-career and senior scientists, an opportunity to help shape a new organization and body of research
 - Opportunities for professional development and collaboration with a dynamic, interdisciplinary team
 - Salary: \$100,000 – \$115,000 per year, with promotion potential based on performance.
 - Health & Wellness: Annual health stipend provided to support medical, dental, or vision insurance coverage.
 - Time Off: Paid time off (vacation, personal days, and sick leave) plus paid holidays. Specific accrual rates and holiday schedule will be provided during the hiring process.
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How to Apply

If you're inspired by applied science that improves understanding and protection of natural and working lands, we want to hear from you! Please send your resume, cover letter, and any relevant project information in a single pdf to meghan@tealwaters.com. Please use the following file name format for the pdf: [last name]_TWapp_[date]. Applications will be reviewed on a rolling basis until the position is filled.