Lauren M. Thatch, PE

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PROFESSIONAL EXPERIENCE

US Bureau of Reclamation, Technical Service Center, Water Resources Intern, Lakewood, C0 — 2017-Present

- Assisted with the expansion of the CalSim model into the Tulare Basin. Compiled water management and delivery data in the Tulare region and developed hydrologic model inputs for precipitation, evapotranspiration, and crop demands.
- Assisted with the St. Marys and Milk River Basin Study update, including VIC and IHACRES model developments and multi-parameter calibrations.

Northgate Environmental Management, Senior Staff Engineer, Oakland, CA — 2014-2015

- Prepared environmental monitoring work plans, cost estimates, data evaluations, and final monitoring reports, ensuring compliance with all Federal, State and Local requirements.
- Performed start-up, testing, and maintenance of soil vapor extraction and groundwater treatment systems.

AMEC Environment & Infrastructure Inc., Staff Engineer, Sacramento, CA — 2010-2014

- Provided onsite engineering and oversight, including critical decisions regarding treatment system operations / shutdowns. Managed site personnel and temporary contractors while ensuring that system design modifications were completed to design specifications.
- Prepared technical and regulatory reports.
- Analyzed and collected water quality, biological monitoring, stormwater, and sediment compliance samples and data.
- Provided maintenance and field oversight for a tidal wetlands restoration project, including groundwater supply and monitoring well testing.

US Army Corps of Engineers, Hydraulics and Water Resources Dept, Intern, Seattle, WA — 2009-2010

- Utilized GIS and HEC-RAS to model river channel and sandbar movement for flood control evaluation.

EDUCATION

PhD in Hydrologic Science and Engineering (in progress), Colorado School of Mines, Golden, CO - WA — 2018-Present

MS in Hydrologic Science and Engineering, Colorado School of Mines, Golden, CO — 2016-2018

BS in Civil Engineering, University of Washington, Seattle, WA — 2006-2010

TECHNICAL SKILLS

Hydrologic Modeling: ParFlow-CLM, MODFLOW, VIC, SAC-SMA, HEC-RAS/HMS

Languages: R, Python (including scikit-learn), Matlab, NCL, Fortran

PUBLICATIONS

Thatch, L. M., Gilbert, J. M., & Maxwell, R. M. (2020). Integrated hydrologic modeling to untangle the impacts of water management during drought. Groundwater, 58(3), 377-391.

Thatch, L. M., Condon L., Gilbert, J. M. & Maxwell, R. M. (Under Review). Remotely estimating groundwater pumping and irrigation: a synthesis approach using GRACE and integrated hydrologic modeling.

GRANTS

NSF Grant 1805160, *Integrated hydrologic modeling of tradeoffs between food and hydropower in large scale Chinese and US basins*. P.I. Reed Maxwell. Helped write and prepare this successful NSF Grant which has funded my PhD

VOLUNTEER WORK

Adventure Scientists, American Prairie Reserve, 2016

PROFESSIONAL REGISTRATION

Professional Engineer, Civil Engineering, California, No. C81615

HOBBIES

Skiing, mountain biking, climbing, handstand attempting, ‘good’ science fiction