Jason Fisher

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Availability

- Job Type: Permanent
- Work Schedule: Full-time

Work Experience

- Hydrologist U.S. Geological Survey (This is a federal job) 1973 Helen Rd. Pleasant Hill, CA 10/2008 - Present Hours per week: 40 Series: 1315 Hydrology Pay Plan: GS - General Schedule (Ch. 51, 5 U.S.C.). Grade: 13 Duties, Accomplishments and Related Skills: As a Hydrologist, key duties include leading complex hydrologic studies, analyzing hydrologic data, and developing innovative methodologies to address water resource challenges. I serve as the lead modeler for the Idaho National Laboratory Project Office and hold a lead role in the Python and R Tools group of the AQUARIUS Samples Integration Project, where I supervise a team of programmers. Significant accomplishments include publishing scientific reports and software releases. Essential skills involve advanced data analysis, cross-disciplinary knowledge, and strong communication, all crucial for effective project execution and stakeholder engagement. Supervisor: Brian Twining (208-526-2540) Okay to contact this Supervisor: Yes
- Project Scientist University of California, Merced 5200 North Lake Rd. Merced, CA 1/2007 - 1/2008 Hours per week: 40 Duties, Accomplishments and Related Skills: Research and lecturing duties within the School of Engineering. Supervisor: Dr. Thomas Harmon (209-228-4400) Okay to contact this Supervisor: Yes
- Postdoctoral Scholar University of California, Merced 5200 Lake Rd. Merced, CA 1/2004 - 1/2007 Hours per week: 40 Duties, Accomplishments and Related Skills: Research and lecturing duties within the Civil and Environmental Engineering Department. Supervisor: Dr. Thomas Harmon (209-228-4400) Okay to contact this Supervisor: Yes
- Graduate Research Assistant University of California, Los Angeles 405 Hilgard Avenue Los Angeles, CA 1/2002 - 1/2004 Hours per week: 20 Duties, Accomplishments and Related Skills: Research duties within the Department of Civil and Environmental Engineering.
- Teaching Assistant University of California, Los Angeles 405 Hilgard Avenue Los Angeles, CA 4/2001 - 1/2002 Hours per week: 20 Duties, Accomplishments and Related Skills: Provided support and guidance to students in the Department of Civil and Environmental Engineering.
- Computer Programmer U.S. Forest Service (This is a federal job) 1700 Bayview Drive Arcata, CA 4/2000 - 4/2001 Hours per week: 20 Series: 0334 Computer Specialist (FAA Only) Pay Plan: GS - General Schedule (Ch. 51, 5 U.S.C.). This is a time-limited appointment or temporary promotion Duties, Accomplishments and Related Skills: Performed data processing tasks for the Redwood Sciences Laboratory.
- Hydrologic Technician U.S. Forest Service (This is a federal job) 1700 Bayview Drive Arcata, CA 5/1997 - 4/2000 Hours per week: 20 Series: 1316 Hydrologic Technician This is a time-limited appointment or

temporary promotion Duties, Accomplishments and Related Skills: Performed data processing tasks for the Redwood Sciences Laboratory.

Education

- University of California, Los Angeles Los Angeles, CA United States Doctorate degree 5 / 2005 Credits Earned: Quarter Hours Major: Civil Engineering
- University of California, Los Angeles Los Angeles, CA United States Master's degree 3 / 2003 Credits Earned: Quarter Hours Major: Civil Engineering
- Humboldt State University Arcata, CA United States Master's degree Credits Earned: Semester Hours Major: Environmental Systems
- Humboldt State University Arcata, CA United States Bachelor's degree 5 / 1998 Credits Earned: Semester Hours Major: Environmental Resources Engineering

Job-Related Training

- Content Management System (CMS) Certification Course, May 2024.
- Configuration, and Release Management Course, February 2024.
- Course of Study in Docker, July 2021.
- Introduction to High Performance Computing (HPC), March 2020.

Professional Publications

- Fisher, J.C., and Twining, B.V., 2024, Multilevel Monitoring System (MLMS) datasets for wells in the U.S. Geological Survey - Idaho National Laboratory groundwater monitoring network: U.S. Geological Survey data release, https://doi.org/10.5066/P144NWLJ.
- Fisher, J.C., and Twining, B.V., 2024, mlms—Multilevel Monitoring System (MLMS) data storage and processing for the U.S. Geological Survey Idaho National Laboratory Project Office: U.S. Geological Survey software release, R package, https://doi.org/10.5066/P9V6VCBO.
- Fisher, J.C., Trcka, A.R., Treinen, K.C., 2024, Datasets for the U.S. Geological Survey - Idaho National Laboratory groundwater and surface-water monitoring networks, v1.1: U.S. Geological Survey data release, https://doi.org/10.5066/P9UWRYR4.
- Fisher, J.C., Trcka, A.R., Treinen, K.C., 2024, inldata—Collection of datasets for the U.S. Geological Survey - Idaho National Laboratory groundwater and surface-water monitoring networks, v1.1: U.S. Geological Survey software release, R package, https://doi.org/10.5066/P9IAKQOR.
- Treinen, K.C., Trcka, A.R., and Fisher, J.C., 2024, An update of hydrologic conditions and distribution of selected constituents in water, eastern Snake River aquifer and perched groundwater zones, Idaho National Laboratory, Idaho, emphasis 2019—21: U.S. Geological Survey Scientific Investigations Report 2023—5128 (DOE/ID-22261), 96 p., https://doi.org/10.3133/sir20235128.
- Fisher, J.C., 2023, webmap—Interactive web maps using The National Map (TNM) services: U.S. Geological Survey software release, R package, Reston, Va., https://doi.org/10.5066/P9CPB1WD.
- Fisher, J.C., 2023, inlcolor—Color palettes for the U.S. Geological Survey Idaho National Laboratory Project Office: U.S. Geological Survey software release, R package, Reston, Va., https://doi.org/10.5066/P93BDACR.
- Fisher, J.C., 2022, inlpubs—Bibliographic information for the U.S. Geological Survey Idaho National Laboratory Project Office: U.S. Geological Survey software release, R package, Reston, Va., https://doi.org/10.5066/P9I3GWWU.
- Twining, B.V., Bartholomay, R.C., Fisher, J.C., and Anderson, C., 2021, Multilevel groundwater monitoring of hydraulic head, water temperature, and chemical constituents in the eastern Snake River Plain aquifer, Idaho National Laboratory, Idaho, 2014—18: U.S. Geological Survey Scientific Investigations Report 2021—5002, 82 p., https://doi.org/10.3133/sir20215002.
- Fisher, J.C., 2021, ObsNetQW—Assessment of a water-quality aquifer monitoring network: U.S. Geological Survey software release, R package, Reston, Va., https://doi.org/10.5066/P9X71CSU.

- Fisher, J.C., Bartholomay, R.C., Rattray, G.W., and Maimer, N.V., 2021, Optimization of the Idaho National Laboratory water-quality aquifer monitoring network, southeastern Idaho: U.S. Geological Survey Scientific Investigations Report 2021-5031 (DOE/ID-22252), 63 p., https://doi.org/10.3133/sir20215031.
- Fisher, J.C., 2020, inldata—Collection of datasets for the U.S. Geological Survey-Idaho National Laboratory Aquifer Monitoring Networks: U.S. Geological Survey software release, R package, Reston, Va., https://doi.org/10.5066/P9PP9UXZ.
- Bartholomay, R.C., Maimer, N.V., Rattray, G.W., and Fisher, J.C., 2020, An update of hydrologic conditions and distribution of selected constituents in water, Eastern Snake River Plain Aquifer and perched groundwater zones, Idaho National Laboratory, Idaho, emphasis 2016—18: U.S. Geological Survey Scientific Investigations Report 2019—5149 (DOE/ID—22251), 82 p., https://doi.org/10.3133/sir20195149.
- Bartholomay, R.C., Maimer, N.V., Rattray, G.W., and Fisher, J.C., 2017, An update of hydrologic conditions and distribution of selected constituents in water, eastern Snake River Plain aquifer and perched groundwater zones, Idaho National Laboratory, Idaho, emphasis 2012-15: U.S. Geological Survey Scientific Investigations Report 2017—5021 (DOE/ID—22242), 87 p., https://doi.org/10.3133/sir20175021.
- Davis, L.C., Bartholomay, R.C., Fisher, J.C., and Maimer, N.V., 2015, Water-quality characteristics and trends for selected wells possibly influenced by wastewater disposal at the Idaho National Laboratory, Idaho, 1981—2012: U.S. Geological Survey Scientific Investigations Report 2015—5003 (DOE/ID—22233), 110 p., https://doi.org/10.3133/sir20155003.
- Twining, B.V., and Fisher, J.C., 2015, Multilevel groundwater monitoring of hydraulic head and temperature in the eastern Snake River Plain aquifer, Idaho National Laboratory, Idaho, 2011-13: U.S. Geological Survey Scientific Investigations Report 2015—5042 (DOE/ID—22235), 49 p., https://doi.org/10.3133/sir20155042.
- Fisher, J.C., 2013, Optimization of water-level monitoring networks in the eastern Snake River Plain aquifer using a kriging-based genetic algorithm method: U.S. Geological Survey Scientific Investigations Report 2013—5120 (DOE/ID—22224), 74 p., https://doi.org/10.3133/sir20135120.
- Bartholomay, R.C., Davis, L.C., Fisher, J.C., Tucker, B.J., and Raben, F.A., 2012, Water-quality characteristics and trends for selected sites at and near the Idaho National Laboratory, Idaho, 1949—2009: U.S. Geological Survey Scientific Investigations Report 2012—5169 (DOE/ID—22219), 68 p. plus appendixes, https://doi.org/10.3133/sir20125169.
- Fisher, J.C., Rousseau, J.P., Bartholomay, R.C, and Rattray, G.W., 2012, A comparison of U.S. Geological Survey three-dimensional model estimates of groundwater source areas and velocities to independently derived estimates, Idaho National Laboratory and vicinity, Idaho: U.S. Geological Survey Scientific Investigations Report 2012—5152 (DOE/ID—22218), 130 p., https://doi.org/10.3133/sir20122152.
- Twining, B.V., and Fisher, J.C., 2012, Multilevel groundwater monitoring of hydraulic head and temperature in the eastern Snake River Plain aquifer, Idaho National Laboratory, Idaho, 2009-10: U.S. Geological Survey Scientific Investigations Report 2012—5259, 44 p. plus appendixes, https://doi.org/10.3133/sir20125259.
- Fisher, J.C. and Twining, B.V., 2011, Multilevel groundwater monitoring of hydraulic head and temperature in the eastern Snake River Plain aquifer, Idaho National Laboratory, Idaho, 2007—08: U.S. Geological Survey Scientific Investigations Report 2010—5253 (DOE/ID—22213), 62p., https://doi.org/10.3133/sir20105253.
- Ackerman, D.J., Rousseau, J.P., Rattray, G.W., and Fisher, J.C., 2010, Steady-state and transient models of groundwater flow and advective transport, eastern Snake River Plain aquifer, Idaho National Laboratory and vicinity, Idaho: U.S. Geological Survey Scientific Investigations Report 2010—5123 (DOE/ID—22209), 220 p., https://doi.org/10.3133/sir20105123.
- Twining, B.V., Fisher, J.C., and Bartholomay, R.C., 2010, Completion summary for well NRF-16 near the Naval Reactors Facility, Idaho National Laboratory, Idaho: U.S. Geological Survey Scientific Investigations Report 2010—5101 (DOE/ID—22210), 36 p., https://doi.org/10.3133/sir20105101.
- Rundel, P.W., Graham, E.A., Allen, M.F., Fisher, J.C., and Harmon, T.C., 2009, Environmental sensor networks in ecological research: New Phytologist, 182(3), p. 589-607, http://dx.doi.org/10.1111/j.1469-

8137.2009.02811.x.

- Goldman, J., Ramanathan, N., Ambrose, R., Caron, D.A., Estrin, D., Fisher, J.C., Gilbert, R., Hansen, M.H., Harmon, T.C., Jay, J., Kaiser, W.J., Sukhatme, G.S., and Tai, Y.-C., 2007, Distributed sensing systems for water quality assessment and management: White Paper published and prepared by the Foresight and Governance Project at the Woodrow Wilson International Center for Scholars, 36 p.
- Harmon, T.C., Ambrose, R.F., Gilbert, R.M., Fisher, J.C., Stealey, M., and Kaiser, W.J., 2007, High resolution river hydraulic and water quality characterization using rapidly deployable networked infomechanical systems (NIMS RD): Environmental Engineering Science, 24(2), p. 151-159, http://dx.doi.org/10.1089/ees.2006.0033.
- Singh, M., Batalin, M., Chen, V., Stealey, M., Jordan, B., Fisher, J.C., Harmon, T.C., Hansen, M.H., and Kaiser, W.J., 2006, Autonomous robotic sensing experiments at San Joaquin River: International Conference on Robotics and Automation (43% acceptance rate), 8 p., http://dx.doi.org/10.1109/ROBOT.2007.364248.
- Fisher, J.C., 2005, A coupled systems approach to solute transport within a heterogeneous vadose zone-groundwater environment: Ph.D. dissertation, University of California, Los Angeles, CA, 91 p.
- Fisher, J.C., 2000, Simulation of partially saturated - saturated flow in the Caspar Creek E-Road groundwater system: M.S. thesis, Humboldt State University, Arcata, CA, 107 p., https://www.treesearch.fs.fed.us/pubs/7765.

Professional Talks

- INL Monitoring and Surveillance Committee Meeting, Idaho Falls, ID, June 22, 2022, Assessing the efficacy and appropriateness of an existing water-quality aquifer monitoring network.
- Technical Architecture Review Board (TARB), May 20, 2022, Application design assessment for the Discrete Sample Extensibility Tools (DSET) project.
- USGS Water Missing Area Seminar Series, Feb. 2, 2022, Assessing the efficacy and appropriateness of an existing water-quality aquifer monitoring network.
- Idaho Water Quality Workshop, Boise, ID, Jan. 27, 2021, Optimization of the Idaho National Laboratory Water-Quality Aquifer Monitoring Network.
- Wood River Valley groundwater-flow model training workshop, organized by the USGS Idaho Water Science Center and the Idaho Department of Water Resources (IDWR), planned and delivered a full-day series of talks for staff scientists. Boise, ID, Oct. 5, 2016.
- R language training, organized by USGS Idaho Water Science Center, planned and delivered a full-day series of talks for staff scientists. Boise, ID, Oct. 4, 2016.
- USGS National Groundwater Workshop, Reno, NV, Aug. 29, 2016, A case study in reproducible model building: simulating groundwater flow in the Wood River Valley aquifer system, Idaho.
- The R User Conference (useR!), Stanford University, Stanford, CA, Jun. 28, 2016, A case study in reproducible model building: simulating groundwater flow in the Wood River Valley aquifer system, Idaho.
- Wood River Valley Modeling Technical Advisory Committee (MTAC) meetings, delivered talks at 14 of the full-day meetings. Hailey, ID, Mar. 2013 through Apr. 2015.
- USGS Office of Groundwater cyber seminar series, Oct. 9, 2014, A path toward reproducible research.
- American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, Dec. 13, 2013, Optimization of water-table monitoring networks in the eastern Snake River Plain aquifer using a kriging-based genetic algorithm method.
- Water Resource Seminar Series, University of Idaho, ID, Sep. 3, 2013, Optimization of water-level monitoring networks in the eastern Snake River Plain aquifer using a kriging-based genetic algorithm method.
- USGS National Water Data Conference, Portland, OR, Sep. 25, 2012, Optimization of water-table monitoring networks in the eastern Snake River Plain aquifer using a kriging-based genetic algorithm method.
- Water Resource Seminar Series, University of Idaho, ID, Sep. 27, 2011, A comparison of USGS 3-D model estimates of groundwater source areas and velocities to independently-derived estimates, INL and vicinity.

- INL Monitoring and Surveillance Committee Meeting, Idaho Falls, ID, May 19, 2011, An evaluation of the USGS 3-D model using backward particle- tracking to compare model-derived to independently-derived estimates of the source and age of groundwater.
- AGU Fall Meeting, San Francisco, CA, Dec. 14, 2010, Multilevel groundwater monitoring of hydraulic head and temperature in the eastern Snake River Plain (ESRP) aquifer, 2007—08.
- Idaho State University (ISU) Department of Geosciences Colloquium, Pocatello, ID, Sep. 29, 2010, Multilevel groundwater monitoring of hydraulic head and temperature in the Eastern Snake River Plain aquifer, 2007 to 2008.
- AGU Fall Meeting, San Francisco, CA, Dec. 15, 2009, Steady-state and transient groundwater flow and advective transport, ESRP aquifer, Idaho National Laboratory and vicinity, Idaho.
- INL Monitoring and Surveillance Committee Meeting, Idaho Falls, ID, Nov. 19, 2009, Steady-state and transient models of groundwater flow and advective transport, Eastern Snake River Plain aquifer, INL and vicinity, Idaho.
- American Water Resources Association (AWRA) Summer Specialty Conference, Missoula, MT, June 28, 2006, Multiscale river hydraulic and water quality observations combining stationary and mobile sensor network nodes.
- AWRA Annual Water Resources Conference, San Diego, CA, Nov. 8, 2003, Modeling of conjunctive use systems impacted by natural sources of groundwater contamination.

Professional Posters

- AGU Fall Meeting, San Francisco, CA, Dec. 19, 2014, wrv: An R package for groundwater flow model construction, Wood River Valley aquifer system, Idaho.
- USGS National Groundwater Workshop, Denver, CO, Aug. 7, 2012, A comparison of model estimates of groundwater source areas and velocities to independently-derived estimates.
- AGU Fall Meeting, San Francisco, CA, Dec. 7, 2011, Comparing model-derived to independently-derived estimates of the source and age of groundwater, Idaho National Laboratory and vicinity, Idaho.
- AGU Fall Meeting, San Francisco, CA, Dec. 10, 2007, The Sierra Nevada-San Joaquin Hydrologic Observatory: a WATERS network test bed.
- AGU Joint Assembly, Baltimore, MD, May 25, 2006, Multiscale river hydraulic and water quality observations combining stationary and mobile sensor network nodes.
- AGU Fall Meeting, San Francisco, CA, Dec. 15, 2004, A coupled systems approach to solute transport within a heterogeneous vadose zone—groundwater environment.
- AGU Chapman Conference on State-of-the-Art in Hillslope Hydrology, Sunriver, OR, Oct. 8, 2001, Simulation of partially saturated—saturated flow in the Caspar Creek E-Road groundwater system.

References

- Brian Twining, U.S. Geological Survey, INL Project Office Chief, 208-526-2540, btwining@usgs.gov
- Katherine Norton, U.S. Geological Survey, Physical Scientist, 360-993-8951, knorton@usgs.gov
- David Rus, U.S. Geological Survey, Lead Hydrologist, 402-328-4127, dlrus@usgs.gov
- Kerri Treinen, U.S. Geological Survey, Hydrologist, 208-387-1330, ktreinen@usgs.gov

Additional Information

- Best groundwater report of 2013 from a USGS Water Science Center for "Optimization of water-level monitoring networks in the eastern Snake River Plain aquifer using a kriging-based genetic algorithm method".
- UCLA Civil and Environmental Engineering departmental fellowship, 2000-01 academic year.
- Engineer-In-Training, FE exam, license number XE104350, issued January 1998.
- R Programming: Strong proficiency in spatial and temporal data analysis, statistical modeling, and visualization.
- JavaScript: Experience in coding and interfacing for web applications and interactive visualizations.
- SQL: Skilled in database management and querying for efficient dataset handling.

- Docker: Proficient in creating and managing containers for reproducible application deployment.
- GitLab Pipelines: Experience with continuous integration and delivery workflows.
- Windows Subsystem for Linux (WSL): Utilized for running Linux tools in a Windows environment.
- Visual Studio Code (VS Code): Proficient user for coding, debugging, and project management.