



Professional History

Hutchinson Environmental Sciences Ltd.
President & Principal Scientist
Bracebridge, ON
2009 – Present

AECOM
(formerly Gartner Lee Limited)
Senior Aquatic Scientist
Bracebridge, ON
2008 – 2009

Gartner Lee Limited
Senior Surface Water Specialist
Markham, ON
1998 – 2008

Dorset Environmental Science Centre
Lake Scientist
Ontario Ministry of the Environment
Standards Development Branch
1992 – 1997

Dorset Environmental Science Centre
Ontario Ministry of the Environment
Field Operations Planner
Lake Management Studies Unit
1987 – 1992

Dorset Environmental Science Centre
Ontario Ministry of the Environment
Post-Doctoral Research:
Aquatic Toxicology
1984 – 1987

University of Guelph
Department of Zoology
Graduate Research
1979 – 1984

Background

Hutchinson Environmental Sciences Ltd. was formed in November of 2009 as a consulting firm specializing in aquatic and environmental science, technical facilitation and peer review services.

Dr. Neil Hutchinson brings over 35 years of postgraduate experience and 16 years of northern and mining experience to the study team. His career has focussed on pollutants and stressors of aquatic systems, with a focus extending from geochemical to laboratory to whole-watershed levels of investigation and a specialization in PreCambrian Shield systems. He received his B.Sc. in Honours Ecology from the University of Guelph in 1978 and his Ph.D. in Zoology (Aquatic Toxicology) at the University of Guelph in 1985. He spent 3 years in post-doctoral studies and 11 years as a scientist at the Dorset Environmental Science Centre of the Ontario Ministry of the Environment and 11 years as a senior consultant at Gartner Lee Ltd. before forming Hutchinson Environmental Sciences Ltd. in 2009.

Mining and Northern Environmental Management

Neil's experience in Northern Canada has been largely focused on the mining sector, particularly on Canada's rapidly emerging diamond mining industry, which has been characterized by detailed technical analysis and review, industry cooperation, engagement of a wide and diverse group of stakeholders and focused followup on commitments and agreements. Since 1998, Neil has provided a leadership and technical role in the regulatory review, development of the Report on the Environmental Assessment and development of the resultant Water Licences for the Diavik, Ekati, Snap Lake and Gahcho Kue diamond projects in the Northwest Territories and review of the EA for the Victor diamond mine in the James Bay Lowlands of Northern Ontario for the Attawapiskat First Nation. He is currently retained by the Mackenzie Valley Land and Water Board, the Wek'eezhi Land and Water Board, The Sahtu Land and Water Board, The Kitikmeot Inuit Association and the Kivalliq Inuit Association as technical advisor on water quality for mining and hydrocarbon projects. Neil has worked on various other mining projects in the NT, NU, YT and ON, provided technical input to the development of various water and effluent management policies and frameworks to guide development in the north and is well regarded as a technical facilitator.

His expertise therefore covers technical assessment and policy development for a wide range of aquatic environments and activities specific to Canada's northern waters and the mining sector.

Education

Adjunct Faculty

Department of
 Biology, University
 of Waterloo.

1994 – 1997

Ph.D. Aquatic Toxicology

Department of
 Zoology, University
 of Guelph,
 Supervisor: Prof J.
 B. Sprague

1979 - 1984.

"Studies of trace
 metal mixtures and
 factors modifying
 their lethality to
 American flagfish
 (*Jordanella floridae*)
 in soft, acid water."

B.Sc., Honours Ecology

University of Guelph
 1974 – 1978

* Specific Experience in Northern Mining and Water Management

- * Technical Advisor for surface water quality, fisheries and aquatic effects monitoring; and facilitation of technical workshops for development of the Water Licence for DeBeers Canada Gahcho Kué Diamond Project For Mackenzie Valley Land and Water Board. (2014).
- * Technical Advisor for Fortune Minerals NiCo project Water Licence Hearings. For Wek'eezhi Land and Water Board. 2014.
- * Technical Advisor and Facilitation for Imperial Oil Norman Wells production Facility Water Licence Renewal Water Licence Application. For Sahtu Land and Water Board. 2014.
- * Review of Water and Sediment Quality Technical Assessments of EIS for Sabina Gold and Silver Back River Project. For Kitikmeot Inuit Association (2013-ongoing)
- * Water quality review of draft Environmental Compliance Approval of the Wallbridge Mining Company Ltd. Broken Hammer Mine Operation, Sudbury ON. For Shared Value Solutions, on behalf of Atikameksheng Anishnawbek First Nation (October 2013).
- * Water quality review of draft Advanced Exploration Closure Plan and supporting documents for the FNX Mining Company Inc.'s Victoria Project, Sudbury ON. For Shared Value Solutions, on behalf of Atikameksheng Anishnawbek First Nation (December, 2013).
- * Water quality and aquatic ecological baseline and impact assessment for Argonaut Gold Magino Project, Wawa ON. SLR Consulting (2013-ongoing).
- * Water Quality Review of Areva Kiggavik Uranium Project EIS. For Kivalliq Inuit Association (2011-ongoing)
- * Water Quality Review of AEM Meliadine Gold Project EIS. For Kivalliq Inuit Association (2011-ongoing)
- * Ongoing water quality assessment and guidance on the AEM Meadowbank Gold Project. For Kivalliq Inuit Association (2013-ongoing)
- * Technical Advisor for Canadian Zinc Prairie Creek Mine Water Licence Application, Hearings and Development. For Mackenzie Valley Land and Water Board (2012-2013).
- * Senior Water Quality and Strategic Advisor to MMG Minerals for the Izok Corridor Project of two base metals mines, a 250 km all season road and Arctic Ocean port facility in Nunavut (2012-ongoing).
- * Aquatic effects baseline and impact assessment lead for High Lake Mine in the Izok Corridor Project for MMG Minerals (2012-ongoing).
- * Preparation, filing and cross examination of affidavit respecting potential aquatic effects and EA process regarding Cliffs Chromite Project. For Olthuis, Kleer, Townsend representing Matawa First Nation (2011-2013).
- * Water Quality Review of Newmont Gold Hope Bay Mining Project. For Kitikmeot Inuit Association (2011-ongoing)
- * Technical Review of Water Quality and Aquatic Disciplines for Quintette and Line Creek Applications (Teck Coal Ltd. 2011).

- * Technical Input to Baseline Studies and Environmental Assessment of Casino Metals Project (Yukon) for Casino Mining Corporation. For Palmer Environmental Consulting Group (2011).
- * Development of Guidelines for Mixing Zones and General Objectives for Effluent Discharges. For Mackenzie Valley Land and Water Board (2011).
- * Technical Advisor and Facilitation for Snap Lake Diamond Project Water Licence Renewal. For Mackenzie Valley Land and Water Board. (2011-2012)
- * Review and Guidance for Three-Year Review of Diavik Diamond Mine Aquatic Effects Monitoring Program. For Wek'eezhi Land and Water Board (2011-2012).
- * Technical peer review of the fisheries/aquatic resources components of the "DETOUR LAKE PROJECT Class Environmental Assessment for MNR Resource Stewardship and Facility Development Projects Environmental Study Report", Certificate of Approval and Permit to take Water Applications for Detour Gold Mine (2010-2012, DPRA, on behalf of Moose Cree First Nation).
- * Third Party Reviewer for Shareholders Feasibility Study and external reviewer of EA submission – Gahcho Kue Diamond Project for DeBeers reviewer of EA submission – Gahcho Kue Diamond Project for DeBeers Canada Inc. 2010-2011.
- * Revised Criteria for Calculation of Risk Level for Wastewater Facilities in Canada's Far North (CCME, 2011).
- * Development of an Adaptive Management Response Framework for Diamond Mines in the NT for Wek'eezhi Land and Water Board (2008-2010).
- * Water quality input to the EA for remediation of the Anvil Range mine Faro (YT), for AECOM, Canada. 2009-2010
- * Senior Technical Input to Baseline Studies, Water Quality Modelling and Aquatic Impact Assessment for Draft EIS for High Lake Mine (Nunavut)) for Zinifex, later OZ Minerals, now MMG in 2006-2008.
- * Senior Technical Input to Baseline Aquatic Environmental Program for proposed Izok Mine (Nunavut) for Zinifex, later OZ Minerals, now MMG in 2006-2008.
- * Expert technical reviewer for the 2008-2009 Water Licence Renewal for the Ekati Diamond Mine Sable, Pigeon and Beartooth Project (for the Wek'eezhii Land and Water Board).
- * Technical review of various documents submitted by Diavik Diamond Mines Inc. in support of amendment and renewal of their Water Licence (2005-2008).
 - o Development of Terms of Reference for Revised Aquatic Effects Monitoring Plan for Diavik Diamond Mines Inc. (2007),
 - o coordination of review of draft and final AEMP submissions by DDML, including
 - o facilitation of AEMP design workshop in March 2007, follow up on technical elements in Water Licence and AEMP,
 - o and technical advisor at Water Licence Hearings
 all for Wek'eezhi Land and Water Board (2006-2008).
- * Technical screening of the EA submission for the Doris North Gold Mine, Nunavut (Miramar Corp.), on behalf of INAC, Nunavut and presentation and attendance at pre-hearings for the mine in four Nunavut communities in April 2003 and participation at the hearings in July 2004.
- * Review of proposed effluent quality and receiving water assessment for renewal of the Water Licence for the Ekati Diamond Mine (2004, on behalf of DFO).
- * Technical review of the Aquatic Effects Monitoring Program (AEMP) Report of Diavik Diamond Mines Inc. on behalf of the Environmental Monitoring and Assessment Board of the Diavik Project (2004, on behalf of EMAB).
- * Technical evaluation, prehearing submissions and preparation of the Environmental Assessment Report of the Snap Lake Diamond Project by DeBeers Limited, on behalf of the MVEIRB (2003).

- * Development of the Water Licence for the Snap Lake Diamond Project (Mackenzie Valley Land and Water Board (MVLWB) in 2003).
- * Assembly of the technical review team and technical review of water quality of the EA submission for the Victor Diamond Project of DeBeers Canada in the James Bay Lowlands of Ontario, on behalf of the Attawapiskat First Nation in 2002-2003. Ongoing review of licences and permits for the Victor Mine on behalf of the Attawapiskat First Nation (2003-2008).
- * Preparation of the water quality input to the Environmental Assessment Report for the Anvil Range Mine Maintenance Program, Faro, YT (for Deloitte and Touche – Interim Receiver, 2003).
- * Development of draft site-specific water quality objectives for final closure of the Anvil Range Mine, Faro, YT (for Deloitte and Touche – Interim Receiver, 2003).
- * Technical Peer Review of The NWT Transboundary Water Quality Agreement with Alberta, on behalf of DIAND Water Resources Division, Yellowknife (2002).
- * Technical review of DIAND technical report and analysis of receiving water quality at the Prairie Creek Mine, on behalf of DIAND, Water Resources Division, Yellowknife (2002).
- * Technical screening of the EA submission for the Jericho Diamonds Project by Tahera Corp., on behalf of DIAND, Nunavut (2001).
- * Development of remedial plans for CN-contaminated tailings water at the Colomac Mine on behalf of DIAND Royal Oak Project Team (2000).
- * Environmental Monitoring, synthesis and reporting of aquatic environmental surveys at the Discovery Mine Site, on behalf of DIAND, Yellowknife (2000).
- * Technical screening of the EA submission by BHP Diamonds for development of the Sable, Pigeon and Beartooth kimberlite pipes at the Ekati Mine on behalf of the Mackenzie Valley Environmental Impact Review Board (MVEIRB) in 2000.
- * Review of Municipal Water Management policies and approaches in Nunavut (2000).
- * Development of a Water Management and Pricing Framework for surface waters on Inuit Owned Lands in Nunavut, for Nunavut Tunngavik Inc in 2000.
- * Technical review of water quality and aquatic biology for the Diavik Diamond Mine EA submission, on behalf of INAC, NT (1998-1999).
- * Technical co-ordination of all aspects of the Comprehensive Study of the Diavik Diamond Mine, again on behalf of INAC. This project included facilitation of numerous technical workshops, in Yellowknife and First Nations Communities, input into writing the Comprehensive Study Report and formulating responses to public comment (1999).
- * Technical input into the development of the Water Licence for the Diavik Diamond Mine through DIAND's intervention to the NWT Water Board and development and review of the resultant monitoring program and effluent limits (1999-2000).
 - o *Neil's contribution to DIAND's Diavik Project Team was recognized by the inclusion of himself and the rest of the Gartner Lee Team for receipt of an Award of Excellence from the President of the Treasury Board of Canada in 2001.*

Summary of Related Experience

Neil has:

- Published 13 papers and a book chapter on acidification and nutrient management in the primary scientific literature.
- Conducted scientific peer review for eight scientific journals.
- Served as Associate Editor for the Scientific Journal "Lake and Reservoir Management" from 2004 – 2011.
- Supervised and examined numerous graduate students.
- Made over 40 presentations of original research on acidification, nutrient management, remote sensing and environmental assessment to scientific conferences;
- Served as the Program Chair for "Aquatic Ecosystem Stewardship". 15th Annual Symposium of the North American Lake Management Society. Toronto, Ontario. November 6 – 11, 1995
- Written numerous scientific reports on nutrient management for the provincial government;
- Given invited talks and keynote addresses to scientific gatherings on acidification, lake and nutrient management and watershed ecology;
- Given numerous invited lectures to senior undergraduate and graduate classes, cottager's associations and the general public; and
- Provided scientific peer review and technical assistance to practitioners of lakeshore capacity planning in provincial and municipal governments, the consulting industry and the Federation of Ontario Cottager's Associations.

Served as an invited expert for:

- United States National Acid Precipitation Assessment Program. "Critical Values for Effects of Acidification on Fish Populations", April 1989.
- Natural Sciences and Engineering Research Council of Canada (NSERC). Grant Selection Committee 18 – Ecology and Evolution.: 2000 – 2002.
- Natural Sciences and Engineering Research Council of Canada (NSERC). Strategic Project Grants Selection Committee. Panel A "Healthy Environment and Ecosystems" : 2007 – 2009. Panel Chair – 2008, 2009.
- Natural Sciences and Engineering Research Council of Canada (NSERC). Vanier Graduate Scholarship Selection Committee. 2012-2014.

Been Qualified as an expert witness for:

- Aquatic toxicology of acid and trace metals, Provincial Court of Ontario, April 1991,
- Limnology, water quality and eutrophication. Ontario Municipal Board. November 1993, September 1996, October, 2005, March 2006, October 2007.
- Water Quality – Northwest Territories Water Board. December, 1999, Mackenzie Valley Environmental Impact Review Board. April 2003, Nunavut Impact Review Board, June 2004, Wek'eezhi Land and Water Board, November 2006.

Professional Memberships

- North American Lake Management Society (1987 – Present)
- Board of Directors – Muskoka Heritage Foundation (2000 – 2006)
- Executive Committee – Muskoka Watershed Council (2001 – 2004)