

Speaker Biographies

Mike McVay, P.G.

Mike McVay is a Technical Hydrogeologist at the Idaho Department of Water Resources. He earned a Bachelor's of Science in Geologic Engineering and a Master's of Science in Hydrology from the University of Idaho. Mike is currently employed at the Idaho Department of Water resources and specializes in aquifer characterization and groundwater modeling. Mike is also registered as both a professional geologist and a professional engineer in the State of Idaho.

Qualifications

- Bachelor of Science degree in Geologic Engineering – University of Idaho, 2003.
- Employed as Environmental/Geological Engineer in Wyoming, 2003-2004.
- Masters of Science degree in Hydrology – University of Idaho, 2007.
- Employed as Hydrogeologist/Civil Engineer at the Idaho Department of Environmental Quality, 2006-2008.
- Employed as a Hydrogeologist/Civil Engineer at the Idaho Department of Water Resources, 2008-present.
- Registered Professional Geologist in the State of Idaho.
- Registered Professional Engineer in the State of Idaho.

Tonia Spiker Mitchell, P.G.

Tonia has been an environmental hydrogeologist at DEQ since 1998. She has managed the Nitrate Priority Area Delineation and Ranking Process since 2001 and has been heavily involved with ground water quality evaluations related to nutrients and inorganic constituents. She has also been heavily involved with agency coordination in regards to managed recharge, mining point of compliance development, guidance preparation, and negotiated rulemaking. Prior to DEQ Tonia has worked for 15 years in the private sector, and other government agencies in the fields of geotechnical engineering, environmental compliance, GIS, mine planning, operation and reclamation. Tonia has a Bachelor of Science in Geology from Boise State University and 28 graduate level credits with an emphasis on Hydrogeology. Tonia is a registered Professional Geologist in Idaho.

Jeff Fromm, Ph.D.

Jeff Fromm, Ph.D. has an educational background in biology, environmental toxicology, biochemistry and ecology. He has been with DEQ for twenty-one years, providing toxicological support to the agency and specializing in the evaluation of exposure to chemical and radiological contaminants for both ecological and human health risk assessment. He also serves frequently as a liaison to the IDHW Division of Health, reviewing and providing assistance with health consultations and public health assessments, and serving on advisory committees such as the Cancer Cluster Analysis Work Group and the Idaho Fish Consumption Advisory Program committee. Previously he has worked for the U.S. EPA and taught a variety of college courses in

the biological sciences as a faculty member at Washburn University and the University of Kansas.

David L. Bjorneberg, Ph.D.

Supervisory Research Agricultural Engineer
USDA ARS Northwest Irrigation and Soils Research Laboratory - Kimberly, ID

Responsible for planning and conducting research with a team of scientists to develop practices and technologies that address production and environmental problems associated with irrigated crop and dairy production.

Education:

- South Dakota State University, Brookings, SD. B.S. Agricultural Engineering. 1987.
- South Dakota State University, Brookings, SD. M.S. Agricultural Engineering. 1989.
- Iowa State University, Ames, IA. PhD. Agricultural & Biosystems Engineering. 1995.

Experience:

- 2008-present: Supervisory Research Agricultural Engineer, USDA-ARS, Northwest Irrigation and Soils Research Laboratory, Kimberly, ID.
- 1995-2008: Research Agricultural Engineer, USDA-ARS, Northwest Irrigation and Soils Research Laboratory, Kimberly, ID.

Grants Received:

- Upper Snake-Rock watershed assessment study. NRCS funded CEAP Special Emphasis Watershed. \$282,000. 2004 to 2008.
- Net groundwater use on southern Idaho dairies. Independent Dairy Environmental Action League. \$243,000. 2008 to 2010.
- Quantify Potential nitrate leaching to groundwater from agriculture in southern Idaho. Independent Dairy Environmental Action League and Idaho Department of Environmental Quality. \$307,500. 2013 to 2016.

Publications (last 5 years):

1. Bjorneberg, D.L., A.B. Leytem, J.A. Ippolito, and A.C. Koehn. 2014. Phosphorus losses from an irrigated watershed in the northwestern U.S: Case study of the Upper Snake Rock Watershed. (in press)
2. Bjorneberg, D.L. and King, B.A. 2014. Groundwater use on southern Idaho dairies. Applied Engineering in Agriculture 30:41-45.
3. King, B.A., Winward, T.W., and Bjorneberg, D.L. 2014. Comparison of drop size and velocity measurements by a laser precipitation meter and low-speed photography for an agriculture sprinkler. Applied Engineering in Agriculture 30:413-421.
4. Leytem, A.B., Dungan, R.S., Bjorneberg, D.L., and Koehn, A.C. 2013. Greenhouse gas and ammonia emissions from an open-freestall dairy in Southern Idaho. Journal of Environmental Quality 42:10-20.

5. 55. Koehn, A.C., Leytem, A.B., and Bjorneberg, D.L. 2013. Comparison of atmospheric stability methods for calculating ammonia and methane emission rates with WindTrax. *Transactions of the ASABE* 56:763-768.
6. King, B.A. and Bjorneberg, D.L. 2012. Droplet kinetic energy of moving spray-plate center-pivot irrigation sprinklers. *Transactions of the ASABE*. 55:505-512.
7. King, B.A. and Bjorneberg, D.L. 2012. Transient soil surface sealing and infiltration model for bare soil under droplet impact. *Transactions of the ASABE* 55:937-945.
8. Tarkalson, D.D., King, B.A., Bjorneberg, D.L., and Taberna, J.P. 2012. Effects of planting configuration and in-row plant spacing on photosynthetic active radiation. *Potato Research* 55:41-58.
9. Dukes, M.D., Bjorneberg, D.L., and Klocke, N.L. 2012. Advances in irrigation: Select works from 2010 Decennial Irrigation Symposium. *Transactions of the ASABE* 55:477-482.
10. Tarkalson, D.D., Bjorneberg, D.L., and Moore, A. 2012. Effects of tillage system and nitrogen supply on sugar beet production. *Journal of Sugar Beet Research* 49:79-102.
11. Dungan, R.S., Leytem, A.B. and Bjorneberg, D.L. 2011. Concentrations of airborne endotoxin and microorganisms at a 10,000 cow open-freestall dairy. *Journal of Animal Science* 89:3300-3309.
12. Dungan, R.D., Bjorneberg, D.L., and Leytem, A.B. 2011. Effect of sprinkler pressure and spray plate on culturable microorganism concentrations during simulated irrigation of dairy wastewater. *Transactions of the ASABE* 54:1669-1673.
13. King, B.A. and Bjorneberg, D.L. 2011. Evaluation of potential runoff and erosion of four center pivot irrigation sprinklers. *Applied Engineering in Agriculture* 27:75-85.
14. King, B.A., Tarkalson, D.D., Bjorneberg, D.L., and Taberna, J.P. 2011. Planting system effect on yield response of Russet Norkotah to irrigation and nitrogen under high intensity sprinkler irrigation. *American Journal of Potato Research* 88:121-134.
15. Tarkalson, D.D., Brown, B., Bjorneberg, D.L. 2010. Small Grain Residue Management Effects on Soil Organic Carbon - A Literature Review. *Agronomy Journal* 1:247-252.
16. Leytem, A.B., Dungan, R.S., Bjorneberg, D.L., and Koehn, A.C. 2010. Emissions of ammonia, methane, carbon dioxide, and nitrous oxide from dairy cattle housing and manure management systems. *Journal of Environmental Quality* doi:10.2134/jeq2009.0515.
17. Leytem, A.B., Dungan, R.S., and Bjorneberg, D.L. 2010. Case study: Seasonal and spatial distribution of ambient ammonia concentrations measured at a large open-lot dairy. *The Professional Animal Scientist* 25:786-793.
18. Dungan, R.S., Leytem, A.B., Ver Wey, S.A., and Bjorneberg, D.L. 2010. Assessment of bioaerosols at a concentrated dairy operation. *Aerobiologia* 26:171-184.
19. Dungan, R.S., Leytem, A.B., and Bjorneberg, D.L. 2010. Year-long assessment of airborne endotoxin at a concentrated dairy operation. *Aerobiologia* 26:141-148.
20. King, B.A. and Bjorneberg, D.L. 2010. Characterizing droplet kinetic energy applied by moving spray-plate center-pivot irrigation sprinklers. *Transactions of the ASABE* 53:137-145.
21. King, B.A., Winward, T.W. and Bjorneberg, D.L. 2010. Laser precipitation monitor for measurement of drop size and velocity of moving spray-plate sprinklers. *Applied Engineering in Agriculture* 26:263-271.
22. King, B.A., Wall, R.W., Winward, T.W., and Bjorneberg, D.L. 2010. Collector design for measuring high-intensity time variant sprinkler application rates. *Applied Engineering in Agriculture* 26:85-95.

23. Leytem, A.B., Dungan, R.S., and Bjorneberg, D.L. 2009. Case Study: Seasonal and Spatial Distribution of Ambient Ammonia Concentrations Measured at a Large Open-Lot Dairy. *The Professional Animal Scientist* 25:786-793.
24. Tarkalson, D.D., Brown, B., Kok, H., and Bjorneberg D. 2009. Irrigated small-grain residue management effects on soil chemical and physical properties and nutrient cycling. *Soil Science* 174:303-311.
25. Leytem, A.B. and Bjorneberg, D.L. 2009. Changes in soil test phosphorus and phosphorus in runoff from calcareous soils receiving manure, compost, and fertilizer application with and without alum. *Soil Science* 174:445-455.
26. Bjorneberg, D.L., Leytem, A.B., Westermann, D.T., Griffiths, P.R., Shao, L., and Pollard, M.J. 2009. Measurement of atmospheric ammonia, methane, and nitrous oxide at a concentrated dairy production facility in southern Idaho using open-path FT-IR spectrometry. *Transactions of the ASABE* 52:1749-1756.
27. Busscher, W.J., Bjorneberg, D.L., and Sojka, R.E. 2009. Field application of PAM as an amendment in deep-tilled US Southeastern Coastal Plain soils. *Soil & Tillage Research* 104:215-220.
28. Leytem, A.B., Bjorneberg, D.L., Sheffield, R.E. and De Haro Marti, M.E. 2009. Case Study: On-farm evaluation of liquid dairy manure application methods to reduce ammonia losses. *The Professional Animal Scientist* 25:93-98.

Amber Moore, Ph.D.

Amber Moore has been a Soil Fertility Specialist with the University of Idaho at the UI Twin Falls Research and Extension Center for 7 years. In Idaho, Amber has worked on dairy manure field applications, organic production, specialty fertilizers, strip-tillage, nitrogen mineralization, potatoes, barley, sugar beets, corn, beans, and various cover crops. Amber grew up in Tennessee and received her Masters and Doctorate in Soil Science from North Carolina State University and Bachelor's in Environmental Science from Auburn University.

Eric Winiecki

Eric Winiecki works in the Drinking Water Unit, in the Office of Water and Watersheds, of the U.S. Environmental Protection Agency (EPA). Since 1990 he has contributed to EPA's mission to protect human health and the environment through work involving enforcement coordination, source water protection coordination, grants management in support of the Columbia Basin Ground Water Management Area, hazardous waste site cleanup management, policy analysis, and strategic planning. Past work experience includes state government and private consulting. He earned a BA degree in international economics from the University of Illinois at Urbana-Champaign, and a MPA degree from the Evans School of Public Affairs at the University of Washington.

William Howard Neibling, Ph.D.

Education

- Ph.D., Agricultural Engineering, Purdue University, 1984
- M.S., Agricultural Engineering, Kansas State University, 1976
- B.S., Agricultural Engineering, Kansas State University, 1974

Academic experience (all full time)

- Univ. Idaho, Associate Professor/Extension Water Management Engineer, 5/97-present
- Univ. Idaho, Assistant Professor/Extension Water Management Engineer, 2/92-5/97
- Univ. Missouri-Columbia, Assistant Professor, Agric. Engineering Dept., , 8/87-2/92
- University of Wyoming, Assistant Professor, Agric. Engineering Dept., 3/85-8/87
- Purdue University, Adjunct Assistant Professor & member of graduate faculty, Agricultural Engineering Dept., 9/84-3/85

Non-academic experience (full time)

- USDA-ARS, Agricultural Engineer, National Soil Erosion Laboratory, Purdue University, W. Lafayette, IN, 1976-1985

Certifications or professional registrations: Idaho PE #7407

Current membership in professional organizations: ASABE

Honors and awards

- 2010 Excellence in Extension Award by University of Idaho (a team award, I was lead on one chapter): for Pasture and Grazing Management in the Northwest PNW 614
- 2010 Educational Materials Program “Certificate of Excellence” from the American Society of Agronomy for “Pasture and Grazing Management in the Northwest PNW 614” (a team award, I was lead on one chapter)

Service activities

- Chair, Lide Chen 3-year review
- Chair, BAE Extension Waste Management Engineer search committee
- Chair, Idaho Irrigation Equipment Association Education Committee
- Member, Idaho Water Education Foundation Board
- Major professor for Mario E. de Haro Marti Ph.D. program
- Member of W-2128 “Micro Irrigation” Regional Research Committee.

Publications and Presentations (last 5 years)

- Hines, S and H. Neibling. 2013. Center Pivot Irrigation for Corn: Water Management and System Design Considerations in Southern Idaho. University of Idaho Extension Bulletin 881. 10pp.
- Neibling, W.H. 2013. Evaluation of Sprinkler Irrigation System Components in Southern Idaho. Final report to Idaho Power, Boise ID. 43pp.
- Peters, R.Troy, W. Howard Neibling and Tom Hoffman. 2012. Calculating chemigation injection rates. Washington State University Fact Sheet FS035E. 5pp.

- Erik J. Wenninger, E.J., O. T. Neher, K. E. Daku, W. H. Neibling, and D. W. Morishita. 2012. “Soil water content, disease, insect, and weed response in strip-till sugar beet”. Presented at the IIRB meeting, Brussels, Belgium.
- Neibling, W.H. 2012. Growing season water management on fields receiving manure. In: Proceedings of the 2012 University of Idaho Nutrient Management Conference. 6pp.
- R. T. Peters, W.H. Neibling and T. Hoffman. 2010. Calculating Chemigation Injection Rates. Pacific Northwest Extension publication PNW 2010-0309. 5pp.
- Neibling, H., M. Bohle and C. Falen. 2010. Chapter 6, Principles of pasture irrigation. In: PASTURE AND GRAZING MANAGEMENT IN THE NORTHWEST. G. Shewmaker ed. Pacific Northwest Extension Publication PNW 614. Pp 53-66.
- Falen, C, H. Neibling, B.Hazen and M.Telford. 2011. Crossing Boundaries with Teamwork and Economics for Water Management. Journal of Extension (Vol. 49(2), April, 2011).
- Neibling, W.H., G.E. Shewmaker and C.L. Falen. 2010. Center pivot design and management for forage production. In: Proc. of the 2010 Idaho Alfalfa and Forage Conference, February 16-17, Burley, ID. 11pp.
- Neibling, W.H. 2010. Scheduling winter land application of lagoon effluent based on ET, precipitation and soil moisture. In: Proc of the 2010 Nutrient Management Conference, Shoshone, ID. 7pp.
- Qureshi, Z and W. H. Neibling. 2008. Response of Two-row Malting Spring Barley to Water Cutoff under Sprinkler Irrigation. Agric. Water Manage., doi 10.1016/j.agwat.2008.07.012

Recent Professional Development activities

- Arc-GIS training, October 18-19, 2011, Boise, ID.
- Nelson Irrigation Equipment Training School (control valves, sprinkler selection, orchard applications). October 4-6, 2011. Walla Walla, WA.

Becky Ohrtman

Rebecca Ohrtman received her bachelor of Science degree in Agriculture from Iowa State University. She has worked in water quality programs for USDA-NRCS, Iowa Department of Agriculture and Land Stewardship and most recently for the past eight years has coordinated the Iowa Department of Natural Resources statewide SWP program for Targeted Community Water Supplies.

Carolyn Firth

For almost 10 years, Carolyn Firth has served as the Ground Water Agricultural Program Specialist for the Idaho Soil and Water Conservation Commission. Prior to that, she worked as a Water Quality Resource Conservationist for the Idaho Association of Soil Conservation Districts, focusing on developing and implementing plans to address surface water quality issues on private land. In her work as Ground Water Quality Specialist, Carolyn has been actively involved in developing Ground Water Management Plans for communities located within Nitrate Priority Areas. She has also worked directly with numerous producers to help them implement

nutrient management and irrigation water management on their farms. She grew up on a farm and has assisted her husband in operating a small farming and ranching operation in Minidoka County. Carolyn earned a B.S. degree in Earth Science Education and a M.S. degree in Geology. She worked 10 years in the petroleum industry as a production geologist.

Paul Stoker

Paul Stoker was raised in Othello, Washington where he helped his father level and prepare the family farm to receive the first irrigation water from the federal project in 1958. He attended Brigham Young University for 1968 to 1972. He owned and operated a large irrigated farm in Othello from 1972 to 2001. He became politically active in 1994 and organized and chaired the Columbia Basin Groundwater Management Area. He discontinued full time farming in 2001 and became the Executive Director of the CBGWMA from 2001 to present.

Chi Ho Sham, Ph.D.

Chi Ho Sham has over two decades of consulting experience, mainly in the areas of drinking water protection, water quality analysis, and underground injection control. Currently, he works at The Cadmus Group, Inc. He is an active member of the American Water Works Association (AWWA) – serving many councils, divisions, and committees. He served as the lead author of the Operational Guide to AWWA Standard G300: Source Water Protection and as a co-Principal Investigator of the “Development of a Source Water Protection Vision and Roadmap for U.S. Drinking Water Utilities” project sponsored by the Water Research Foundation. He is a Research Fellow of the George Perkins Marsh Institute and an adjunct professor at Clark University in Worcester, Massachusetts. Chi Ho received his Ph.D. and M.A. from the University at Buffalo and his B.A. from the University of Regina in Canada. His research interests include effective source water protection strategies, impacts of wildfires and extreme events on water utilities, and management of hydraulic fracturing and underground injection activities.