



University *of* Idaho

Presents:

The Water Directory

Compiled By:



Idaho Water Resources Research Institute

College of Agricultural and Life Sciences

Patrick Hatzenbuehler

Department Agricultural Economics and Rural Sociology
College College of Agriculture and Life Sciences
Campus Twin Falls Research & Extension Center
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Professional Affiliations

Keywords

Water Use in Agriculture and Aquaculture, Water Rights

Professional Interest

Research activities that investigate the crop planting implications of changes in ground and/or surface water availability due to supply and/or demand changes to the water system in Idaho. Related studies on the follow-on effects of such changes on the agricultural and aligned industries.

Robert Heinse

Department Soil and Water Systems
College College of Agriculture and Life Sciences
Campus Moscow
Office phone
Email rheinse@uidaho.edu

Professional Affiliations

Keywords

Hydro geophysics, Vadose Zone Hydrology

Professional Interest

Jodi Johnson-Maynard

Department Soil and Water Systems
College College of Agricultural and Life Sciences
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Office phone 208-885-9245
Email jmaynard@uidaho.edu

Professional Affiliations

Soil Science Society of America, Ecological Society of America

Keywords

Soil management and physical properties, Water infiltration and storage

Professional Interest

I am interested in how soil management influences water infiltration rates and storage. I'm also interested in crop rotations that maximize water use efficiency and the development of climate-friendly cropping systems.

Alexander Karasev

Department Entomology, Plant Pathology, and Nematology
College College of Agricultural and Life Sciences
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Office phone 208-885-2350
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Professional Affiliations

American Phytopathological Society

Keywords

Sustainability Of Crop Production

Professional Interest

Biotic stresses caused by plant pathogens.

Laurel Lynch

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Office phone 970-689-9116
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Professional Affiliations

Ecological Society of America, American Geophysical Union, European Geophysical Union, Soil Ecology Society

Keywords

Watershed Biogeochemistry, Metabolomics

Professional Interest

My background is in ecosystem ecology. My work focuses on how environmental drivers and microbial communities shape the chemistry of dissolved organic carbon as it flows between soil and river systems.

Greg Moller

Department Soil and Water Systems
College College of Agricultural and Life Sciences
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Office phone 208-885-0401
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Professional Affiliations

Water Environment Federation

Keywords

Water Technology, Water Quality, Aquatic Toxicology, Nutrients, Phosphorus,

Professional Interest

Our team focuses on the development of technology innovation for sustainable water systems. Key to our efforts are green chemistry and green engineering approaches. Risk management as well as system resilience and regeneration are drivers in our approach to the grand challenges of clean water.

Jae Ryu

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Office phone 208-332-4402
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Professional Affiliations

American Water Resources Association

Keywords

Sustainable Water Resources Planning and Management, Drought Monitoring And Forecasting, Climate Change and Variability, Hydro Modeling, System Dynamics, Water Quality Monitoring, Remote Sensing, Unmanned Aerial System, STEM Education

Professional Interest

Conjunctive aquifer management along with various management options and technologies, such as water conservation, managed recharge, satellite-based remote sensing, unmanned aerial system (UAS, a.k.a. drone), real-time monitoring is critical to sustain Ag-driven Idaho economy in years to come. Precision agriculture along with efficient irrigation technologies is another avenue to protect water quality standards in Idaho waterways.

Linda Schott

Department Soil and Water Systems
College College of Agricultural and Life Sciences
Campus Twin Falls Research & Extension Center
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Email lschott@uidaho.edu

Professional Affiliations

American Society of Agricultural and Biological Engineers, Soil Science Society of America

Keywords

Water Quality, Soil Health, Cropping Systems, Animal Production Systems, Non-Point Sources

Professional Interest

Linda specializes on addressing the needs of stakeholders in southern Idaho related to the impacts of nutrient and livestock waste management and other land management practices on soil health and water quality.

Olga Walsh

Department Plant Sciences
College College of Agriculture and Life Sciences
Campus Moscow
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Professional Affiliations

Keywords

Irrigation, Precision Water Management, Water Quality, Water Quantity

Professional Interest

Areas of specialization are soil fertility, nutrient management, precision agriculture. I am interested in water/fertilizer interactions and how crops respond to applied nutrients as affected by water. I am interested in evaluating and developing precision irrigation management practices. I am interested in utilizing Unmanned Aerial Vehicles (UAVs) and crop sensors for monitoring soil water and crop moisture status and for using precision ag tools for prescribing irrigation.

College of Letters, Arts and Social Sciences

Ruby Fulton

Department Lionel Hampton School of Music
College College of Letters, Arts and Social Sciences
Campus Moscow

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Professional Affiliations

American Society of Composers, Authors, and Publishers

Keywords

Intersection of Science and The Arts, Sonification

Professional Interest

Interdisciplinary collaboration is intrinsic to my practice as a composer. When arts and science intersect, its possible to find a new way of thinking about how humans interact with the environment, hopefully leading to a more sustainable way of living. I'm currently working on a film and music project centered on changes over time along the Big Creek river basin in the Frank Church River of No Return Wilderness.

Manoj Shrestha

Department Politics and Philosophy
College College of Letters, Arts and Social Sciences
Campus Moscow
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Professional Affiliations

N/A

Keywords

Water Governance Networks, Collaborative Water Management and Policy, Social-Ecological System

Professional Interest

I am interested in the study of water governance and policy networks and the consequences of those networks on outcomes. I apply social network theories and analysis in my research.

Adam M. Sowards

Department History
College College of Letters, Arts and Social Sciences
Campus Moscow
Office phone 208-885-0529
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Professional Affiliations

Keywords

Water History, Water Policy

Professional Interest

I am an environmental historian who focuses on the American West, especially its public lands. Generally, my research and writing has examined how the public and commodity users, scientists and managers, and local and federal policymakers create and contest the public interest in these public lands and waters.

College of Natural Resources

Kenneth Cain

| | |
|---------------------|---|
| Department | Fish and Wildlife Sciences/Aquaculture Research Institute |
| College | College of Natural Resources |
| Campus | Moscow |
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Professional Affiliations

American Fisheries Society - Fish Health Section, World Aquaculture Society, United States Aquaculture Society

Keywords

Fish Health, Aquaculture, Immunology, Water quality, Fisheries Science

Professional Interest

My interests are primarily in the areas of Fish Health and Disease Management and Sustainable Aquaculture. The need for high quality water for use in aquaculture is directly relevant to Water Resources.

Jan Eitel

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| Department | Natural Resources and Society |
| College | College of Natural Resources |
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Professional Affiliations

American Geophysical Union

Keywords

Remote Sensing Of Water Resources

Professional Interest

Remote Sensing Of Water Resources

Tracey Johnson

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College College of Natural Resources
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Professional Affiliations

The Wildlife Society; Society for Range Management

Keywords

Riparian Ecology

Professional Interest

I am interested in ecological services provided by riparian systems, including wildlife habitat, water quality and quantity, and livestock forage.

Timothy E. Link

Department Department of Forest, Rangeland, and Fire Sciences
College College of Natural Resources
Campus Moscow
Office phone 208-885-9465
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Professional Affiliations

American Geophysical Union, International Association of Hydrological Sciences, probably should include Society of American Foresters but don't like paying expensive dues for nothing

Keywords

Forest Hydrology, Climate impacts, Snow hydrology

Professional Interest

Within University of Idaho, it's primarily training students in physical hydrology to go into agency, industry, or non-government organizations positions (or academic positions for PhDs).

Brian Small

Department Fish and Wildlife Sciences
College College of Natural Resources
Campus Hagerman Fish Culture Experiment Station
Office phone 208-837-9096

Email bcsmall@uidaho.edu

Professional Affiliations

American Fisheries Society; World Aquaculture Society; Idaho Aquaculture Association

Keywords

Aquaculture; Fisheries Science; Fish Physiology

Professional Interest

My professional interest in water resources focuses on water utilization, quality and availability affecting aquaculture and fisheries ecology and management.

Chloe Wardropper

Department Natural Resources and Society
College College of Natural Resources
Campus Moscow
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Professional Affiliations

International Association for Society and Natural Resources

Keywords

Human Dimensions of Natural Resources; Watershed Management; Water for Agriculture; Individual and Organizational Decision-Making; Risk Perception

Professional Interest

I study how people and organizations manage water and land under changing conditions.

Frank Wilhelm

Department Fish and Wildlife Sciences
College College of Natural Resources
Campus Moscow
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Professional Affiliations

North American Lakes Management Society, Washington Lakes Protection Association, Society of International Limnologists, Association for the Sciences of Limnology and Oceanography

Keywords

Water Quality Harmful Algae Blooms, Whole-Lake Nutrient Budgets, Wind-generated surface Currents, Macroinvertebrates

Professional Interest

I am interested in understanding the causes of harmful algae blooms and methods to prevent them, hence my interests in whole-lake nutrient budgets and understanding wind-generates surface currents. With roots in invertebrate ecology, I am also interested in their interactions/roles in aquatic ecosystems.

College of Engineering

Amin Mirkouei

| | |
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| Department | Industrial Technology, Mechanical/Biological Engineering |
| College | Engineering |
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Professional Affiliations

N/A

Keywords

Water Treatment, Nutrient Removal, Fish Production

Professional Interest

Annual produced waste (both solid and liquid pollutants) from food-animal and aquaculture industry has a negative impact on surface water and ground water that can pose environmental problems. For example, the wastewater discharged from fish hatcheries can contain uneaten fish food, fish feces, nutrients (especially phosphorus), algae, parasites and pathogens, drugs and other chemicals. To address sustainability challenges in Idaho, we aim to conduct life cycle assessment and input-output analysis to find the major pollution sources and find practical solutions to reduce the environmental emissions, such as blended wood-based biochar that has application in water-nutrient recycling at Fish Farms.

James Moberly

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| Department | Chemical and Materials Engineering |
| College | Engineering |
| Campus | Moscow |
| Office phone | 208-885-7705 |
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Professional Affiliations

Chemical and Materials Engineering

Keywords

Water Treatment, Water Quality, Energy Water Nexus

Professional Interest

Microorganisms catalyze chemical reactions that can produce valuable products for mankind, for instance, they can produce energy (microbial fuel cells), bioplastics, degrade pollutants, transform and harvest metals (biomining), and can be used in resource recovery (biosorption and biotransformation). Microorganisms that breakdown different types of organic pollution can be introduced into areas as a means to clean up contamination. My research focuses on discovering how microorganisms or their bioproducts can be applied to solve engineering and environmental problems, improve human health, and increase accessibility to high-quality water sources.

Andy Tanmer

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| Department | Civil and Environmental Engineering |
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| Office phone | 208-364-6165 |
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Professional Affiliations

Keywords

Rivers, Geomorphology, Channel evolution, Sediment transport, Riparian vegetation

Professional Interest

Improve understanding of the physical river processes that support aquatic and riparian species. This includes calculation of hydrodynamics, prediction of river channel change through time, and impacts of vegetation as a control on hydraulic and sediment conveyance.

Elowyn Yager

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| Department | Civil and Environmental Engineering |
| College | Engineering |
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| Office phone | 208-885-4935 |
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Professional Affiliations

American Geophysical Union

Keywords

Sediment transport Geomorphology Eco hydraulics Post-fire erosion Water quality

Professional Interest

My research focuses on sediment transport, flow hydraulics, and geomorphology. I also study the coupling between physical and ecological processes in river systems.

Office of Research and Economic Development

Alexis Clark

Department Idaho Geological Survey
College Office of Research & Economic Development
Campus Boise
Office phone 208-364-4599
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Professional Affiliations

National Groundwater Association, American Water Resources Association

Keywords

Hydrogeology, Groundwater, Modeling, Water Resources, Water Quality

Professional Interest

Idaho Geological Survey conducts research to support Idaho's water resources related to groundwater supply and water quality.

Alan Kolok

Department Idaho Water Resources Research Institute
College Office of Research & Economic Development
Campus Moscow
Office phone 208-885-5771
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Professional Affiliations

Keywords

Water Quality; Fish as Environmental Sentinels; Citizen Science; Watershed Scale Data Acquisition; Environmental Epidemiology

Professional Interest

My personal research interests focus on the water/food/public health nexus. I am interested in the relationship between land use and water quality, particularly at the basin-wide scale. In this capacity, my interests also focus upon autonomous water quality sensing, including crowdsourced research generated by citizen scientists. I am also intrigued by the prospect of linking land use and watershed geography to the incidence of adverse health outcomes.

Office of the President

Katherine Himes

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Professional Affiliations

American Association of the Advancement of Science, Consortium of University Public Service Organization

Keywords

Water Policy Collaborative Governance, Transboundary Water Cooperation, Foreign Policy, International Development

Professional Interest

The McClure Center currently is co-facilitating Governor Little's Salmon Workgroup. In addition, the McClure Center engages in broad water policy-related research.

College of Science

Jerry P. Fairley

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College Science
Campus Moscow
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Professional Affiliations

American Geophysical Union, Geological Society of America, Sigma Xi, Institute for Andean Studies, International Association of Volcanology and Chemistry of the Earth's Interior

Keywords

Hydrogeology, Geothermal Systems, Geostatistics, Modeling, Monitoring and Characterization

Professional Interest

My research focuses on characterizing and modeling complex, strongly heterogeneous groundwater systems, with particular emphasis on the transport of energy and volatiles (carbon dioxide, water, etc.). I use low-cost methods to collect large, spatially-distributed datasets for geostatistical analysis, and use the resulting data to connect field conditions with quantitative models in a wide variety of groundwater and thermally-driven (e.g., geothermal, nuclear waste disposal) systems.

Jeff Langman

Department Geological Sciences
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Professional Affiliations

American Geophysical Union, Geochemical Society, National Ground Water Association, Geological Society of America, International Mine Water Association

Keywords

Hydro Geochemistry, Water Quality, Mine Water, Metal Mobility, Isotope Tracers

Professional Interest

Thomas Ptak

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Professional Affiliations

Keywords

Energy-Water Nexus, Irrigation Modernization

Professional Interest

Research, teaching, outreach

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