



Seeking postdoctoral and post-master's applicants for the Wisconsin Water Resources Science-Policy Fellowship with a focus on groundwater-surface water interactions

Project focused on groundwater-surface water interactions

Application Deadline: April 14, 2019

The University of Wisconsin Water Resources Institute (WRI) in partnership with the Wisconsin Department of Natural Resources (WDNR) seeks postdoctoral and post-master's candidates interested in tackling science and policy challenges related to water resources management in Wisconsin. Together, these programs will fund a Wisconsin Water Resources Science-Policy Fellow position. This fellowship will provide a unique educational and career opportunity for recent graduates who are interested both in aquatic resources and in the policy decisions affecting those resources in Wisconsin. This program places a recent master's or doctoral graduate within a state program full-time for one year, with the Fellow bringing technical skills to benefit water issues and challenges and receiving valuable real-world science-policy experience from the resource professionals who will serve as mentors. This mutually beneficial partnership will result in advancing science to support policy decisions as well as valuable training opportunities for new professionals entering the work force.

The Fellow will be placed at the Wisconsin Department of Natural Resources - Drinking Water and Groundwater Bureau office in downtown Madison and will be working with researchers from across the state and region in addition to stakeholders and policy-makers in Wisconsin. WDNR has identified the following priority area in which we are seeking assistance. The qualified Fellow would work on the following project:

Determining significant reductions in average seasonal water levels for lakes in the Central Sands region of Wisconsin – (Drinking Water and Groundwater Bureau, WDNR)

The Water Resources Institute at the University of Wisconsin and the Wisconsin Department of Natural Resources Drinking Water and Groundwater Program are seeking a fellow with a background in quantitative ecology, biology, hydrology, limnology, aquatic ecology, or a related field to help quantify the relationship between groundwater withdrawals and surface water in the state of Wisconsin, focusing on how groundwater quantity variation impacts fish and aquatic life, water quality, and recreation and navigation in surface water bodies. The fellow will support the Wisconsin Department of Natural Resources' efforts to complete the Central Sands Lakes Study, as well as help refine the Department's approach toward environmental review of high capacity wells.

Wisconsin 2017 Act 10 requires the Wisconsin Department of Natural Resources to complete a 3-year study ("Central Sands Lake Study") that investigates the potential for groundwater withdrawal-related impacts to Pleasant, Plainfield, and Long Lakes. The lakes are located primarily in Waushara County in Wisconsin's Central Sands region. The study will include data collection, analysis, hydrologic modeling, a field study, and a significant impact determination for each of the three lakes. If significant impacts from groundwater withdrawals are identified, the department will evaluate special measures to address predicted impacts, complete an economic impact analysis, compile a decision document for public hearing and comment, and create final reports and recommendations for submission to the Wisconsin Legislature.

The fellow will work as part of a team to integrate data assessments from each lake into the larger process to determine significant thresholds for fish and aquatic life, water quality, and recreation and navigation in the three lakes. These thresholds will then be compared to groundwater flow model results to determine whether groundwater withdrawals are causing, or are likely to cause, a significant reduction in lake levels. The fellow will also help with drafting the final report and recommendations to the Legislature. More information about the project can be found at <https://dnr.wi.gov/topic/Wells/HighCap/CSLStudy.html>.

The fellow will also review and refine existing tools and technical analyses on groundwater drawdowns from proposed high capacity wells and help translate the approach developed for the Central Sands Lake Study to other parts of the state to fulfill requirements prescribed in Wis. Stat. 281.34 and Wis. Admin. Code NR 820. The fellow will help streamline the current environmental review process for new high capacity well applications by improving existing tools or developing new tools for a scientifically-defensible, timely assessment of groundwater pumping impacts on surface water bodies.

Additional information

More detail on the fellowship is below. If you have any questions, please contact: Jennifer Hauxwell at jennifer.hauxwell@aqua.wisc.edu or (608) 263-4756.

Eligibility

Any student or postgraduate who will have graduated between spring 2018 and summer 2019 with a degree in quantitative ecology, biology, hydrology, limnology, aquatic ecology, or a related field is eligible to apply. Fellows must have completed all degree requirements before starting the fellowship.

Stipend and Expenses

Annual stipends are dependent on the Fellow's academic background, with post master's Fellows earning \$40,000 and postdoctoral Fellows earning \$55,000, both with additional benefits (see - <http://www.ohr.wisc.edu/benefits/new-emp/grad.aspx>). Fellows will be allotted up to \$2,000 to cover fellowship-related travel and can include conferences. Additional travel associated with the fellowship may be covered by the host agency at the agency's discretion.

Application Requirements

Application packages should be sent to jennifer.hauxwell@aqua.wisc.edu at the University of Wisconsin Water Resources Institute and should include:

1. A cover letter that describes your background and abilities, your expectations from the fellowship experience and how this experience fits with your career goals. (2 pages or fewer)
2. Curriculum vitae with relevant educational, professional and volunteer experience. (no length limit)
3. Copies of undergraduate and graduate student transcripts. Scanned copies are acceptable.
4. Two letters of recommendation, including one from the applicant's major professor; if no major professor exists, another faculty member at the same institution, familiar with your academic record, may be substituted. References should email letters directly to jennifer.hauxwell@aqua.wisc.edu.
5. Up to 4 writing samples, both formal and informal (e.g., journal articles or other technical documents, popular articles, web resources, etc.)

Please use the naming convention "Last name – description of file" for all files associated with the application (e.g. "Smith – cover letter", "Smith – cv", "Smith – transcripts", etc.).

Selection Process

WRI and WDNR staff will identify a short list of candidates for interviews. Interviews will be conducted by a panel of WRI and WDNR staff members to determine the best fit for the position. It is expected that applicants will possess a strong aquatic sciences and/or modeling background, strong analytical skills, an ability to manage projects and work independently, and excellent written and verbal communication skills.

Length of Assignment

The length of assignment is one year with an anticipated start of June 2019. This timeline may be adjusted to accommodate academic semester needs or the needs of the candidates or funding institutions.

Timeline

April 14, 2019 – Deadline for submission of applications / Late April/early May – Interviews / June 2019 (approx.) – Fellowship begins