

# **APPENDIX 2**

Technical Experts' Curricula Vitae

# JESSE A. SINCLAIR

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#24-4800 ISLAND HWY N • NANAIMO, BRITISH COLUMBIA V9T 1W6 • PHONE: 250-729-9623 • FAX: 250-729-9628 • E-MAIL: MESL@SHAW.CA

## SUMMARY OF QUALIFICATIONS

Extensive experience in identifying and conducting appropriate statistical analyses through my Master's research and work as a Biologist with MacDonald Environmental Sciences Ltd. and the BC Ministry of Environment; I am proficient with the R programming language for statistical computing and graphics.

Participated in sediment and biological sampling programs to support Natural Resource Damage assessments and Ecological Risk Assessments.

Participated in hydoracoustic and gill netting surveys on the Sooke Lake and Coquitlam reservoirs; sampling consisted of identifying, measuring, weighing, sexing and collecting muscle tissue, stomach contents and scales of freshwater fishes.

Accumulated 34 days at sea participating in juvenile salmon surveys in the Bering Sea. I collaborated with NOAA, collecting phytoplankton, zooplankton and marine and anadromous fishes; sampling consisted of identifying, measuring, weighing, sexing and collecting muscle tissue, stomach contents and scales of selected fishes.

Experience using relational databases such as Microsoft Access, PostGreSQL and Oracle to import and extract biological and limnological data as well as creating queries to collate data and run analyses. I have designed and maintained multiple databases to support environmental assessments during my Master's research and work experience.

Worked with stakeholders (i.e., municipal government) during my experience in the Water and Aquatic Sciences Research Program at the University of Victoria and Natural Resource Trustees during my experience with MacDonald Environmental Sciences Ltd..

## EDUCATION

### **University of Victoria**

Victoria, BC

M.Sc., Biology, 2010, Water and Aquatic Sciences Research Program

### **University of Saskatchewan**

Saskatoon, SK

B.Sc. with distinction, Biology, 2004, Minor in Geographic Information Systems

### **Carlton Comprehensive High School**

Prince Albert, SK

High School Diploma, 1997

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## PROFESSIONAL CERTIFICATIONS

Registered Professional Biologist (College of Applied Biology - British Columbia)

## WORK HISTORY

### **Senior Biologist**

*February 2010 - Present*

*MacDonald Environmental Sciences Ltd., Nanaimo, BC*

- Develop and maintain relational databases to support the development of Natural Resource Damage Assessments and Ecological Risk Assessments.
- Participate in the compilation and statistical analysis of environmental data to support the development of Natural Resource Damage Assessments and Ecological Risk Assessments.
- Participate in the design of sampling programs and the subsequent collection of sediment and biota samples to support the development of Natural Resource Damage Assessments and Ecological Risk Assessments.
- Successfully created a package of statistical analysis tools, which has streamlined various aspects of analyses routinely performed at MESL, including: the analysis of environmental data needed to support the development of Natural Resource Damage Assessments, the development of concentration-response models to derive toxicity thresholds, and the calculation of preliminary estimates of damage of trust resources.

### **Scientific and Technical Officer - Water Protection**

*April 2009 - February 2010*

*Health Protection Branch, Population and Public Health Division*

*BC Ministry of Healthy Living & Sport, Victoria, BC*

- Analyzed and developed spatial information products to address source water protection issues, using ArcGIS.
- Identified key topic areas regarding water quality issues for human health in British Columbia and developed the Water Protection work plan to address the data requirements for priority issues
- Participated in creating a source area risk assessment tool to identify watersheds at risk in British Columbia.
- Reviewed water quality objectives reports, developed to assess water quality in Community Watersheds on Vancouver Island.

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## ***Water Quality Biologist***

*July 2008 - March 2009*

*Information Branch, Water Stewardship Division  
BC Ministry of Environment, Victoria, BC*

- Improved and modernized the acquisition of continuous water quality data in the province by successfully installing and using satellite telemetry to acquire real-time water quality data from remote locations, configuring and downloading data from data loggers and calibrating and maintaining multi-parameter water quality probes.
- Reviewed and edited water quality assessment and objectives development reports for community watersheds across the province, including the compilation and analysis of water quality data pertaining to designated uses of the watersheds (drinking water, aquatic life, wildlife, recreation and irrigation). Used BC water quality and Health Canada guidelines for drinking water to assess water quality.
- Worked with colleagues in an inter-branch setting to assess and offer recommendations to improve data storage and processing of water quality and quantity data.
- Contributed to the Water Quality Objectives Attainment Summary Report; the project involved compiling and analyzing water quality data for select watersheds across the province; summary reports for various watersheds were written.

## ***Field Technician***

*January 2008 - June 2008*

*Water and Aquatic Sciences Research Program  
University of Victoria, Victoria, BC*

*April 2005 - September 2005*

- Collected limnological data (physical and biological components) in both mesocosm and field settings.
- Supervised a Co-op student during their work term, training the student in collection and analysis of limnological data.
- Performed statistical analyses of field experiments and presented results to the municipal government.
- Prepared and analyzed water chemistry samples (organic carbon, nitrogen and phosphorus).
- Assisted in hydro-acoustic and gill netting fish surveys; identifying, measuring, weighing and bio-sampling salmonids in a freshwater environment.

## ***Teaching Assistant (BIOL 330: Ecological Methods)***

*January 2007 - April 2007*

*University of Victoria, Victoria, BC*

- Instructed the lab component for 3rd and 4th year biology and environmental science students on design of ecological experiments, sampling design, and statistical

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analysis.

- Lab material focussed on the analysis of data sets using SPSS 14 and Microsoft Excel and writing scientific reports.
- Guided students through a term research project of their design.

## **VOLUNTEER EXPERIENCE**

### **Bering-Aleutian Salmon International Survey**

University of Victoria / NOAA

2006/2007

Bering Sea

- Participated in multi-week trawl surveys in the Bering Sea collecting information on juvenile salmonids
- Identified, measured and weighed juvenile and adult salmonid and other fish species.
- Sampled juvenile and adult salmonids (collected muscle tissue, scales and stomach contents).

### **Volunteer Firefighter**

Prince Albert National Park & Waskesiu Lake, SK

2003/2004 (Seasonal)

## **COMPUTER SKILLS**

**Statistical Software:** R, SPSS, SigmaPlot

**Operating Systems:** Mac OS X, Microsoft Windows, GNU/Linux, UNIX

**Office Software:** Microsoft Word, Microsoft Excel, Microsoft Access, Microsoft Project, Microsoft Outlook

**GIS Software:** ArcGIS platform (ArcMap, ArcCatalog)

## **PUBLICATIONS**

Carter, R., M.E. Wainwright, D.D. MacDonald, J.A. Sinclair, A. Schein, H.J. Prencipe, M.L. Haines, W. Lorentz, D. Tillitt, and D.K. Nicks. 2013. Field Sampling Plan for Evaluation of Exposure of Avian Receptors to Bioaccumulative Contaminants. Prepared for United States Fish and Wildlife Service. Birmingham, Alabama.

MacDonald, D.D., C.G. Ingersoll, M.E. Wainwright, A. Schein, C.E. Orazio, W.G. Brumbaugh, H.J. Prencipe, J.A. Sinclair, M.L. Haines. 2013. Quality Assurance Protection Plan (QAPP) for Evaluation of the Toxicity of Upper Columbia River Sediments to Freshwater Mussels. Prepared for United States Department of the

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Interior (USDOl) Project Manager. Spokane, Washington.

MacDonald, D.D., A. Schein, and J. Sinclair. 2012. Overview of Water Quality Issues and Concerns Related to the Avanti Kitsault Mine Project. Prepared for Nisga'a Lisims Government, New Aiyansh, British Columbia.

MacDonald, D.D., J. Sinclair, and M. Coady. 2012. An Evaluation of the Reference Envelope Approach Applied in the Baseline Ecological Risk Assessment for the Portland Harbor Site. Prepared for: Office of Environmental Assessment, U.S. Environmental Protection Agency. Seattle, Washington. Prepared by: MacDonald Environmental Sciences Ltd., Nanaimo, BC in association with CDM Smith, Bellevue, WA.

Sinclair, J.A., M.A. Crawford, D.D. MacDonald, and H.J. Prencipe. 2012. Preliminary Risk Assessment of Long Lake in the Quinsam River Watershed, Vancouver Island. Prepared for: Ministry of Environment, Nanaimo, British Columbia. Prepared by: MacDonald Environmental Sciences Ltd. Nanaimo, British Columbia.

MacDonald, D.D. and J.A. Sinclair. 2012. Identification and evaluation of toxicity tests to support the development of site-specific water quality objectives for Buttle Lake, Vancouver Island, British Columbia. Prepared for B.C. Ministry of the Environment. Nanaimo, British Columbia. Prepared by MacDonald Environmental Sciences Ltd. Nanaimo, British Columbia.

Ingersoll, C.G., W.G. Brumbaugh, J. A., Steevens, G.R. Lotufo, D.D. MacDonald, and J.A. Sinclair. 2012. Sediment sample collection, handling, preparation, and characterization. Chapter 2 . In: Evaluation of toxicity to the amphipod, *Hyalella azteca*, and to the midge, *Chironomus dilutus*, and bioaccumulation by the oligochaete, *Lumbriculus variegatus*, with exposure to PCB-contaminated sediments from Anniston Alabama. Prepared by U.S. Geological Survey, Columbia Environmental Research Center, Columbia, MO; U.S. Army Corps of Engineer, Engineer Research and Development Center, Vicksburg, MS; MacDonald Environmental Sciences Ltd., Nanaimo, BC.

Steevens, J.A., G.R. Lotufo, N.E. Kemble, C.G. Ingersoll, J.K. Stanley, J.D. Farrar, J.A. Sinclair, D.D. MacDonald. 2012. Evaluation of bioaccumulation in the oligochaete, *Lumbriculus variegatus*, exposed to sediments from the Anniston PCB Site. Chapter 3. In: Evaluation of toxicity to the amphipod, *Hyalella azteca*, and to the midge, *Chironomus dilutus*, and bioaccumulation by the oligochaete, *Lumbriculus variegatus*, with exposure to PCB-contaminated sediments from Anniston Alabama. Prepared by U.S. Army Corps of Engineer, Engineer Research and Development Center, Vicksburg, MS; U.S. Geological Survey, Columbia, MO; MacDonald Environmental Sciences Ltd., Nanaimo, BC.

Stanley, J.K., N.E. Kemble, J.D. Farrar, C.G. Ingersoll, D.D. MacDonald, J.A. Steevens, J.A.

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Sinclair. 2012. Toxicity testing with the amphipod, *Hyalella azteca*, and with the midge *Chironomus dilutus*. Chapter 4. In: Evaluation of toxicity to the amphipod, *Hyalella azteca*, and to the midge, *Chironomus dilutus*, and bioaccumulation by the oligochaete, *Lumbriculus variegatus*, with exposure to PCB-contaminated sediments from Anniston Alabama. Prepared by U.S. Army Corps of Engineer, Engineer Research and Development Center, Vicksburg, MS; U.S. Geological Survey, Columbia Environmental Research Center, Columbia, MO; MacDonald Environmental Sciences Ltd., Nanaimo, BC.

MacDonald, D.D., C.G. Ingersoll, J.A. Sinclair, J.A. Steevens, J.K. Stanley, J.D. Farrar, N.E. Kemble, J.L. Kunz, W.G. Brumbaugh, and M.R. Coady. 2012. Evaluation of relations between sediment toxicity and sediment chemistry at the Anniston PCB Site. Chapter 5. In: Evaluation of toxicity to the amphipod, *Hyalella azteca*, and to the midge, *Chironomus dilutus*, and bioaccumulation by the oligochaete, *Lumbriculus variegatus*, with exposure to PCB-contaminated sediments from Anniston Alabama. Prepared by MacDonald Environmental Sciences Ltd., Nanaimo, BC; U.S. Geological Survey, Columbia Environmental Research Center, Columbia, MO; U.S. Army Corps of Engineer, Engineer Research and Development Center, Vicksburg, MS.

MacDonald, D.D., J.A. Sinclair, A. Schein, H.J. Prencipe, M.E. Wainwright, M.R. Coady, M.L. Haines, C.G. Ingersoll, N.E. Kemble, J.L. Kunz, J.A. Steevens, G.R. Lotufo, and D. Farrar. 2012. Preliminary Assessment and Quantification of Natural Resource Injuries Associated with Discharges of Oil or Releases of Other Hazardous Substances in the Vicinity of the Piles Creek Site, Linden, New Jersey. Volume 1 - Technical Report. Prepared for Office of Response and Restoration National Oceanic and Atmospheric Administration and New Jersey Field Office, U.S. Fish and Wildlife Service. Prepared by MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia, United States Geological Survey, Columbia, Missouri, and United States Army Corps of Engineers (ERDC), Vicksburg, Missouri.

MacDonald, D.D., J. Sinclair, M.A. Crawford, C.G. Ingersoll, H. Prencipe, S. Cox, and M. Coady. 2012. Evaluation and interpretation of the 2005 sediment chemistry and sediment toxicity data for the Upper Columbia River Site. Prepared for Washington Department of Ecology Toxic Cleanup Program. Through Science Applications International Corporation. Bothell, Washington. Prepared by MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia and United States Geological Survey, Columbia, Missouri and Tacoma, Washington.

MacDonald, D.D., J.A. Sinclair, M. Crawford, H. Prencipe, C. Lewis, and M. Donlan. 2011. Preliminary Summary of Whole-Sediment Chemistry, Fish-Tissue Chemistry, and Invertebrate-Tissue Chemistry Data Obtained during the 2010 Sediment and Biota Sampling Program for Piles Creek and South Branch Creek, Linden, New Jersey. Prepared for Office of Response and Restoration, National Oceanic and Atmospheric Administration and Division of Environmental Contaminants, U.S. Fish and Wildlife Service. Prepared by

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MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia, and Industrial Economics Inc., Columbia, Missouri.

MacDonald D.D., C.G. Ingersoll, D.E. Smorong, J.A. Sinclair, R.A. Lindscoog, N. Wang, C. Severn, R. Gouguet, J. Meyer, and J. Field. 2011. Baseline ecological risk assessment of the Calcasieu Estuary, Louisiana: 2. An evaluation of the predictive ability of effects-based sediment quality guidelines. *Archives of Environmental Contamination and Toxicology* 61:14-28.

MacDonald D.D., C.B. Ingersoll, N. Kemble, D.E. Smorong, J.A. Sinclair, R.A. Lindscoog, C. Gaston, D. Sanger, S. Carr, J. Biedenbach, R. Gouguet, J. Kern, A. Shortelle, J. Field, and J. Meyer. 2011. Baseline Ecological Risk Assessment of the Calcasieu Estuary, Louisiana: 3. An Evaluation of the Risks to Benthic Invertebrates Associated with Exposure to Contaminated Sediments. *Archives of Environmental Contamination and Toxicology* 61:29-58.

MacDonald, D.D., J. Sinclair, M. Crawford, H. Prencipe and M. Meneghetti. 2011. Potential effects of contaminants on Fraser River sockeye salmon. MacDonald Environmental Sciences Ltd. Cohen Commission Tech. Rep. 2. In prep. Vancouver, B.C. [www.cohencommission.ca](http://www.cohencommission.ca)

MacDonald, D.D., C.G. Ingersoll, J.A. Sinclair, M. Crawford, H. Prencipe, M. Coady, N.E. Kemble, A. Jones, M. Curry, C. Lewis, J. Steevens, and K. Nolan. 2011. Preliminary evaluation of the effects on benthic invertebrates associated with exposure to PCB-contaminated sediments in the Upper Hudson River, New York. Prepared for: National Oceanic and Atmospheric Administration, Silver Spring, Maryland. Prepared by: MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia. United States Geological Survey, Columbia, Missouri. Industrial Economics, Inc., Cambridge, Massachusetts. United States Army Corps of Engineers, Vicksburg, Mississippi. Watershed Assessment Associates, LLC, Schenectady, New York.

MacDonald, G.L. Linder, C.G. Ingersoll, S.E. Finger, M.A. Crawford, H.J. Prencipe, J.A. Sinclair, M.B. Meneghetti, and J.E. Hinck. 2010. Handbook for Assessing Risks to Fish and Wildlife Associated with the Potential Use of Water, Treated Wastewater, Stormwater, Sediment, Soil, Biosolids, or Other Materials on Units of the National Wildlife Refuge System. Volume I: Overview of the Recommended Decision Framework. Prepared for U.S. Fish and Wildlife Service. Vancouver, Washington. Prepared by MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia and United States Geological Survey, Columbia, Missouri.

MacDonald, G.L. Linder, C.G. Ingersoll, S.E. Finger, M.A. Crawford, H.J. Prencipe, J.A. Sinclair, M.B. Meneghetti, and J.E. Hinck. 2010. Handbook for Assessing Risks to Fish and



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Wildlife Associated with the Potential Use of Water, Treated Wastewater, Stormwater, Sediment, Soil, Biosolids, or Other Materials on Units of the National Wildlife Refuge System. Volume II: Description of the Rapid (Tier 1) Assessment Process. Prepared for U.S. Fish and Wildlife Service. Vancouver, Washington. Prepared by MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia and United States Geological Survey, Columbia, Missouri.

MacDonald, G.L. Linder, C.G. Ingersoll, S.E. Finger, M.A. Crawford, H.J. Prencipe, J.A. Sinclair, M.B. Meneghetti, and J.E. Hinck. 2010. Handbook for Assessing Risks to Fish and Wildlife Associated with the Potential Use of Water, Treated Wastewater, Stormwater, Sediment, Soil, Biosolids, or Other Materials on Units of the National Wildlife Refuge System. Volume III: Description of Detailed (Tier 2) Assessment Process. Prepared for U.S. Fish and Wildlife Service. Vancouver, Washington. Prepared by MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia and United States Geological Survey, Columbia, Missouri.

MacDonald, D.D., A. Jones, C.G. Ingersoll, J.A. Sinclair, H. Prencipe, and M. Meneghetti. 2010. Sampling and analysis plan for the 2010 sediment and biota sampling program for Piles Creek and South Branch Creek, Linden, New Jersey. Prepared for: National Oceanic and Atmospheric Administration. Silver Spring, Maryland. Prepared by: MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia. Industrial Economics Inc., Cambridge, Massachusetts. United States Geological Survey, Columbia, Missouri.

MacDonald, D.D., C.G. Ingersoll, M. Crawford, H. Prencipe, J.M. Besser, W.G. Brumbaugh, N. Kemble, T.W. May, C.D. Ivey, M. Meneghetti, J. Sinclair, and M. O'Hare. 2010. Advanced screening-level ecological risk assessment (SLERA) for aquatic habitats within the Tri-State Mining District, Oklahoma, Kansas, and Missouri. Draft Final Technical Report. Submitted to United States Environmental Protection Agency (USEPA). Region 6, Dallas, Texas, Region 7, Kansas City, Kansas, and US Fish and Wildlife Service, Columbia, Missouri. Submitted by MacDonald Environmental Sciences Ltd., Nanaimo, British Columbia. United States Geological Survey, Columbia, Missouri. CH2M Hill, Dallas, Texas

## PRESENTATIONS

### **Effects of Wetland Inundation on Hydrologically Connected Aquatic Ecosystems**

Society of Canadian Limnologists Annual Meeting, 2007

Montréal, QC

## EDUCATION:

Bachelor of Science, Zoology  
(Fisheries Biology; Environmental Physiology, Comparative Biochemistry)  
University of British Columbia, 1982

## SPECIALIZATION:

Principal of MacDonald Environmental Sciences Limited, which was established to provide scientific consulting services in the fields of fisheries and aquatic resource management, stream ecology, environmental quality guidelines and policy development, environmental risk and hazard assessment, and information and technology transfer.

Specialist in environmental toxicology and chemistry, ecosystem-based resource management, water quality/water use interactions, and sediment quality assessment.

## PROFESSIONAL MEMBERSHIPS:

American Fisheries Society  
President Western Division; Past-President, Canadian Aquatic Resources Section; Nominations Committee; Chair, Wetlands Conservation Committee; Newsletter Committee; Membership Committee.  
Aquaculture Association of Canada  
Association of Professional Biologists of British Columbia  
Canadian Association on Water Pollution Research and Control  
International Association on Water Pollution Research and Control  
Society of Environmental Toxicology and Chemistry

## OTHER PROFESSIONAL ACTIVITIES:

1986-1988	Newsletter Editor, North Pacific International Chapter, American Fisheries Society
1987-1989	Chair, Membership Committee, North Pacific International Chapter, American Fisheries Society
1992-1994	Chair, Wetlands Conservation Committee, Canadian Aquatic Resources Section, American Fisheries Society
1990-1994	Vice-President, President-Elect, President, and Past-President, Canadian Aquatic Resources Section, American Fisheries Society
1995-Present	Canadian Director and Chair, Board of Directors, Sustainable Fisheries Foundation
1997-2001	Vice-President, President-Elect, President, and Past-President, Western Division, American Fisheries Society
2000-2001	Member, Membership Committee, American Fisheries Society
2003-2006	Award of Excellence Committee, American Fisheries Society
2005-2006	Member, Science Advisory Board for Contaminated Sites in British Columbia
2006-Present	Board or Directors, Mid-Island Science, Technology & Innovation Council (MISTIC)

## PROFESSIONAL CERTIFICATIONS:

Fisheries Professional-Certified (American Fisheries Society)

Registered Professional Biologist (College of Applied Biology - British Columbia)

## EXPERIENCE:

### *AQUATIC BIOLOGIST - February 1989 to Present*

**MacDonald Environmental Sciences Limited, #24 - 4800 Island Highway North, Nanaimo, B.C. V9T 1W6** Independent consulting on environmental impact assessment, natural resource damage assessment, ecological risk assessment, fisheries and aquatic resource management, environmental quality, stream ecology, computer data management, and information and technology transfer. Projects include the development of water quality guidelines, sediment quality guidelines, tissue residue guidelines, environmental quality monitoring programs, fisheries co-management programs, ecosystem-based management, ecological risk assessments, natural resource damage assessments, and the assessment of environmental quality.

### *WATER QUALITY OBJECTIVES OFFICER - September 1984 to February 1989*

**Water Quality Branch, Inland Waters, Environment Canada, 502 - 1001 West Pender Street, Vancouver, B.C. V6E 2M9** Compilation, management and statistical analysis of existing and new information generated to support the formulation of water quality objectives in waters of significant federal interest; generation of water quality criteria information through toxicological, water quality, and other studies; design and implementation of monitoring programs to assess compliance with water quality objectives; preparation of reports and other publications on information developed to formulate water quality objectives; organization of workshops and information exchange sessions on water quality guidelines and objectives; provision of information and advice to technical committees established to resolve the International Joint Commission reference on the Flathead River. Supervisor: Dr. D. Valiela, Head Water Quality Objectives Division

### *TECHNICAL PLANNING COORDINATOR - November 1983 to September 1984*

**Water Quality Branch, Inland Waters, Environment Canada, 502 - 1001 West Pender Street, Vancouver, B.C. V6E 2M9** Planning and development of regional water quality programs, including long- and short-term logistics and budgetary requirements and inter-project coordination; planning, organization, expedition, and supervision of special field studies and sampling projects for water quality analysis; pollution surveillance and sediment sampling; planning and implementation on national water quality monitoring programs to assess national trends and conditions. Supervisor: Dr. W.E. Erlebach, Chief Water Quality Branch

**PUBLICATIONS AND TECHNICAL REPORTS:***Journal/Book Publications*

- MacDonald D.D., D. Moore D, C.G. Ingersoll, D.E. Smorong, R.S. Carr, R. Gouguet, D. Charters, D. Wilson, T. Harris, J. Rauscher, S. Roddy, and J. Meyer. 2011. Baseline ecological risk assessment of the Calcasieu Estuary, Louisiana: 1. Overview and problem formulation. *Archives of Environmental Contamination and Toxicology* 61:1-13.
- MacDonald D.D., C.G. Ingersoll, D.E. Smorong, J.A. Sinclair, R.A. Lindscoog, N. Wang, C. Severn, R. Gouguet, J. Meyer, and J. Field. 2011. Baseline ecological risk assessment of the Calcasieu Estuary, Louisiana: 2. An evaluation of the predictive ability of effects-based sediment quality guidelines. *Archives of Environmental Contamination and Toxicology* 61:14-28.
- MacDonald D.D., C.B. Ingersoll, N. Kemble, D.E. Smorong, J.A. Sinclair, R.A. Lindscoog, C. Gaston, D. Sanger, S. Carr, J. Biedenbach, R. Gouguet, J. Kern, A. Shortelle, J. Field, and J. Meyer. 2011. Baseline ecological risk assessment of the Calcasieu Estuary, Louisiana: 3. An evaluation of the risks to benthic invertebrates associated with exposure to contaminated sediments. *Archives of Environmental Contamination and Toxicology* 61:29-58.
- MacDonald D.D and C.G. Ingersoll. 2010. Tools for assessing contaminated sediments in freshwater, estuarine, and marine ecosystems. *In: Sedimentology of Aqueous Systems*, 1st edition, C. Poletto, S. Charlesworth editors. Blackwell Publishing. Boston Massachusetts.
- Clark, M.J.R., D.D. MacDonald, P.H. Whitfield, and M.P. Wong. 2010. Designing monitoring programs for water quality based on experience in Canada. Part II - Monitoring Tools - Problem Characterization and Data Quality Objectives. *Trends in Analytical Chemistry* 29(5):385-398.
- MacDonald, D.D., M.J.R. Clark, P.H. Whitfield, and M.P. Wong. 2009. Using water sampling for decision making for status and trends: Part III - Ecosystem Based Management and Water Quality Objectives - Problem Characterization and Data Quality Objectives. In Review.
- MacDonald, D.D. M.J.R. Clark, P.H. Whitfield, and M.P. Wong. 2009. Designing monitoring programs for water quality based on experience in Canada I. Theory and framework. *Trends in Analytical Chemistry* 28(2):204-213.
- Ingersoll, C.G., N.E. Kemble, J.L. Kunz, W.G. Brumbaugh, D.D. MacDonald, and D. Smorong. 2009. Toxicity of sediment cores collected from the Ashtabula River in Northeastern Ohio, USA, to the amphipod *Hyaella azteca*. *Archives of Environmental Contamination and Toxicology* 57(2):315-329.
- Bay, S.M., W. Berry, P. Chapman, R. Fairey, T. Gries, E. Long, D. MacDonald, and S. Weisberg. 2007. Evaluating consistency of best professional judgment in the application of a multiple lines of evidence sediment quality triad. *Integrated Environmental Assessment and Management* 3(4):491-497.

- Long E.R., C.G. Ingersoll, and D.D. MacDonald. 2006. Calculation and uses of mean sediment quality guidelines: A critical review. *Environmental Science and Technology* 40(6):1726-1736.
- Ingersoll, C.G., S.M. Bay, J.L. Crane, L.J. Field, T.H. Gries, J.L. Hyland, E.R. Long, D.D. MacDonald, and T.P. O'Connor. 2005. Ability of sediment quality guidelines to estimate effects or no effects of sediment-associated contaminants in laboratory toxicity tests or in benthic community assessments. *In: Wenning RJ, Batley G, Ingersoll CG, editors. Use of sediment quality guidelines (SQGs) and related tools for the assessment of contaminated sediments.* 497-556. SETAC Press. Pensacola Florida.
- MacDonald, D.D., R.S. Carr, D. Eckenrod, H. Greening, S. Grabe, C.G. Ingersoll, S. Janicki, R.A. Lindskoog, E.R. Long, R. Pribble, G. Sloane, and D.E. Smorong. 2004. Development, evaluation and application of sediment quality targets for assessing and managing contaminated sediments in Tampa Bay, Florida. *Archives of Environmental Contamination and Toxicology* 46(2):147-161.
- Knudsen, E.E., D.D. MacDonald, and Y.K. Muirhead, editors. 2004. Sustainable management of North American fisheries. American Fisheries Society, Symposium 43, Bethesda, Maryland.
- Carr, R.S., J.M. Biedenbach, and D.D. MacDonald. 2003. Comparison of sediment quality guideline values derived using sea urchin porewater toxicity test data with existing guidelines. *In: Porewater Toxicity Testing: Biological, Chemical, and Ecological Considerations* R.S. Carr and M. Nipper (Eds). SETAC Press. Pensacola, Florida.
- Crane, J.L. and D.D. MacDonald. 2003. Applications of numerical sediment quality targets for assessing sediment quality conditions in a U.S. Great Lakes Area of Concern. *Environmental Management* 32(1):128-140.
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