

Casey Gierke
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PROFESSIONAL EXPERIENCE

Hydrogeologist

(January 2013-Present)

Lee Wilson & Associates, Albuquerque, NM
Wetland hydrology monitoring and restoration, attended Natural Channel Design and Techniques for Restoration workshop in Valles Caldera in 2015, GIS analysis and map production of water table, bottom of aquifer, saturated thickness, contaminant level contour maps, assessment of historic irrigated acreage, depth to water measurements, stream gaging, monitoring design and implementation, well site location and drilling oversight, database creation and management, Python and R scripting for data processing and visualization, run MODFLOW models, litigation support, draft water rights leases and state engineer permits.

Research Assistant

(September 2010-August 2012)

New Mexico Bureau of Geology, Socorro, NM
Organization and design of a field campaign to determine tree water sources, management of grant-in-aid budget, cryogenic vacuum distillations of twig and soil water, operation and maintenance of a Picarro Cavity Ring-Down Spectrometer and construction and deployment of sap flow sensors.

Teaching Assistant

(August 2011-December 2011)

New Mexico Tech (NMT), Socorro, NM.
Creation, revision and logistic planning of labs for "Hydrology Theory and Field Methods." Labs included: Hele-Shaw saltwater intrusion models, aquifer surface surveying, stream gauging, slug tests, solute breakthrough curves, vadose zone infiltration and matric potential assessments.

English Teacher/ Translator

(February 2008-May 2011)

Blue Bell Idiomas, Belo Horizonte, Brazil
Planning and preparing one-on-one language classes catered toward professional interests as well as specific certifications. Translation of travel magazine from Portuguese to English for web publication.

English Teacher

(July 2008-November 2008)

Chilean Ministry of Education, Puerto Natales, Chile
Planning and conducting English as Second Language (ESL) classes in a public primary school for grades 3-8. Average class size was 15-20 students. Course work was developed based on age and interest and conducted largely in Spanish.

EDUCATION

MS Hydrology

2012

New Mexico Tech, Socorro, NM

GPA: 3.76

Thesis title: "Sourcing Tree Water in the Sacramento Mountains of New Mexico: A Stable Isotope Study."

This study was part of the Sacramento Mountain Watershed Study, a project aimed to assess the effects of tree thinning on aquifer recharge. My role was to analyze the stable isotopes of tree water samples and match results to samples from possible sources. This information was used to determine if trees use water stored in soils or aquifers in order to understand how they interact with the hydrologic system and if their removal could result in increased groundwater recharge.

BA (Liberal Arts with emphasis in Asian Studies)

2005

University of Montana, Missoula, MT

GPA: 3.77

Minor in Media Arts

Semester Abroad at Sophia University, Tokyo, Japan 2003

Semester Abroad at PUC, Belo Horizonte, Brazil 2010

CONFERENCE PRESENTATIONS

Taos Pueblo Water Administration Office Summit; (December 2014)

Oral presentations

American Geophysical Union Fall Meeting; (December 2014/12)

Poster presentation

Geologic Society of America Rocky Mountain Meeting; (May 2012)

Oral presentation

New Mexico Geologic Society Spring Meeting; (April 2012)

Oral presentation

Geologic Society of America Fall Meeting; (October 2011)

Poster presentation

SCHOLARSHIPS & AWARDS

Honorable Mention: Best Graduate Oral Presentation (May 2012)

Judging panel

Graduate Student Association Travel Scholarship (October 2011)

Student reviewed proposal

New Mexico Geologic Society Grant-in-Aid (March 2011)

Committee reviewed proposal

COMPUTER SKILLS

Python, R, MySQL, Microsoft Office Suite, Adobe Illustrator, MATLAB.

LANGUAGE SKILLS

Fluent in English, Spanish and Portuguese. Intermediate Japanese.