Meaningful Engagement

Women, Diverse Identities and Indigenous Water and Wastewater Reponsibilities

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Les auteurs de cet article sont un collectif composé de membres des Premières Nations, des métis, ils habitent la ville ou sur les réserves, ils sont jeunes, il y a des mères, des grands-mères, ils sont les gardiens du savoir autochtone, des historiens, des étudiants ingénieurs et d'autres en sciences sociales Nous avons travaillé ensemble sur "Naanaagide'enmodaa Nibi: Occupons-nous de l'eau," un projet fondé par le Réseau des eaux canadiennes. Cette initiative veut promouvoir l'autonomie des communautés autochtones et leurs décisions se rapportant à l'eau et aux eaux usées qui historiquement étaient soumises à des contrôles dictés par le gouvernement pour la qualité de l'eau, la sécurité. Souvent les projets étaient en conflit avec le savoir traditionnel et local de l'eau. Dans un esprit de collaboration, le projet cherche à établir des façons d'inciter les dirigeants autochtones, les ingénieurs des Premières nations et ceux de l'Ouest, les autochtones instruits ainsi que les membres des communautés Inuit et Premières Nations à travailler ensemble, créant ainsi un cadre spécifique aux communautés et culturellement approprié. En particulier, nous regardons comment le savoir traditionnel autochtone et la connaissance scientifique pourraient se recouper par le biais de nos relations et des nouvelles responsabilités face à l'eau.

Indigenous women are the holders of the rights to the waters.

—2008 Water Declaration of the First Nations in Ontario

In October of 2008, the Chiefs of Ontario issued a *Water Declaration of the First Nations in Ontario* following an assembly where they met "to discuss First Nations perspectives on the waters, including water quality, water quantity, safe drinking water and models forward" (Chiefs of Ontario 1). The third and fourth statements of the declaration made it clear that Indigenous¹ women hold significant authority for overseeing the well-being of the waters in their territories:

First Nations women are the keepers of water as women bring babies into the world carried on by the breaking of the water and;

First Nations in Ontario, through the teachings of women, have the responsibility to care for the land and the waters of creation.

These statements reflect teachings among various Indigenous peoples in Canada that link women and water (see, for example, Anderson; Bedard; McGregor). The understanding is that because of their capacity to give life, women have a unique relationship with water-the source of all life (Anderson 9). Many Indigenous cultures acknowledge that, as with the human body, the body of mother earth is comprised mostly of water; waters that represent her veins and the waters she uses to fulfill life-giving cycles, abilities and responsibilities (11). Whether they give birth or not, women are understood to have capacities and responsibilities for taking care of their own waters as well as those of the original mother. This paper tells the story of how the authors—Indigenous and non-Indigenous women of diverse identities and knowledges-collaborated to take up responsibilities for water through a project that integrated Indigenous knowledge and engineering.

Collectively, the authors have First Nations, Métis and settler identities; are urban- and reserve based; are youth, mothers and grandmothers; and are Indigenous knowledge keepers, historians, social scientists, and engineering students. We have been working together on Naanaagide'enmodaa Nibi: Let's Look After the Water, a research project funded by the Canadian Water Network. This project is taking place in four Indigenous communities in Canada² and in collaboration with researchers from the University of Guelph, Nipissing University, the University of Saskatchewan, and Wilfrid Laurier University.3 The goal of the Naanaagide'enmodaa Nibi project is to foster autonomy in water and wastewater decision-making in Indigenous communities who have, historically, been operating under government-imposed frameworks of water quality, safety, and design, and which are frequently in conflict with traditional and local understandings of water. In a collaborative spirit, the project seeks to establish ways in which Indigenous water operators and managers, First Nation and Western engineers, Indigenous scholars, and members of First Nations and Inuit communities might work together toward creating community-specific and culturally-appropriate water management frameworks. Given the technical issues in water and wastewater management faced by First Nations and the engineering community who seek to provide respectful solutions for them, our paper looks at what was learned by some of the women involved with the Curve Lake site of the project. In particular, we look at how traditional Indigenous and scientific knowledge found a space to intersect through our relationships, and through newfound responsibilities to water.

Balancing Knowledges

We acknowledge upfront that there are two potential lines of thought that one might follow in determining how to bring together the differing outlooks of Native communities and Western science overall. The 1613 Haudenosaunee Two Row Wampum treaty with the Dutch was established to address diplomatic relations between the two nations, declaring peaceful coexistence between the two. This treaty, portrayed by the parallel lines of the wampum belt, guides Haudenosaunee approaches to negotiation to the present day, and gives emphasis to equality between nations, and, in particular, the non-interference of one with the other (Muller). In terms of ecological knowledge and understanding, the Two Row treaty asserts that the Dutch and the Haudenosaunee people carried different knowledges, and that there was no benefit in meshing the two.

Contrast this treaty with Mi'kmaq Elder Albert Marshall's teaching of Two-Eyed Seeing; the practice of "learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing and from the other eye with the strengths of Western knowledges and ways of knowing and to using both these eyes together for the benefit of all" (Bartlett, Marshall and Marshall 335). Marshall emphasizes the need to combine diverse ways of understanding in order to better meet the challenges inherent in post-colonial society, through collaborative effort.

As a result of participating in this project, we argue that while First Nations communities are chronically under-resourced and struggle with capacity, the question is not really *whether* policy, governance and infrastructure, and technical expertise are needed, but, rather, *how* they might be configured and applied, while reflecting the traditional ecological and local knowledge of the people.

Background: First Nations Water and Wastewater Challenges and Directions

At the time of this writing, there are 127 boil water advisories in effect, in 86 First Nation communities in Canada, outside of British Columbia (Health Canada). Reserves are far more likely than the general population in Canada to have high-risk drinking water systems in place, despite the federal government's 1977 promise to "provide water and sanitation services comparable to similarly-situated non-Aboriginal communities" (Boyd 1).

The implementation of the government's technologies, policies, and procedures has not proven to be effective or appropriate in the specific context of Indigenous communities. Water infrastructure management is problematic in First Nations for many reasons, not least of which is a failure of the government to consult Aboriginal communities in making crucial decisions about water. Anishinaabe legal scholar John Borrows notes that:

Indigenous people are often submerged and invisible in their own land because the province does not make provision for a representation of their interests. These federalist structures organize, separate, and allocate water and rocks in a manner which promotes unequal distributions of political influence. A "legal" geography is thus constructed which marginalizes Indigenous peoples in significant environmental decision making (420).

In their 2012 study of issues related to safe drinking water on reserve, Jerry White, Laura Murphy and Nicholas Spence found that policy and jurisdictional issues are at the heart of the struggle, pointing out that "If the issue were simply a matter of funding shortfalls, the problem would be more easily solved" (1), and "Technology is also not the issue" (1). The United Nations has stressed the significant role communities must play in water management; the approach suggested by the United Nations recognizes "the roles of communities and, partially, local governments and non-government organizations (NGOS) in water supply" (Langford 275). In 2006, the Chiefs of Ontario published a report on Aboriginal Knowledge and Source Water Protection, calling for the application of Indigenous knowledge while maintaining autonomy in the midst of collaboration. The report stressed, "Chiefs must listen to their Elders and people; they cannot make

Storytelling, Indigenous Knowledge and Curve Lake First Nation

Curve Lake First Nation is an Anishinaabe community located 25 kilometres northeast of Peterborough, Ontario. The community has 2,177 registered members (1,409 off reserve and 768 on reserve), and is situated on a peninsula and islands in the surrounding Buckhorn and Chemong lakes. Curve Lake is rich with water and water stories, even though interactions with the water have been forcibly

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their decisions about our land and water resources solely on what the settler population wants and needs" (Lavelley 15). Combining Indigenous and Western scientific ways of knowing has had more uptake in recent years and Anishinaabe scholar Deborah McGregor has written about the move to call on traditional knowledge for environmental practice in Ontario ("Linking"), and in particular, for water protection ("Traditional Knowledge").

We can attest that this call for integrating knowledges is happening in the area of water and wastewater management as well, as participants in our project network have expressed a strong desire to not only provide systems that will bring water quality to acceptable health standards, but, also to integrate Indigenous traditional understandings of water in the creation of water infrastructure. This interest comes from First Nations communities and organizations, but also from individuals in the engineering field. One demonstration of this is that the Naanaagide'enmodaa Nibi project itself was initiated by a non-Indigenous University of Guelph engineering Master's Student (Jason McCullough), upon realizing that he needed to incorporate more than technical solutions into his practice. As Kim Anderson, a professor of Indigenous studies (and a co-author of this paper), notes that, "Jason came to see [her' when he was doing his Master's because he wanted to examine First Nations water infrastructure issues through story and qualitative research-to make space for local and traditional knowledge." The Curve Lake site of our project thus took up the premise that storytelling is one way to begin making change.

Our learning is grounded in story, and so we offer a small piece of the Curve Lake First Nation water story next.

altered by flooding, and the subsequent creation of new lakes and water systems following the introduction of the Trent Severn Waterway. Tourism has also had a negative impact upon the quality of the water in the area, affecting the flora and fauna, particularly wild rice.

Our work at Curve Lake began with the hiring of a local youth researcher, Jack Hoggarth. Jack worked for eighteen months, talking to community elders about various periods and relationships with the waters of their territories. We involved other youth and elders in educational activities around local and traditional knowledge and about engineering knowledge of wastewater systems. At one point we hosted a "sewage Olympics" for the children, where they designed their own wastewater systems; we have also shared traditional knowledge about water with local children and encouraged them to tell their own water stories through photography. The authors of this paper were involved at Curve Lake in various ways: coordinating, supporting, helping with educational activities, assisting with writing up the oral histories, beginning to work with technical documents, and envisioning how to integrate traditional and technical knowledge moving forward. With the oral history and introductory phase now complete, we are looking forward to seeing how this local and Indigenous knowledge can be applied to frameworks and strategies related to water protection, safety, security, and management of the systems on the reserve.

Dorothy Taylor, an author on this paper, was also one of the oral historians that worked with Jack. The following excerpt from their conversation demonstrates how Indigenous and local knowledge was central to our learning and work.

"I Pray for the Water Every Day": Dorothy's Water Story at Curve Lake

This area was settled because we were on a peninsula between two lakes, and it was surrounded by cranberries, cranberry bush, and lots of game and wild rice. Pretty well every First Nation, you'll notice they always settle beside a lake or a river, like it's central—the water is essential for food and transportation. And when Curve Lake was first settled, they had every opportunity to put a house down by the shoreline, like we do now, to see the sunrises and sunsets, but they didn't.

Fritzy Taylor brought this to my attention one time, she said, "the old people never built houses along the shoreline" and I said, "I wonder why they didn't?" Because now if you want to build a house by the shoreline it's ... um, it's expensive, but in the old days, the first houses were built away from the shoreline. And the reason for that was, because if you lived too close to the lake—everyday living will pollute the water, it will affect the water.

... Another reason why the Elders wouldn't build along the shoreline is because of the Opiango—the water serpent. [My dad' said he had seen it before, and knew people who did see it, mostly on the Buckhorn Lake side. When he used to guide, on most of the lakes, [it was' mostly in Burleigh area, on Lovesick, but he would guide here too. He said he took a couple of Americans out and, if I can think of it right, and they saw, they saw the Opiango [laughs'. Granny *Eliza McCue, she would talk about the Opiango all the time* on the lakes. There was certain times of the year that they wouldn't go out because they were afraid of that Opiango getting them... it was mostly around, in the spring time. This is my own idea, about how come we don't see that Opiango anymore, because the Opiango is a part of that spirit world, and we're not as connected with that spirit world anymore, you know, the young people.

Jack Hoggarth asks about women's connection to water and Dorothy responds:

I pray for the water everyday, that's our obligation. Even if it's just a quick prayer, just say "gchi miigwetch gzheminidoo, emiizhiyaan dementaanaamin se iw nbi, wiidokwe shwaan chi giinwendimaa nbi"—to help us every day with the water. Now that will thank the Mother Earth for the water, so "now and forever, clear and clean, through the veins of our Mother," that's just a little prayer that I say everyday... and when I'm in my shower, since I learned that nbi [water' song, I sing that four times before I come out of the shower [laughs'. Yeah, I just automatically say "miigwetch" [thank you' for the water whenever I have water, and when I cook, I always pray when I cook too. Because you use water to cook with, and I was always taught to pray for that water before I cook.

This excerpt illustrates principles found in many Indigenous cultures related to water; principles that can be applied to water infrastructure considerations: respect for water; acknowledgement of its spiritual nature; attentiveness to place; and women's responsibilities are all here. Dorothy's practice as an Anishinaabe woman has further shown us how to take up responsibility to water, as prior to our arrival she had spearheaded a collaborative project to protect the waters of the Peterborough area. "The Sacred Water Circle," led by local women, has hosted conferences and engaged in water awareness walks with the aim to "create dialogue around spiritually-based environmental issues, and to motivate communities and governments to act to set policy that will protect our water, by leading with prayer and walking together" (Sacred Water Circle). Dorothy's motivation for doing this work is also part of her story:

Well, now we are lazy and so disconnected from the Earth, and that's why I started this project called the "Sacred Water Circle." To try to teach, bring those spiritual leaders to work with those who are in positions of power and influence, like municipal governments and corporations. So that when they start making decisions that will impact water, they'll have that spiritual understanding and that appreciation for water before they implement any projects. So just to give them that, bring back their awareness about how sacred water really is. Sacred means that it has a higher connection with the higher power, the spirit, and water actually has a spirit, and water is alive. It's what we believe, to give it that respect and that understanding. So, that's what we are trying to communicate with those people who affect [it], how their everyday actions impact the water. We have to be more aware of that now. And those spiritual Elders are the ones who are saying that "No, we have to start bringing balance back to the world, and start remembering our original instructions that creator gave us." It wasn't just water that they were talking about—it's all of creation, but it's because of those teachings amongst the Ojibwe and all First Nations, that women are responsible for water, so that's why I take it seriously now.

This story has now become a part of our story as water researchers and caretakers. The particular impact on the young women coming from an engineering environment is described below.

Women, Engineering, Connecting, Water

Rachael Marshall, a PhD student in engineering at the University of Guelph, describes herself as a settler ally. She joined the *Naanaagide'enmodaa Nibi* project in its second year. Her career path is informed by her respect for water, and by her desire to accurately reflect the traditions of the communities with whom she works. Working with this project has led her to reflect on her own origins and relationship with water:

I often think about how, as settlers, we've become so disconnected.... I believe many of us arrived at Turtle Island already disconnected. Most of my ancestors came from either Scotland or Ireland, and I have heard stories about the Celtic traditions of these places that were strongly rooted in connection and ceremony with the earth before the arrival of invaders and colonizers. I have heard how rooted these traditions were in honouring and worshipping water—rivers and springs as the Rachael has learned that one of the main problems in First Nations water infrastructure involves the lack of attention to local context. Aboriginal communities are often offered water treatment systems without consideration for the larger water context in the community. For example, while the treatment provided may be effective at improving water quality, a lack of funds for proper road maintenance can prevent community members with trucked water delivery from accessing this water. Communities are also provided with complicated, unmanageable

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bestowers of life, health, and fertility. As a settler, these kinds of relationships with the natural world seem striking, both foreign and innate. The disconnect from these relationships with traditional land and water has left many of us with a sense that something is lacking.

Rachael's thoughts illustrate the tendency of modern science to discount traditional ways of knowing, and to disconnect from the spiritual nature of water. Removing the sacredness from water allows those who make decisions about water and wastewater management to present water as a commodity, without rights, and without spirit. She notes that one of the most significant steps Western science can take is to recognize its own limitations in its worldview and its comprehension of water. As Peter Gleick points out, "the twentieth-century water-development paradigm, driven by an ethic of growth, has now stalled, as social values and political and economic conditions have changed" (128). The change in outlook away from water as merely an exploitable resource is a positive step toward integrating Indigenous knowledges into water and wastewater management.

It is important to pay attention to a community's notion of water as a spiritual entity, as exemplified in Dorothy's story. Indigenous holistic worldviews factor into this approach, as water is then seen as part of a greater web of interconnected relations. Rachael reflects on the value of moving away from "reductionist thinking that focuses on compartmentalizing interconnected natural and human systems," noting "while science is beginning to move towards what Silvio Funtowicz and Jerry Ravets refer to as Post-Normal-Science, in practice, narrow consideration of dissected pieces of the whole remains the status quo." treatment systems in some cases. Redundancy is an important engineering design principle; however, facilities designed to treat raw water of much poorer quality than local supplies can be far too expensive to maintain given the limited maintenance budgets of most First Nations communities. In some cases, operators are faced with the decision of disconnecting parts of the treatment system that are too expensive to maintain. This strongly points to how ill-suited these designs can be for local contexts, and to the need for relationship building and better communication between communities and practitioners.

Treatment facilities are also designed with a Western ideal of water quality in mind. Certain treatment processes are seen to disrespect the spirit of water. Communities are faced with few options, of which none are often considered spiritually appropriate or respectful. For example, in Nunatsiavut, one Inuk woman associated with the larger Naanaagide'enmodaa Nibi project expressed her concern that reverse osmosis treatment removes everything, including the spirit of the water. She would not drink this water, believing it to be dead. In Curve Lake, water treatment mimicking natural processes, such as slow sand filtering, is preferred in order to ensure the spirit of water is treated with respect. Imposed Western ideals of how water is treated are a source of tension in communities that perpetuate a growing disconnect with traditional relationships to water-particularly in younger generations.

The full context of a community's water needs, including locally-specific spiritual needs, are often missed due to a lack of communication and focus on relationship-building between communities and practitioners. Impressive, expensive facilities are not always appropriate to communities' water needs, nor are they sustainable. Attention to context is thus key. Rachael states, "while this may sound obvious, engineers are often ill-prepared for the very specific contexts of each community, including understanding how to approach alternate knowledge systems and past or present colonial issues." She advocates synthesizing "shared perspectives," pointing out that "moving away from this kind of check-box design requires us to be integrative across knowledge systems."

Dialogue is critical in order to bring knowledge systems

community "to navigate Western water treatment and management approaches with increased understanding and control."

What is the significance of working as women in engineering environments? From Emily's perspective, this question is a challenge, because she hesitates to make a distinction between women and men. Yet she notes that women in the project bring to it a certain compassion and empathy and have created a strong bond with each other, transcending barriers others might put up. Within

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and experiences together. This has been a key lesson for Emily Nickersen, another *Naanaagide'enmodaa Nibi* student who identifies as a fourth generation settler of Scottish and English decent. Emily grew up in Fredericton, New Brunswick and has been studying water resources engineering for the past four years at the University of Guelph. As a young person in a professional program that carries and perpetuates stereotypes of certainty and a vast understanding of "how the world works," this project has led her to reflect on feelings of being ill-equipped to tackle the intricacies of Aboriginal community water management, and the need for dialogue:

I don't know the right way forward; I don't have the answers. I recognize that I am young and still learning, but in no way do I know how to address the complex challenges that face so many individuals and communities—no one person or company will ever have all the answers. Engineers need to unpack the idea that equations and designs are empirically constructed, rooted in experimental analysis with contextual and temporal limitations.... But creating opportunities for dialogue that allow for collective learning as we did in our project provides powerful learnings about how we come together and how we engage stakeholders.

Emily points out that "Dorothy Taylor shared a powerful teaching that we are not seeking to bridge Indigenous and Western knowledge, but rather to balance it." Working within an engineering environment, Emily sees the necessity to acknowledge the fact that Western knowledge does not carry all the solutions to the complex questions surrounding water and wastewater infrastructure management on reserves. Her lesson has been to seek out "meaningful engagement" that will allow the the project, she notes, the approach to technical issues has been reversed from the traditional engineering practice of bypassing the human element of water management, to actively pursuing it: "We begin with the connection between us, the bond of being human, then move to a place of 'let's understand the issue, engage the community and focus on people first," she says. Emily believes that communication and taking time to know who the people are advances the ability of a team of non-Indigenous and Indigenous women and men to find respectful solutions.

Rachael notes that women working together promotes a more human connection regarding water issues. Traditionally, she says, women are water carriers, and it makes sense to her to bring together a group of people who have responsibility to look after it.

As a woman, Rachael is a minority in the field of engineering, and from a conventional perspective, she is an outsider. This project has provided her with the opportunity to come together with a group of women who made her feel she had an equal voice. This initiative has been particularly important to her because she feels that there is not enough focus on femininity in the design process in engineering. She stresses that the point is not that we all have to fit into a social construct of femininity, but that, as a whole, women are not encouraged to express that feminine creativity in the engineering field, which is more about concrete, squares and angles. She deals with fewer women as she rises higher in her discipline, which is still predominantly male-oriented.

In the end, establishing trusting relationships is key. As Rachael states, "without relationships, how can one know the limits of one's worldview, understand the local context, or be integrative?" Hearing and sharing stories was a major component to relationship-building and incorporating contextual details; it allowed all the members of the team to understand where each participant was coming from on a personal level. What is often missing in engineering consultancy on First Nation drinking water is relationship, which takes time and effort. The greatest demonstration of respect is through listening, and by beginning to work with stories. The women involved in this project came away with a sense that relationship-building supports creativity and fosters trust; overall, it creates a safe space to explore things we might not have been able to look at otherwise. It allows for coming together.

Coming Together

The preceding sections of this paper introduced traditional/ local knowledge through Dorothy, followed by the perspectives of young women in engineering through Rachael and Emily. Jo-Anne Lawless and Kim Anderson, the two remaining authors on this paper, came to the project from Indigenous studies, an interdisciplinary field that provides space for considering how knowledges come together. The possibilities for this realization of "two-eyed seeing" weren't immediately evident, as Kim explains:

After working in Indigenous and gender studies and with women's healing for most of my career, it felt odd to be invited into a space where the primary research question had to do with engineering and water infrastructure. When I was charged with facilitating the "kickoff" gathering we had [for this project', I was at first perplexed at how to proceed, but then decided I would just do it as I have always done—beginning with ceremony, working with a talking circle, and encouraging relationship-building. With the understanding that water protection requires women's leadership, I suggested inviting Shirley Williams, an Anishinaabek Elder and water activist, to come and be our grandmother/leader.

Elder Shirley Williams opened the first *Naanaagideen-modaa Nibi* gathering with a water ceremony,⁴ and Kim followed by inviting the mostly male participants (engineers and water operators) to share their stories about water. "I was astonished when everyone opened up about their connections to place and the spiritual significance of those connections," she says. "I then asked the few women who were there to lead the small group work, which was welcomed by the men. I can only say that grandmother spirit was working with us that day."

Throughout the project, Jo-Anne has been able to make connections between Indigenous methodologies, involving storytelling and the technical work. She notes:

When women, Indigenous and non-Indigenous, academics and professionals, come together to care for the water, the first thing is to gather stories, and then to take these stories and build relationships on them. I've noticed that the field of engineering, which plays a central role in First Nations water and wastewater management, can lack an understanding of the vital importance of relationship and interconnectivity in our dealings with the environment. Women in this field bring to it a sense of humanity and a connection with other women who have a vested interest in the water, whether as people traditionally responsible for its wellbeing, or as people who are trying to bring it back in balance. This project has demonstrated a desire among the young women engineers involved to renovate the current water system design and align it more closely with Indigenous understandings, with the recognition that it isn't just one "Indigenous understanding"; rather, water design initiatives must be community specific, reflecting both the geographic area and the traditional beliefs of the people.

We are still early on in the work to find better options for First Nations water infrastructure; this is a large and complicated issue. But we take a number of lessons from our experience: recognizing the limitations of our knowledge; acknowledging the spiritual component of water; listening to story; considering local context; and seeking out meaningful engagement through relationship-building. How these lessons might find expression as we move forward remains to be seen. It may be that we inspire a new generation of engineers who will collaborate on innovative design that takes into account Indigenous principles, practices and respect for water. It may be that communities will find ways of integrating ceremony into their water systems to show their respect and fulfill their responsibilities. Perhaps communities will revisit both traditional and colonial water stories as they collaborate with technical support, and will find ways to use this knowledge in their planning for safe drinking and wastewater. Perhaps more women will take up leadership in water protection and planning, as called for by the Chiefs and exemplified by Dorothy Taylor and Shirley Williams. For now, the most heartening lesson we take from this experience is that through our relationships with each other, women have the potential to forge a restored relationship between humanity and water.

Jo-Anne Lawless is a PhD candidate in Canadian Studies at Carleton University; Dorothy Taylor is a community-based researcher, organizer, and Indigenous knowledge-keeper of the Curve Lake First Nation; Rachael Marshall is a PhD candidate in the School of Engineering at the University of Guelph; Emily Nickerson is an undergraduate student in the School of Engineering at the University of Guelph; and Kim Anderson is an Associate Professor in Indigenous Studies at Wilfrid Laurier University. ¹In this paper we use the term "Indigenous" to refer to First Nations, Métis and Inuit peoples, who are defined collectively as "Aboriginal" in the Canadian constitution. We choose not to use the term Aboriginal as it was recently rejected by the Assembly of Manitoba Chiefs and the Anishinaabek Nation. (see Marks, 2014).

²Curve Lake First Nation, Dokis First Nation, James Smith Cree Nation and the Inuit community of Rigolet, Labrador. ³Faculty leading the project include Dr. Khosrow Farahbakhsh (Principal Investigator), School of Engineering, University of Guelph; Dr. Kim Anderson, Indigenous Studies, Wilfrid Laurier University; Dr. Rob Innes, Department of Native Studies, University of Saskatchewan; Dr. Benjamin Kelly, Department of Sociology, Nipissing University; and Dr. Carly Dokis, Department of Anthropology, Nipissing University.

⁴Shirley, ,a teacher of Anishnaabemowin, the Ojibway language, also named the project.

References

- Anderson, Kim. Aboriginal Women, Water and Health: Reflections from Eleven First Nations, Inuit and Metis Grandmothers. Atlantic Centre of Excellence for Women's Health and Prairie Women's Health Centre of Excellence. Pdf.
- Bartlett, Cheryl, Murdena Marshall, and Albert Marshall. "Two-Eyed Seeing and other Two-Eyed Seeing and Other Lessons Learned Within a Co-learning Journey of Bringing Together Indigenous and Mainstream Knowing." *Journal of Environmental Studies and Sciences* 2.4 (2012): 331-340. Print.
- Bédard, Renée Elizabeth Mzinegiizhigo-kwe. "Keepers of the Water: Nishnaabe-kwewag Speaking for the Water." *Lighting the Eighth Fire: the Liberation, Resurgence and Protection of Indigenous Nations.* Ed. Leanne Simpson. Winnipeg: Arbeiter Ring Press, 2008. 89-110. Print.
- Borrows, John. "Living Between Water and Rocks: First Nations, Environmental Planning and Democracy." *University of Toronto Law Journal* 47.4 (1997): 417-468.
- Boyd, David R. "No Taps, No Toilets: First Nations and the Constitutional Right to Water in Canada." *McGill Law Journal* 57 (2011): 81-134. Print.
- Chiefs of Ontario. *Water Declaration of the First Nations in Ontario.* 2008. Web. August 2, 2014.
- Funtowicz, Silvio O. and Jerome R. Ravetz. "Science for the Post-Normal Age." *Futures* 25.7 (1993): 739-755. Print.
- Gleick, Peter H. "A Look at Twenty-first Century Water Resources Development t." *Water International* 25.1 (2000): 127-138. Print.
- Health Canada. *First Nations and Inuit Health; Drinking Water and Wastewater.* Web. 16 August 2014.

- Langford, Malcolm. "The United Nations Concept of Water as a Human Right: A New Paradigm for Old Problems?" *Water Resources Development* 21.2 (2005): 273-282. Print.
- Lavalley, Giselle. *Aboriginal Traditional Knowledge and Source Water Protection: First Nations' Views on Taking Care of Water*. Chiefs of Ontario, 2006. Print.
- Marks, Don. "What's in a Name? Indian, Native Aboriginal or Indigenous?" *CBC News* Oct. 2, 2014. Web. August 11, 2014.
- McGregor, Deborah. "Traditional Knowledge: Considerations for Protecting Water in Ontario." *International Indigenous Policy Journal* 3.3 (2012): 1-21. Print.
- McGregor, Deborah. "Linking Traditional Knowledge and Environmental Practice in Ontario." *Journal of Canadian Studies* 43.3 (2009): 69-100. Print.
- McGregor, Deborah. "Anishnaabe Kwe, Traditional Knowledge and Water Protection." *Canadian Woman Studies* 26.3,4 (Spring 2008): 26-30. Print.
- Muller, Kathryn V. "The Two" Mystery" Belts of Grand River: A Biography of the Two Row Wampum and the Friendship Belt." *The American Indian Quarterly* 31.1 (2007): 129-164. Print.
- White, Jerry P., Laura Murphy and Nicholas Spence. "Water and Indigenous Regan Peoples: Canada's Paradox." *International Indigenous Policy Journal* 3.3 (2012). Web. August 13, 2014.

JOANNA M. WESTON

The Calm

coloured pencils strewn on the table

a manual for electricians open at page 34

knife and serving spoon all wait for hands

which lie still on her lap

ready for resurrection

Joanna M. Weston's second volume of poetry, ABedroom of Searchlights, is forthcoming from Inanna Publications in the spring of 2016.