



PhD Positions in Li Reactive Water Group, Penn State, @LiReactiveWater.bsky.social

Li Reactive Water Group (<https://lireactivewater.wixsite.com/group>) at Penn State University is recruiting PhD students for Fall 2026 admission. We are looking for motivated students who are curious and interested in resolving pressing water challenges that our society faces today. Our research questions focus broadly on understanding and predicting water quantity and quality in a changing climate including climate extremes (e.g., droughts, floods, heatwaves) and human perturbation (e.g., urbanization, agriculture). We have multiple collaborative, interdisciplinary projects in field sites with contrasting climate, vegetation, geology, and human perturbations. These watersheds span from high-elevation Rocky Mountain sites (Coal Creek, Colorado; Sagehen River, Nevada), to pacific northwestern Cascades (HJ Andrews, Oregon), to northeastern (Sleepers River, Vermont), to tall grass prairie in Midwest (Konza Prairie, Kansas). We use a combination of field work and process-based reactive transport modeling to understand processes, and machine learning / deep learning tools for identifying trends and patterns from regional to global scales.

Students will work in interdisciplinary, collaborative, and diverse teams from multiple universities. We travel to field sites and help collect data with our collaborators in the summer. Students are encouraged to skim through our publications in recent years on [Google Scholar](#).

Students with a bachelor's or master's degree from earth and environmental sciences (e.g., hydrology, biogeochemistry, ecology), engineering, and related fields are encouraged to apply. We're dedicated to creating an inclusive and supportive group culture. We welcome applicants with computational, GIS, or statistics skills but these skills are not required. What matters most is an inquisitive mind, along with a thirst to learn and grow.

Interested students are encouraged to contact Prof. Li Li (with resume and transcripts) at lili@engr.psu.edu. State College, Pennsylvania, known as Happy Valley, has long been rated as [one of the best places to live in the United States](#).

Please feel free to apply [here](#) directly to the **Environmental Engineering** program and mention Prof. Li as a potential advisor in your research statement. Review application materials will start in early January 2026.

Example publications:

1. Stewart et al., 2024. [Illuminating the “invisible”: substantial deep respiration and lateral export of dissolved carbon from beneath Soil](#). *Water Resources Research*.
2. Zhi et al., 2023. [Widespread deoxygenation in warming rivers](#). *Nature Climate Change*.
3. Sadayappan and Li, 2025. [Riverine heat waves on the rise, outpacing air heat waves](#). Proceedings of National Academy of Sciences.
4. Li et al., 2024. [River water quality shaped by land-river connectivity in a changing climate](#). *Nature Climate Change*.

"Somewhere, something incredible is waiting to be known." - Carl Sagan, and "The most important thing is to never stop questioning." - Neil deGrasse Tyson.