



Ontario Association for Impact Assessment

2018 Annual Conference

October 17-18th, 2018

**Planning & Protecting Water Resources:
Emerging Issues, Approaches & Technologies**

*Bay Adelaide Centre, 34th Floor, East Tower
22 Adelaide Street West, Toronto*



Traditionally, Toronto was a gathering place for many nations including the Anishinabeg, the Haudenosaunee and the Wendat peoples. We acknowledge we are meeting in the area covered by Treaty 13, also known as the Toronto Purchase, and we pay our respects to the Mississaugas of the New Credit First Nation.

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OAIA-2018

Planning & Protecting Water Resources: Emerging Issues, Approaches & Technologies

About the Conference Theme

Water is an essential component of our life, well-being and economy. Water is the focus of many environmental assessments (EAs): Either as a water resource-related project or where a proposed project may have an impact on our water resources. With technological advancements, improvements in our use and understanding of scientific and Indigenous knowledge, policy enhancements, climate change, cumulative effects, regional and strategic EA and increased public scrutiny, EA practitioners are facing emerging water-related issues in EAs at an ever-accelerating rate.

These emerging issues present challenges as well as opportunities. To tackle these issues, EA practice must evolve by using innovative approaches and new technologies and tools to help plan, manage and protect water resources. What are the emerging water-related issues that are changing the way EA is practiced in Ontario and elsewhere? How are EA practitioners tackling these issues through innovative approaches or new technologies and tools to help protect water resources?

This year's conference will explore these themes by considering:

- Baseline data collection and interpretation.
- Potential impacts modelling, prediction, and evaluation.
- Impact management measures and follow-up monitoring program design and implementation.
- Indigenous knowledge in EA design, baseline studies, impact assessments and community-based monitoring programs.
- Indigenous community, the public and other stakeholder engagement and process improvement.
- Duty of the Crown and legal aspects of defending the public interest.
- Treating water as a resource in urban environments.
- Water quality and quantity, and addressing related themes of climate change, biodiversity loss, and cumulative effects.
- ... and so much more.



The 2018 OAIA Conference Planning Committee:

Mike Bricks – (Conference Chair) Morrison Hershfield

Jillian Bieser – University of Toronto

Katie Bright – Metrolinx

Peter Brown – Ontario Ministry of the Environment, Conservation and Parks

Cheryl Chetkiewicz – Wildlife Conservation Society (WCS) Canada

Nick Crockford – Morrison Hershfield

Colleen George – Ontario Ministry of Natural Resources and Forestry

Ariane Heisey – Ontario Ministry of Energy, Northern Development and Mines

Anjala Puvananathan – (Conference Co-Chair) Canadian Environmental Assessment Agency



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DAY 1 / OCTOBER 17

TIME	SESSION	SPEAKERS
8:00	CONTINENTAL BREAKFAST & REGISTRATION	
9:00 - 9:15	INTRODUCTION & WELCOMING REMARKS <ul style="list-style-type: none"> • Councillor, Cathie Jamieson, Opening Prayer, Mississaugas of the New Credit First Nation • Gabrielle Kramer, Conference Venue Host, Borden Ladner Gervais LLP • Caroline Burgess, President of OAIA and Managing Director, Odonaterra Inc. 	
9:15 - 10:30	SESSION 1 – PROTECTING WATER RESOURCES IN ONTARIO : AN ONTARIO MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS PERSPECTIVE <p>Presentation 1: Jennifer Moulton – Source Water Protection</p> <p>Environmental assessment practitioners should be aware of the potential implications of proposed projects on sources of drinking water. Source protection plan policies may affect how or where projects can be undertaken. This presentation will cover how and when project proponents can identify and determine the potential impacts of projects on sources of drinking water and what should be included in project reports. Additionally, there is a new regulation under the Ontario's Safe Drinking Water Act that affects new and changing municipal residential drinking water systems in source protection areas. The regulation works in conjunction with the Ontario's Clean Water Act to require that drinking water system owners ensure that technical work to identify and score vulnerable areas is complete before applying for a Drinking Water Works Permit and that source protection plan amendments are approved before the drinking water system can supply treated water to the public. This presentation will also cover the requirements of the new regulation and discuss when and how to initiate this work, which is ideally at the Class Environmental Assessment project stage.</p> <p>Presentation 2: Jennifer Moulton – Surface Water Impact Assessment and Mitigation</p> <p>Ontario's Environmental Assessment Act sets out the planning and decision making process to evaluate potential environmental effects</p>	<p>Moderator: Andrew Harkness <i>Morrison Hershfield</i></p> <p>Presenter: Jennifer Moulton <i>Ontario Ministry of the Environment, Conservation and Parks</i></p>



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	of proposed projects. The process includes documentation of the natural environment that will be affected, the effects of projects on the environment, and the actions that may be necessary to mitigate these effects. This information allows for consultation with potentially affected parties and other interested persons. It is also used by the ministry's technical review staff, to formulate comments and recommendations regarding the acceptability of proposed impacts, and the suitability of proposed mitigation measures, to ensure environmental protection. The benefits of providing as much detail as possible at the environmental assessment stage will be discussed, such as allowing stakeholders, including ministry reviewers, to have a more thorough understanding of the project and its environmental effect, and leading to more efficient reviews of permit applications.	
10:30 - 10:45	AM BREAK/REFRESHMENTS Sponsored by Hardy Stevenson and Associates	



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TIME	SESSION	SPEAKERS
10:45 - 12:15	<p>SESSION 2 : THE COMPLEXITY OF ENVIRONMENTAL ASSESSMENT PLANNING IN WATERSHEDS : USING PAST EXPERIENCE TO MOVE FORWARD</p> <p>Since its establishment in 1954 following Hurricane Hazel, the Toronto and Region Conservation Authority (TRCA) has a long history of environmental planning and watershed management within nine watersheds and along the Lake Ontario shoreline. Planning and management is conducted in partnership with municipalities, the Province, members of the public, and other stakeholders in the communities the Authority serves. Environmental planning is a complex process often filled with challenges, such as the existing natural and physical environmental conditions or competing interests among project stakeholders. Through a series of five case studies, the complex nature of environmental assessment planning will be discussed, highlighting key challenges, resolutions and overall lessons learned from past and current TRCA projects around water resources, and how these experiences are used to help us move forward with new projects that affect water resources.</p> <p>Presentation 1: Nancy Gaffney – Case Study Presentation of the Port Union Waterfront Park</p> <p>Presentation 2: Lisa Turnbull – Case Study Presentation of the Ashbridges Bay Erosion and Sediment Control Project</p> <p>Presentation 3: Katherine Hills – Case Study Presentation of the Scarborough Waterfront Project</p> <p>Presentation 4: Ken Dion – Case Study Presentation of the Brampton Flood Protection Class EA</p>	<p>Moderator: Anneliese Grieve <i>Anneliese Grieve Strategic Environmental Planning Solutions and OAIA Board Member</i></p> <p>Presenters: Nancy Gaffney <i>Toronto and Region Conservation Authority</i></p> <p>Lisa Turnbull <i>Toronto and Region Conservation Authority</i></p> <p>Katherine Hills <i>Toronto and Region Conservation Authority</i></p> <p>Ken Dion <i>Toronto and Region Conservation Authority</i></p>
12:15- 1:30	LUNCH/NETWORKING	

TIME	SESSION	SPEAKERS
1:30 - 3:00	<p>SESSION 3 : ALTERNATIVES, ADAPTIVE MANAGEMENT AND MONITORING IN WATERSHED MANAGEMENT</p> <p>Presentation 1: Laurie Nelson and Sameer Dhalla – Toronto and Region Conservation Authority's (TRCA) Objective Based Approach to Evaluation of Alternatives for Environmental Assessments</p> <p>TRCA plays two roles in the environmental assessment business: as an agency reviewer and as a proponent. As reviewer, TRCA recognizes that infrastructure is often located within flood plains and valley corridors, traverses natural features, or is located in immediate proximity to TRCA land holdings. As the proponent of environmental assessments for flood and erosion control remedial works, TRCA also recognizes the competing interests of building the infrastructure and ensuring the natural environment is both protected and restored, while we work to ensure public safety and community building. Our approach, whether as a proponent or reviewer is the same: We must carefully balance the socio-economic needs, including safeguarding tax payer dollars, of the project with potential environmental impacts. Case Study: Dixie Focus Area - Special Policy Areas (SPAs) designation and transit planning.</p> <p>Presentation 2: Beth Williston and Manirul Islam – Effective monitoring and adaptive management plans tied to amending procedures in environmental assessment process</p> <p>The Toronto-York Spadina Subway Extension (TYSSE) subway line crossed two TRCAs watersheds, the Don and Humber, a forest in York University, and both Black Creek and a significant aquifer in Vaughan. It was determined that construction could have major impacts on groundwater, and with requirements to discharge groundwater to the rivers, there could be potential impacts to surficial features as well. An environmental monitoring plan was developed and implemented. The project also involved the difficult task of relocating Black Creek, constructing new access routes, and long-term erosion issues. Case Study: The Environmental Management Plan Implementation for the Toronto-York Spadina Subway Extension.</p>	<p>Moderator: Charles (Chuck) J. Birchall LL.B., LL.M., Willms & Shier Environmental Lawyers LLP and OAIA Board Member</p> <p>Presenters: Laurie Nelson Toronto and Region Conservation Authority</p> <p>Sameer Dhalla Toronto and Region Conservation Authority</p> <p>Beth Williston Toronto and Region Conservation Authority</p> <p>Manirul Islam Toronto and Region Conservation Authority</p> <p>Ken Dion Toronto and Region Conservation Authority</p>

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TIME	SESSION	SPEAKERS
	<p>Presentation 3: Ken Dion – Approaches to Working and Partnering with Indigenous Communities in Project Monitoring</p> <p>The Crown has a duty to consult and accommodate Indigenous communities when projects are contemplated that could impact Indigenous Peoples and/or their Treaty rights. The Crown may delegate the administrative requirements of their duty to consult to project proponents. It is the responsibility of the proponent to develop and implement an engagement and consultation program with the various Indigenous communities throughout the environmental assessment process. Emerging issues, such as calls from the Federal Government to advance reconciliation with Indigenous Peoples, have increased expectations of proponents regarding consultation. In addition, Indigenous Peoples are increasing their internal capacity by establishing more formalized engagement, project review, and data collection oversight processes at the individual and community level. As a result, project proponents are increasingly approaching Indigenous communities early in the planning process to develop closer relationships and/or establish a formalized two-way engagement approach. Case Study: The Portland's Project.</p>	
3:00 - 3:15	<p>PM BREAK/REFRESHMENTS</p> <p>Sponsored by: Centre for Environmental Assessment at the University of British Columbia</p>	



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TIME	SESSION	SPEAKERS
3:15 - 4:45	<p>SESSION 4 : BRINGING SCIENCE INTO THE ASSESSMENT OF FRESHWATER RESOURCES</p> <p>Presentation 1: Lauren Arnold – Freshwater Cumulative Effects and Environmental Assessment Decision-making</p> <p>Decisions about resource development activities are complex and important due to the cumulative effects of development, landuse, and natural processes on freshwater resources. The prediction and evaluation of cumulative effects requires a broad spatial and temporal scope; however, decisions about resource development projects are often made through project-level environmental assessment processes. As cumulative effects assessment shifts in research and practice towards regional frameworks, an important issue is the extent to which cumulative effects information is useful to and applied within Environmental Assessment.</p> <p>This presentation highlights key challenges in generating data that meets the needs of organizations, but also in organizational capacity, management structures, and interpreting cumulative effects information for project-level decision-making. The discussion draws on our recent experience in the Northwest Territories, however, the insights and recommendations that surfaced are timely and relevant to the Ontario and broader Canadian context of impact assessment and freshwater management.</p> <p>Presentation 2: Bram Noble – Water quality data to support cumulative effects monitoring and decision-making</p> <p>Baseline data and long-term monitoring are foundational to understanding and effectively managing cumulative effects to freshwater systems, yet monitoring is amongst the most deficient aspects of cumulative effects initiatives. The challenge is in the coordination of water quality monitoring programs across multiple project impact assessments, and the compatibility of monitoring programs that are designed to pursue different questions or that function at different spatial scales. This presentation focuses on integrated monitoring systems to support cumulative effects understanding and management, including: consistency of monitoring parameters, compatibility of monitoring and reporting methods, indicators that ensure observability and detectability of change and that are adaptable to multiple spatial scales, and the accessibility and usability of monitoring data. We draw on our recent application of these principles in the Northwest Territories, though the lessons, including the enduring challenges and opportunities for improved monitoring programs, are of direct relevance to the Ontario context.</p>	<p>Moderator: Nick Crockford <i>Morrison Hershfield and OAIA Conference Planning Committee Member</i></p> <p>Presenters: Lauren Arnold <i>University of British Columbia (2018 OAIA Student Bursary Recipient)</i></p> <p>Bram Noble <i>University of Saskatchewan</i></p> <p>Cole Atlin <i>University of Waterloo</i></p> <p>Lisa White <i>University of Waterloo</i></p> <p>Serena Foster <i>University of Saskatchewan (Student Bursary Runner Up)</i></p> <p><i>Foster, Atlin and Arnold are all graduate students</i></p>

TIME	SESSION	SPEAKERS
	<p>Presentation 3: Cole Atlin and Lisa White – Wood Buffalo National Park Strategic Environmental Assessment: An Overview</p> <p>The Peace-Athabasca Delta (PAD) is a complex water system where the Peace River and Athabasca River meet in Northern Alberta to generate the largest freshwater delta in North America. The largest portion of the PAD lies within the bounds of Wood Buffalo National Park (WBNP). The delta has undergone significant changes over the past 50 years a result of large scale industrial development, river regulation and climate change. A Strategic Environmental Assessment (SEA) of WBNP was undertaken beginning in December 2016 and was concluded in April 2018. This presentation overviews the SEA of WBNP and its results, as well as the challenges of assessing watersheds at this scale for scoping and assessment, and the concerns related to delineating cumulative effects post-development. The role of indigenous communities and international communities in the SEA will also be included.</p> <p>Presentation 4: Serena Foster – Using military intelligence protocols to translate SEA results into focused tactical actions</p> <p>This presentation summarizes the ways in which strategic environmental assessment (SEA) follow-up and implementation can be improved by incorporating procedures derived from a military strategic and operational intelligence framework. In addressing national security and environmental issues, typically information is fragmented and uncertain, there are conflicting values, the opportunity costs are high. As such, structured communication through the various tiers of a military campaign are critical for effective implementation. Military intelligence procedures have been adapted for use in a range of industries for achieving objectives, and can also benefit SEA practice. The objectives of this research were to develop a military intelligence-based SEA framework and test it in the Parks Canada environmental management context.</p>	
4:45 - 5:00	WRAP OF DAY 1	<p>Mike Bricks Morrison Hershfield and 2018 OAIA Conference Chair</p>

**We are planning a drinks social immediately following the conference wrap up.
Details will be announced at the Conference. Please join us!**





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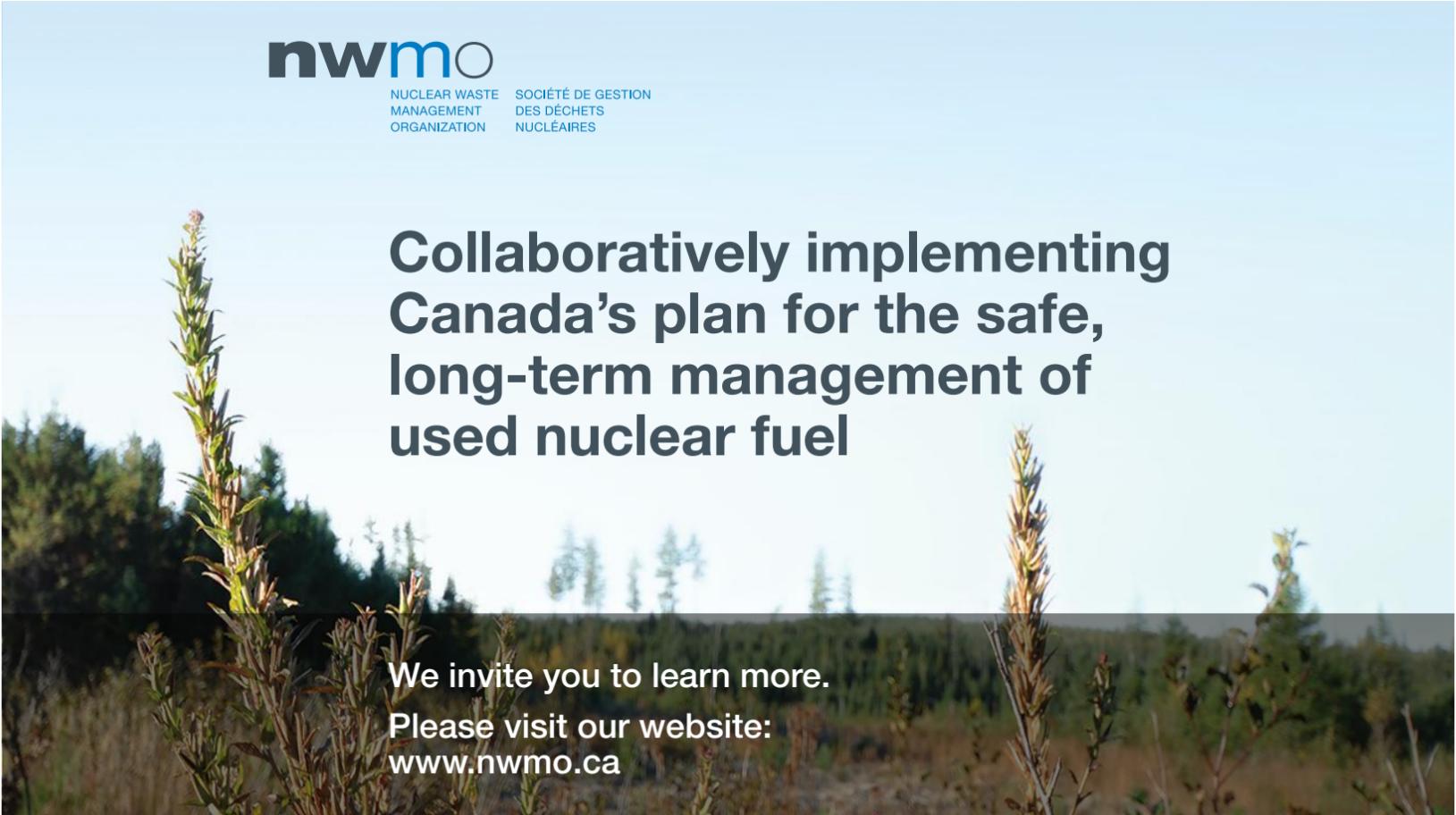


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DAY 2 / OCTOBER 18

TIME	SESSION	SPEAKERS
8:00 - 9:00	OAIA Annual General Meeting with breakfast/registration OAIA President to be elected. All are welcome to attend OAIA's Annual General Meeting.	All OAIA Members
9:00 - 9:15	Welcome by Conference Chair and announcements by OAIA Membership Committee <ul style="list-style-type: none"> • Mike Bricks, Morrison Hershfield and 2018 OAIA Conference Chair • Cheryl Chetkiewicz, Wildlife Conservation Society (WCS) Canada and OAIA Membership Committee 	
9:15 - 10:30	<p>SESSION 5 – REVITALIZING, PLANNING, ADAPTIVE MANAGEMENT AND RESTORATION</p> <p>Presentation 1: Neil Hutchinson – Linking Environmental Assessment to Environmental Regulation thru Adaptive Management via the Water Licensing Process</p> <p>“Adaptive Management” and “Environmental Monitoring” are frequently recommended to address uncertainty arising from the environmental assessment process. A “Response Framework” is proposed as a systematic process to link environmental assessment predictions to aquatic monitoring results and adaptive management actions in the regulatory process or to respond to changes that were not predicted. The environmental assessment process contributes by documenting the predictions of environmental change that are considered significant. With a clear definition of changes to be avoided from the environmental assessment, the Response Framework can set action levels and management responses to ensure that such changes do not occur. This approach is both prescriptive and adaptive – and allows timely response without the need for exhaustive “a-priori” derivation of adaptive management plans for all possible outcomes.</p> <p>Presentation 2: Joseph Carnevale and Yena Ahadzie - Portlands and South of Eastern Master Plan: Planning for Water as a Resource</p> <p>This presentation will highlight the innovative approach taken to plan for the “water as a resource” part of the City of Toronto’s Port Lands and South of Eastern Master Plan. This plan was completed following the Municipal Class Environmental Assessment planning process. This plan was developed by the City of Toronto and Waterfront Toronto in partnership with TRCA. The project area, historically has</p>	<p>Moderator: Kevin Hanna <i>Centre for Environmental Assessment Research at the University of British Columbia</i></p> <p>Presenters: Neil Hutchinsion <i>Hutchinson Environmental Sciences Ltd.</i></p> <p>Joseph Carnevale <i>Dillon Consulting Limited</i></p> <p>Yena Ahadzie <i>Dillon Consulting Limited</i></p> <p>Richard Hendriks <i>University of Toronto</i></p>



TIME	SESSION	SPEAKERS
	<p>been used for port and industrial uses for almost 100 years and is now being redeveloped and revitalized. New transportation and servicing infrastructure are required to support this development. The plan has been developed with a view to integrating water into: the identity for the area; a meaningful framework for street design and the public realm; to improve micro-climate; and as a communal experience. Over the course of the project a range of alternatives were considered and evaluated including conventional approaches and an innovative approach to treating water as a resource that integrates an ecological approach to stormwater management including open channels as stormwater parks along streets, bioswales to connect urban and wild areas and a series of green streets. http://www.portlandsconsultation.ca/node/17</p> <p>Presentation 3: Richard Hendriks - Leveraging renewal of existing hydropower: implications for environmental assessment?</p> <p>Achieving Canada's 2030 greenhouse gas emissions reduction target requires substantial increases in low-carbon electricity supply. A large portion of the dependable generating capacity necessary for integrating intermittent wind and solar resources could come from reconsidering the design and operation of existing hydroelectric facilities. Hydroelectric redevelopment entails changes to key operational (e.g., inflow, reservoir storage, drawdown, minimum outflow) and design (e.g., installed capacity, developable head) characteristics at sites potentially suitable for redevelopment. Potential redevelopment includes: tailrace improvements, installed capacity increases, pumped storage additions, increases to live storage volumes, improvements to turbine generator operations, and modifications to downstream flow requirements. The objective of this research is to evaluate the suitability of existing provincial and federal environmental assessment requirements – developed primarily for new hydroelectric development – for use in evaluating hydroelectric redevelopment. Policy implications for provincial and federal environmental assessment will be identified.</p>	
10:30 - 10:45	AM BREAK/REFRESHMENTS Sponsored by: Hardy Stevenson and Associates	



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TIME	SESSION	SPEAKERS
10:45 -12:15	<p>SESSION 6 – INDIGENOUS PERSPECTIVES ON WATER</p> <p>Presentation 1: Don Richardson – “Collaborative Consent”: An Indigenous Perspective</p> <p>The duty to consult and accommodate Indigenous Peoples throughout the impact assessment process from a First Nations perspective will be discussed in this presentation. The federal regulatory review process that occurred in 2017 provided a prime opportunity for Indigenous Peoples to provide input on how they would like to be involved in projects in their traditional territories. The duty to consult and accommodate has evolved to the point where it is obvious that collaborative assessment and decision making processes based on Nation-to-Nation relationships and agreements are necessary to secure free, prior and informed consent (FPIC) of Indigenous Peoples.</p> <p>“Collaborative consent” is an important foundational concept for future environmental assessment legislation in the context of Nation-to-Nation agreements set out by mutually agreed-upon frameworks. This can provide flexibility for local and regional accommodations required for practical dialogue, informed decision-making processes, good information sharing, and projects that support sustainability. This will help ensure the project considers the net contribution of a project to the environmental, social and economic well-being of First Nations’ territories and regions and within their seven generations concept of intergenerational responsibility. This will be a joint presentation with one of our Northern Ontario First Nations clients.</p> <p>Presentation 2: Mark LaForme and Kim Fullerton – The Mississaugas of the New Credit: Water Consultation</p> <p>The Mississaugas of the New Credit First Nation (MNCFN) historically occupied, controlled and exercised stewardship over approximately 3.9 million acres of lands, waters and resources of southern Ontario for hunting, fishing, gathering, healing and spiritual usage. Water stewardship for both the MNCFN and others engaged in the protection, conservation and management of water resources often align. Today the MNCFN maintain “the rights to be stewards of their treaty territory.” The purpose of this presentation is to share information on the past, present, future legal basis of the MNCFN treaty based rights and interests of water from the MNCFN perspective and to discuss the expectations on consultation and engagement on projects that affect lands and waters in the MNCFN treaty lands.</p>	<p>Moderator: Peter Brown <i>Ontario Ministry of the Environment, Conservation and Parks and OIA Board Member</i></p> <p>Presenters: Scott McKay <i>Shared Value Solutions, Ltd.</i></p> <p>Mark LaForme <i>Mississaugas of the New Credit First Nation</i></p> <p>Kim A. Fullerton <i>Kim Alexander Fullerton Barrister and Solicitor Professional Corporation</i></p> <p>Jennifer Simard <i>Moose Cree First Nation</i></p> <p>Constance O’Connor <i>Wildlife Conservation Society Canada</i></p> <p>Richard Nesbitt <i>Hutchinson Environmental Sciences Ltd.</i></p>

TIME	SESSION	SPEAKERS
	<p>Presentation 3: Jennifer Simard and Constance O'Connor – Science and stewardship: Using biotelemetry and traditional knowledge to monitor namayo – Lake Sturgeon</p> <p>Natural systems are facing unprecedented challenges, and successful stewardship requires the cooperative actions of multiple parties. Here, we present a collaborative approach to combine scientific and Indigenous knowledge into the stewardship of namayo – lake sturgeon in the Moose Cree First Nation traditional homeland. Our research team includes First Nation, non-profit, and academic partners, and is using physiological sampling and acoustic telemetry to understand lake sturgeon health, movement, and activity in two river systems: one intact, and one fragmented by hydropower facilities. Preliminary results indicate that fish in the fragmented river show poor body condition and altered activity compared to fish in the intact river, which supports long-standing Moose Cree concerns. Data collection is ongoing and will be incorporated into a broader Moose Cree/Ontario Power Generation monitoring program, and used to develop strategies to reduce the impact of infrastructure development and climate change on lake sturgeon.</p> <p>Presentation 4: Richard Nesbitt – Monitoring Aquatic Environments using Indigenous Knowledge and Western Science in Conjunction</p> <p>We are developing a method that brings together Indigenous Traditional Knowledge and western science into “One Voice” to monitor the freshwater aquatic environment. This will allow Indigenous communities to have an even stronger voice during the Environmental Assessment and quantitatively incorporate traditional methods for assessing the aquatic environment into the monitoring requirements for proponents. This developing method will also increase the capacity of the community to be active participants in monitoring the aquatic environment. Interviews with knowledge holders and concurrent water quality sampling can be used to establish baseline conditions, evaluate the impact of stressors, refine aquatic monitoring programs to better address community concerns and produce a more holistic characterization of the aquatic environment using both approaches.</p>	
12:15 - 1:00	WORKING LUNCH	

TIME	SESSION	SPEAKERS
1:00 - 2:30	<p>SESSION 7 – PROCESSES AND PERSPECTIVES ON HYDROELECTRIC PROJECTS AND IMPACT ASSESSMENT PROCESSES IN REMOTE AND URBAN SETTINGS</p> <p>This session provides the audience with a snapshot of some of the issues and efforts made to address impacts and impact assessment of hydroelectric projects and water infrastructure projects in remote and urban settings in Manitoba and other provincial and territorial norths. Aimée Craft will set the context for the session and explore the Duty of the Crown, and Indigenous experience and engagement on water projects and impact assessment. Jill Blakley will speak to project and regional cumulative effects assessment, and process improvement around hydroelectric infrastructure projects in northern Manitoba, including the Keeyask Hydroelectric Dam project. Patricia Fitzpatrick will discuss adaptive management and follow-up monitoring drawing on experience across a number of water infrastructure projects in Manitoba. The panelists will share ideas on how to establish a better legacy of both environmental stewardship and Indigenous partnership, particularly as it relates to water resources and impact assessment in Manitoba, Ontario and beyond. The presentations in this session on Manitoba are also the basis of an edited volume scheduled for release by the University of Manitoba Press in 2019.</p> <p>Presentation 1: Aimée Craft to present on Duty of the Crown and Indigenous experience and engagement.</p> <p>Presentation 2: Jill Blakley to present on preventing biodiversity loss through ambitious scoping in cumulative effects assessment.</p> <p>Presentation 3: Patricia Fitzpatrick to present on building transparency through adaptive management, follow-up and monitoring.</p>	<p>Moderator: Cheryl Chetkiewicz <i>Wildlife Conservation Society (WCS) Canada and OIAA Board Member</i></p> <p>Presenters: Aimée Craft <i>University of Ottawa</i></p> <p>Jill Blakley <i>University of Saskatchewan</i></p> <p>Patricia Fitzpatrick <i>University of Winnipeg</i></p>
2:30 - 2:45	<p>PM BREAK/REFRESHMENTS Sponsored by Anneliese Grieve Strategic Environmental Planning Solutions</p>	

OAIA 2018

DAY 2 / OCTOBER 18

TIME	SESSION	SPEAKERS
2:45 - 3:00	<p>SPECIAL ADDRESS – Update on the proposed Impact Assessment Act</p> <p>In February 2018, the Government of Canada introduced Bill C-69, which includes the proposed Impact Assessment Act. In June 2018, Bill C-69 passed in the House of Commons with amendments following feedback from Indigenous peoples, companies, and Canadians. The Bill goes to the Senate for review in the fall.</p>	<p>Moderator: Charles (Chuck) J. Birchall <i>LL.B., LL.M., Willms & Shier Environmental Lawyers LLP and OAIA Board Member</i></p> <p>Presenter: Ron Hallman <i>President, Canadian Environmental Assessment Agency</i></p>



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TIME	SESSION	SPEAKERS
3:00 - 4:15	<p>SESSION 8 – EMERGING ISSUES AND NEW TECHNOLOGY</p> <p>Presentation 1: Christopher Serrano – Interactive EIA and public participation: An Australian case study</p> <p>While environmental impact assessment (EIA) has been around for over 50 years, the overall process and presentation of these assessments has not vastly changed. The introduction of new interactive tools and rise of geographical information systems have created a unique opportunity to repurpose the way we present impact assessments and engage with the community. This presentation highlights two examples of the use of a virtual and interactive tool that has provided a platform for public participation based on two recent Australian transport infrastructure projects. The projects made use of an online interactive environmental impact statement and provided an intuitive way for the community to provide input on the project impacts.</p> <p>These tools are an example of how we as environmental practitioners can improve the accessibility of often daunting large technical documents to the broader community. The presentation describes the functionality and operation of these tools and identifies how this could improve the effectiveness of the presentation of EIA and its benefits for public participation in Canada.</p> <p>Presentation 2: Joanna Eyquem and Rhonneke Van Riezen, AECOM – The Use of Higher-Resolution Satellite Imagery, LiDAR and Drones in River Applications: Meander Belt Width Assessments to Effluent Plume Delineation</p> <p>This presentation will focus on how innovative tools, including higher-resolution satellite imagery, LiDAR and drones, may be used to update or complement existing approaches within two disciplines of water resources: fluvial geomorphology and hydraulics. Two examples will be discussed:</p> <p>Globally, in the context of a changing climate, there is a focus on more sustainable river management based on natural processes and enabling rivers to follow natural flooding and erosion regimes. In Ontario, this vision is reflected within the Provincial Policy Statement 2005, which includes consideration of flood and erosion hazards. An approach to determine “Freedom Space” for rivers has been developed that relies on LiDAR and hydrogeomorphological</p>	<p>Moderator: J.A. (Sandy) Nairn WSP</p> <p>Presenters: Christopher Serrano WSP</p> <p>Joanna Eyquem AECOM</p> <p>Rhonneke Van Riezen AECOM</p> <p>Kevin Hanna - Centre for Environmental Assessment Research at the University of British Columbia</p>

TIME	SESSION	SPEAKERS
	<p>interpretation to help define flooding mechanisms. Riparian wetlands are an integral consideration and different levels of risk are defined within the hazard lands using this approach.</p> <p>Within the context of wastewater treatment and effluent discharge, the size of the mixing zone is of paramount concern when considering the immediate impacts of the effluent on fish. Plume dye tracer studies, used in conjunction with drone photography, have recently been used to successfully address regulatory agency comments and environmental compliance approval conditions.</p> <p>Presentation 3: Kevin Hanna – Environmental Assessment and the Blue Economy</p> <p>In Nordic Europe the notion of a Blue Economy is emerging. This concept seeks to develop a strategic and sustainable approach to considering the values and management needs of water and water-based resources in developing economic and social opportunities. Water has been central to the Canadian economy as well as integral parts of Canadian landscapes and history. The Nordic example asks communities, governments and industry to think about the economic and social values of water and related resources, and to better integrate science into planning and decision making. It seeks to build improved models of development impacts, options and scenarios. And it envisions a form of governance focused on water issues. Does the Nordic example hold value or provide lessons for Canada? Or are we already doing much of what they envision, albeit under different labels? Envisioning water as a commodity, as the foundation for a Blue Economy, may be uncomfortable for Canadians. This presentation examines the Nordic case and the central role that environmental assessment plays in planning for a Blue Economy. The applicability to Canada is outlined and examined. It may be that Canadians are already building a Blue Economy.</p>	
4:15 - 4:30	<p>CLOSING OF THE CONFERENCE</p> <p>Completion of evaluation forms using electronic tool</p>	Incoming OAIA President



Presenter Biographies

Yena Ahadzie, P. Eng., is a Water Resources engineer with experience in stormwater management design and technical analyses. Her work has involved the design and review of preliminary/conceptual stormwater management works, and preliminary/detailed design of stormwater management infrastructure for redevelopment sites within Toronto. She has also led and coordinated the submission of environmental approvals/permit applications to many agencies. Yena was the water resource engineer for the City of Toronto's Port Lands and South of Eastern Master Plan.

Lauren Arnold is a PhD student at the University of British Columbia based at the Centre for Environmental Assessment Research located on the Okanagan campus in Kelowna, British Columbia. Her research interests are in environmental assessment, cumulative effects, and resource management decision-making. Her past academic and government research experiences have involved work in the Northwest Territories, British Columbia, and Saskatchewan. Lauren is the recipient of the 2018 OAIA Student Bursary.

Cole Atlin is a PhD Candidate at the University of Waterloo and a private consultant. She specializes in sustainability-based assessment, as well as strategic assessment and Indigenous facilitation in assessment.

Jillian Bieser is an Environmental Scientist with a specialization in ecological restoration and the Director of Communications for the OAIA, an elected position she has held since 2012. As a fifth year PhD Candidate in the Faculty of Forestry at the University of Toronto, Jillian's doctoral work focuses on disturbance impacts in the boreal forest and the associated implications for climate change and land reclamation. Jillian has taught Undergraduate courses at the University of Toronto in Environmental Impact and Risk Assessment in the School of Engineering and Forest Conservation in the Faculty of Forestry. Jillian has also acted as an Environmental Assessment Project Coordinator for GHD, an international Engineering Consulting Firm and as a Research Analyst providing support to the Department of Foreign Affairs and International Trade (DFAIT) during her time at Global Advantage Consulting in Ottawa, Ontario, a government management consulting firm.

Charles (Chuck) J. Birchall, LL.B., LL.M. is a Director of OAIA and partner at Willms & Shier Environmental Lawyers LLP and certified as an Environmental Law Specialist by the Law Society of Upper Canada. Chuck has over 27 years' experience devoted exclusively to environmental law and the intersection of environmental law with Aboriginal law, consultation and economic development. Chuck has particular expertise with environmental assessment and compliance, contaminated lands and energy

law. Chuck received his LL.B. from Queen's University and his LL.M. in Common Law from the University of Ottawa. Chuck also has a B.A. (Hons.) in Political Science from the University of Toronto. Chuck is called to the Bar in Ontario, Nunavut and the Northwest Territories.

Jill Blakley, PhD, MCIP, RPP is an Associate Professor in Geography and Planning at the University of Saskatchewan. She specializes in environmental assessment, particularly strategic and cumulative effects assessment. Over the past two decades, she's provided expert advice to the Canadian Council of Ministers of the Environment, Alberta Environment, the Canadian Environmental Assessment Agency, the Manitoba Clean Environment Commission, BC Hydro, the Public Interest Law Centre of Manitoba, the Consumers Association of Canada (Manitoba chapter), Pape Salter Teillet LLP Barristers and Solicitors, Fisheries and Oceans Canada, the Canadian International Development Agency; and the Canadian Institute of Planners.

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	<p>Julie Abouchar B.Sc., LL.M. Certified as a Specialist in Environmental Law and in Indigenous Legal Issues by the Law Society of Ontario Called to the bars of New Brunswick, Northwest Territories, Nunavut and Ontario 416 862 4836 jabouchar@willmsshier.com</p>
	<p>Charles J. Birchall LL.B., LL.M. Certified by the Law Society of Ontario Called to the bars of Northwest Territories, Nunavut and Ontario 613 761 2424 cbirchall@willmsshier.com</p>

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Katie Bright, B.Sc., MCIP, RPP, is a Member of the OAIA Board. She joined the OAIA Board in 2015 and is an Executive Director serving as the Secretary. She is an Environmental Project Manager with Metrolinx. Prior to joining Metrolinx Katie was an Associate and Senior Environmental Planner with MMM Group (formerly Ecoplans Limited). Katie has completed municipal, provincial and federal Environmental Assessments throughout Ontario. Her work focuses on transportation infrastructure extending from initial project planning through approvals, tender preparation, implementation, and monitoring. Katie enjoys the collaborative nature of project planning through Environmental Assessment, working with a variety of technical specialists and engaging with stakeholders and regulators. Katie also sits on the Transportation Working Group with the Ontario Professional Planners Institute.

Mike Bricks, MCIP RPP, is a Principal of Morrison Hershfield and a Director on the OAIA Board (and the 2018 OAIA Conference Chair). At Morrison Hershfield he is the Director of the Environmental Services Department in the Greater Toronto and Hamilton Area. He brings over 25 years of experience in the transportation planning, municipal, and environmental fields. He has worked extensively in all aspects of planning, design and construction of infrastructure projects. He has been involved in over 100 Environmental Assessment Studies including some of the largest and most complex route planning studies in the province.

Peter Brown is a member of the OAIA Board and (a member of the 2018 OAIA Planning Committee) and has worked in the fields of environmental assessment and/or Indigenous engagement for about fifteen years, both as a private sector consultant and now as Indigenous Consultation Advisor within the Environmental Assessment and Permissions Division at the Ministry of the Environment, Conservation and Parks.

Caroline Burgess, is the Managing Director, Odonaterra Inc. and President of OAIA. She is an environmental planner with 23 years' experience in public and indigenous consultation, environmental assessment and regional planning. To date, she has worked with many First Nations communities primarily in northern Ontario in building management capacity in strategic natural resource management and environmental assessment. She is a Registered Professional Planner in Ontario, and a full member of the Canadian Institute of Planners, and the Prospectors and Developers Association of Canada. She teaches a fourth-year Environmental Geography course part-time at the University of Ottawa.

Joseph Carnevale, MES Planning - Joseph is an Environmental Planner with over 10 years of experience who has worked for both the private and public sectors on a variety of projects ranging from large provincial Individual Environmental Assessments (EAs) and Class EAs to federal Environmental Impact Statements for highways, bridges, culverts, pipelines, transmission lines,

and other infrastructure. Some of the higher profile projects he's worked on include the Port Lands and South of Eastern Master Plan in the City of Toronto (where he acted as project planner and coordinator), Hydro One's Northwest Transmission Enhancement Project in northwestern Ontario and several infrastructure projects for the Ministry of Transportation.

Cheryl Chetkiewicz, PhD, is a Conservation Scientist with Wildlife Conservation Society (WCS) Canada, a member of the OAIA Board and a member of the 2018 OAIA Conference Planning Committee. Her research focuses on regional-scale issues affecting fish and wildlife as well as First Nations including field and applied research, monitoring, assessing the cumulative impacts of land use and climate change on wildlife, and promoting the need for regional environmental and strategic assessments, especially in the Ring of Fire in the Far North of Ontario.

Aimée Craft, LLB, LLM is an Assistant Professor at the University of Ottawa, and an adjunct Professor at the University of Manitoba. Aimee has served as the Research Director for the National Enquiry into Missing and Murdered Indigenous Women and Girls and the Director of Research for the National Centre for Truth and Reconciliation. She was formerly a lawyer at the Public Interest Law Centre of Manitoba, and has published two books: "A Knock on the Door: The Essential History of Residential Schools from the Truth and Reconciliation Commission of Canada", and "Breathing Life into the Stone Fort Treaty: An Anishnabe Understanding of Treaty One".

Nick Crockford, BES, MES, is an Environmental Planner at Morrison Hershfield and he is a member of the 2018 OAIA Conference Planning Committee. He has worked on numerous projects across Canada in infrastructure, automotive, waste management and sustainability in both the public and private sectors. Since joining Morrison Hershfield, Nick has assisted in coordinating provincial environmental assessment process requirements; formulating and implementing consultation plans; coordinating and reviewing environmental and technical specialist work; coordinating socio-economic and land use data collection; and communicating with Indigenous groups, municipal and provincial government representatives, and the public.

Sameer Dhalla is the Associate Director of Engineering Services at the Toronto and Region Conservation Authority. He has 20 years of experience in both the private and public sector and has worked on various projects from watershed planning to flood plain management. At the Toronto and Region Conservation Authority (TRCA), Sameer leads a team of engineers, scientists and technicians in reviewing development applications, implementing flood remediation projects, developing water management policies and administering TRCA's flood protection and warning program.



Ken Dion is the Senior Manager of Special Projects and Design Services in the Project Management Office of the Toronto and Region Conservation Authority. Since he began his work at the Toronto and Region Conservation Authority (TRCA) in 2001, Ken has managed several environmental assessment projects including the Lakeview Waterfront Connection Project, the Don Mouth Naturalization and Port Lands Flood Protection Project, and the Lower Don River West Remedial Flood Protection Project. Currently, Ken is overseeing TRCA's involvement in the design and construction of the Port Lands Due Diligence work in collaboration with Waterfront Toronto, City of Toronto and Toronto Port Lands Company, the construction of the Lakeview Waterfront Connection Project, and initiating a new Class Environmental Assessment with the City of Brampton, called the Downtown Brampton Flood Protection Project.

Joanna Eyquem, P.Geo, CWEM, CEnv, is professionally qualified in both Canada and the UK, with extensive experience applying fluvial geomorphological principles to practical river management challenges. She has been delivering geomorphologically-led assessments, action plans and channel designs since 2002, working to ensure that natural processes are taken into account in river management. Joanna is Technical Lead for AECOM's Fluvial Geomorphology practice, both across Canada and worldwide.

Dr. Patricia Fitzpatrick (Trish) is an Associate Professor in the Department of Geography, and an Instructor in the Master's of Development Practice: Indigenous Development, at the University of Winnipeg. Trish's research program focuses on different aspects of environmental governance surrounding major-and mega-project development in Canada. Her academic and professional experience spans the area of public participation and engagement, environmental governance, environmental assessment, independent oversight and adaptive management in monitoring and follow-up. Over the past twenty years, Trish has been involved in fourteen Canadian assessment and regulatory hearings for mining and energy projects, focusing predominately on the provincial and territorial norths.

Serena Foster joined the Canadian Armed Forces (CAF) in 1999, serving in leadership positions over the following fourteen years. In 2002, she completed a B.Sc. in Microbiology at the University of Saskatchewan (U of S), as well as the military Environmental Officer Qualification. In 2009, she completed military Intelligence Officer training and is presently pursuing a M.A. in Geography and Planning at the U of S. Ms. Foster applies a multidisciplinary approach for analyzing and advising on current and future contexts towards effective solutions planning at the strategic, operational and tactical levels of human and environmental issues.

Kim Alexander Fullerton, M.A., L.L.B., was called to the Bar in Ontario in 1982. His practice is restricted to representing First Nations and their organizations as legal counsel primarily in land

claims. To date he has been legal counsel on twenty-five settled land claims with a total value in excess of \$660 million dollars and tens of thousands of acres of reserve land. From 1993 to 1996 he was Chief Counsel for the Indian Claims Commission in Ottawa. Previously, Mr. Fullerton acted as Senior Solicitor-Native Affairs with Ontario Hydro. Prior to that, Mr. Fullerton acted as Counsel to the Indian Commission of Ontario. The Kim Fullerton Barrister and Solicitor Professional Corporation (KAFBS) is a law firm that only represents First Nations clients. Kim has practiced law for 30 years and in First Nations law for 24 years. The firm advocates for First Nations interests in specific claim negotiation and has many successful settlements in this regard. His firm also provides advice and draft trust agreements for clients. Kim's involvement with the Mississaugas of the New Credit includes the successful negotiating and settlement of the Toronto Purchase Agreement on behalf of the Nation.

Nancy Gaffney is the Waterfront Specialist at the Toronto and Region Conservation Authority, where she has been developing partnerships and leading regional shoreline initiatives for over 30 years. Nancy works closely with Toronto and Region Conservation Authority's (TRCA) municipal partners, stakeholders, and restoration specialists on waterfront projects and initiatives. Nancy is involved in a number of lake management issues, and is chair of Toronto and Region Remedial Action Plan steering committee.

Colleen George is a member of the 2018 OAIA Conference Planning Committee. She is a Research Scientist with the Ontario Ministry of Natural Resources and Forestry. She holds a PhD in Environment and Sustainability from the University of Saskatchewan and a Master of Environmental Studies in Northern Environments and Cultures from Lakehead University. She holds two bachelor's degrees from McMaster University: Bachelor of Science, Biology (Biodiversity Specialization) and Bachelor of Arts, Political Science and Government.

Anneliese Grieve is Managing Director at Anneliese Grieve Strategic Environmental Planning Solutions and member of the OAIA Board. She is an expert in the application of environmental assessment and decision making processes for the approval of complex and controversial projects and has specialized expertise in conducting social impact assessments and stakeholder engagement. Anneliese has recently been part of the team undertaking an SEA for Wood Buffalo National Park.

Ron Hallman was appointed President of the Canadian Environmental Assessment Agency (CEAA) effective July 8, 2013. From 2011 to 2013, Ron served as Senior Assistant Deputy Minister of Regional Operations in the department of Aboriginal Affairs and Northern Development. In this role, he led and directed the Community Infrastructure, Governance, Urban Aboriginal and Emergency Management program areas, working with Aboriginal leaders and key partners to better support on-reserve First Nations communities and urban

Aboriginal populations. Prior to joining AANDC, Ron served in a variety of executive roles in the Parks Canada Agency, including: Vice President, Protected Area Establishment and Conservation (2009-2011); Executive Director, Mountain Parks (2006-2009); and Chief of Staff and Corporate Secretary (2003-2006). Ron Hallman was born in New Westminster, BC, and raised in British Columbia and Alberta. He holds a Bachelor of Arts in Economics and a Master of Arts in Political Science, both from the University of Calgary.

Kevin Hanna, Ph.D., is Director of the Centre for Environmental Assessment Research at the University of British Columbia. His research focuses on integrated approaches to natural resource management, the effectiveness of environmental impact assessment, cumulative effects assessment, and management of energy resources and systems. In addition to many peer reviewed papers, Dr. Hanna has published *Environmental Impact Assessment: Practice and Participation*, available from the Oxford University Press. He is also a member of the Environmental Assessment Advisory Committee to the BC Minister of Environment and Climate Change Strategy.

Andrew Harkness is a Principal and a Director with Morrison Hershfield. He specializes in Environmental Assessment planning and in managing multi-disciplinary project teams on a range of complex infrastructure projects. Andrew is currently leading a feasibility study for a 600 km all-season road between Highway 11 and James Bay, the primary objective of which is the enhancement of community well-being. Andrew is certified as an ENVISION Sustainability Professional and is playing a lead role with Morrison Hershfield's clients in Climate Change Mitigation and Adaptation.

Ariane Heisey, B.A. (Hons), M.E.S., MCIP, RPP, is an OAIA Past President. She has been a leader in environmental assessment since 1989. She taught planning at Ryerson University from 1982 to 1999 including a course in Social Impact Assessment. At the same time she had her own environmental planning practice specializing in social impact assessment and land use planning. Since 1999 Ariane has been working with the Province of Ontario in various capacities, including with the Ministry of the Environment, Conservation and Parks. Among initiatives with the Ministry was the publication of 5 Codes of Practice which provide guidance on the expectations of key components of the EA programme. In 2011, after 12 years with the Ministry, Ariane started a new job at the Ring of Fire Secretariat at the Ministry of Energy, Northern Development and Mines. Here she is responsible for leading the development of policy and a programme to guide the coordination of EAs, land use planning and permitting for new mines in the Ring of Fire located in the far north of the province.

Richard Hendriks is currently pursuing graduate studies in Civil Engineering at the University of Toronto.

Katherine Hills is a Master of Environmental Science graduate from the University of Toronto. She has worked in both the non-profit and municipal sectors, specializing in storm water management, community engagement, and aquatic and terrestrial ecosystem monitoring and restoration. She has been with the Toronto and Region Conservation Authority for over five years and is currently a Project Manager working on complex Individual EAs in Toronto and Region Conservation Authority's (TRCA) Project Management Office.

Neil Hutchinson is President of Hutchinson Environmental Sciences Ltd., 10 aquatic scientists working across the country. He has contributed to Class and Individual EAs in Ontario, and Screenings, Comprehensive Studies and Joint Review Panels federally. As a scientist, he sees the need for clear and direct presentation of information in the environmental assessment process, the need to ensure that all voices are heard, and that all voices bring clear presentation, real questions and opinions that are substantiated by evidence to the process. Environmental assessment practitioners in southern Canada could learn a lot from environmental assessment processes in the Northwest Territories and Nunavut.

Manirul Islam, MEnv.Sc, CAN-CISEC, PMP, is Program Manager, Mitigation and Monitoring, Environmental Assessment Planning at the Toronto and Region Conservation Authority.

Gabrielle Kramer is a partner in the Toronto office of Borden Ladner Gervais LLP. She has a public law practice focusing on issues related to the environment, regulatory defence, municipal law, expropriations law and real estate. Gabrielle has appeared as counsel before all of the courts in Ontario and the Supreme Court of Canada, and has extensive appellate experience. She represents a variety of private and public sector clients before the Environmental Review Tribunal, Ontario Municipal Board, Joint Board, and Boards of Inquiry and Negotiation. Gabrielle is able to work in French.

Mark LaForme is a member of the Mississaugas of the New Credit First Nation. After completing his Business Management Studies at Mohawk College in Hamilton, Ontario, Mark accepted the position of Band Administrator for the Mississaugas of the New Credit First Nation. This first opportunity to work for his community and deal with First Nations issues was the beginning of an unforeseen but, deeply gratifying and rewarding path. Mark went on to serve as the Executive Director of the Association of Iroquois and Allied Indians, a Political Territorial Organization in London Ontario, representing 11 southern Ontario First Nations. Mark then accepted position of Director of Self Government Negotiations with the Indian Commission of Ontario, based in Toronto. While employed at the ICO, Mark was provided the opportunity to attend Harvard University to become certified as a mediator. Mark has been the Director of the Mississaugas of the New Credit First Nation Department of Consultation and Accommodation since its inception in January 2015.



.....**Scott Mackay**, M.Sc., RPP, MCIP, is a Managing Partner, CEO and CFO of Shared Value Solutions Ltd. As a Registered Professional Planner, and with 19 years of diverse professional experience, he has established a strong environment and natural resource planning and management practice serving governments, Aboriginal communities, and progressive private sector clients. As a consultant, Scott has recently led a literature review for the Canadian Environmental Assessment Agency on the consideration of Aboriginal Traditional Knowledge in Federal environmental assessments. He has also provided environmental assessment advice to the Ontario Ministry of Transportation on the project implications of the Magnetawan First Nation traditional land-use study for the Highway 69 Four-Laning project. Scott is a sessional instructor of a fourth year undergraduate course in Environmental Impact Assessment in the Department of Geography, University of Guelph.

Jennifer Moulton is a Senior Drinking Water Program Advisor at the Ministry of the Environment, Conservation and Parks, Source Protection Programs Branch. Jennifer is part of the team responsible for reviewing environmental assessment projects for source protection compliance and also led the development of regulation 205/18 under the Safe Drinking Water Act which applies to Municipal Residential Drinking Water Systems in Source Protection Areas. Jennifer has worked for the provincial government in different capacities for over fifteen years and completed her Masters of Integrated Water Management through the International Water Centre in Australia.

J.A. (Sandy) Nairn, MCIP, RPP, is the National Manager for Environmental Planning with WSP with over 25 years' experience in Environmental Assessment in Ontario specializing in transportation infrastructure. He is a long standing member of OAIA and is registered professional planner. Sandy has completed well over 100 environmental planning assignments for various public and private sector organizations. His career experience includes application of various environmental assessment regimes working with indigenous communities, government ministries, municipalities and private sector developers. In addition, Sandy has provided expert advice to clients on environmental assessment process, policy development and environmental assessment audits.

Laurie Nelson, MCIP, RPP, is Associate Director, Policy and Planning with the Toronto and Region Conservation Authority.

Richard Nesbitt is an Aquatic Scientist with Hutchinson Environmental Sciences Ltd. specializing in servicing private sector, Indigenous and government clients in the aquatic environmental field, with an emphasis on organic and inorganic contaminants. He is experienced in providing technical input to mining and other industrial projects throughout the regulatory process and at all project stages. His expertise includes environmental impact studies, project licencing and compliance, ecotoxicological risk analysis, water quality objective derivation,

technical facilitation, water compensation, environmental effects monitoring and leading aquatic monitoring training programs for Indigenous communities. Richard also facilitates Indigenous community engagement, designing and leading interviews with knowledge holders.

Bram Noble, Ph.D., is a professor in the Department of Geography & Planning at the University of Saskatchewan, and member of the Global Institute for Water Security. His works is focused on impact assessment, especially cumulative effects. He is a practicing consultant in the field of impact assessment, and has served as an advisor to numerous industries, First Nations, and government agencies – including Environment and Climate Change Canada, Canadian Environmental Assessment Agency, Commissioner of Environment & Sustainable Development, and the Auditor General of Ontario.

Constance (Connie) O'Connor is an Associate Conservation Scientist for Wildlife Conservation Society (WCS) Canada where she leads the freshwater conservation program in Ontario's northern boreal region. She completed her PhD at Carleton University on environmental stressors and fish and held a postdoctoral fellowship at McMaster University on the ecology of African fishes. Connie's research has greatly contributed to the developing field of 'conservation physiology', and she was awarded the prestigious Alice Wilson Medal from the Royal Society of Canada in 2013. Connie is a leader in science communication, outreach, and student mentorship.

Anjala Puvananathan is a Director on the Board of OAIA, and the co-chair of the 2018 OAIA Conference Planning Committee. She is the Regional Director at the Canadian Environmental Assessment Agency. Prior to joining the Canadian Environmental Assessment Agency, Anjala was with the Public Health Agency of Canada where she held various positions including A/ Regional Director for Ontario and Nunavut Region. Previously Anjala held positions at Health Canada and Environment and Climate Change Canada. At Health Canada, Anjala held a number of positions, including Regional Director, Strategic Policy and Intergovernmental Affairs. At Environment and Climate Change Canada, Anjala held several positions, including Senior Negotiator of the 2002 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem.

Rhonneke Van Riezen is a licenced geoscientist and a Senior Fluvial Geomorphologist with AECOM. She has over 12 years of experience and has worked on numerous geomorphic assessments and natural channel design projects, including several EAs. She routinely characterizes existing geomorphological conditions and provides recommendations to protect long term stream form and function and proposes natural channel design. Recent project experience includes the Class Environmental Assessment Study for Stouffville Road from Yonge Street to Highway 404 for York Region, and the Class Environmental Assessment study for the West Branch of the

CEAR Centre for Environmental Assessment Research at UBC



Christopher Serrano is an Environmental Consultant from WSP in Sydney, Australia with three years experience specialising in environmental impact assessment and planning approvals for transport infrastructure.

Christopher has worked on numerous environmental impact assessments for several recent major projects in Australia including Inland Rail, Parramatta Light Rail, Western Harbour Tunnel and Beaches Link, Pacific Highway Upgrade and WestConnex.

Jennifer Simard is the lead on an environmental team monitoring the Lower Mattagami as part of a partnership between Moose Cree First Nation and the Ontario Power Generation. Jennifer has over 15 years working on forest policy, environmental assessments and stewardship planning with First Nations as well as with federal and provincial government. Jennifer has a BSc and MSc in Ecology. She belongs to the Moose Cree First Nation and grew up on the land where she gained an invaluable education from her family. Jennifer uses all forms of knowledge (Indigenous knowledge, western science) to improve decision making on these projects.

Lisa Turnbull is a Senior Manager of Project Management Services in the Project Management Office at the Toronto and Region Conservation Authority. Her responsibilities include managing the initiation, planning, execution, control and close out phases for a diverse range of environmental engineering and restoration projects. She provides expertise and professional leadership to ensure project management processes result in the successful planning, design and delivery of major capital works that are typically planned within the framework of a regulated Environmental Assessment or similarly complex master plan process. Some of Lisa's current projects include the Ashbridges Bay Landform, East Don Trail and the Meadoway project, which will create an active greenspace connection between downtown Toronto and Rouge National Urban Park.

Dr. Lisa White is an Industrial Professor at the School of Engineering Safety and Risk Management in the Faculty of Engineering at the University of Alberta. She received her Ph.D. in the area of Strategic Environmental Assessment for Sustainable Resource Development and Planning from the School of Environment and Sustainability at the University of Saskatchewan in 2012 and was also awarded an Engineering MSc in the assessment of surface and groundwater contamination potential from point source pollutants in 2006. Dr. White has over 20 years of professional and academic experience. Dr. White's most recent relevant project experience includes a Strategic Environmental Assessment for Parks Canada assessing the cumulative environmental impact of industrial development surrounding the Wood Buffalo National Park in Northern Alberta.

Beth Williston is the Associate Director of Environmental Assessment Planning at Toronto and Region Conservation Authority (TRCA). She is a professional planner, and is a career conservationist. Beth has worked in infrastructure planning for the past 15 years. She is responsible for overseeing the environmental review of all infrastructure projects in TRCA's 9 watersheds across the GTA. She works closely with municipalities, the province and many, many consultants to ensure efficient service delivery and effective natural resource management as we build our city region. Beth lives in Innisfil with her husband and youngest daughter, and has two other children off at university. In her spare time, she loves to hike and swim.





The Ontario Association for Impact Assessment (OAIA) is a forum for advancing innovation, development, and communication of best practice in impact assessment through the exchange of ideas and experiences among its members, and with other organizations with compatible interests. The OAIA promotes development of local, provincial, national, and global capacity for the application of impact assessment in which sound science and full public participation provide a foundation for equitable and sustainable development. OAIA is an affiliate of the International Association for Impact Assessment, and its goals and objectives are consistent with those of that organization.

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