

## FRANK M. WILHELM

### CONTACT

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### PERSONAL DATA

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Date of Birth: June 15, 1968  
Place of Birth: West Germany  
Citizenship: Canadian, permanent US resident  
Languages: English, German

### EDUCATION

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- 1994-1999 **Ph.D.**, University of Alberta, Department of Biological Sciences  
**Supervisor:** Dr. D. W. Schindler
- 1991-1993 **M.Sc.** Trent University, Watershed Ecosystems Graduate Program  
**Supervisor:** Dr. D. C. Lasenby
- 1987-1991 **B.Sc. (Honours)**, Trent University, Biology/Environmental Resource Science  
**Supervisors:** Drs. D. C. Lasenby and M. Fox

### EMPLOYMENT HISTORY

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- 2010- **Associate Professor**, University of Idaho, Moscow, Idaho, USA  
2007-2010 **Assistant Professor**, University of Idaho, Moscow, ID, USA  
2007- Adjunct faculty member, Department of Environmental Resources and Policy, Southern Illinois University, Carbondale, IL, USA  
2001-2007 **Assistant Professor of Zoology**, Southern Illinois University, Carbondale, IL, USA  
1999-2001 **NSERC Post-doctoral Researcher**, University of Otago, New Zealand  
1998-1999 **University of Alberta Dissertation Fellowship**, University of Alberta, Canada  
1996-1998 **Izaak Walton Killam Memorial Scholarship**, University of Alberta, Canada  
1994-1996 **NSERC Post-graduate Scholarship**, University of Alberta, Canada  
1993-1994 **Demonstrator/Technician**, Biology Department, Trent University, Canada  
1994 **Contract**, Beak Consultants Limited, Trent Severn Waterway, Canada  
1990-1993 **Teaching Assistant**, Biology Department, Trent University, Canada  
1992 **Electron Microscopy Technician**, Biology Department, Trent University, Canada  
1991 **NSERC Summer Research Award**, Biology Department, Trent University, Canada  
1990 **NSERC Summer Research Award**, Biology Department, Trent University, Canada

## RESEARCH FOCUS

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My limnological research is focused on the examination of (i) surface- and (ii) ground water and (iii) the ecology and life history of benthic and epigeal invertebrates. The goal of the first two areas is to characterize and understand these environments; to recommend management strategies to improve water quality; and to examine the long-term effects of the implemented strategies. The focus of the third area is to understand the ecology of key invertebrates in aquatic ecosystems and to predict their response to changing environmental conditions. Thus, the first two research areas provide the environmental information necessary to place the biological and ecological findings in context.

### ***Surface Water Research***

Lakes and reservoirs are used for a variety of purposes including public drinking water supply, recreation and irrigation. Eutrophication, anoxia, and the increased occurrence of blooms of toxic cyanobacteria impair water quality and use of many of these multi-purpose systems. My research focuses on developing realistic management strategies to remediate and restore these water bodies. Because management itself represents a disturbance, I also examine the response of ecosystems to the methods implemented. In addition, I use GIS linked environmental visualization software to create time-series animations to effectively communicate results to the public because changes in water chemistry often are not readily visible at the lake surface. For teaching purposes, I create and use easily accessible spreadsheet-based whole-lake models so students can explore lake dynamics and management scenarios.

### ***Ground Water Research***

The ground water research is focused in caves and wells of southern Illinois with the goal to relate water quality to surface land use. The cave research has been focused to understand the biology of the Illinois cave amphipod, *Gammarus acherondytes*, listed as endangered under the US Endangered Species Act. Plans are to expand this research to include multiple cave systems with contrasting surface-land uses to examine the linkages between water quality and composition of cave-communities. The ultimate goal of this research will be to protect underground communities and thus water resources. This is important because human survival is linked to the availability of clean water.

### ***Ecology / Life History Strategy of Invertebrates***

My research on the ecology and life history strategy of aquatic invertebrates, primarily amphipods and shrimp, aims to characterize their basic biology and determine their reproductive strategies across environmental gradients. The basic biology of many species remains to be discovered and provides an ideal training ground for students. By understanding life history strategies I aim to develop models that predict the response of species to changes in environmental conditions such as those arising from climate warming. I am also interested in the lipid composition and dynamics of these invertebrates, as they may provide an ideal alternative source of essential fatty acids currently derived from marine fish, stocks of which are overfished.

### ***Collaborative Approach***

I involve students (undergraduate and graduate) and colleagues in my research. I believe in a teamwork approach to draw on the knowledge and expertise of others to maintain rigorous scientific standards, reduce complex problems, and to cross disciplinary boundaries.

**Refereed Publications:**

- 35 Eitel, K., **Wilhelm, F. M.**, Parsons, R., and Eitel, J. 2014. Lakes Alive. *Science Scope* 32: 22-29.
- 34 Harris, T. D.\*\*, **Wilhelm, F. M.**, Graham, J. L., and Loftin, K. A. 2014. Experimental manipulation of TN:TP ratios to suppress cyanobacterial biovolume and microcystin concentration in large scale *in situ* mesocosms. *Lake and Reservoir Management*. 30: 72-83.  
DOI:10.1080/10402381.2013.876131
- 33 Harris, T. D.\*\*, **Wilhelm, F. M.**, Graham, J. L., and Loftin, K. A. 2014. Experimental additions of aluminum sulphate and ammonium nitrate to large-scale *in situ* mesocosms to reduce cyanobacterial biovolume and microcystin concentration. *Lake and Reservoir Management* 30:84-93 DOI:10.1080/10402381.2013.876132
- 32 **Wilhelm, F. M.** 2013. Using service-learning to teach limnology. *LakeLine* 33: 34-39.
- 31 Sánchez-Murillo, R.\*\*, Brooks, E. S., Sampson, L. Boll, J., and **Wilhelm, F.M.** 2013. Ecohydrological habitat quality and steelhead (*Oncorhynchus mykiss*) in an effluent dominated stream: potential benefits of waste water treatment plants in streams of the Pacific Northwest impoverished by loss of marine derived nutrients. *Ecohydrology* DOI: 10.1002/eco.1376.
- 30 **Wilhelm, F. M.**, and Nelson\*\*, D. 2012. A non-lethal approach to estimate whole-body <sup>13</sup>C and <sup>15</sup>N stable isotope ratios of freshwater amphipods using walking legs. *Invertebrate Biology*. 131:110-118. DOI 10.1111/j.1744-7410.2012.00259.x
- 29 Caldwell\*\*, T. J., and **Wilhelm, F. M.** 2011. The life history characteristics, growth and density of *Mysis diluviana* in Lake Pend Oreille, Idaho, USA. *Journal of Great Lakes Research*. **38**: 58-67 Supplement 2. doi:10.1016/j.jglr.2011.07.010.
- 28 Nelson\*\*, D., and **Wilhelm, F. M.** 2011. Survival and growth of the stygophilic amphipod *Gammarus troglophilus* under laboratory conditions. *Journal of Crustacean Biology* **31**:424-433. DOI: 10.1651/10-3431.1
- 27 **Wilhelm, F. M.** 2009. Pollution of aquatic ecosystems I. In G. E. Likens, editor. Encyclopedia of Inland Waters. Volume 3, pp 110-119. Oxford: Elsevier.
- 26 **Wilhelm, F. M.** and Venarsky\*\*, M. P. 2009. Variation in gnathopod morphology of cave amphipods and its use in determination of sex. *Journal of Crustacean Biology* **29**: 26-33.
- 25 Venarsky\*\*, M. P., Anderson, F. E. and **Wilhelm, F. M.** 2009. Population genetic study of the U.S. federally listed Illinois cave amphipod, *Gammarus acherondytes*. *Conservation Genetics* **10**: 915-921. Published online 2008 DOI: 10.1007/s10592-008-9579-0
- 23 Parker, B. R., Schindler, D. W., **Wilhelm, F. M.**, Donald, D. B. 2007. Bull trout population response to reductions in angler effort and retention limits. *North American Journal of Fisheries Management* **27**: 848-859.
- 22 **Wilhelm, F. M.**, Closs, G. P., and Burns, C. W. 2007. The seasonal diet of juvenile common bully in a coastal South Island, New Zealand, lake. *Hydrobiologia* **586**: 303-312.

- 21 Venarsky\*\*, M. P., **Wilhelm, F. M.** and Anderson, F. E. 2007. Conservation strategies supported by non-lethal life history sampling of the U.S. federally listed Illinois cave amphipod, *Gammarus acherondytes*. *Journal of Crustacean Biology* **27**:202-211.
- Lencioni, M\*. 2006. Prey selection by *Chaoborus* in the field and laboratory. *Journal of Young Investigators* **15**:1-9. [Undergraduate student supervised under a Southern Illinois University Office of Research and Development REACH (Research Enriched Academic Challenge) award].
- 20 Panno, S. V., Hackley, K. C., Kelly, W. R., Hwang, H. H., **Wilhelm, F. M.**, Taylor, S. J. and Stiff, B. J. 2006. Potential effects of recurrent hypoxic conditions on the Illinois Cave amphipod. *Journal of Cave and Karst Studies* **68**: 55-63.
- 19 Venarsky\*\*, M. P. and **Wilhelm, F. M.** 2006. Use of clove oil to anaesthetize freshwater amphipods. *Hydrobiologia* **568**: 425-432.
- 18 **Wilhelm, F. M.**, Taylor, S. J., and Adams\*\*, G. L. 2006. Comparison of routine metabolic rates of the stygobite, *Gammarus acherondytes* (Amphipoda: Gammaridae), and the stygophile, *Gammarus troglophilus*. *Freshwater Biology* **51**:1162-1174
- 17 **Wilhelm, F. M.**, Venarsky\*, M. P., Taylor, S. J., and Anderson, F. E. 2003. Survival of *Gammarus troglophilus* (Gammaridae) after leg removal: Evaluation of a procedure to obtain tissue for genetic analysis of rare and endangered amphipods. *Invertebrate Biology* **122**:369-374.
- 16 Blais, J. M., **Wilhelm, F. M.**, Kidd, K. A., Muir, D. C. G., Donald, D. B., and Schindler, D. W. 2003. Concentrations of organochlorine pesticides and polychlorinated biphenyls in amphipods (*Gammarus lacustris*) along an elevation gradient in mountain lakes of western Canada. *Environmental Toxicology and Chemistry* **22**: 2605-2613.
- 15 **Wilhelm, F. M.**, Hamann\*, J. and Burns, C. W. 2002. Mysid predation on amphipods and *Daphnia* in a shallow coastal lake: prey selection and effects of macrophytes. *Canadian Journal of Fisheries and Aquatic Sciences* **59**: 1901-1907.
- 14 **Wilhelm, F. M.** 2002. Estimating reproductive effort in small aquatic invertebrates from lipid dynamics. *Journal of Freshwater Ecology* **17**: 595-599.
- 13 **Wilhelm, F. M.**, and D. W. Schindler. 2000. Reproductive strategies of *Gammarus lacustris* (Crustacea: Amphipoda) along an elevation gradient. *Functional Ecology* **14**: 413-422. Featured in Editor's Choice *Science* **290**: 411.
- 12 **Wilhelm, F. M.** and Schindler, D. W. 2000. *Gammarus lacustris* (Crustacea: Amphipoda) zooplankton predation in a Canadian Rocky Mountain lake. *Verhandlungen der Internationalen Vereinigung für Limnologie* **27**: 783-784.
- 11 **Wilhelm, F. M.**, Schindler, D. W. and McNaught, A. S. 2000. The influence of experimental scale on estimating the predation rate of *Gammarus lacustris* (Crustacea: Amphipoda) on *Daphnia* in an alpine lake. *Journal of Plankton Research* **22**: 1719-1734.
- 10 **Wilhelm, F. M.**, Parker, B. R., Schindler, D. W. and Donald, D. B. 1999. Seasonal food habits of bull trout from a small alpine lake in the Canadian Rocky Mountains. *Transactions of the American Fisheries Society* **128**: 1176-1192.

- 9 **Wilhelm, F. M.**, Hudson, J. J. and Schindler, D. W. 1999. Contribution of *Gammarus lacustris* to phosphorus recycling in a fishless alpine lake. *Canadian Journal of Fisheries and Aquatic Sciences* **56**: 1679-1686.
- 8 **Wilhelm, F. M.** and Schindler, D. W. 1999. Effects of *Gammarus lacustris* (Crustacea: Amphipoda) on plankton community structure in an alpine lake. *Canadian Journal of Fisheries and Aquatic Sciences* **56**: 1401-1408.
- 7 **Wilhelm, F. M.**, Hardie, A. K.\*\*\*, McNaught, A. S. and Clare\*, S. L. 1998. Large suprabenthic *Daphnia middendorffiana* from an alpine lake in the Canadian Rocky Mountains. *Canadian Field Naturalist* **112**: 419-424.
- 6 **Wilhelm, F. M.** and Lasenby, D. C. 1998. Seasonal trends in the head capsule length and body length/weight relationships of two amphipod species. *Crustaceana* **71**: 399-410.
- 5 **Wilhelm, F. M.**, Lasenby, D. C., Wilhelm, R. M. and Plante, R. 1997. A new recorder for simultaneously recording the activity and oxygen consumption of small benthic invertebrates. *Canadian Journal of Fisheries and Aquatic Sciences* **54**: 2888-2893.
- 4 **Wilhelm, F. M.** and Lasenby, D. C. 1997. A sediment core sectioning method to minimize the post-sampling redistribution of organisms. *Aquatic Sciences* **59**: 34-38.
- 3 Parker, B. R., **Wilhelm, F. M.** and Schindler, D. W. 1996. Recovery of *Hesperodiaptomus* from diapausing eggs following elimination by stocked salmonids. *Canadian Journal of Zoology* **74**: 1292-1297.
- 2 **Wilhelm, F. M.** 1996. Comment on "Predation on *Mysis relicta* by Slimy Sculpins (*Cottus cognatus*) in southern Lake Ontario" J. Great Lakes Res. **21**: 275-283. *Journal of Great Lakes Research* **22**: 119-120.
- 1 **Wilhelm, F. M.** and Hiebert, J. A. 1996. A simple and inexpensive method to separate live and preserved benthos from sediments. *Journal of Freshwater Ecology* **11**: 119-121.

### In Review:

Liao, F. H. and **Wilhelm, F. M.** 2015. The effects of ambient water quality and Eurasian milfoil on lakefront property values in the Coeur d'Alene area of Northern Idaho, USA. Sustainability Special Issue: Geo-Informatics in Resource Management & Sustainable Ecosystem

Caldwell\*\*, T. J., and **Wilhelm, F. M.** The role of predation by *Mysis diluviana* in the food web of Lake Pend Oreille, Idaho, USA, based on gut content analyses. *Canadian Journal of Fisheries and Aquatic Sciences*.

Beutel, M. W., Duvil, R., Cubas, F. J., Grizzard, T. J., **Wilhelm, F. M.**, Austin, D., Matthews, D. A., Horne, A. J., and Gebremariam, S. 2015. A Review of Managed Nitrate Addition to Improve Surface Water Quality. *Critical Reviews in Environmental Science and Technology*

**Wilhelm, F. M.**, Reams, E.,\*\* Rohrbacher,\* M., and Dux, A. Use of ethanol or formaldehyde preservative does not affect estimates of a zooplankton quality index. Submitted to *Inland Waters*.

Olson,\* Bourret\*\*, S. Thorp\*, A. Iñiguez A. C., and **Wilhelm F. M.** Trophic interactions in fish and fishless high alpine lakes of the páramo in the Andes of southern Ecuador. For *Inland Waters*.

Nelson, D., and **Wilhelm, F. M.** Food resources of cave stream macroinvertebrates determined by natural abundance stable isotopes and consumer-resource elemental imbalances. Submitted to *Freshwater Science*

### **In preparation:**

Reams, E.,\*\* and Wilhelm, F. M. A simple, effective and affordable messenger triggered plankton net release. For *Limnology and Oceanography Methods*.

### **Non-refereed Papers:**

Braker, E.,\*\* Moffitt, C. M., Wilhelm, F. M., Noonan, J.,\* Kibler, R., and Woolf, T. 2015. Update on Efforts to Control the Invasive Asian Clam (*Corbicula fluminea*) in Lake Pend Oreille. Idaho Naturalist New.

Wilhelm, F. M., and LaCroix, T. 2015. Fernan Lake Bathymetry, Idaho (2014-2015). DOI: 10.7923/G4BG2KWD

Coyle, M. K., and **Wilhelm, F. M.** 2014. Rock Snot in the Intermountain Northwest: An Invasive or a Native Nuisance? Winter Newsletter of Washington Lakes Protection Association (<http://www.walpa.org/waterline/december-2014/rock-snot-in-the-intermountain-northwest-an-invasive-or-a-native-nuisance/>)

Harris\*\*, T., and Wilhelm, F. M. 2011. Observations on the appearance of brine flies at Willow Creek Reservoir, a freshwater lake. Waterline online edition. <http://www.walpa.org/waterline/december-2011/observations-on-the-appearance-of-brine-flies-at-willow-creek-reservoir-a-freshwater-lake/>

Venarsky\*\*, M. P., **Wilhelm, F. M.** and Taylor, S. J. 2003. Cave amphipod respiration in southwestern Illinois. *Illinois Natural History Survey Reports* **375**: 2.

**Wilhelm, F. M.**, Parker, B. R. and Schindler, D. W. 1998. Harrison Lake bull trout: a rare gem in the Canadian Rockies. *Banff National Park Research Updates* **1**: 6-7.

**Wilhelm, F. M.** 1998. Bull charr observations from a small sub-alpine lake. *Alberta Naturalist* **28**: 6-8.

**Wilhelm, F. M.** 1998. Bull char assessment. *The Bear and The Butterfly Summer 1998*: 3.

**Wilhelm, F. M.** and D. W. Schindler. 1996. Life at the top: the biology of the amphipod *Gammarus l. lacustris* in alpine lakes. *Research Links* **4**: 7-11.

### **Reports:**

Burnet, S. H.,\*\* and Wilhelm, F. M. 2015. Willow Creek Water Quality Research and Evaluation Studies Q1 Progress report for period April 01, 2015 to July 31, 2015. Submitted to US Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, MS. 7p.

- Burnet, S. H.,\*\* and Wilhelm, F. M. 2015. Willow Creek Water Quality Monitoring. 4<sup>th</sup> and final Quarterly report for Cooperative Agreement W9127N-14-2-0010. Submitted to US Army Corps of Engineers, Portland District. 3p.
- Coyle, M. K.,\*\* Wilhelm, F. M., and Shaffii, B. 2015. Response of nuisance mats of *Didymosphenia geminata* to different concentrations of nitrogen and phosphorus. Final Report submitted to US Army Corps of Engineer, Engineer Research and Development Center, Vicksburg, MS. 37p.
- Burnet, S. H.,\*\* and Wilhelm, F. M. 2014. 3<sup>rd</sup> Quarterly progress report for Project entitled “Willow Creek Water Quality Monitoring in 2014. Submitted to U.S. Army Corps of Engineering, Portland District 3p.
- Coyle, M. K.,\*\*, Wilhelm, F. M., and Shaffi, B. 2014. Phosphorus Enrichment as a Management Strategy for *Didymosphenia geminata* Nuisance Mats in the Kootenai River, Libby MT. Year 2 Progress Report, submitted to Montana Fish, Wildlife and Parks, Libby MT. 33p.
- Wilhelm, F. M. 2014. 2<sup>nd</sup> Quarterly Progress report for Project entitled “Willow Creek Reservoir Water Sampling in 2014 and determination of Internal Phosphorus Loading”. Submitted to US Army Crops of Engineers, Portland District. 2p.
- Wilhelm, F. M. 2014. 1<sup>st</sup> Quarterly Progress report for Project entitled “Willow Creek Reservoir Water Sampling in 2014 and determination of Internal Phosphorus Loading”. Submitted to US Army Crops of Engineers, Portland District. 2p.
- Rajkovich, H. E., and Wilhelm, F. M. 2014. Final report for Willow Creek Water Quality sampling in 2013. Submitted to US Army Corps of Engineers, Portland District Office. 4p.
- Coyle, M. K.,\*\*, Wilhelm, F. M., and Shaffii, B. 2013. *Didymosphenia geminata* in the Kootenai River, Libby MT: Nuisance Mat Characteristics and Management Strategies for Long-term Suppression. Year 1 Project Progress Report 17p.
- Coyle, M. K.,\*\* and **Wilhelm, F. M.** 2013. Experimental determination of the role of phosphorus on the growth of *Didymosphenia geminata* in the Kootenai River, Montana, downstream from Libby Dam” for the period 03-May-12 to 31-Dec-13.
- Coyle, M. K.,\*\* and **Wilhelm, F. M.** 2013. Experimental determination of the role of phosphorus on the growth of *Didymosphenia geminata* in the Kootenai River, Montana, downstream from Libby Dam” for the period 02-Aug-12 to 02-May-13.
- Rajkovich, H. E.,\*\* and Wilhelm, F. M. 2013. 2012 WCR Summary and scope of work for 2013. Final report to USACE Portland District.
- Wilhelm, F. M.**, and Caldwell\*\*, T. J. 2011. Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival. Final report for Idaho Department of Fish and Game / UI Cooperative agreement 20090112113804.
- Wilhelm, F. M.** 2011. A nutrient and sediment mass balance of Willow Creek Reservoir, Heppner, OR, determined from daily and bi-weekly samples collected in 2009-2010. Final report for W9127N-09-2-0009 U.S. Army Corps of Engineers, Portland District. 30p.

- Wilhelm, F. M.** 2010. Literature review of the potential impacts of overwater structures on bull trout in the Lake Pend Oreille system. Final report for W912EF-10-P-0008 U.S. Army Corps of Engineers, Walla Walla District. 25p.
- Caldwell\*\*, T., and **Wilhelm, F. M.** 2010. Quarterly progress report #7 for Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival." Submitted to Idaho Department of Fish and Game, Coeur D'Alene regional office. 4p.
- Caldwell\*\*, T., and **Wilhelm, F. M.** 2010. Quarterly progress report #6 for "Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival." Submitted to Idaho Department of Fish and Game, Coeur D'Alene regional office. 3p.
- Wilhelm, F. M.**, and 19 others\*. 2010. A limnological assessment of the Best Hills Ranch Development lake with a focus on macrophyte growth and recommendations to reduce their abundance. Final Class report, submitted to Best Hills Ranch Development Homeowner's Association. 38p.
- Caldwell\*\*, T., and **Wilhelm, F. M.** 2010. Quarterly progress report #5 for "Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival." Submitted to Idaho Department of Fish and Game, Coeur D'Alene regional office. 3p.
- Wilhelm, F. M.**, and Adams\*\*, C. J. 2010. Quarterly progress report #4 for "Monitoring water quality in Willow Creek Reservoir in 2009 and obtaining in- and outflow samples to determine the nutrient mass balance". Submitted to US Army Corp of Engineers, Portland District. 6p.
- Caldwell\*\*, T., and **Wilhelm, F. M.** 2009. Quarterly progress report #4 for "Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival." Submitted to Idaho Department of Fish and Game, Coeur D'Alene regional office. 3p.
- Wilhelm, F. M.**, and Adams\*\*, C. J. 2009. Quarterly progress report #3 for "Monitoring water quality in Willow Creek Reservoir in 2009 and obtaining in- and outflow samples to determine the nutrient mass balance". Submitted to US Army Corp of Engineers, Portland District. 4p.
- Caldwell\*\*, T., and **Wilhelm, F. M.** 2009. Quarterly progress report #3 for "Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival." Submitted to Idaho Department of Fish and Game, Coeur D'Alene regional office. 3p.
- Adams\*\*, C. J., and **Wilhelm, F. M.** 2009. Quarterly progress report #2 for "Monitoring water quality in Willow Creek Reservoir in 2009 and obtaining in- and outflow samples to determine the nutrient mass balance". Submitted to US Army Corp of Engineers, Portland District. 4p.
- Caldwell\*\*, T., and **Wilhelm, F. M.** 2009. Quarterly progress report #2 for "Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival." Submitted to Idaho Department of Fish and Game, Coeur D'Alene regional office. 3p.



- Wilhelm, F. M.** 2009. Comments on USFWS 5 year review of *Gammarus acherondytes* recovery plan. Submitted to USFWS Regional Office in Moline, IL. 8p.
- Adams\*\*, C. J., and **Wilhelm, F. M.** 2009. Quarterly progress report #1 for “Monitoring water quality in Willow Creek Reservoir in 2009 and obtaining in- and outflow samples to determine the nutrient mass balance”. Submitted to US Army Corp of Engineers, Portland District. 4p.
- Wilhelm, F. M.** 2009. A bathymetric inventory of lakes and ponds on the Shawnee National Forest. Final Report to US Forest Service, Mississippi Bluffs Ranger District Shawnee National Forest Jonesboro, IL 62952. 26p + maps.
- Wilhelm, F. M.** 2009. Quarterly progress report #1 for “Determination of the role of *Mysis* in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival.” Submitted to Idaho Department of Fish and Game, Coeur D’Alene regional office. 3p.
- Wilhelm, F. M.**, and Adams\*\*, C. J. 2009. Willow Creek 2008 data review. Interim progress report prepared for SolarBee Inc. and US Army Corps of Engineers, Portland District. 4p.
- Wilhelm, F. M.** 2009. Summary of University of Idaho Limnology Lab coring activities at Willow Creek Reservoir in 2008. Final Report to US Army Corps of Engineers, Portland District. 7p.
- Wilhelm, F. M.** 2008. Limnological assessment of a small pond near Bonners Ferry, Idaho. 10p Completed for Idaho Department of Fish and Game, Coeur D’Alene Regional Office.
- Wilhelm, F. M.** 2007. Bathymetric Mapping and Sediment Analysis of Candlewick Lake, Illinois. Final Report to Candlewick Lake Association, Poplar Grove, IL. v+18 pp.
- Panno, S. V., Hackley, K. C., Kelly, W. R., Hwang, H. H., **Wilhelm, F. M.**, Taylor, S. J., and Stiff, B. J. 2004. Effects of water quality on populations of *Gammarus acherondytes* in two caves in southwestern Illinois. Final Report to Illinois Department of Natural Resources, Springfield, IL. 24 pp.
- Muchmore, C., Stahl, J., Talley, E. and **Wilhelm, F. M.** 2004. Phase I Diagnostic/Feasibility Study of Campus Lake, Jackson County, Illinois. Final Report. Illinois Environmental Protection Agency, Springfield, IL. 203 pp.
- Taylor, S. J., **Wilhelm, F. M.**, Adams\*\*, G. L. and Venarsky, M. P. 2003. Establishing baseline data on seasonal physiological requirements for *Gammarus acherondytes* and *Gammarus troglophilus* in relation to microbial demand. Illinois Natural History Survey Center for Biodiversity Technical Report 2003(20): 1-50.
- Wilhelm, F. M.**, Taylor, S. J. and Adams\*\*, G. L. 2002. Establishing baseline data on seasonal physiological requirements for *Gammarus acherondytes* and *Gammarus troglophilus* in relation to microbial oxygen demand. 12 p. Progress Report #5 submitted to Division of Natural Heritage, Illinois Department of Natural Resources.
- Taylor, S. J., **F. M. Wilhelm**, Adams\*\*, G. L. 2002. Establishing baseline data on seasonal physiological requirements for *Gammarus acherondytes* and *Gammarus troglophilus* in relation to microbial oxygen demand. 3 p. Revised Objectives and Deliverables. Submitted to Division of Natural Heritage Illinois Department of Natural Resources.

Taylor, S. J., Adams\*\*, G. L. and **Wilhelm, F. M.** 2001. Establishing baseline data on seasonal physiological requirements for *Gammarus acherondytes* and *Gammarus troglophilus* in relation to microbial oxygen demand. 9 p. Progress Report #4 submitted to Division of Natural Heritage, Illinois Department of Natural Resources.

**Wilhelm, F. M.** 1998. Seasonal diet and population assessment of bull charr (*Salvelinus confluentus*) in Harrison Lake, Banff National Park. 37 p. Report prepared for The Friends of Banff National Park.

**Wilhelm, F. M.** 1998. A preliminary *Gammarus* and rainbow trout diet analysis investigation in the Livingstone Trout Farm Main Pond. 24 p. Report prepared for Livingstone Trout Farm.

**Wilhelm, F. M.** 1992. Lake sediment bioturbation by *Diporeia hoyi*: the importance of determining organism stratigraphy in the sediments. 47 p. Trent University, Peterborough, Ontario, K9J 7B8.

**Wilhelm, F. M.** 1991. A water quality impact study of Burleigh Bay waters for the proposed development of the Stony Lake Estates Condominium Complex. 20 p. Trent University, Peterborough, Ontario, K9J 7B8.

### **Publication of Photographs**

2011. Photograph of *Hyaella azteca* for use on web page of Aquatic Biosystems.

2008. Photograph of Illinois Cave amphipod published on public education poster displayed at Illinois Caverns State Natural Area.

2007. Photograph published on Illinois Department of Natural Resources "Illinois Threatened and Endangered Species" poster.

2007. Back cover and article photograph for OutdoorIllinois 14(1) January issue.

2006. Cover photograph of Freshwater Biology 51(6) June issue.

### **Interactions with the Media**

August 11, 2015. Gave interview (all day) to Joan ?? Outdoor Idaho, Idaho PBS at Fernan Lake.

August 15, 2014. Gave interview to Becky Kramer of Spokesman Review regarding work on HABs on Fernan Lake and general research related to MILE/UI EPSCoR - published in Spokesman Review Aug 20<sup>th</sup>, 2014  
<http://www.spokesman.com/stories/2014/aug/20/ui-researchers-tracking-sources-of-fernan-lake/>

September 21, 2012. Gave interview to David Austin on interpretation of brine spill in Seneca Lake, NY. Article appeared in Observer-Review week of September 24th.

April 19, 2010. Gave Interview to Erin Hart of Argonaut on Service-learning. Article appeared in Argonaut on May 7<sup>th</sup>, 2010.

Feb 2009. Gave interview to Kate Wilson regarding lakeshore buffers. Articles published in 'The

River Journal” May 2009 edition.

July 14<sup>th</sup>, 2006. Gave interview regarding Cave Hill Cave and aquatic biota in it to Brian DeNeal, staff writer for Daily Register. News article appeared in printed and online version of The Daily Register on Monday July 17<sup>th</sup>,

March 24<sup>th</sup>, 2003. Gave a TV interview to CBS-KFVS 12 for Lake lab as part of Illinois Junior Science and Humanities Symposium, Carbondale IL. Show appeared on the 18:00 nightly news.

January 5<sup>th</sup>, 2002. Gave a TV interview to Kirstin Millgate on lake ice formation and safety for ABC-WSIL 3, Carbondale IL. Show appeared on the 22:00 nightly news.

### **Theses:**

**Wilhelm, F. M.** 1999. The ecology of *Gammarus lacustris* (Crustacea: Amphipoda:) in lakes of the Canadian Rocky Mountains. PhD thesis, University of Alberta, Edmonton, Alberta, Canada, T6G 2E9.

Department of Biological Sciences Nomination for Governor General’s Gold Medal for best PhD thesis at University of Alberta Fall 1999 Convocation.

**Wilhelm, F. M.** 1994. The growth, life history and respiration of *Diporeia* (Crustacea: Amphipoda) from two south central Ontario lakes. M.Sc. thesis, Trent University, Peterborough, Ontario, Canada K9J 7B8.

**Wilhelm, F. M.** 1991. The effects of low dissolved lake oxygen concentrations on gill surface area in *Pontoporeia hoyi* (Crustacea: Amphipoda). B.Sc. (Honours) thesis, Trent University, Peterborough, Ontario, Canada, K9J 7B8.

### **RESEARCH GRANTS (as P.I.)**

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2015	Willow Creek Reservoir Water Quality Research and Evaluation Studies <b>Wilhelm, F. M.</b>	\$ 80,000
2014	<b>University of Idaho Service-Learning office</b> Service-Learning Mini Grant <b>Wilhelm, F. M.</b>	\$ 400
2014	<b>Idaho EPSCoR</b> Proposal to obtain data sondes to obtain water quality data from the Chain Lakes on the Coeur d’Alene River as part of expansion of MILES beyond the Fernan Lake pilot program. <b>Wilhelm, F. M.</b> , LaCroix, T., and Chess, D.	\$ 51,370
2014	<b>Idaho EPSCoR</b> Proposal to obtain University of Idaho site licence for CTech Development Corporation visualization software <b>Wilhelm, F. M.</b> , LaCroix, T., and Anderson, J. W.	\$ 5, 040
2014	<b>US Army Corps of Engineers</b>	

	Experimental determination of the role of phosphorus on the growth of <i>Didymosphenia geminata</i> in the Kootenai River, Montana, downstream from Libby Dam. <b>Wilhelm, F. M.</b>	\$ 5, 800
2014	<b>US Army Corps of Engineers</b> Willow Creek Reservoir Water Sampling in 2014 and determination of Internal Loading <b>Wilhelm, F. M.</b>	\$ 65,000
2013	<b>iSEED UI EPSCoR</b> Visualizing limnological data: support to develop a data interoperability standard <b>Wilhelm, F. M.</b> , and Anderson, J. W.	\$ 65,345
2013	<b>Office of Species Conservation / Pacific Coast Salmon Recovery Fund</b> The juvenile steelhead food web in an effluent dominated stream, Troy, Idaho, determined using stable isotopes. <b>Wilhelm, F. M.</b> , Sanchez-Murillo, R., Treasure, J., Brooks, E., Boll, J.	\$ 77,846
2013	<b>US Army Corps of Engineers</b> Willow Creek Reservoir Water Sampling in 2013 <b>Wilhelm, F. M.</b>	\$ 53,729
2012	<b>Montana Fish Wildlife and Parks</b> Invasion/outbreak of <i>Didymosphenia geminata</i> in the Kootenai River at Libby Dam Montana: research for underlying causes and potential remediation strategies. <b>Wilhelm, F. M.</b>	\$ 277,982
2012	<b>US Army Corps of Engineers</b> Experimental determination of the role of phosphorus on the growth of <i>Didymosphenia geminata</i> in the Kootenai River, Montana, downstream from Libby Dam. Wilhelm, F. M.	\$ 96,654
2012	<b>US Army Corps of Engineers</b> Willow Creek Reservoir Water Sampling in 2012 <b>Wilhelm, F. M.</b>	\$ 50,171
2011	<b>Idaho Department of Fish and Game</b> An examination of the spatial and temporal distribution and density of <i>Mysis</i> and zooplankton and implications for the survival of kokanee fry in Lake Pend Oreille. <b>Wilhelm, F. M.</b>	\$ 105,701
2011	<b>US Army Corps of Engineers</b> Monitoring water quality in conjunction with circulation patterns from long distance circulation in Willow Creek Lake in 2011 <b>Wilhelm, F. M.</b>	\$ 54,382
2011	<b>Idaho Department of Fish and Game</b> Interpretation of algal data collected below Dworshak Reservoir in association with whole-reservoir nutrient enhancement <b>Wilhelm, F. M.</b>	\$ 2,000
2010	<b>US Army Corps of Engineers</b>	

	Monitoring water quality and long distance circulation currents in Willow Creek Lake in 2010.	
	<b>Wilhelm, F. M.</b>	\$ 84,586
2010	<b>University of Idaho Service-Learning Center</b> Service-Learning mini grant for FISH 415 Limnology	
	<b>Wilhelm, F. M.</b>	\$ 600
2009	<b>US Army Corps of Engineers</b> Literature review of potential impacts of overwater structures on bull trout in Lake Pend Oreille.	
	<b>Wilhelm, F. M.</b>	\$ 11,825
2009	<b>Illinois Department of Natural Resources / US Fish and Wildlife Service</b> A rearing protocol for the Illinois cave amphipod, <i>Gammarus acherondytes</i> , to supports its recovery.	
	<b>Wilhelm, F. M.</b>	\$ 53,194
2009	<b>US Army Corps of Engineers</b> Monitoring water quality in Willow Creek Reservoir in 2009 and obtaining in- and outflow samples to determine the nutrient mass balance.	
	<b>Wilhelm, F. M.</b>	\$13,230
2009	<b>Idaho Department of Fish and Game</b> Determination of the role of <i>Mysis</i> in the nutrient budget of surface waters in Lake Pend Oreille and its relation to kokanee survival	
	<b>Wilhelm, F. M.</b>	\$ 100,000
2009	<b>IDFG / Kootenay Tribe / Dr. K. Cain</b> subcontract to monitor water quality and zooplankton populations in natural ponds used to extensively culture burbot.	
	<b>Wilhelm, F. M.</b>	\$ 5,000
2008	<b>University of Idaho Seed Grant Program</b> Investigating mechanisms by which long distance circulation (LDC) enhances surface water quality	
	<b>Wilhelm, F. M.</b>	\$ 8,000
2008-2011	<b>US Geologic Service</b> Investigating mechanisms by which long distance circulation (LDC) enhances surface water quality	
	<b>Wilhelm, F. M.</b>	\$ 20,032
2007-2012	<b>US Department of the Interior/US Fish and Wildlife Service</b> A rearing protocol for the Illinois cave amphipod, <i>Gammarus acherondytes</i> , to supports its recovery.	
	<b>Wilhelm, F. M.</b>	\$ 37,000
2007	<b>Candlewick Lake Association</b> Bathymetric Mapping and Sediment Analysis of Candlewick Lake, Illinois	
	<b>Wilhelm, F. M.</b>	\$ 11,707

2006-2011	<b>US Department of the Interior/US Fish and Wildlife Service</b> A rearing protocol for the Illinois cave amphipod, <i>Gammarus acherondytes</i> , to supports its recovery. <b>Wilhelm, F. M.</b>	\$ 20,000
2006-2007	<b>Lumpkin Family Foundation</b> Summary and cost benefit analysis of projects to improve the water quality in Illinois Lakes. <b>Wilhelm, F. M.</b>	\$ 15,761
2006-2007	<b>Illinois Environmental Protection Agency</b> Monitoring the mixing of chloride in Living Light Ministry (Maru) Pond as part of its recovery. <b>Wilhelm, F. M.</b>	\$ 10,000
2005-2006	<b>Southern Illinois University (Undergraduate Student Technology Grant)</b> A proposal to obtain 3 dimensional visualization and interpolation software at Southern Illinois University. <b>Wilhelm, F. M., Esling, S., Sun, W., Williard, K., Harpalani, S. and DeVantier, B.</b>	\$ 5,425
2005	<b>Travel Grant - Office of Research and Development, Southern Illinois University</b> Supplemental grant to attend 6 <sup>th</sup> International Crustacean Congress - Scotland, UK. <b>Wilhelm, F. M.</b>	\$ 500
2005-2006	<b>US Department of Agriculture/US Forest Service</b> A bathymetric inventory of Lakes and Ponds on the Shawnee National Forest. <b>Wilhelm, F. M.</b>	\$ 23,083
2005	<b>Southern Illinois University (Graduate Student Technology Enhancement Grant)</b> Technology to enhance groundwater related research in Zoology and Geology. <b>Wilhelm, F. M., and Esling, S.</b>	\$ 9,000
2004-2007	<b>Illinois Environmental Protection Agency</b> Phase II long-term restoration and protection of Campus Lake. <b>Wilhelm, F. M., Neuman, R. and Ruffing, A.</b>	\$ 476,549
2004-2005	<b>US Department of Agriculture/US Forest Service</b> An inventory of biotic communities and water quality in homestead wells of the Shawnee National Forest: A first step to establish a groundwater monitoring network. <b>Wilhelm, F. M.</b>	\$ 21,397
2004	<b>US Department of the Interior / US Fish and Wildlife Service</b> The population genetics and ecology of the Illinois cave amphipod. <b>Wilhelm, F. M.</b>	\$ 1,591
2002-2003	<b>Faculty Research and Creative Grants - Office of Research and Development, Southern Illinois University</b> The ecology and lipid dynamics of amphipods in lakes of Southern Illinois. <b>Wilhelm, F. M.</b>	\$ 18,768

2002	<b>Travel Grant</b> - Office of Research and Development, Southern Illinois University Supplemental grant to attend annual meeting of ASLO - Victoria, Canada <b>Wilhelm, F. M.</b>	\$ 300
1999-2000	<b>Minor Equipment Grant</b> - Department of Zoology, University of Otago <b>Wilhelm, F. M.</b>	\$ 1,500
1997-1999	<b>Canadian Circumpolar Institute/Alberta Boreal Research Grant</b> The importance of <i>Gammarus lacustris</i> in the regeneration of nutrients in small alpine and arctic lakes. <b>Wilhelm, F. M.</b>	\$ 5,000
1997-1998	<b>Friends of Banff National Park Research Grant</b> An evaluation of the bull charr ( <i>Salvelinus confluentus</i> ) population and its diet seasonality in Harrison Lake, Banff National Park, Alberta, Canada. <b>Wilhelm, F. M.</b>	\$ 3,260
1996-1998	<b>Izaak Walton Killam Memorial Scholarship Research Grant</b> <b>Wilhelm, F. M.</b>	\$ 1,500
1995-1997	<b>Challenge Grants in Biodiversity (Alberta Environmental Protection)</b> An investigation of <i>Gammarus lacustris lacustris</i> (Crustacea: Amphipoda) life history from mountain lakes along an altitude gradient in southwestern Alberta. <b>Wilhelm, F. M.</b>	\$ 12,000
1995-1997	<b>Canadian Circumpolar Institute/Alberta Boreal Research Grant</b> The life history and feeding habits of <i>Gammarus lacustris lacustris</i> , a crustacean amphipod in alpine and arctic lakes. <b>Wilhelm, F. M.</b>	\$ 1,000
<b>as Co-P.I. / participant</b>		
2015	<b>NSF - An International, interdisciplinary student research program in a biological hotspot of southern Ecuador</b> Waits, L., Roon, D., Bosque-Perez, N., and Wilhelm, F. M.	\$ 245,000.00
2013	<b>NSF - IGERT</b> Adaptation to change in water resources: science to inform decision-making across disciplines, cultures and scales. Boll, J., and others (Wilhelm is faculty participant)	approx. \$ 3,499 161
2013	<b>USFWS Region 1 FY2014 Science Support Partnership</b> Risks and effectiveness of benthic barriers as tools to eradicate infestation of Asian clams in the Ellisport Bay treatment area of Lake Pend Oreille, Idaho Kiebler, R., Moffitt, C. M., <b>Wilhelm, F. M.</b>	\$ 46,018
2003-2004	<b>Illinois Department of Natural Resources</b> Differences in water quality between the upper and lower reaches of Illinois Caverns: Potential effects on population s of <i>Gammarus acherondytes</i> . Panno, S. V., Hackley, K. C., Kelly, W. R., Hwang, H. H., <b>Wilhelm, F. M.</b> ,	

	Taylor, S. J.	\$ 17,000
2003-2004	<b>USDA Forest Service Shawnee National Forest</b> Illinois Spring Cave Fish Burr, B. M. Adams, G.L., <b>Wilhelm, F. M.</b> , Adams, R.	\$ 15,000
2003	<b>Division of Natural Heritage, Illinois Department of Natural Resources</b> Supplemental funds for: Establishing baseline data on seasonal physiological requirements for <i>Gammarus acherondytes</i> and <i>Gammarus troglophilus</i> in relation to microbial oxygen demand. January - June 30, 2003 (Total award beginning in 2000: \$20,912). Taylor, S. J. (INHS), and <b>Wilhelm, F. M.</b> (SIUC)	\$ 5,000
2001-2002	<b>Division of Natural Heritage, Illinois Department of Natural Resources / USFWS</b> Establishing baseline data on seasonal physiological requirements for <i>Gammarus acherondytes</i> and <i>Gammarus troglophilus</i> in relation to microbial oxygen demand. Taylor, S. J., <b>Wilhelm, F. M.</b> , Adams, G. L.	\$ 15,912
2000-2001	<b>Otago Research Grant (University of Otago)</b> Effects of climate change on coastal freshwater and brackish ecosystems. Burns, C. W., Schallenberg, M., <b>Wilhelm, F. M.</b> , Zehrer, R., Floeder, S., Fitzharris, B., Koons, P., Schulmeister, J.	\$ 42,344



## STUDENTS SUPERVISED &amp; COMMITTEE SERVICE

Name	Year Started	Year Degree Awarded
<b><u>PhD</u></b>		
Mary Coyle (UI)	Jan 2012	
Elliott Reams (UI)	Aug 2011	Withdrew from program Aug 2014
Dirk Wongsopawiro (SIUC)	Aug 2003	Switched to Curriculum Instruction May 2004
<b><u>MSc</u></b>		
Sarah Burnet (UI)	Jun 2014	
Trea LaCroix (UI)	Jan 2014	
Matthew Hill (UI)	Aug 2012	May 2015
Hallie Rajkovich (UI)	Aug 2012	April 2014
Theodore Harris (UI)	May 2010	May 2012
Timothy Caldwell (UI)	Jan 2009	December 2010
Daniel Nelson (UI)	Aug 2008	May 2010
Cindy Adams (UI)	Jun 2008	April 2012
Darrin Martin (SIUC)	Aug 2005	Jun 2007
Alicia Jacobs (SIUC)	Aug 2004	not completed
Nick Gaskill (SIUC)	Aug 2004	Withdrew from Program Dec 2007
Mike Venarsky (SIUC)	Jan 2003	Oct 2005
Erik Oshel (SIUC)	Aug 2002	Withdrew from Program May 2003
<b><u>Non-thesis MS Projects</u></b>		
Marie Cobb (EnvSci MS)	Sep 2013	May 2015
<b><u>Undergraduate Students</u></b>		
Megan Nissley (CRISSP REU)	May 2014	Aug 2014
Hattie Porter	Jan 2014	Apr 2015
Shell Howard (Environmental Science)	Aug 2013	Apr 2014
Jessica Balbiani (Environmental Science)	Aug 2013	Apr 2014
Brita Olson (Ecology and Conservation Biology)	Jan 2013	Apr 2014
Michael Rohrbacher (Environmental Science)	Aug 2012	May 2013
Garret Kratina (CRISSP REU)	May 2013	Aug 2013
Scott Dismuke (CRISSP REU)	May 2012	Aug 2012
Amy Thorp (Ecology and Conservation Biology)	Jan 2012	May 2013
Mikaela Campbell (Ecology and Conservation Biology)	Jan 2012	May 2013
Daniel Davidson (Ecuador summer program)	Jan 2012	Dec 2012
Esptefany Hernandez (SEED student)	Oct 2011	May 2012
Carrie Anderson (Ecology and Conservation Biology)	Jan 2011	Dec 2011
Kristen Gilbert (Environmental Science ENVS 400)	August 2010	May 2011
Rosalinda Gonzalez (Environmental Science Research Experience of Undergraduates UI)	Jun 2010	Aug 2010

Jacqueline Amante (Environmental Science Research Experience of Undergraduates UI)	Jun 2010	Aug 2010
Andrew Waldo (Fisheries UI)	Oct 2009	May 2010
Yuanyang Yu (Forest products)	Sep 2009	Jun 2010
Susan Bury (Environmental Science Research Experience of Undergraduates UI)	Jun 2009	Aug 2009
Leah Arneson (Environmental Science Research Experience of Undergraduates UI)	Jun 2008	Aug 2008
Kurt Seifert (Undergraduate Research/Creative Activity Award)	Aug 2006	May 2007
Stacie Flood (ZOOL 493-3)	Aug 2006	May 2007
Mike Lencioni (ZOOL 493-3 & Undergraduate Research/Creative Activity Award)	Aug 2004	May 2005
Nick Gaskill (ZOOL 493-6)	Aug 2004	May 2004
Alicia Jacobs (ZOOL 493-6)	Jan 2003	Dec 2003
John Henderson (Postgraduate Diploma thesis Otago)	Feb 2001	Oct 2001
Juliane Hamann (3 <sup>rd</sup> yr. Internship Otago)	Aug 2000	Oct 2000

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#### **Undergraduate Assistantships/technicians**

Sierra Grove (Undergraduate technician)	Sep 2013	Dec 2013
Rhia Pulizzi (undergraduate technician)	Oct 2012	Mar 2013
Kristen Gilbert (Undergraduate technician)	May 2011	Aug 2011
Jenny Vise (Undergraduate Assistantship)	Aug 2007	May 2008
Terry Foster (Undergraduate Assistantship)	Aug 2005	May 2006
Canda Musgrove (Undergraduate Assistantship)	Jan 2005	May 2005
Alicia Jacobs (Undergraduate Assistantship)	Jan 2003	Dec 2003

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#### **Member of Graduate Student Committees**

	<b><u>In Progress</u></b>	<b><u>Completed</u></b>
Fisheries / Natural Resources (UI) - MSc	2	2
Environmental Sciences (UI) - MSc	1	4
Waters of the West (UI) - MSc	1	1
Zoology SIUC - PhD	1	4
Zoology SIUC - MSc	0	9
Geology SIUC - MSc	0	1
Environmental Resource Policy Program SIUC - PhD	1	0

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#### **TEACHING EXPERIENCE**

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2011-present (Spring) (odd yrs) **Current Issues in Aquatic Sciences** (FISH 404 3 credit hours), University of Idaho, Moscow, ID, USA.  
 • responsible for delivery of lectures to under/graduate students

2011 **Senior Thesis** (FISH 497 1 credit hour), University of Idaho, Moscow, ID, USA.

- Supervision of proposal, research and sample analysis for student completing independent study and research in Ecology and Conservation Biology program in Ecuador.

**Senior Thesis** (ENVS 497 1 credit hour), University of Idaho, Moscow, ID, USA.

- Supervision of research data analysis, interpretation and presentation for student completing independent study and research in Environmental Sciences.

2010 **Environmental Science** (ENV 400 3 credit hours), University of Idaho, Moscow, ID, USA.

- Supervision of proposal, research and sample analysis for student completing independent study and research in environmental science program.

2009-present **Advanced Limnology** (FISH 503 3 credit hours), College of Natural Resources, University of Idaho, Moscow, ID, USA.

- (Spring)  
(even yrs)
- responsible for delivery of lectures/laboratories to graduate students and continuing ed professionals

2008-present **Introduction to Fish and Wildlife Profession** (FISH/WLF 102 1 credit hour), College of Natural Resources, University of Idaho, Moscow, ID, USA.

- (Fall)
- responsible for delivery of lectures/laboratories to first year fish and wildlife majors

2008-present **Natural Resources (NR 101)** 1 credit hour), College of Natural Resources, University of Idaho, Moscow, ID, USA.

- (Fall)
- responsible for delivery of lectures and laboratories of introduction to natural resource professions
  - supervision and advisement of individual students/preparation of individualized curricula

2007- **Limnology (FISH 415)** 4 credit hours), Department of Fish and Wildlife Resources, University of Idaho, Moscow, ID, USA

- (Fall)
- responsible for laboratory-based introductory limnology course.
  - supervision and advisement of individual students/preparation of individualized curricula

2001-2006 **Limnology (ZOOL 415)** 3 credit hours), Department of Zoology, Southern Illinois University, Carbondale, IL, USA

- (Fall)
- responsible for laboratory based introductory limnology course.
  - supervision and advisement of individual students/preparation of individualized curricula

2006 **ZOOL 493 (Honors Research)** 3 credit hours), Department of Zoology, Southern Illinois University

- (Fall)
- Supervision of proposal, research and sample analysis for student completing independent study and research.
  - Supervision of data analysis, final presentation and summary paper for student completing independent study and research.

2003-2006 **ZOOL 118 (Principles of Animal Biology)** 4 credit hours), Department of Zoology, Southern Illinois University, Carbondale, IL, USA.

- (Spring)
- lecture / lab based course for SIUC science (not zoology) majors, part of SIUC core

curriculum

- 2003-2006  
(Spring)      **ZOOL 458 (Issues in Aquatic Ecology 3 credit hours)**, Department of Zoology, Southern Illinois University, Carbondale, IL, USA.  
• lecture / discussion based course covering wide range of issues in aquatic ecology
- 2004  
(Fall)        **ZOOL 493 (Honors Research 3 credit hours)**, Department of Zoology, Southern Illinois University  
• Supervision of proposal, research and sample analysis for student completing independent study and research.  
• Supervision of data analysis, final presentation and summary paper for student completing independent study and research.
- 2003  
(Fall)        **ZOOL 493 (Honors Research 3 credit hours)**, Department of Zoology, Southern Illinois University  
• Supervision of proposal, research and sample analysis for student completing independent study and research.  
• Supervision of data analysis, final presentation and summary paper for student completing independent study and research.
- 2003  
(spring)     **ZOOL 493 (Honors Research 3 credit hours)**, Department of Zoology, Southern Illinois University  
• Supervision of proposal, research and sample analysis for student completing independent study and research.
- 2001         **Assistant Lecturer (Freshwater Ecology ZOOL 416)**, Department of Zoology, University of Otago, Dunedin, New Zealand  
• responsible for independent student projects, student presentations at mini symposium (total of 40% of final course grade), participation in class discussions  
**Co-supervisor** of John Henderson, post graduate Diploma of Science (Ecology).
- 2000         **Co-supervisor** of Juliane Hamann, 3<sup>rd</sup> year practicum student, from Technical University of Dresden, Germany - Practicum at University of Otago, Dunedin, New Zealand.  
• experiments that student performed became part of refereed publication, (see above)
- 2000         **Teaching Assistant (Aquatic Ecology ZOOL 331)**, Department of Zoology, University of Otago, Dunedin, New Zealand.  
• supervised aquatic ecology laboratories, aided students with project development
- 1999         **Guest Lecturer (Aquatic Ecology Seminar Series BIOL 664)**, Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada.  
• The ecology of *Gammarus lacustris* in lakes of the Rocky Mountains
- 1998         **Guest Lecturer (Ecology Seminar Series BIOL 631)**, Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada.  
• *Gammarus* life history variation with elevation and fish predation
- 1995         **Guest Lecturer (Aquatic Biology ZOOL 665)**, Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada.  
• Lecture on Dr. R. H. Peters

- 1994           **Guest Lecturer (Aquatic Invertebrates of Alberta ZOOL 351)**, Department of Biological Sciences, University of Alberta, Edmonton, AB, Canada.
- Amphipods
- 1993-1994      **Demonstrator/Technician (Limnology BI 305 and Ecology BIES 202)**, Biology Department, Trent University, Peterborough, ON, Canada.
- organized and taught laboratories; assessed student work; distributed laboratory reports to T.A.s for marking; maintained boats, field and laboratory equipment
- 1993           **Guest Lecturer (Biogeography BI/GEO 305)**, Biology Department, Trent University, Peterborough, ON, Canada.
- Distribution of the glacial relict *Diporeia hoyi*
- 1990-1993      **Teaching Assistant (Ecology BIES 202)**, Biology Department, Trent University, Peterborough, ON, Canada.
- organized laboratories; tutored students during laboratory sessions; supervised and evaluated student work; distributed laboratory reports to T.A.s for marking
- 1992  
(4 mo)         **Electron Microscopy Technician (Electron Microscopy BI 401)**, Biology Department, Trent University, Peterborough, ON, Canada.
- demonstrated and taught practical aspects of scanning electron microscopy including: specimen preparation, sputtercoating, operation of scanning electron microscope (Cambridge Stereoscan 90), and production of photomicrographs
- 1992           **Guest Lecturer (Introductory Biology BI 101)**, Biology Department, Trent University, Peterborough, ON, Canada.
- Metabolic rates of aquatic invertebrates

#### CONFERENCE PRESENTATIONS

\* indicates under-; \*\*graduate student(s)

- 107 **Wilhelm, F.M.**, Moffitt, C. M., Braker, E., Kibler, B., Noonan, J., and Woolf, T. 2015. Efforts to use elevated pH and benthic barriers to eradicate Asian clams (*Corbicula*) from Idaho's great lake, Lake Pend Oreille. 35<sup>th</sup> Annual conference of the North American Lakes Management Society. Saratoga Springs, New York, USA. Nov 17-20.
- 106 LaCroix, T.,\*\* and **Wilhelm, F. M.** 2015. Engaging Landowners in Limnology: The Fernan Lake Experience. 35<sup>th</sup> Annual conference of the North American Lakes Management Society. Saratoga Springs, New York, USA. Nov 17-20.
- 105 LaCroix, T.,\*\* and **Wilhelm, F. M.** 2015. High resolution spatial and temporal data to understand nutrient concentrations and loads that influence algal blooms in a small lake: how much data do we need? 35<sup>th</sup> Annual conference of the North American Lakes Management Society. Saratoga Springs, New York, USA. Nov 17-20.
- 104 Burnet, S. H.,\*\* and **Wilhelm, F. M.** 2015. Selection of sites is crucial to obtain meaningful measures of internal loading: a case study from Willow Creek Reservoir, OR. 35<sup>th</sup> Annual conference of the North American Lakes Management Society. Saratoga Springs, New York, USA. Nov 17-20.
- 103 **Wilhelm, F. M.**, V.-A., Suchar, LaCroix, T. 2015. How meaningful are those lake sampling sites you chose? Washington Lakes Protection Association Annual Meeting. Walla Walla, Washington, USA. Oct 26-28.
- 102 LaCroix, T.\*\* and **Wilhelm, F. M.** 2015. A mass balance approach using high resolution data to

- understand nutrient concentrations and loads that influence algal blooms in a small lake. Washington Lakes Protection Association Annual Meeting. Walla Walla, Washington, USA. Oct 26-28.
- 101 Burnet, S. H.,\*\* and **Wilhelm, F. M.** 2015. The need for multiple within-lake sites to determine rates of internal loading from sediment cores. Washington Lakes Protection Association Annual Meeting. Walla Walla, Washington, USA. Oct 26-28.
- 100 Burnet, S. H.,\*\* and **Wilhelm, F. M.** 2015. Large variance in internal loading rates from spatially separated sediment cores in Willow Creek Reservoir, OR. Oregon Lakes Association 2015 Annual Conference. Klamath Falls, Oregon, USA. Oct 2-4.
- 99 Guzman, B.,\* Rankin, E.,\* Braker, E.,\*\* Moffitt, C. M., and **Wilhelm, F.M.** 2015. Benthic survey of Ellisport Bay, Lake Pend Oreille, Idaho, for Asian clams. Annual meeting of the Ecological Society of America, Baltimore, Maryland, USA. Aug 9-14.
- 98 Moffitt, C. M., **Wilhelm, F. M.**, Braker, E.,\*\* Kibler, B., Noonan, J.\*, and Woolf, T. 2015. Asian clams can pose a significant threat to aquatic resources: updates on the Lake Pend Oreille infestation and management. Annual meeting of the Idaho Chapter of the American Fisheries Society, Boise, Idaho, USA. Mar. 3-5.
- 97 **Wilhelm, F. M.**, and LaCroix, T.\*\* 2015. What landowners can do for aquatic scientists: the Fernan Lake experience. 14<sup>th</sup> Annual Regional Lakes Day, Spokane, Washington, USA. Feb. 7.
- 96 **Wilhelm, F. M.**, and LaCroix, T.\*\* 2014. Idaho EPSCoR MILES Limnology Research at Fernan Lake to date. Spokane River Forum, Coeur d'Alene, Idaho, USA. Nov 18-20.
- 95 Coyle, M. K.,\*\* Nissley, M.,\* **Wilhelm, F. M.**, and Shaffi, B. 2014. *Didymosphenia geminata* in the Intermountain Northwest and Long-term Management Strategies for Nuisance Mats. Washington Lakes Protection Association Annual Meeting, Chelan, Washington, USA. Oct 2.
- 94 **Wilhelm, F. M.** 2014. Dealing with dishonest students: what faculty need to know to survive all 12 rounds. 11<sup>th</sup> Annual UIACADA Advising Symposium. Moscow, Idaho, USA. Sep 12.
- 93 Coyle, M. K.,\*\* and **Wilhelm, F. M.** 2014. Phosphorus enrichment as a management strategy for *Didymosphenia geminata* mats in the Kootenai River Libby, MT. Idaho Chapter of the American Fisheries Society annual meeting. Idaho Falls, ID. Feb 10-13.
- 92 Rajkovich, H. E.,\*\* and **Wilhelm, F. M.** 2014. Daily measures of phosphorus and sediment to identify contributions of sub-watershed loads that fuel reservoir cyanobacteria growth. 26<sup>th</sup> Annual Idaho Department of Environmental Quality Water Quality Conference, Boise, ID. Feb 4-6.
- 91 Reams, E.,\*\* and **Wilhelm, F. M.** 2013. Zooplankton size structure as an indicator of productive stocking sites. 33<sup>rd</sup> annual meeting of the North American Lakes Management Society. San Diego, California, USA. October 28 - November 1.
- 90 Rajkovich, H. E.,\*\* and **Wilhelm, F. M.** 2013. Use of high resolution sampling to identify candidate sub-catchments for potential remediation to improve water quality in receiving water bodies. 33<sup>rd</sup> annual meeting of the North American Lakes Management Society. San Diego, California, USA. October 28 - November 1.
- 89 Olson B. L.,\* Bourret, S.,\*\* Bustamante, M.,\* Eguiguren, J. S.,\* **Wilhelm, F. M.**, and Iñiguez, C. 2013. Cascading trophic interactions in fish and fishless high altitude lakes in the Andes of southern Ecuador. 33<sup>rd</sup> annual meeting of the North American Lakes Management Society. San Diego, California, USA. October 28 - November 1.
- 88 Rajkovich, H. E.,\*\* and **Wilhelm, F. M.** 2013. Use of high resolution sampling to identify candidate sub-catchments for potential remediation to improve water quality in receiving water bodies. Joint meeting of Washington Lakes Protection Association and Oregon Lakes Association. Vancouver, Washington, USA. October 16-18.
- 87 Roon, D., Waits, L., Rachlow, J., **Wilhelm, F. M.**, Tank, D., Pinel, S., Cisneros, R., Lopez, F., Iniguez-Gallardo, V., Espinoza, C., Iñiguez Armijos, C. 2013. A student-driven research partnership for building neotropical conservation capacity, centered on the Podocarpus region of

- Southern Ecuador, 98<sup>th</sup> Annual Meeting of the Ecological Society of America. Minneapolis, Minnesota, USA. August 4-9.
- 86 Coyle, M. K.,\*\* and **Wilhelm, F. M.** 2013. Overview of *Didymosphenia geminata* mesocosm project below Libby Dam. International Kootenai Ecosystem Restoration Team Meeting. Kaslo, British Columbia, Canada. May 9-10.
- 85 Reams, E.,\*\* **Wilhelm, F. M.**, and Dux, A. 2013. Changes in the thermal stratification of Lake Pend Oreille. Lake Pend Oreille Basin Commission Meeting. Dover, Idaho, USA. April 22.
- 84 Coyle, M. K.,\*\* and **Wilhelm, F. M.** 2013. *Didymosphenia geminata* in the Kootenai River. Invasive Aquatic Species Treatment, Prevention and Education in the Northern Interior Columbia Basin. Dover, Idaho, USA. March 28.
- 83 **Wilhelm, F. M.**, Harris, T. D.,\*\* Graham, J. L., and Loftin, K. A. 2013. The ecology of blue-green blooms and implications to management decisions concerning water quality. 23<sup>rd</sup> Annual Idaho Department of Environmental Water Quality Conference. Boise, ID, USA. February 12-14.
- 82 Reams, E.,\*\* and **Wilhelm, F. M.** 2013. Changes in the thermal stratification of Lake Pend Oreille. 12<sup>th</sup> Annual Regional Lakes Day. Spokane, WA, USA. February 9.
- 81 Harris, T.D.,\*\* **Wilhelm, F. M.**, Graham, J. L., and Loftin, K. A. 2013. Manipulating the nitrogen to phosphorus ratio in lakes and reservoirs: a management strategy to reduce toxic cyanobacterial blooms. 2013 Kansas Natural Resources Conference. Wichita, Kansas, USA. January 24-25.
- 80 Thorp, A.,\* Campbell, M.,\* Davidson, D.,\* Suescum, J. A.,\* **Wilhelm, F. M.**, and Iñiguez C. 2012. Limnological investigations of limiting nutrients and stream and lake invertebrate communities in the high Andean Páramo of southern Ecuador. 32<sup>nd</sup> annual meeting of the North American Lakes Management Society. Madison, Wisconsin, USA. November 7-9.
- 79 Reams, E.,\*\* and **Wilhelm, F. M.** 2012. Influences of climate change on the annual thermal stratification of a large oligotrophic lake. 32<sup>nd</sup> annual meeting of the North American Lakes Management Society. Madison, Wisconsin, USA. November 7-9.
- 77 Harris, T. D.,\*\* **Wilhelm, F. M.**, Graham, J. L., and Loftin, K. A. 2012. Experimental additions of alum and nitrogen to large-scale *in situ* mesocosms to reduce algal biovolume and microcystin concentration. 32<sup>nd</sup> Annual meeting of the North American Lake Management Society. Madison, Wisconsin, USA. November 7-9.
- 76 Harris, T.D.,\*\* **Wilhelm, F. M.**, Graham, J. L., and Loftin, K. A. 2012. Potential short-term management strategy to reduce toxic cyanobacterial blooms by manipulation of the nitrogen to phosphorus ratio. 2012 Governor's Conference on the Future of Water in Kansas. Manhattan, Kansas, USA. October 30-31.
- 75 **Wilhelm, F. M.**, and Makus, L. 2012. Mentoring students to graduation and beyond: a faculty perspective. 9<sup>th</sup> Annual UI/WSU Advising Symposium. Moscow, Idaho, USA. September 9.
- 74 Anderson, C. L.,\* Shimada, E.,\* Lopez, F., Tiwi, C.,\* Cisneros, R., Leiva, A. Iñiguez, C. Roon, D., Fremier, A., and **Wilhelm, F. M.** 2011. Relations between benthic macroinvertebrates and vegetative communities along an elevation gradient in the southern Andes of Ecuador: baseline data for indigenous communities and long-term resource management. 31<sup>st</sup> Annual meeting of the North American Lakes Management Society. Spokane, Washington, USA. October 25-28.
- 73 Harris, T.D.,\*\* **Wilhelm, F. M.** Graham, J. L., and Loftin, K. A. 2011. Alteration of nutrient regimes in large-scale *in situ* enclosure experiments to reduce cyanobacterial biovolume and toxicity. 31<sup>st</sup> Annual meeting of the North American Lakes Management Society. Spokane, Washington, USA. October 25-28.
- 72 Adams, C. J.,\*\* and **Wilhelm, F. M.** 2011. Perceptions by the general public of cyanobacterial blooms and remediation strategies in lakes: what can scientist learn? 31<sup>st</sup> Annual meeting of the North American Lakes Management Society. Spokane, Washington, USA. October 25-28.
- 71 Caldwell, T. J.,\*\* and **Wilhelm, F.M.** 2011. The role of the opossum shrimp (*Mysis diluviana*) in the food web of Lake Pend Oreille, a large (380 km<sup>2</sup>) and deep (>350 m) oligotrophic lake in Northern Idaho, USA. 31<sup>st</sup> Annual meeting of the North American Lakes Management Society.

- Spokane, Washington, USA. October 25-28.
- 70 Harris, T. D.,\*\* and **Wilhelm, F. M.** 2011. An overview of large in situ enclosure experiments in Willow Creek Reservoir to reduce cyanobacteria density and toxicity under altered nutrient regimes. Annual meeting of the Oregon Lakes Association. Portland, Oregon, USA. October 21-22.
- 60 **Wilhelm, F. M.**, Strittmater, K, and Turner, S. 2011. Advising 303: Degree Audit, What-If and GPA calculator - Oh My! 8<sup>th</sup> Annual UI/WSU Advising Symposium. Moscow, Idaho, USA. September 9.
- 59 Amante, J.,\* **Wilhelm, F. M.**, and Harris, T. D.\*\* 2011. The response of cyanobacteria and zooplankton to experimental addition of nitrogen to large lake enclosures. University of New Hampshire Undergraduate Research Conference. Durham, NH, USA. April 27.
- 58 Gonzalez, R.,\* Caldwell, T. J.,\*\* and **Wilhelm, F. M.** 2011. The vertical and spatial distribution of zooplankton in Lake Pend Oreille, northern Idaho, in the presence of *Mysis diluviana*. Aquatic Sciences Meeting of the American Society of Limnology and Oceanography. San Juan, Puerto Rico, USA. February 13-18.
- 57 **Wilhelm, F. M.**, and Caldwell, T. J.\*\* 2011. Mysids in the Lake Pend Oreille food web: history and current research. 10<sup>th</sup> Annual Regional Lakes Conference. Spokane, WA. February 5.
- 56 **Wilhelm, F. M.** 2010. Use of large mesocosms in lake management research. 30<sup>th</sup> Annual meeting of the North American Lakes Management Society. Oklahoma City, Oklahoma, USA. November 3-5.
- 55 Adams, C. J.,\*\* and **Wilhelm, F. M.** 2010. Amazing differences: the disparity between mass of total solids and phosphorus entering a reservoir based on daily and biweekly samples. 30<sup>th</sup> Annual meeting of the North American Lakes Management Society. Oklahoma City, Oklahoma, USA. November 3-5.
- 54 **Wilhelm, F. M.** 2010. Incorporating service-learning into an introductory limnology course. Annual joint meeting of the American Society of Limnology and Oceanography and North American Benthological Society. Albuquerque, New Mexico, USA. June 6-11.
- 53 Caldwell, T. J.,\*\* and **Wilhelm, F. M.** 2010. The role of *Mysis diluviana* in the nutrient and zooplankton community dynamics of a large and deep oligotrophic lake in northern Idaho, USA. Annual joint meeting of the American Society of Limnology and Oceanography and North American Benthological Society. Santa Fe, New Mexico, USA. June 6-11.
- 52 Nelson, D.,\*\* and **Wilhelm, F. M.** 2010. Food web structure in cave streams of southwestern Illinois: a stable isotope approach. Annual joint meeting of the American Society of Limnology and Oceanography and North American Benthological Society. Santa Fe, New Mexico, USA. June 6-11.
- 51 Adams, C. J.,\*\* and **Wilhelm, F. M.** 2010 Implications of solar powered circulation of an epilimnion for cyanobacteria control of the zooplankton populations within Willow Creek Reservoir, Oregon. Annual joint meeting of the American Society of Limnology and Oceanography and North American Benthological Society. Santa Fe, New Mexico, USA. June 6-11.
- 50 Caldwell, T. J.,\*\* and **Wilhelm, F. M.** 2010. The role of the opossum shrimp (*Mysis relicta*) in the nutrient and zooplankton community dynamics of a large and deep (>350 m) oligotrophic lake in Northern Idaho, USA. Annual meeting of the International Association of Great Lakes Research. Toronto, Ontario, Canada. May 17-21.
- 49 Adams, C. J.,\*\* and **Wilhelm, F. M.** 2009. The vertical and horizontal distribution of zooplankton populations in response to a mechanical whole-lake management strategy. 29<sup>th</sup> Annual meeting of the North American Lakes Management Society. Hartford, Connecticut, USA. October 27-31.
- 48 **Wilhelm, F. M.**, and Banks, L. 2009. Advising 102: Taking the plunge. University of Idaho Academic Advising Association 6<sup>th</sup> Annual Advising Symposium. Moscow, Idaho, USA. September 11.



- 47 **Wilhelm, F. M.** 2008. An advanced limnology course at the University of Idaho of interest to NALMS CLM/CLPs and other aquatic professionals. 28<sup>th</sup> Annual Meeting of the North American Lakes Management Society. Chateau Lake Louise, Lake Louise, Alberta, Canada. November 11-14.
- 46 Gillespie, K. and **Wilhelm, F. M.** 2008. Advising 101: Getting your feet wet. University of Idaho Academic Advising Association 5<sup>th</sup> Annual Advising Symposium. Moscow, Idaho, USA. September 5, 2008.
- 45 **Wilhelm, F. M.** 2008. Using aerators to restore lakes: avoiding nutrient pumps. 23<sup>rd</sup> Annual Meeting of the Illinois Lake Management Association. Springfield, Illinois, USA. February 28-March 1, 2008.
- 44 **Wilhelm, F. M.** 2007. A touch of realism: service-learning in a natural sciences course - FISH 415 Limnology. Service-Learning Faculty Fellows Workshop. University of Idaho Career and Professional Planning, Moscow, ID, USA. December 18-20, 2007.
- 43 **Wilhelm, F. M.** and Martin, D. L.\*\* 2007. How effective are restorations focused on reducing phosphorus in Illinois lakes? 27<sup>th</sup> Annual Meeting of the North American Lakes Management Society. Orlando, Florida, USA. October 30 - November 2.
- 42 Wahl, N. C.,\*\* Zeigler, J. M.,\*\* Whitley, G. W., Jacobs, A. M.,\*\* and **Wilhelm, F. M.** 2007. Relationship between bluegill diet and cladoceran size in Campus Lake. 136<sup>th</sup> Annual meeting of the American Fisheries Society, San Francisco, California, USA. September 2-6.
- 41 **Wilhelm, F. M.**, Flood, S.,\* and Seifert, K.\* 2007. The use of whole-lake aeration to restore a small pond impacted by a brine spill from oil and gas development. 22<sup>nd</sup> Annual Illinois Lake Management Association Conference, Q Center, St. Charles, Illinois, USA. February 22-24.
- 40 Martin, D. L.,\*\* and **Wilhelm, F. M.** 2007. The phosphorus reductions of draining and dredging a pond and a cost-benefit analysis of the project. 22<sup>nd</sup> Annual Illinois Lake Management Association Conference, Q Center, St. Charles, Illinois, USA. February 22-24.
- 39 **Wilhelm, F. M.**, Jacobs, A. M.,\*\* and Musgrove, C. S.\* 2006. Aeration of Campus Lake: Controlling internal phosphorus loading and environmental visualization of the whole-lake aeration. 26<sup>th</sup> Annual Meeting of the North American Lake Management Society. Indianapolis, Indiana, USA. November 8-10
- 38 Martin, D. L.,\*\* and **Wilhelm, F. M.** 2006. Draining and dredging of a pond as a watershed management strategy to improve the water quality of a downstream lake. 26<sup>th</sup> Annual Meeting of the North American Lake Management Society. Indianapolis, Indiana, USA. November 8-10.
- 37 Jacobs, A. M.,\*\* and **Wilhelm, F. M.** 2006. The impact of a reservoir management strategy on the zooplankton community in the Illinois EPA Clean Lakes Phase II Restoration of Campus Lake. . 26<sup>th</sup> Annual Meeting of the North American Lake Management Society. Indianapolis, Indiana, USA. November 8-10. Abstract accepted for poster presentation.
- 36 Jacobs, A. M.,\*\* and **Wilhelm, F. M.** 2006. The impact of artificial lake destratification on the zooplankton community in the Phase II restoration of Campus Lake. 26<sup>th</sup> Annual Midwest Ecology and Evolution Conference, Washington University, St. Louis, Missouri, USA. March 17-19.
- 35 **Wilhelm, F. M.**, Jacobs, A. M.,\*\* and Musgrove, C. S.\* 2006. Estimating and visualizing the whole-lake effect of year 1 aerator operation on physical and chemical parameters in the Phase II restoration of Campus Lake. 21<sup>st</sup> Annual Illinois Lake Management Association Conference, Eagle Creek Resort & Conference Center, Lake Shelbyville, Illinois, USA. March 9-11.
- 34 Jacobs, A. M.,\*\* **Wilhelm, F. M.**, and Musgrove, C. S.\* 2006. The impact of lake destratification on the zooplankton community in the Phase II restoration of Campus Lake. 21<sup>st</sup> Annual Illinois Lake Management Association Conference, Eagle Creek Resort & Conference Center, Lake Shelbyville, Illinois, USA. March 9-11.
- 33 Martin, D. L.,\*\* and **Wilhelm, F. M.** 2006. The efficacy of pond draining and dredging as a watershed management strategy to improve the water quality of Campus Lake. 21<sup>st</sup> Annual

- Illinois Lake Management Association Conference, Eagle Creek Resort & Conference Center, Lake Shelbyville, Illinois, USA. March 9-11.
- 32 **Wilhelm, F. M.**, Wongsopawiro, D.,\*\* and Arts, M. T. 2005. Seasonal lipid dynamics and inter-annual differences in life history characteristics of the grass shrimp, *Palaemonetes kadiakensis*, in a Midwestern US lake. 6<sup>th</sup> International Crustacean Congress, University of Glasgow, Glasgow, Scotland. July 18-22.
- 31 Venarsky, M. P.,\*\* Anderson, F. E., Abbasi, W.,\* and **Wilhelm, F. M.** 2005. Population genetics and phylogenetic position of the endangered Illinois cave amphipod *Gammarus acherondytes*. Annual Meeting of the Society of Systematic Biologists. University of Alaska, Fairbanks, Alaska, USA. June 11-14.
- 30 Venarsky, M. P.,\*\* **Wilhelm, F. M.**, Anderson, F. E., and Taylor, S. J. 2005. Life history and reproductive timing of the endangered Illinois cave amphipod. 53<sup>rd</sup> Annual Meeting of the North American Benthological Society, New Orleans, Louisiana, USA. May 22-27.
- 29 Venarsky, M. P.,\*\* Anderson, F. E., **Wilhelm, F. M.**, and Taylor, S. J. 2005. Population genetics of the endangered Illinois cave amphipod, *Gammarus acherondytes* (Gammaridae). 25<sup>th</sup> Annual Midwest Ecology and Evolution Conference, Carbondale, Illinois, USA. March 11-13, 2005.
- 28 Taylor, S. J., **Wilhelm, F. M.**, Venarsky, M. P.,\* and Adams, G. L.\*\* 2003. Oxygen consumption / body mass relationships of *Gammarus acherondytes* and *G. troglophilus* (Amphipoda) in an Illinois cave. National Speleological Society Annual meeting, CA. USA. August 1-5.
- 27 **Wilhelm, F. M.**, Taylor, S. J., Venarsky, M. P.,\* and Adams, G. L.\*\* 2003. Oxygen consumption of *Gammarus acherondytes* and *G. troglophilus*, two cave amphipods from Illinois Caverns. The Crustacean Society Annual Conference, Williamsburg, VA. USA. June 1-5.
- 26 **Wilhelm, F. M.**, Burns, C. W., and Schindler, D. W. 2002. The response of aquatic invertebrates to climate change: Predictions from temperature-mediated reproductive strategies. American Society of Limnology and Oceanography Annual Conference, Victoria Conference Centre, Victoria, B. C. Canada. June 10-14.
- 25 **Wilhelm, F. M.** 2001. Climate warming and the fate of aquatic invertebrates: Using seasonal reproductive strategies to predict long-term trends in populations. DIALOG IV (Dissertations Initiative for the Advancement of Limnology and Oceanography), Bermuda Biological Station for Research, Bermuda. October 13-20.
- 24 **Wilhelm, F. M.** 2001. Amphipods on top of the world. DIALOG IV (Dissertations Initiative for the Advancement of Limnology and Oceanography), Bermuda Biological Station for Research, Bermuda. October 13-20.
- 23 Blais, J. M., **Wilhelm, F. M.**, Kidd, K. A., Muir, D. C. G., Donald, D. B. and Schindler, D. W. 2001. Organochlorine pesticide and PCB concentrations in amphipods (*Gammarus lacustris*) along an elevation gradient in mountain lakes of Banff National Park, Canada. Aquatic Toxicity Workshop, Winnipeg, Canada. September 30-October 04.
- 22 **Wilhelm, F. M.** and Burns, C. W. 2001. Predation by mysids on amphipods: An overlooked interaction in aquatic ecosystems. XXVIII Societas Internationalis Limnologiae Congress, Melbourne, Australia. February 4-10.
- 21 **Wilhelm, F. M.** and Burns, C. W. 2000. The life history of *Paracalliope fluviatilis* (Crustacea: Amphipoda) in a South Island, New Zealand lake: Implications of warmer temperatures. Annual Conference of the New Zealand Limnological Society, Christchurch, New Zealand. November 20-24.
- 20 **Wilhelm, F. M.** and Schindler, D. W. 1999. The life history strategy of *Gammarus lacustris* (Crustacea: Amphipoda) in lakes at different elevations in the Canadian Rocky Mountains: Predictions for climate change. Annual Conference of the New Zealand Limnological Society, Wairakei, New Zealand. November 29-December 3.
- 19 Parker, B.R. and **Wilhelm, F. M.** 1999. Harrison Lake Bull Trout. Ecology and Management of Northwest Salmonids: Bull trout II Conference. Canmore, Alberta, Canada. November 17-20.

- 18 **Wilhelm, F. M.**, Hudson, J. J. and Schindler, D. W. 1999. Benthic to pelagic phosphorus transport by the amphipod *Gammarus lacustris* in an alpine lake. 18<sup>th</sup> Annual Conference of the Society of Canadian Limnologists. Edmonton, Alberta. January 7-10.
- 17 **Wilhelm, F. M.**, Parker, B. R. Schindler, D. W. and Donald, D. B. 1998. Bull charr (*Salvelinus confluentus*): A desirable species in small mountain lakes. 18<sup>th</sup> International Symposium of the North American Lake Management Society, Banff, Alberta, Canada. November 10-13.
- 16 **Wilhelm, F. M.** and Schindler, D. W. 1998. *Gammarus lacustris* (Crustacea: Amphipoda) zooplankton predation in a Canadian Rocky Mountain alpine lake. XXVII Societas Internationalis Limnologiae Congress, Dublin, Ireland. August 9-14.
- 15 **Wilhelm, F. M.** 1997. *Gammarus* survival under bull trout predation in a sub-alpine Rocky Mountain lake. Graduate Student Research Symposium, University of Alberta, Edmonton, Alberta, Canada. October 24-25.
- 14 **Wilhelm, F. M.** 1997. *Gammarus lacustris* life history trade-offs between prairie and alpine lakes in southwestern Alberta. Prairies University Biological Seminar, University of Alberta, Edmonton, Alberta, Canada. February 20-22.
- 13 **Wilhelm, F. M.** 1996. *Gammarus lacustris* - nocturnal marauders. Sharing Ideas: Graduate Student Research Symposium, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, Canada. November 8-9.
- 12 **Wilhelm, F. M.** 1996. *Gammarus lacustris* - pelagic predators from the benthos. 44<sup>th</sup> Annual Meeting of the North American Benthological Society, Kalispell, Montana, USA. June 3-7.
- 11 **Wilhelm, F. M.** 1996. High altitude amphipod research. The Future of Our Environment: research at the University of Alberta, Edmonton, Alberta, Canada. April 29-30.
- 10 **Wilhelm, F. M.** and Schindler, D. W. 1995. The life history of *Gammarus lacustris* (Crustacea: Amphipoda) from two southwestern Alberta alpine lakes. American Society of Limnology and Oceanography Annual Conference, University of Nevada, Reno, Nevada, USA. June 11-15.
- 9 **Wilhelm, F. M.** and Hiebert, J. A.\*\* 1995. A cheap and easy method to separate benthos from sediments (just add water!). 43<sup>rd</sup> Annual Meeting of the North American Benthological Society, Keystone, Colorado, USA. May 30-June 3.
- 8 **Wilhelm, F. M.** and Lasenby, D. C. 1995. Activity and respiration rates of *Diporeia hoyi* (Crustacea: Amphipoda) from two south central Ontario lakes. Prairies Universities Biological Seminar, University of Winnipeg, Winnipeg, Manitoba, Canada. February 16-18.
- 7 **Wilhelm, F. M.** and Lasenby, D. C. 1995. How useful are one-time head capsule length - body size/weight relationships? 14<sup>th</sup> Annual Conference of the Society of Canadian Limnologists, Ottawa, Ontario, Canada. January 5-7.
- 6 **Wilhelm, F. M.** and Lasenby, D. C. 1993. Sediment processing by *Diporeia hoyi* from two south central Ontario lakes. American Society of Limnology and Oceanography Annual Conference, University of Alberta, Edmonton, Alberta, Canada. May 30-June 4.
- 5 **Wilhelm, F. M.**, Wilhelm, R. M., Plante, R. and Lasenby, D. C. 1993. A new activity recorder for continuous monitoring of small invertebrates, even in substrates. 41<sup>st</sup> Annual Meeting of the North American Benthological Society, University of Calgary, Calgary, Alberta, Canada. May 25-30.
- 4 **Wilhelm, F. M.** and Lasenby, D. C. 1993. Vertical distribution of *Diporeia hoyi* in Twelve Mile Lake sediments. 12<sup>th</sup> Annual Conference of the Society of Canadian Limnologists, Trent University, Peterborough, Ontario, Canada. January 2-4.
- 3 **Wilhelm, F. M.** and Lasenby, D. C. 1993. Life history of *Diporeia hoyi* (Crustacea: Amphipoda) from two south central Ontario lakes. 12<sup>th</sup> Annual Conference of the Society of Canadian Limnologists, Trent University, Peterborough, Ontario, Canada. January 2-4.
- 2 **Wilhelm, F. M.** and Lasenby, D. C. 1991. The effect of low dissolved lake oxygen concentration on gill surface area in *Pontoporeia hoyi* (Crustacea: Amphipoda). Ontario Ethology and Ecology Colloquium, University of Guelph, Guelph, Ontario, Canada. May 12-14.

- 1 **Wilhelm, F. M.** 1991. The effect of low dissolved lake oxygen concentrations on gill surface area in the amphipod *Pontoporeia hoyi* (Crustacea: Amphipoda). Ontario Biology Day, McMaster University, Hamilton, Ontario, Canada. March 16.

#### INVITED PRESENTATIONS

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- 49 LaCroix, T., and **Wilhelm, F. M.** 2015. The state of Fernan Lake. Kootenai Environmental Alliance monthly lunch meeting. Coeur d'Alene, Idaho, USA, Sep 3.
- 48 LaCroix, T., and **Wilhelm, F. M.** 2015. UI research at Fernan Lake: 2015 update. Fernan Lake Recreation and Conservation Association monthly meeting. Coeur d'Alene, Idaho, USA, Jul 14.
- 47 Coyle, M. K., and **Wilhelm, F. M.** 2015. *Didymosphenia geminata* in the intermountain northwest and long-term management strategies for nuisance mats. Trout Unlimited Libby Chapter. Libby, MT, USA. April 15.
- 46 Coyle, M. K., and **Wilhelm, F. M.** *Didymosphenia geminata* in the intermountain northwest and long-term management strategies for nuisance mats. USACE Ranger Training, Libby, MT, USA. Mar 12.
- 45 **Wilhelm, F. M.**, and LaCroix, T. 2014. Idaho EPSCoR MILES Limnology Research at Fernan Lake to date. Fernan Lake Stakeholder Meeting. Coeur d'Alene, Idaho, USA. Nov 17.
- 44 **Wilhelm, F. M.** 2014. Conservation of aquatic ecosystems. Conservation Biology WLF440 guest lecture. University of Idaho, Moscow, Idaho, USA. Nov 06.
- 43 **Wilhelm, F. M.**, Lacroix, T.,\*\* Burnet, S.,\*\* Rajkovich, H. E., Harris, T., Adams, C. J. 2014. UI limnology research: science for lake management. 50<sup>th</sup> Anniversary Celebration of the Idaho Water Resources Reserch Institute. Coeur d'Alene, Idaho, USA. Oct 17.
- 42 **Wilhelm, F. M.**, LaCroix, T.\*\* 2014. UI research at Fernan Lake to date. Monthly meeting of the Fernan Lake Conservation and Recreation Association, Coeur d'Alene, Idaho, USA. Oct 14.
- 41 **Wilhelm, F. M.** 2014. Overview of other CNR programs / research interests and opportunities for collaboration. Meeting with representatives of Catholic University of Temuco, Chile. Moscow, Idaho, USA. Aug. 8.
- 40 **Wilhelm, F. M.**, and LaCroix, T.\*\* 2014. Adventure Learning at Fernan Lake. Idaho EPSCoR Adenture Learning Workshop. Coeur d'Alene, Idaho, USA. Jun 16.
- 39 Coyle, M. K., and **Wilhelm, F. M.** 2014. *Didymosphenia geminata* nuisance mats throughout Idaho and Montana. Idaho Dept. of Fish and Game crew training. Lewiston, ID, Jun 5.
- 38 **Wilhelm, F. M.**, Rajkovich, H. E.,\*\* Harris, T. D.,\*\* and Adams, C. J.\*\* 2014. Cyanobacteria blooms and research at Willow Creek. US Army Corps of Engineers Harmful Algal Bloom Technical Session. Portland, OR., USA. May 28-29.
- 37 Coyle, M. K., **Wilhelm, F. M.**, and Shafii, B. 2014. Phosphorus enrichment as a management strategy for *Didymosphenia geminata* nuisance mats in the Kootenai River, Libby MT. USACE Personnel Libby Dam. Libby, MT, USA. May 25.
- 36 Balbiani, J.,\* and **Wilhelm, F. M.** 2014. Fernan Lake Wetlands: Nutrient sink or source? Annual Idaho EPSCoR meeting. Coeur d'Alene, Idaho, USA. Apr. 23.
- 35 Coyle, M. K., and **Wilhelm, F. M.** 2014. *Didymosphenia geminata* in the Kootenai River Libby, MT: Finding management strategies for long-term suppression. Northern Idaho Flyfishing Expo, Lewiston, Idaho – Kelly Creek Flycasters. Lewiston, ID, USA. Mar 21.
- 34 **Wilhelm, F. M.**, and Harris, T. 2014. The 'green' in lakes and why you should care. Science on Tap, Salomn River Brewery, McCall, ID, USA. Mar 20.
- 33 Coyle, M. K.,\*\* and **Wilhelm, F. M.** 2014. *Didymosphenia geminata* in the Kootenai River Libby, MT Finding management strategies for long-term suppression. Trout Unlimited, Bozeman Chapter, Bozeman, MT, USA. Mar 18.
- 32 **Wilhelm, F. M.**, Lacroix, T.,\*\* Balbiani, J.,\* Howard, S.,\* Pengilly, M. 2014. Limnology activities at Fernan Lake. Idaho EPSCoR stakeholder meeting, Coeur d'Alene, Idaho, USA. Mar. 5.

- 31 **Wilhelm, F. M.** 2014. Cyanobacteria response to manipulations of TN:TP. ENV5400 University of Idaho, Moscow, Idaho, USA. Feb 25.
- 30 Rajkovich, H. E.\*\* and **Wilhelm F. M.** 2014. Use of high resolution sampling to identify candidate sub-catchments for potential remediation to improve water quality in receiving water bodies. Palouse Clearwater Environmental Institute's Science Uncorked Presentation Series. Moscow, ID, USA. Mar 14.
- 29 **Wilhelm, F. M.** 2014. UI MILES pilot Fernan Lake data. FOR/GEOG 501 University of Idaho, Moscow, Idaho, USA. Feb 20.
- 28 Rajkovich, H. E.,\*\* **Wilhelm, F. M.**, Harris, T. D.,\*\* and Adams, C. J.\*\* 2014. Summary of research at Willow Creek Reservoir to understand the occurrence of blue-green algae blooms. Morrow County Soil and Water Conservation District Annual Meeting, Heppner, OR, USA. January 17.
- 27 **Wilhelm, F. M.**, and Anderson, J. W. 2013. UI Miles pilot Fernan Lake data integration. Idaho EPSCoR quarterly meeting. Moscow, Idaho, USA. Dec. 17.
- 26 **Wilhelm, F. M.** 2013. Potential of internal loads of P to Fernan Lake and contribution to blooms of cyanobacteria. Fernan Lake Conservation and Recreation Association. Coeur D'Alene, Idaho, USA. Sep 11.
- 25 **Wilhelm, F. M.**, Harris, T. D.,\*\* Adams, C. J.,\*\* and Rajkovich, H. E.\*\* 2013. The ecology of blue-green algae blooms and implications to management concerning water quality. Coeur d'Alene Lake Tributaries Watershed Advisory Group. Coeur D'Alene, Idaho, USA. May 16.
- 24 **Wilhelm, F. M.** 2012. Opportunities in the Aquatic Sciences. Department of Natural Sciences Seminar, Universidad, Tecnico Particular de Loja. Loja, Ecuador. May 28.
- 23 **Wilhelm, F. M.** 2012. World water overview. Presentation to SEED students. Moscow, Idaho, USA. March 28.
- 22 **Wilhelm, F. M.** 2011. The science of buffer strips and overview of building code setbacks for Lake Pend Oreille. City of Sandpoint Planning Commission, Sandpoint City Hall, Sandpoint, ID. USA. June 21.
- 21 **Wilhelm, F. M.** 2011. Cyanobacteria and large enclosure research. Public meeting of nutrient enhancement project in Dworshak Reservoir. Best Western Inn, Orofino, ID. USA, May 23.
- 20 **Wilhelm, F. M.** 2011. Overview of Caldwell MS thesis, University of Idaho. Idaho Department of Fish and Game, Coeur D'Alene, ID. USA, March 22.
- 19 **Wilhelm, F. M.**, and Caldwell, T. J.\*\* 2011. An overview of mysids in the Lake Pend Oreille food web. Departmental Seminar, Eastern Washington University, Cheney, WA. USA. March 11.
- 18 **Wilhelm, F. M.** 2010. World water issues and conservation. Guest lecture to WLF470 Conservation Biology. University of Idaho, Moscow, Idaho, USA. November 9.
- 17 Caldwell, T. J.,\*\* and **Wilhelm, F. M.** The role of *Mysis diluviana* in the nutrient dynamics of Lake Pend Oreille. Lake Pend Oreille Task Force meeting, Sandpoint, ID, USA. November 04.
- 16 **Wilhelm, F. M.** 2009. World water issues and conservation. Guest lecture to WLF470 Conservation Biology. University of Idaho, Moscow, Idaho, USA. November 05.
- 15 **Wilhelm, F. M.** 2008. The science of buffers: management of water quality. Bonner County Ad Hoc committee on building code revisions. Bonner County Federal Building, Sandpoint, ID. USA. May 29.
- 14 **Wilhelm, F. M.** 2008. Pitfalls of using aerators to control nutrients in lakes. Idaho Water Resources Research Institute, Water Resources, Hydrology Seminar Series. University of Idaho, Moscow, USA. April 02.
- 13 **Wilhelm, F. M.** 2008. Review of the Illinois EPA clean lakes program. Presented to IEPA Bureau of Water, Surface Water Section, Springfield, Illinois, USA. Feb 27.
- 12 **Wilhelm, F. M.** 2008. Using aerators to restore lakes: avoiding nutrient pumps. Inland Northwest Aquatic, Riparian, and Wetland Symposium. Eastern Washington University, Spokane, Washington, USA. February 22, 2008.
- 11 **Wilhelm, F. M.** 2006. Limnological aspects of Campus Lake. Guest speaker for Rotary Club of

- Carbondale-Breakfast meeting, Southern Illinois University, Carbondale, Illinois, USA. May 16.
- 10 **Wilhelm, F. M.** 2005. The respiration of cave amphipods and the restoration of Campus Lake. Center for Ecology Seminar Series, Southern Illinois University, Carbondale, Illinois, USA. October 5.
  - 9 **Wilhelm, F. M.** 2005. Insights into the life history strategy of invertebrates at the extreme edge of life” Watershed Ecosystems Graduate Program Seminar Series, Trent University, Peterborough, Ontario, Canada. May 19.
  - 8 **Wilhelm, F. M.** 2001. Implications of climate change for populations of benthic invertebrates. Department of Zoology, Guelph University, Guelph, Ontario, Canada. September 24.
  - 7 **Wilhelm, F. M.** 2001. Surprises from the deep: The ecology and role of amphipods in lakes. Department of Zoology, Southern Illinois University, Carbondale, Illinois, USA. March 5.
  - 6 **Wilhelm, F. M.** 2000. Life at the top: The ecology of *Gammarus lacustris* in lakes of the Canadian Rocky Mountains. Entomological Society of New Zealand, Otago Branch, Dunedin, New Zealand. August 24.
  - 5 **Wilhelm, F. M.** 2000. Life at the edge: The ecology of *Gammarus lacustris* in lakes of the Canadian Rocky Mountains. Zoology Seminar Series, Department of Zoology, University of Otago, Dunedin, New Zealand. March 17.
  - 4 **Wilhelm, F. M.** 1999. Life at the edge: The ecology of *Gammarus lacustris* from alpine lakes in the Canadian Rocky Mountains. Biology Seminar Series, Biology Department, Trent University, Peterborough, Ontario, Canada. November 24, 1999.
  - 3 **Wilhelm, F. M.** 1999. The ecology of *Gammarus lacustris* in mountain lakes: From life history to plankton community structure. Ecology Seminar Series, Department of Biological Sciences, University of Calgary, Calgary, Alberta, Canada. February 24.
  - 2 **Wilhelm, F. M.** 1997. An overview of amphipod and bull trout research in Banff National Park. Grade 12 Biology, Margaret Barbour Collegiate Institute, The Pas, Manitoba, Canada. November 10.
  - 1 **Wilhelm, F. M.** 1997. An evaluation of the bull charr (*Salvelinus confluentus*) population and its diet seasonality in Harrison Lake, Banff National Park, Alberta, Canada. The Friends of Banff National Park, Banff, Alberta, Canada. May 26.

#### WORKSHOPS PRESENTED

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- Wilhelm, F. M.** 2014. Limnology of Fernan Lake. UI Adventure Learning. Given to 10 middle school and high school teachers. Coeur d’Alene, Idaho, USA. June 16.
- Wilhelm, F. M.** 2014. Lakes in winter. Three day workshop with approximately 65 6<sup>th</sup> graders at McCall Outdoor Science School. McCall, Idaho. March 18-21.
- Wilhelm, F. M.** 2012. Theory and practice of Limnology. Three day workshop presentation to Universidad Tecnica Particular de Loja. Loja, Ecuador. May 19-21.
- Wilhelm, F. M.** 2010. Understanding dissolved oxygen: A ½ day workshop for professional lake managers. Presented at annual meeting of the North American Lakes Management Society. Oklahoma City, Oklahoma, USA. November 2<sup>nd</sup>.
- Wilhelm, F. M.** 2010. Limnology: A 1-day workshop. Given to Idaho Department of Fish and Game. Boise, Idaho, USA. February 18.

#### WORKSHOPS ATTENDED

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- Leading and Sustaining Your Research Program, a professional development course.** IBest Institute, University of Idaho, Moscow, ID. USA. June 2-6, 2014.
- Collection, identification, ecology and control of freshwater algae - advanced course.** Pre-conference workshop, Madison, WI. USA. November 6, 2012.

- Opportunities and challenges for scientists in a changing world : A communication workshop.**  
Presented by Nancy Baron. University of Idaho. September 16, 2011.
- Communities and Ecosystems in Transition: a resilience perspective.** IUCN workshop, McCall Outdoor Science School, September 10, 2011.
- 30<sup>th</sup> International Kokanee Workshop,** Idaho Fish and Game, Coeur D’Alene Regional Office sponsored workshop. Red Lion, Templins Hotel, Post Falls, Idaho, USA. March 25, 2009.
- Advanced service-learning faculty development workshop** with Dr. Kathleen Rice - University of Idaho Career and Professional Planning. Moscow, ID, USA. January 08, 2009.
- Service-Learning Faculty Fellows Workshop.** University of Idaho Career and Professional Planning, Moscow, ID, USA. December 18-20, 2007.
- Future Directions in Karst Research.** Karst Waters Research Institute, San Antonio, TX, USA. May 3-5, 2007.
- New Approaches and Techniques for Teaching Science: Addressing Environmental Problems to Stimulate Undergraduate Learning.** National Science Foundation sponsored workshop. Bemidji State University, Bemidji, Minnesota, June 15-19, 2003.
- C2000 Karst Short Course.** Taught by Ozark Underground Laboratories. Monroe County Annex, Waterloo, IL, USA, March 12, 2003.
- DIALOG IV** (Dissertation Initiative for the Advancement of Limnology and Oceanography. Bermuda Biological Station for Biological Research, St. Georges, Bermuda, October 13-20, 2001.
- 4<sup>th</sup> International Workshop on Ecosystem Manipulation.** Palisades Centre, Jasper National Park, Alberta, Canada, October 14-17, 1997.
- 3<sup>rd</sup> Canadian Continuous-Flow Isotope Ratio Mass-Spectrometry Workshop.** National Hydrology Research Institute, Saskatoon, Saskatchewan, Canada, September 9-11, 1996.
- The Interactions of Climate Change, Increasing UV-B Exposure and Dissolved Organic Carbon, and their Implications for Aquatic Ecosystems.** Palisades Centre, Jasper National Park, Alberta, Canada, November 4-7, 1994.

## AWARDS AND HONORS

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2015	National Advising Association Faculty Advising Award	
2015	Region 8 National Academic Advising Association Faculty Advisor Award of Merit	
2014	Nominated Donald Crawford Outstanding Graduate advisor	University of Idaho
2014	UI Faculty Advising Excellence Award	University of Idaho
2012	Nominated Donald Crawford Outstanding Graduate advisor	University of Idaho
2012	Nominated UI Advising Excellence Award	University of Idaho
2011	Alumni Award of Excellence	University of Idaho
2010	Alumni Award of Excellence	University of Idaho
2010	Outstanding Advisor Award, CNR	University of Idaho
2010	Distinguished Service Award	Palouse Unit of the American Fisheries Society
1999-2001	NSERC Post Doctoral Fellowship	University of Otago, NZ
1999	18th Int. Symp. N. Am. Lake Management Soc.	Hon. Mention for Student Presentation
1998-1999	University of Alberta Dissertation Fellowship	University of Alberta, Canada
1998-1999	Andrew Stewart Memorial Prize	University of Alberta, Canada
1998	Department of Biological Sciences Travel Award	University of Alberta
1998	Marie Louise Imrie FGSR Travel Award	University of Alberta
1996-1998	Izaak Walton Killam Memorial Scholarship	University of Alberta, Canada
1995	Clemens-Rigler Travel Award (SCL/DFO)	University of Alberta
1995	43 <sup>rd</sup> Meeting of N. Am. Benthol. Soc.	Best Student Poster
1994-1996	NSERC Post-graduate Scholarship	University of Alberta, Canada

1994	Ontario Graduate Scholarship	Declined
1992-1993	Ontario Graduate Scholarship	Trent University, Canada
1991-1992	Ontario Graduate Scholarship	Trent University, Canada
1991-1992	Trent University Graduate Entrance Scholarship	Trent University, Canada
1991	NSERC Summer Undergraduate Award	Trent University, Canada
1990-1991	Roy L. Edwards Scholarship	Trent University, Canada
1990	NSERC Summer Undergraduate Award	Trent University, Canada
1989	Summer Research Scholarship	University of Guelph, Canada
1988-1989	Department of Biology Book Prize	Trent University, Canada
1987-1988	Trent University Entrance Scholarship	Trent University, Canada

#### ACADEMIC / PROFESSIONAL SERVICE

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2014	Faculty mentor in UI SOAR Program
2013-	Washington Lakes Protection Association Board member Washington Lakes Protection Association scholarship committee chair
2013-	<b>Faculty representative</b> on College of Natural Resources Leadership team.
2013	<b>Session Chair</b> , North American Lakes Management Society annual meeting
2013	Mock interview Panel for INTR 201class
2013	Faculty mentor in UI SOAR Program
2012-	Region 10 Director to Board of North American Lakes Management Society
2012-	CNR Faculty representative alternate to University of Idaho Faculty Senate
2012	Mock interview Panel for INTR 201class
2012-	Faculty mentor in UI SOAR Program Faculty panel member for new student orientation
2012	University of Idaho Advising Association Symposium planning committee
2011	<b>Session Chair</b> , North American Lakes Management Society, annual meeting.
2011	University of Idaho Advising Association Symposium planning committee
2010-2013	Washington Lakes Protection Association Board Member Chair scholarship committee Washington Lake Protection Association
2010-	<b>Associate Editor</b> , Journal of Lake and Reservoir Management
2010	<b>CNR representative</b> , University of Idaho summer program review committee
2010	<b>Advising Panel Participant</b> , Washington State University Advising Symposium
2010	University of Idaho Academic Advising Association Symposium planning committee
2010	<b>Session Chair</b> - Annual meeting of American Society of Limnology and Oceanography
2010	University of Idaho Director of Advising Services search committee member
2010	<b>Reviewer</b> for International Association of Great Lakes Research Baldwin Scholarship
2010	<b>Reviewer</b> for student presentations at IAGLR annual meeting
2010	<b>Faculty mentor</b> in UI SOAR Program
2009-2010	<b>Chair UI Academic Advising Association</b>
2009-	Washington Lakes Protection Association Student Scholarships committee - Chair.
2008-	<b>Washington Lakes Protection Association Board</b> member.
2008-	<b>Digital Measures Task Force</b> - College of Natural Resources representative. University of Idaho.
2008-	<b>Data Custodian</b> , Illinois Speleological Survey
2007-2011	<b>Data Request Committee Chair</b> for Illinois Speleological Survey
2007	<b>Teaching Focus Team</b> for College of Natural Sciences strategic planning. University of Idaho.
2006-2007	<b>Committee on Undergraduate Studies</b> , Department of Zoology, Southern Illinois University



- 2006- Science advisory committee for Cave Research Foundation
- 2005-2007 **Secretary to the Faculty**, Department of Zoology, Southern Illinois University  
**Advisory Committee**, Department of Zoology, Southern Illinois University
- 2005 **Zoology Dept Search Committee** for Fisheries and Illinois Aquaculture Center position
- 2003-2005 **Secretary to the Faculty**, Department of Zoology, Southern Illinois University
- 2001-2003 **Secretary to the Faculty**, Department of Zoology, Southern Illinois University  
**Committee on Undergraduate Studies**, Department of Zoology, Southern Illinois University
- 1995-1998 **Department of Biological Sciences Council**, University of Alberta  
  - Graduate Student Representative
- 1992-1993 **Tenure Track Review Committee**, Environmental Resource Studies Department, Trent University  
  - Graduate Student Representative
- 1991-1993 **NSERC Research Committee & Sub-Committee for Trent Research Fellowship**, Trent University  
  - Graduate Student Representative
  - evaluated faculty research proposals for disbursement of research funds
- 1991-1992 **Tenure Track Selection Committee**, Biology Department, Trent University  
  - Graduate Student Representative
- 1988-1991 **Curriculum Committee**, Biology Department, Trent University  
  - Undergraduate Student Representative

#### COMMUNITY / OTHER INVOLVEMENT

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- 2009- Host for Palouse Unit of American Fisheries Society fly tying nights
- 2007 **Participant**, Secchi-Dip In, Coordinated by Kent State University/ US EPA.  
**Volunteer** Lake Monitoring Program, IL EPA, Campus Lakes (biweekly sampling May to October)  
**Judge** at Illinois Junior Academy of Science Regional Science Fair, Southern Illinois University, Carbondale.
- 2006 **Participant**, Secchi-Dip In, Coordinated by Kent State University/ US EPA.  
**Volunteer** Lake Monitoring Program, IL EPA, Little Grassy and Campus Lakes (biweekly sampling May to October)  
**Judge** at Illinois Junior Academy of Science Regional Science Fair, Southern Illinois University, Carbondale.
- 2006-2007 **Chair Data Request Committee**, Illinois Speleological Survey
- 2005 -2006 **Vice President**, Little Egypt Grotto (Caving Club in Carbondale)  
**Director**, Illinois Speleological Survey and **Shawnee project coordinator**
- 2005 **Participant**, Secchi-Dip In, Coordinated by Kent State University/ US EPA.  
**Volunteer** Lake Monitoring Program, IL EPA, Little Grassy and Campus Lakes (biweekly sampling May to October)  
**Judge** at Illinois Junior Academy of Science Regional Science Fair, Southern Illinois University, Carbondale.  
**Workshop leader** for Illinois Junior Science and Humanities Symposium
- 2004 Wilhelm, F. M., Welker, M., and Kleinschmidt, K. 2004. The Shawnee homestead well and cistern project. Shawnee National Forest Volunteer Appreciation Day. Lake Glendale, IL, USA. Oct 16, 2004.  
**Participant**, Secchi-Dip In, Coordinated by Kent State University/ US EPA.  
**Volunteer** Lake Monitoring Program, IL EPA, Little Grassy and Campus Lakes (biweekly sampling May to October)

- Judge** at Illinois Junior Academy of Science Regional Science Fair, Southern Illinois University, Carbondale.
- 2003 **Workshop leader** for Illinois Junior Science and Humanities Symposium  
**Organizer**, Public meeting for future of Campus Lake, City Hall, Carbondale.  
**Participant**, Secchi-Dip In, Coordinated by Kent State University/ US EPA.  
**Volunteer** Lake Monitoring Program, IL EPA, Little Grassy and Campus Lakes (biweekly sampling May to October)
- Judge** at Illinois Junior Academy of Science Regional Science Fair, Southern Illinois University, Carbondale.
- 2002 **Workshop leader** for Illinois Junior Science and Humanities Symposium  
**Participant**, Project WET, Illinois Department of Natural Resources, Giant City State Park.  
**Participant**, Cedar Lake Workshop, Great Egypt Planning Association, IL EPA  
**Volunteer** Lake Monitoring Program, IL EPA, Little Grassy and Campus Lakes (biweekly sampling May to October)  
**Participant**, Secchi-Dip In, Coordinated by Kent State University/ US EPA.  
**Judge** at Illinois Junior Academy of Science Regional Science Fair, Southern Illinois University, Carbondale.
- 1997-1998 **Co-author** of “A Graduate Student Report on the Department of Biological Sciences for the 1998 Departmental Review”
- 1995-1996 **Co-author** of “An Evaluation and Direction of the Graduate Program in the Department of Biological Sciences, University of Alberta.”
- 1992-1993 **Newsletter editor** for Trent Graduate Student Association

#### REFEREEING

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Archiv für Hydrobiologie  
 Aquatic Ecology  
 Canadian Journal of Fisheries and Aquatic Sciences  
 Cannon Parks PhD Scholarship Program  
 Environmental Pollution  
 Estuarine and Coastal Shelf Science  
 Functional Ecology  
 Hydrobiologia  
 Hydrology and Earth Systems Sciences  
 Invertebrate Biology  
 Journal of Experimental Marine Biology and Ecology  
 Journal of Crustacean Biology  
 Journal of Insect Physiology  
 Journal of Great Lakes Research  
 Journal of Lake and Reservoir Management  
 Journal of the North American Benthological Society  
 Limnology and Oceanography  
 Northeastern Naturalist  
 Proceedings of the International Association for Theoretical and Applied Limnology

#### MEMBERSHIP IN PROFESSIONAL SOCIETIES

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American Society of Limnology and Oceanography  
 Society of International Limnologists

The Crustacean Society  
International Association of Great Lakes Studies  
Washington Lakes Protection Association  
North American Lake Management Society  
Illinois Speleological Survey