



## **Postdoctoral Associate Position Description**

### **Water Dynamics in the Global Change Intersectoral Modeling System (GCIMS)**

#### **Summary**

The University of Maryland (UMD) invites applications for a postdoctoral associate position focused on contributing to the Global Change Intersectoral Modeling System (GCIMS) Scientific Focus Area (SFA) (<https://gcims.pnnl.gov/>), sponsored by the U.S. Department of Energy. Broadly, the project will focus on understanding the complex interactions among energy, water, land, socioeconomics, climate, and other important human and natural systems at regional to global scales. The postdoc will focus specifically on enhancing the representation of water dynamics in GCIMS, and contributing to scientific experiments that explore challenges and opportunities for the human system's responses to evolving environmental influences such as droughts.

The postdoc will work under the direct supervision of Dr. Thomas Wild (<http://blog.umd.edu/wildgroup/>), Assistant Research Professor at the Earth System Science Interdisciplinary Center. However, the postdoc will be part of an interdisciplinary, multi-institutional research team (<https://gcims.pnnl.gov/gcims-team>), led by the Pacific Northwest National Laboratory. This position will include a competitive salary and benefits. The position is available as early as October 2020.

#### **Research Details**

The postdoc will contribute to developing water-related aspects of the GCIMS framework by enhancing representations of supply-side and demand-side processes and technologies. These enhancements, which will focus on the Global Change Analysis Model (GCAM) and its suite of interconnected tools, will span renewable groundwater, lakes, water reuse, irrigation technology, and reservoirs. Particular emphasis will be placed on developing an integrated accounting framework in GCAM that balances monthly water supply and demand by including reservoirs and their operations in each water basin globally. This research will benefit from creating and exploring linkages across multiple models that cut across different spatiotemporal scales and processes.

#### **Desired Qualifications**

Background in one of the following disciplines is highly desirable: hydrology/water resources systems, systems analysis, and/or applied economics. Preference will be given to candidates who possess strong computational skills, with programming experience in R, Python, C/C++, or similar languages. Successful candidates are expected to be highly motivated, have strong communication skills in oral and written English, and work effectively as part of a multidisciplinary team.

#### **To Apply**

Send Dr. Thomas B. Wild ([twild@umd.edu](mailto:twild@umd.edu)) a cover letter, CV, and the contact information for 2-3 professional references.