



Government of Northwest Territories Gouvernement des Territoires du Nord-Ouest

NWT Water Stewardship Strategy

Implementation Workshop

November 8-9, 2016

Dettah, NT

Summary Report



The **waters** of the Northwest Territories
will remain clean, abundant and productive for all time.

Introduction

The Government of the Northwest Territories (GNWT) Department of Environmental and Natural Resources (ENR) invited water partners and other interested organizations to discuss the implementation of *Northern Voices, Northern Waters: NWT Water Stewardship Strategy* (Water Strategy) and the *NWT Water Stewardship Strategy: Action Plan 2016-2020* at the 7th Annual Water Strategy Implementation Workshop in Dettah on November 8-9, 2016.

The annual Water Strategy workshop brings water partners together to share information and knowledge, learn from one another, and discuss opportunities to collaborate, prioritize and work together to protect the water in the Northwest Territories (NWT). Previous workshop reports on the development and implementation of the Water Strategy can be accessed on the NWT Water Stewardship Strategy website (www.nwtwaterstewardship.ca/?q=publications).

Workshop Objectives

The objectives of the workshop were to:

- review implementation of the Water Strategy, including updates on water strategy initiatives and water-related research and monitoring; and,
- identify and discuss implementation and research priorities.

Participants

Water partners attending the implementation workshop represented a number of organizations involved in water stewardship in the NWT, including Aboriginal governments and organizations, territorial and federal departments, non-governmental organizations, academic institutions, industry, community representatives, and regulatory and renewable resource boards. The Water Strategy Aboriginal Steering Committee (ASC) also participated in the workshop, representing their respective Aboriginal Governments.

To see the full list of participants and workshop agenda, see Appendices A and B respectively.



The workshop was facilitated by Michele Culhane (ENR).

Workshop Summary

The workshop report is divided into eight main sections based on the workshop structure:

1. Kick-Off Presentations
2. Water Strategy Implementation Updates – Day 1
3. Storytelling Series
4. Poster Fair and Photo Contest Display
5. Water Strategy Implementation Updates – Day 2
6. Confirming our Priorities – Break-out Sessions
7. The Indigenous Leadership Initiative
8. Workshop Wrap-up

Presentations and posters from the workshop can be accessed online on the NWT Water Stewardship Website (www.nwtwaterstewardship.ca/publications).

Day 1 began with an opening prayer and performance by the Yellowknives Dene Drummers. This was followed by opening remarks from the Chief of Dettah, Edward Sangris, and ENR Acting Deputy Minister, Erin Kelly.

1. Kick-Off Presentations

1.1. Aboriginal Steering Committee (ASC) Update Panel

Members of the Aboriginal Steering Committee (ASC) introduced themselves and provided an overview of their work on the ASC. The presenters highlighted different perspectives on water issues and concerns stemming from the various regions they represent. They also provided updates on some of the key Water Strategy initiatives in which the ASC has recently been involved, including the independent evaluation, review of the 2016-2020 Action Plan, and research and monitoring projects. Members of the ASC panel included:

- Sjoerd van der Wielen – Tłı̨chǫ Government
- David Krutko – Gwich'in Tribal Council
- Tim Heron – Northwest Territory Métis Nation
- Leon Andrew – Sahtu Secretariat Incorporated
- Dahti Tsetso – Dehcho First Nations
- Peter Redvers – Kátlodééche First Nation



1.2. Confirming our Priorities – Blair Carter, ENR

Blair Carter (ENR) provided a brief overview of the Water Strategy, the Action Plans and some of the broad implementation activities undertaken since the Strategy was released.

The Water Strategy was released in 2010 based on input from water partners across the NWT. The first Action Plan (2011-2015) was released in 2011 and marked the beginning of the first five-year implementation phase of the Strategy. In 2015, an independent evaluation of Water Strategy implementation progress was completed. Water partners, including the Aboriginal Steering Committee (ASC), provided valuable input throughout the evaluation process. The evaluation helped to inform the new Action Plan for the 2016-2020 implementation phase, which was released in June 2016.

Throughout the development of the Water Strategy and Action Plans and during previous implementation workshops, water partners have provided valuable feedback on the process of reviewing and discussing Water Strategy priorities. For example, we have heard that:

- it is worthwhile to discuss Water Strategy and water research priorities at the annual workshop;
- these discussions are an important step in the implementation process and provide a useful way for water partners to reflect on how their respective priorities align with the Action Plan and other water partners;
- the discussion on priorities should be based around the previous year's priorities as a starting point;
- the discussion could be lengthened and held earlier on the workshop agenda to allow for more in-depth conversations; and,
- the exercise could be more interactive to encourage more participation.

Based on this feedback, two focus questions were identified to guide this year's workshop discussion on priorities:

- 1) Are our existing priorities still our top priorities?
- 2) How can we best work together to foster collaboration and achieve these priorities?

The first question focused on the 'what' aspect of priority setting, which is essentially re-confirming the priorities in the 2016-2020 Action Plan and the priorities identified through the independent evaluation and at past workshops. Throughout the workshop, water partners were encouraged to review, vote and, where they felt necessary, add to the existing priorities list laid out on a large drum diagram.

The results from this exercise informed break-out group discussions around the second question: the 'how' aspect of working together to ensure we achieve the priorities identified. See section 6 (*Confirming our Priorities*) for a summary of break-out group discussions.



2. Water Strategy Implementation Updates – Day 1

2.1. Transboundary Status Update on Negotiation and Implementation of Bilateral Water Management Agreements

Robert Jenkins (ENR) provided an overview and update on the status of negotiations and implementation of NWT's Bilateral Water Management Agreements (BWMA) with neighbouring jurisdictions. In 1997, the Governments of Alberta, Saskatchewan, British Columbia, Yukon Territory, NWT and Canada signed the Mackenzie River Basin Transboundary Waters Master Agreement (the Master Agreement). This agreement commits all six governments to work towards cooperatively managing the water and aquatic ecosystems of the entire Mackenzie River Basin and makes provisions for the parties to develop BWMAs.

An agreement between the NWT and Yukon was signed in 2002. Yukon and NWT are discussing updating this agreement to align it with more recently signed agreements. The NWT has had discussions with Saskatchewan (SK) to negotiate a SK-NWT BWMA. SK has a legal review underway of draft SK-Alberta (AB) and SK-NWT BWMAs. NWT also is committed to discussing and developing a BWMA with Nunavut (NU) once NU is ready to do so.

NWT engagement and Aboriginal consultation on the transboundary water agreements has helped shape completed agreements with AB and British Columbia and will continue to shape completion of agreements with SK, YT, and NU. Throughout negotiation and implementation, the Aboriginal Steering Committee (ASC) has provided valuable input. To ensure direct involvement by Aboriginal governments, the ASC recommends representatives to sit on each of the respective Bilateral Management Committees (BMC) that are established for each completed agreement.

The BMC for the NWT-Alberta agreement has been established and the first meeting was held in May 2016, where a workplan for implementation was developed. The workplan includes tasks such as identifying and implementing ways to synthesize and blend multiple knowledge systems; developing water quality triggers and objectives; and developing tracking metrics for water quantity; a climate change scoping strategy; and reviewing mercury data to determine interim triggers. An Implementation Highlights report was released in March 2017 (www.nwtwaterstewardship.ca/transboundary-water-agreement-implementation). The report focuses on implementation activities during the inaugural year, 2015-2016. A more comprehensive annual report on the first year of implementation will follow.

Discussions are underway to determine implementation priorities for the NWT-British Columbia agreement. The first BMC meeting is expected in summer 2017. A state of the knowledge report also is being prepared on the Liard and Petitot Basin.

Questions from water partners:

Q: The agreements have mechanisms to resolve differences with the agreements; however, are there any instruments for consequences if one party doesn't meet the stated objectives or what they've committed to? What tools do we have to enforce the agreement?

A: These cooperative agreements include transboundary objectives that the upstream party must meet at the border, prior notification and consultation requirements, emergency response protocols, as well as dispute resolution mechanisms, where issues or questions could be

addressed by research or studies, discussion with the Mackenzie River Basin Board (MRRB), an independent panel, or referral to the responsible ministers. If necessary, all legal remedies available before the agreement remain available.

2.2. Wetland Stewardship in the NWT: A Trail Map

Cristina Soto (Ducks Unlimited Canada (DUC)) provided background information on wetland stewardship, as it relates to the Water Strategy in the NWT, and an overview of DUC's work towards a wetland inventory in Canada.

Wetlands provide benefits that are vital to ecosystem health (ecosystem services), including supplying clean water by filtering large areas; supporting rich biodiversity for fish, wildlife and waterfowl; providing food and medicine for Indigenous communities; supporting traditional culture and ways of life; storing carbon and methane; and buffering extreme weather events. The primary threats to wetlands in NWT are climate change and development (both urban and industrial). A forest ecology research team led by Bill Quinton at Wilfrid Laurier University is investigating how rapid warming and associated permafrost thaw are transforming forested permafrost terrain into permafrost-free, tree-less wetlands.

Since wetlands are key components of the waters of NWT, their care and protection is an important part of water stewardship. Working together is important for accomplishing this task. A cautious approach also is required during development and managing fish and wildlife, especially given the rapid and often unpredictable changes occurring.

DUC has identified seven 'trails to wetland stewardship':

1. Raising awareness about the importance of wetlands
2. Establishing a wetland inventory and mapping
3. Identifying wetlands
 - DUC has developed a Boreal Wetland Classes field guide to assist in wetland classification.
4. Improving understanding of wetlands
 - Understanding the importance of wetlands to people (values, uses, observations of change), how they function in the NWT, and how they are changing are important.
 - Collaborative research (both science and traditional knowledge) is critical to this understanding.
5. Ensuring adequate legislation, regulation, and policy that is explicit to wetlands
6. Identifying best management practices for development and industry
7. Recognizing important planning processes
 - Examples of planning processes to align with wetlands: Conservation Network Planning, Land Use Planning, Planning for Species at Risk.

Questions from water partners:

Q: You mentioned that DUC did a review of wetland legislation and policy, is this document available?

A: As of the current date it is not available, but it may be made available in the future. Initially it was developed only for internal use to help identify the gaps and issues related to wetlands.

2.3. GNWT Traditional Knowledge Policy Renewal

Jennifer Fresque-Baxter and Sarah True (ENR) provided a broad overview and update on the GNWT Traditional Knowledge Policy review and renewal process.

The GNWT established a government-wide Traditional Knowledge Policy in 1997, which was later revised in 2005. The Traditional Knowledge Policy Implementation Framework was developed to provide direction to departments and agencies for effective, respectful and appropriate incorporation of traditional knowledge into government programs and services.

During the development of the 2015-2020 ENR Strategic Plan, discussions emerged about reviewing the Traditional Knowledge Implementation Framework to ensure we continue to work collaboratively and move forward in ensuring that traditional knowledge plays a part in making informed decisions about land and water.

The 2016-2019 Mandate of the GNWT includes a commitment to continue implementing the Traditional Knowledge Policy and Implementation Framework across the GNWT, while working with Aboriginal governments and other partners to develop an action plan to improve the inclusion of traditional knowledge in program development, implementation and decision-making.

ENR recently formed a committee to lead the review of the Traditional Knowledge Policy and Implementation Framework. The team is in the scoping and researching phase to better understand what has been done previously, what other jurisdictions are doing, existing policies that Aboriginal Governments have in place, and to identify related GNWT strategic processes such as the Water Strategy. This research is key to ensuring that the Traditional Knowledge Policy and Implementation Framework continue to be effective tools for the GNWT and all Aboriginal partners, and will inform a path forward document outlining key phases of the review, action plan development and associated timelines.

The review of the framework must be a collaborative process that involves working closely with Aboriginal Governments and their existing traditional knowledge policies and protocols.

Questions from Water Partners:

Q: Does the GNWT intend to align the Traditional Knowledge Policy and Implementation with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) to ensure that the intellectual property of First Nations is protected?

A: We agree that intellectual property is important, and that the knowledge should rest with communities and knowledge holders. It is important to recognize that GNWT does not hold that knowledge but it does help in making informed decisions. ENR will discuss any relevant information with our partners during the review of the policy and framework and development of the Action Plan.

2.4. Mackenzie Valley Land and Water Board (MVLWB)

Heather Scott and Rebecca Chouinard (MVLWB) provided an overview of the MVLWB and its links to the Water Strategy.

There are four land and water boards in the Mackenzie Valley that are responsible for regulating the use of land and waters and the deposit of waste in the Mackenzie Valley: Sahtu Land and Water Board, Gwich'in Land and Water Board, Wek'èezhii Land and Water Board and the MVLWB. The MVLWB is responsible for issuing land use permits and water licences in the Mackenzie Valley in areas without settled land claims and for transboundary projects.

A water licence tells licence holders how much water they can use and from what source. Licence holders also are required to monitor water quality and quantity. The boards use this monitoring data to ensure the user is complying with the conditions of the water licence, and to ensure the water licence adequately protects the environment. Once the water licence is issued the licence holder must adhere to the conditions outlined in the licence, which may include: completing sampling; submitting management plans; submitting updates to plans; and completing annual reporting. Licensees also are expected to participate in meetings/workshops when applicable.

Water licences are important for many reasons, including: ensuring that regular water quality samples are taken, water is safe, treatment facilities are working, communities have confidence in their water supply and providing opportunities for communities to build capacity in water management activities.

The MVLWB is guided by four priority areas – corporate excellence, regulatory improvement, information and communication technologies, and outreach and engagement. In 2008 a series of working groups were established, each focused on specific regulatory improvements to increase clarity and consistency among the boards.

Water licensing falls under the regulatory improvement area of operation. Current initiatives under water licensing include drafting a Water Licensing Process Guide and a Standard Water Licence Condition List. The MVLWB also has sub-groups that work on various external initiatives where there are overlaps with the LWB mandate. These initiatives include: ENR Cumulative Impact Monitoring Program (CIMP); Water Strategy; community based monitoring; source water protection; air; climate change; and wildlife.

The Water Strategy directly aligns with the MVLWB mandate through action items related to the assessment of cumulative effects on water (Key to Success 2.1E) and municipal water licence compliance, guidelines and information sharing (Keys to Success 3.1A-C).

Questions from Water Partners:

Q: The premise of land claim agreements was that Indigenous governments would have a role to play in the regulatory process and their voices would be heard. There should be public meetings for this purpose. The communities don't have the capacity to read water licence applications, but they do have their concerns. What is the MVLWB doing to remedy the timeline to allow for public hearings for Class B water licenses? Currently there is no duty to consult for Class B licences, but these can have as much of an effect on indigenous rights as Class A licences. For example, we wrote letters to request community meetings regarding the recent spills at James Creek and at the ferry crossing, but were told that since it was a Class B, no consulting was needed.

A: We do have a board policy on consultation and engagement and we have been working on making the policy clearer on what it means for communities and how it influences the treatment of applications. Right now there is a level of requirement that needs to be met before the board will say the application is complete. The number one issue or reason for why applications are incomplete is due to the lack of engagement. In terms of getting out into the communities, that needs to be increased. Anytime there is a management application for even a Class B licence, we try to run a workshop to get feedback. These workshops bring people together to get informed and in doing so give them with the opportunity to provide their comments and guidance to the board. We are doing more of this and it's a good step to clarify talking to each other before comments are submitted to the board. The legislation identifies when public hearings are mandatory and when they are at the discretion of the board. If a hearing is not required, the board will determine whether or not a hearing is warranted based on the evidence submitted to it. The land and water boards also have a responsibility to conduct preliminary screenings to determine whether a project will be referred for an environmental assessment, based on the "might" test (i.e., if a project "might" be the cause of significant environmental impact or public concern). It's important that you continue submitting your comments to the boards so the board can consider these comments when making decisions. These needs are also acknowledged in the 2016-2020 Action Plan under Key to Success 3.1D (*improve the understanding of waste and wastewater systems in NWT communities and consider traditional knowledge in municipal licensing processes*) and Key to Success 3.2 A (*ensure clarity and facilitate understanding of water use, waste and wastewater regulatory processes*).

2.5. NWT Cumulative Impact Monitoring Program (NWT CIMP)

Julian Kanigan (ENR) provided an overview of the NWT CIMP program and highlighted relevant aquatic results from 2015/16. NWT CIMP is an environmental monitoring program focused on understanding cumulative impacts and environmental trends. The program uses both science and traditional knowledge to support informed decision-making.

NWT CIMP is working towards several action items under the Work Together component of the 2016-2020 Action Plan, primarily under Key to Success 1.2 A (*improve data collection and data management for water and water-related monitoring programs*) and Key to Success 1.2C (*ensure the effective use of traditional, local and western scientific knowledge in water stewardship initiatives, decision-making processes and implementation of water-related programs*):

- Standardized water quality sampling – NWT CIMP promotes standardized water quality sampling through the use of protocols available at <http://nwtcimp.ca>.
- Plain language formats and translation into Aboriginal languages – NWT CIMP is continuously working on this. Plain language results summaries are a requirement of all NWT CIMP projects. Short, plain language research bulletins and videos that explain the program are available in Aboriginal languages on the NWT CIMP website.
- Support researchers to present information to communities – NWT CIMP supports researchers to present their findings back to communities by providing funding for their travel. NWT CIMP also organizes annual regional results workshops and provides funding for community members to attend these meetings and promote information sharing and dialogue with researchers.
- Include traditional knowledge in projects or monitoring programs – In 2015/16 NWT CIMP supported ten projects with a traditional knowledge element. NWT CIMP is also partnered with

- the North Slave Métis Alliance and Royal Roads University to better understand how traditional knowledge can be best presented to boards so that it is used in decision-making.
- Capacity building, training and education – In 2015/16, 23 of the 29 projects were led or partnered with a regional Aboriginal, community or co-management organization. 60% of these projects resulted in new or enhanced capacity, largely through the promotion of training opportunities.

NWT CIMP is also working towards action items under the Know and Plan component, primarily under Key to Success 2.1 E (*improve the assessment of cumulative effects on water from climate change and industrial development*):

- Identify and prioritize monitoring gaps – NWT CIMP facilitates annual check-ins on water and fish monitoring priority blueprints to determine if there are significant changes year-to-year.
- Community-based monitoring collects data relevant to decision-making and addresses community concerns – NWT CIMP provides community-based water monitoring guidance and supports several key community-based monitoring projects.
- Assess cumulative effects of climate change and development – NWT CIMP has several ongoing long-term projects aimed at understanding cumulative effects. Examples include a project assessing the cumulative impacts of two diamond mines on water quality in Lac de Gras; a project investigating anthropogenic and environmental changes in the Tathlina watershed; and a monitoring project on changes in chum salmon harvesting related to climate warming.

Questions from Water Partners:

Q: Can you expand on the portal? How are the results shared? What is in the portal?

A: The NWT Discovery Portal has been around for a few years. The idea is that anyone can submit information to the portal, and it is moderated by ENR staff. To date, the majority of information in the portal (2,779 records) is produced by NWT CIMP; but there are also significant contributions from the Inventory of Landscape Change and the Canadian Cryospheric Information Network. We are working towards partnering with other organizations to add even more results to the portal. If you are interested in contributing information to the portal, please contact nwtcimp@gov.nt.ca.

Q: How much money did the diamond mines contribute to the project?

A: The diamond mines did not contribute any funds; however, they provided their collected data and participated in the working group.

2.6. Environment and Climate Change Canada (ECCC) Water Quality Monitoring Update

Anita Gue (ECCC) provided an overview of the Water Quality Monitoring and Surveillance Division (WQMSD) and the associated water quality monitoring activities that are ongoing in the NWT and northern Alberta.

The WQMSD division falls under the Science and Technology Branch of Environment and Climate Change Canada and has a mission to monitor water quality and aquatic ecosystem health of waters under federal jurisdiction or of national interest in order to:

- meet domestic and international commitments and legislative requirements;
- inform the development of regulations, enforcement, policies and programs; and
- deliver on government priorities.

Two primary water quality monitoring projects are underway in the North:

- The Long-term Water Quality Monitoring Network – The primary objectives of the network are to monitor baseline status and trends in northern rivers, assess ecosystem health, and assess the impacts of human activities and climate change on northern river systems. Monitoring sites are in areas of federal responsibility and are generally co-located with Water Survey hydrometric stations. There are currently 49 monitoring sites across the North: NWT (22), Yukon (12), Nunavut (14) and Alberta (1). Parameters measured include: physical parameters, major ions, nutrients, total and dissolved metals, polycyclic aromatic hydrocarbons (PAH), and organochloride pesticides. Data from the network are reported through the Water Quality Indicator (www.ec.gc.ca/indicateurs-indicators/) and provided through individual data requests (anita.gue@canada.ca).
- Canadian Aquatic Bio-monitoring Network (CABIN) – CABIN is a bio-monitoring program with a set of national, standardized protocols for the collection of freshwater benthic invertebrates (i.e., bugs that live in the riverbed). The standardized protocols allow for data sharing and comparisons to be made between sites to assess river health as well the creation of models to help assess aquatic effects at impacted sites. ECCC provides CABIN protocol training for practitioners, field staff and project managers and provides an online CABIN website and database where data can be stored and shared: www.ec.gc.ca/rcba-cabin.

ECCC is also undertaking water monitoring upstream of the NWT in the Peace-Athabasca Delta and surrounding area as part of the Joint Oil Sands Monitoring Program. The northern portion of the program has 11 sites and focuses on better understanding long-term trends in contaminant concentrations and fluxes, and in assessing the cumulative impacts of oil sands development on water quality and quantity.

Questions from Water Partners:

Q: Has CABIN been adapted for bigger rivers?

A: It is in the works, but has not been finalized yet.

Q: Is there any thought around open data sources?

A: Water quality indicators are a part of a national indicator program. A few sites have come and gone that have been connected to bigger projects. With regards to data access, we're looking into being more of an open data organization. This is a declared priority of ECCC in moving forward. We hear and understand that people want the data collected to be easily accessible and as of now we need to figure out what is pertinent information and how can we make it more accessible. In December 2016, ECCC published long-term water quality monitoring data online through the Government of Canada Open Government Portal, available at: <http://open.canada.ca/data/en/dataset/5133b19b-6a92-44b2-8b12-a49731b56421>.

Q: Is there a site at Peace Point and, if so, what data are being collecting?

A: Yes, there is a Peace Point site and all basic monitoring parameters are being collected along with additional parameters because it is one of our oil sands sites.

Q: If you had unlimited money, how many sites would you want to be monitored in order to see that the job gets done?

A: What we believe would be almost better is to hire more people to interpret all of the information and best uses of that information. Better special coverage would be great but we need the people to handle all the data.

2.7. Dechinta Centre for Research and Learning Update

Erin Freeland-Ballantyne (Dechinta Centre for Research and Learning) provided a brief overview of Dechinta and presented a short video highlighting parts of the 2016 program – *Dechinta Experience 2016* (www.youtube.com/watch?v=Zm3FFghX1-w).

Dechinta is a land-based post-secondary education program that is rooted in Indigenous values. All of Dechinta's programming is aimed at investing in people and the capacity they have to build a knowledge economy in the NWT. Dechinta defines itself as an evidence-based best practice approach for successful community-based training and education. Due to growing interest in the program and an increasing number of applicants, Dechinta has been pursuing options to increase capacity for more participants, including the potential development of regional programs. In 2017 Dechinta is launching a new program called Rivers of Reconciliation. The program will take 50 students from across the territories on eight-week river expeditions, doing courses on critical northern issues and convening talking circles about reconciliation in the next 150 years.

Glen Coulthard, an associate professor at the University of British Columbia (UBC) and member of Yellowknives Dene First Nation, provided a summary of his involvement with Dechinta. Since 2009, he has spent half of his time in the north teaching. Work is underway to determine options for how Dechinta students can be accredited with UBC credits when taking Dechinta courses. Glen also is working on a Social Science and Humanities Research Centre funded project aimed at better understanding how we can empower communities through water governance that is rooted in Indigenous traditions and sovereignty. This a seven-year, \$2.5M project that aims to create an Indigenous-led framework for monitoring that is respectful of Aboriginal legal rights and traditional values. More information about this project is available at www.decolonizingwater.ca.

3. Storytelling Series

Four community members from different regions – William Koe (Tetlit Gwich'in Renewable Resource Council), Earl Evans (Northwest Territory Métis Nation), Narcisse Chocolate (Tłı̨chǫ Government), and Leon Andrew (Sahtu Secretariat Incorporated) – participated in a one-hour storytelling panel. The presenters shared different stories and perspectives that spoke to the importance of water to them and their communities, in addition to observations of change overtime.

William Koe discussed development pressures on the Peel watershed and the associated need to protect it. People and animals have relied on the watershed for hundreds of years and it is important to continue to keep the river safe for future generations.

Narcisse Chocolate discussed his water monitoring work with the Tłı̨chǫ Government, particularly related to power dams. The water levels have been declining almost every year. It seems that the amount of precipitation (both snow and rain) have been declining and in return resulting in low water levels.

Leon Andrew talked about growing up in Tulita. The Mackenzie River has served people for a very long time and is a transportation method that is still used today. His grandfather used to travel from Fort Resolution to Tulita in a moose skin boat to get supplies. As a child he used to haul water from the river and drink it directly. It was good quality, but today it is different. In 1995 Elders began to notice changes in the river system. A fine layer of dust appeared on the water that people had never seen before.

Earl Evans spoke about his experiences growing up and spending time on the land in the Fort Smith area, and the associated changes he has observed over time. Prior to the dam, the Peace-Athabasca area would get flooded every 2-3 years. With the dam, the area no longer floods. He referenced the film *Death of a Delta* (<http://screenculture.org/cesif/film/death-delta>), which shows what the delta looked like prior to the dam. The delta is no longer able to support people, especially trappers, as it had in the past. There are also subtle changes on the river, such as buildup of sediment that blocks flow in certain areas. The ice formations and melting times have also changed dramatically. These changes make it difficult and dangerous for trappers to travel on the ice. When breakup happens, there are no longer large chunks of ice that used to dredge the bottom of the river and open up the channels that led to the islands used for hunting.

The panel concluded with a brief question and answer period.

4. Poster Fair and Photo Contest Display

4.1. Poster Fair

A 1.5 hour poster fair session was held during the afternoon of Day 1. Eight water partners presented posters related to a recent or ongoing Water Strategy initiative:

- Impacts of Melting Permafrost on Water Quality and Zooplankton Communities in the Inuvik Region - *Derek Gray, Wilfrid Laurier University*
- Impacts of Linear Development on Fish - *Cumulative Impact Monitoring Program (CIMP), ENR*
- NWT-wide Community-based Water Quality Monitoring Program - *Water Resources Division, ENR*
- Muskrat Pushup Abundance Along the Slave River - *Water Resources Division, ENR*



- Concentrations of Mercury and Other Heavy Metals in Furbearers from the Slave River - *Water Resources Division, ENR*
- Dissolved Organic Matter and Water Quality - *Pieter Aukes, Wilfrid Laurier University*
- Changing Cold Regions Network/Global Water Futures - *Stacey Dumanski, Changing Cold Regions Network*
- Water and River Ice Monitoring: Results from Space - *Joseph Chamberland, C-Core*
- Canadian Heritage Rivers System - *Lara Mountain, ENR*



PDF copies of the posters can be accessed online through the NWT Water Stewardship Website (www.nwtwaterstewardship.ca/publications).

4.2. Photo Display

The workshop featured a collection of water-themed photo submissions from NWT youth aged 25 and under. Youth were encouraged to submit photos and descriptions that captured what water means to them and their community. More than 50 water-themed photos were submitted from youth across the NWT.

During the workshop water partners were invited to browse the photos and vote to determine the contest winners. After a close vote, two final prize winners were selected. Congratulations to Deanna O'Reilly of Fort Resolution and Madison Melnyk of Norman Wells on their winning photos.

The collection of photos is being featured in a 2017-2018 Youth Water Stewardship Opportunities Calendar that will be distributed in July 2017 (http://www.enr.gov.nt.ca/sites/enr/files/resources/128-ywso_calendar_proof.pdf).



5. Water Strategy Implementation Updates – Day 2

5.1. Delta Dialogue Network

Three members of the Slave River Delta Partnership (SRDP) – Earl Evans, Tim Heron and Jennifer Fresque-Baxter – provided an overview of the SRDP and its role in the Delta Dialogue Network. The SRDP was formed in 2010 in response to concerns about the health of the delta. The goal of the partnership is to support and coordinate community-based research and monitoring programs along the Slave River and Delta that are grounded in both traditional knowledge and western science. Partners include communities, federal and territorial government agencies, Aboriginal governments, non-government organizations and academic institutions.

The SRDP also represents the Slave River Delta in the Delta Dialogue Network (DDN). The DDN is a partnership project that connects three Canadian deltas (Slave, Peace-Athabasca and Saskatchewan River) to share experiences of the changes people are experiencing, their concerns for the deltas and their hopes for the future. Overall themes of the network are around knowledge mobilization and how we can better share research and monitoring information, within and beyond the deltas. In 2015, Earl Evans, Tim Heron and Jennifer Fresque-Baxter took part in Delta Days in Saskatoon, which brought together all of the partners in the network. The project team presented a short video from the Delta Days gathering - www.youtube.com/watch?v=R0z6loAn9kY&feature=youtu.be.

5.2. Tracking Change Project Update

Tracking Change is a six-year project funded by the Social Science and Humanities Research Council (SSHRC), led by the University of Alberta, the Traditional Knowledge and Strengthening Partnerships Steering Committee of the Mackenzie River Basin Board, the Government of the Northwest Territories, Indigenous governments and resource boards from across the Mackenzie River Basin and many other valued partner organizations.

The project has a long-term goal of strengthening the voices of subsistence fishers and Indigenous communities in the governance of major fresh water ecosystems. The main focus is to promote community-driven research activities in the Mackenzie River basin where Indigenous people have been tracking changes in fish, fishing livelihoods and water.

There are several initiatives underway that are working in partnership with the Tracking Change project. Dahti Tsetso (Resource Management Coordinator, Dehcho First Nations) provided an update on related activities in the Dehcho region where they have been working to put together an environmental stewardship and monitoring program. This past year the project delivered an on-the-land youth oriented program, where youth were given the opportunity to be on the land with Elders. The program consisted of an 85 kilometer canoe trip from Fort Simpson to Willow River, where participants stayed at traditional camps along the river. Families that use the camps were invited to join and tell their stories of being on the land. The tracking change model was used to track and record this information. Information is still being gathered and discussions about how to improve are ongoing.

In the Sahtu, Leon Andrew spoke about a program was held on Great Bear Lake, where participants camped for a week. Many discussions were had on changing fish populations, fish health and impacts on livelihoods.

In early 2016, the Aboriginal Steering Committee (ASC) and the Mackenzie River Basin Board (MRBB) met to identify the objectives of Tracking Change. Twelve community projects were funded. Detailed information about the projects can be accessed through the Tracking Change website (www.trackingchange.com). A community research methods tool kit has also been developed and is on the website.

A three-day Youth Knowledge Fair was held in Edmonton from May 24-26, 2016. This event was a great opportunity to bring northern youth together. Thirty-five junior and high school students participated in the event. Each participant presented a poster on a traditional knowledge research topic important to

them. The youth were encouraged to talk to their communities and Elders about changes seen throughout their regions. Other activities that took place included:

- Opening ceremony at Telus World of Science
- Tour of University of Alberta
- Tipi raising
- Keynote presentations
- Fish dissection lab
- Art mural activity
- Tour of the Art Gallery of Alberta

Participants included NWT students from Yellowknife, Fort Simpson, Norman Wells, Fort Smith, Inuvik, and Tulita as well as students from Alberta, Saskatchewan and Yukon. Awards were given out to students for their poster work.

5.3. Update on Wilfrid Laurier University (WLU) Research in the NWT

Alex Latta (WLU) provided an update on five of WLU's water-related projects underway in the NWT. This research is being facilitated through two research centers – the Cold Regions Research Centre and the Laurier Institute for Water Science.

1. *Fish Reproductive Health in Tathlina Lake (2012-2016)* – led by WLU (Andrea Lister, Grant Harrison, Deborah MacLatchy) in partnership with NWT CIMP and Ka'a'gee Tu First Nation

This project is driven by community concerns about varying fish populations, climate change and oil and gas development near Ka'a'gee Tu First Nation. The project is aimed at addressing the need for baseline data and a methodology for long-term, community-based bio-monitoring. Sampling was carried out biannually between 2012 and 2016. Two primary recommendations emerged: 1) community-based monitoring is undertaken every two years for fish condition factors, liver size and gonad size; and 2) expand monitoring to other lakes.

2. *Hydrology and Industrial Development* – led by WLU (Brent Wolfe), in partnership with Slave River and Delta Partnership, Deninu School in Fort Resolution, Fort Resolution community support and University of Waterloo

This hydroecological research uses a variety of scientific techniques to gather information about the impacts of changing climatic conditions and industrial development on boreal freshwater lakes.

- Slave River Delta Core Analysis – This research involves lake sediment core analysis from the Slave River Delta to address community concerns about contaminants in the Slave River. The results suggest evidence of arsenic enrichment during the 1950s that may have originated from NWT mining operations. Findings show no evidence of pollution related to oil sands development.

- Cumulative Effects Monitoring, Marian Watershed – This research is linked to the Marian Watershed Stewardship Program and is aimed at addressing community concerns about the potential cumulative effects of the NICO mine, land disturbances and climate change. The research team is using paleolimnological approaches to reconstruct past hydroecological conditions and to establish baseline sediment metal concentrations.
- Hydroecological, Contaminant and Toxicity Research in the Peace-Athabasca Delta – This research involves the development and application of various research and monitoring methods to: 1) track relations among climate, river flow and lake hydrological conditions in the delta; and 2) link the spatial distribution of contaminants and their toxicity characteristics in the delta with hydrological pathways and limnological conditions.

3. *Dissolved Organic Matter and Water Quality* – partners include WLU (Michael English) and University of Waterloo (Sherry Schiff), with University of Waterloo grad students Pieter Aukes and Paul Dainard

This research is aimed at better understanding how environmental changes in the NWT, such as changes in precipitation, changes in active-layer soil depth and permafrost extent are impacting surface water quality. The project team is specifically looking at dissolved organic matter frozen in permafrost and the associated surface water quality implications when permafrost melts.

Preliminary results and conclusions indicate that dissolved organic matter quality and quantity varies significantly at small spatial scales. Early results also suggest that sunlight and microbial degradation can greatly alter dissolved organic matter quality, and that the source of dissolved organic matter can impact amount of chlorine required.

4. *The Hydrology of Landscape Disturbance* – led by WLU (William Quinton), in partnership with Jean-Marie River First Nation, Liidlii Kue First Nation and Dehcho First Nation

This research is aimed at better understanding the impacts of linear disturbances (i.e., seismic lines) on vegetation and hydrology overtime in the Scotty Creek region of the NWT. The project looks at the changing flow and storage of water along a seismic cut line that extends through permafrost and permafrost-free wetlands.

5. *Indigenous Involvement in the NWT Water Stewardship Strategy* – led by WLU (Alex Latta), in partnership with ENR and the Water Strategy Aboriginal Steering Committee (ASC)

Alex Latta concluded with an overview of a research project he is leading in partnership with ENR and the ASC - *Indigenous Involvement in the NWT Water Stewardship Strategy*. The project emerged out of the Pan-American Indigenous Rights and Governance Network and is part of a broader research initiative funded by the Social Sciences and Humanities Research Council (SSHRC). The initiative is broadly aimed at understanding different intercultural frameworks for negotiating free prior and informed consent and is comprised of four case studies.

The project is nearing the end of phase one, which involved a document review and engagement with the ASC to better understand their role with the Water Strategy and the engagement and consultation processes for the transboundary negotiations. Phase two of the project will be completed during 2017-2018 and will focus on selected experiences of individual Aboriginal governments with water governance, the Water Strategy and transboundary negotiations.

5.4. Changing Cold Regions Network & Introduction to Global Water Futures

Stacey Dumanski (University of Saskatchewan) provided an overview of the Changing Cold Regions Network (CCRN) and its link to the recently launched Global Water Futures project.

CCRN is a collaborative research network that was established in 2013 with five-year funding from the National Science and Engineering Research Council. The overarching aims of CCRN are to understand, diagnose and predict interactions between the cryospheric, ecological, hydrological, and climatic components of the changing Earth system, with a focus on Western Canada's rapidly changing cold climate. The network consists of a large, multi-disciplinary team of researchers from national (i.e., Canadian universities, federal government partners and provincial and territorial government agencies) and international institutions and research programs.

The CCRN research program and its objectives are centered on five key themes:

- Observed Earth System Change in Cold Regions – Inventory and Statistical Evaluation;
- Improved Understanding and Diagnosis of Local-Scale Change;
- Upscaling for Improved Atmospheric Modeling and River Basin-Scale Prediction;
- Analysis and Prediction of Regional and Large-Scale Variability and Change; and
- User Community Outreach and Engagement

The program operates 14 research sites, five of which are located within the NWT: Scotty Creek, Havikpak Creek, Trail Valley Creek, Baker Creek and Brintnell-Bologna Icefield. The sites all contain long-term observational records and legacy datasets, including hydro-meteorological variables, remote sensing observations, LiDAR topography, and soils, geology, and vegetation characterization. Information on the data available and the content archived within the CCRN's database can be accessed through the following online map: <http://giws.usask.ca/meta>.

Observed changes in the interior of Western Canada include:

- ~2 °C annual temperature increase from 1950-2015;
- Up to 6.5 °C winter temperature increase from 1950-2015 (temperature increases highest in Northern Canada);
- 2 month decline in snow cover days in the some areas of the Rocky Mountain region (1972-2013);
- Earlier river ice break-up overtime; and,

- Increased frequencies of extreme events, such as floods and extreme fire years.

Global Water Futures is a University of Saskatchewan-led research program that is funded in part by a seven-year \$77.8-million grant from the Canada First Excellence Research Fund. The aim is to transform the way communities, governments and industries in Canada and other cold regions prepare for and manage increasing water-related threats (e.g., declining source water quality, floods and droughts, legacy mine waste, algal blooms). The program is the largest university-led water research program to be funded worldwide and is partnered with University of Waterloo, Wilfrid Laurier University and McMaster University. More information can be accessed through the Global Water Futures website (<http://globalwaterfutures.ca>).

6. Confirming our Priorities: Break-out Sessions

After a short break, workshop participants separated into three break-out groups with themes based on key components of the Water Strategy – Work Together, Know and Plan and Use Responsibly. The break-out groups were broadly structured to provide water partners with an opportunity to discuss the Water Strategy priorities identified throughout the workshop for each Key to Success. A facilitator helped to guide the discussions for each group, which mainly focused on considering ways in which water partners can work together to foster collaboration and achieve these priorities. Water partners cycled through two of the three break-out groups during the 1.5 hour session.

The results from the break-out groups are organized thematically below. It is important to note that there were significant overlaps between the groups. Water partners also acknowledged that, while there is value in having focused discussions based on the Keys to Success separately, there is also a need to link water partners that naturally gravitate to each of the three components for greater overarching success in implementing the Water Strategy.



Work Together

Communication and Engagement: The workshop is a good venue for water partners to discuss Water Strategy priorities and ways to work together towards common goals; Facebook and other social media tools are an effective way to communicate information to communities; it is very useful to have a primer explaining the roles of everyone associated with the Water Strategy; there needs to be a clear reporting mechanism for lead and supporting water partners to report back on their progress.

Information Management: Desire to have one place for information that is accessible in one place, including the information collected by land and water boards and through CIMP projects; there is a fair amount of information available, but the data and reporting methods need to be standardized.

Transboundary Water Management Agreements: The benefits and scope of transboundary water management agreements need to be communicated to communities more frequently and clearly.

Community-Driven Research: It should be a priority to routinely revisit communities' priorities and questions to ensure research is driven by their questions and concerns. Research outcomes also need to have a clear pathway to decision-makers.

Know and Plan

Traditional Knowledge: It is positive that traditional knowledge is being integrated into water monitoring; however, it needs to be further recognized as a foundational component of monitoring.

Collaborative Approach to Community-Based Monitoring: There is a need for more resources for training and full time-employment rather than seasonal employment; training and capacity building should also extend to include analyzing and interpreting monitoring results; need to ensure that monitoring is informed by community priorities; communities need to receive research findings in a format that is comprehensible (reporting back should be built in to project budgets and work plans); need for greater collaboration and coordination among agencies doing water monitoring in the NWT, and a coordinated message to regulators.

Use Responsibly

Municipal Compliance: Water partners confirmed that municipal water license compliance remains a key Water Strategy priority. Broadly, water partners discussed the need for more support and resources in communities to increase compliance, such as different tools and progressive approaches, support with information management and data analysis, clearer communication around the importance of water licence compliance and how water licensing can help to address common community concerns about waste and wastewater. Water partners also discussed opportunities to link Surveillance Network Program water monitoring, which is part of municipal water licence compliance, to existing water quality monitoring programs in the NWT as a way to increase capacity building among existing monitors.

Regulatory Process: There is a need for new guidelines and baseline water quality monitoring requirements; need to improve understanding of existing regulatory and environmental assessment processes; need for more clarity on impacts of development on wetlands and the design of industry practices to minimize these through environmental assessments.

7. The Indigenous Leadership Initiative – National Indigenous Guardians Network

Stephen Kakfwi, a senior advisor to the Indigenous Leadership Initiative, provided an overview of the Initiative and their work to develop a National Indigenous Guardians Network.

Indigenous communities across Canada are calling for the recognition and expansion of Indigenous-led conservation and land management. The Indigenous Leadership Initiative was launched in 2013 to support and advance these initiatives and strengthen Indigenous nationhood for the fulfillment of Indigenous cultural responsibilities to the land.

In October 2016 the Indigenous Leadership Initiative asked the Federal Government for \$500 million over five years in a partnership to setup a national network of Indigenous Guardian programs. The funding will be used to employ Guardians as the “eyes on the ground” in Indigenous communities. They monitor the ecological health, maintain cultural sites and protect sensitive areas and species.

Similar initiatives are underway in Australia that have well-documented success. Since 2007 the Australian government has invested hundreds of millions of dollars in Indigenous ranger programs to provide employment and training opportunities for Indigenous people to undertake natural and resource management work that aligns with local community environmental and cultural priorities. The Australian program, called *Working on Country*, has been successful as part of a government reconciliation initiative. Over 680 Indigenous people have been employed through the program. Research on the program suggests that for every \$1 invested, ranger programs generate \$3 in conservation, health and economic results.

Larry Innes, currently a Strategic Advisor to the Indigenous Leadership Initiative, was the director of Lands and Resources from 1992 to 2002 for the Innu Nation where he played a lead role in the development of the Innu Guardians Programs in Labrador. The Innu were facing similar challenges that many northern communities are facing today, including climactic changes and fast-paced development pressures. The Innu response was to have Innu people on the ground telling Innu what is happening. This marked the beginning of the guardians programming where Innu were trained to monitor and collect environmental information to relay to community members and decision-makers.

There are two emerging guardians programs in the NWT – Ni Hat’ni Dene (Watching the Land) launched by the community of Lutsel K’e, and Dehcho K’ehodi (Taking Care of the Dehcho) launched by Dehcho First Nations. A group of Australian researchers were invited to the NWT to analyze these programs and their social return. The Report is titled *Analysis of the Current and Future Value of Indigenous Guardian Work in Canada’s Northwest Territories* (www.ilinationhood.ca/wp-content/uploads/2016/11/value-in-indigenous-guardian-work-nwt.pdf). The findings suggest that for every \$1 invested, the NWT sees a \$2.5 social, economic and environmental return. With support from a national network, the researchers estimate this to increase to \$3.7 for every \$1 investment.

Mike Low, a Technical Advisor for the Dehcho Aboriginal Aquatic Resource and Ocean Management program (AAROM), and Dahti Tsetso, the Resource Management Coordinator for Dehcho First Nations, each spoke to their respective involvement in these emerging programs. Mike discussed his role in the

Dehcho K'ehodi program, which is primarily focused on technical support for monitoring. He also spoke about the potential for the AAROM program to extend its support for monitoring with support from a national guardians network.

Dahti leads the Dehcho K'ehodi program and explained how Dehcho First Nations is working in collaboration with their member communities to develop a regional stewardship program. There is a growing need to ensure that Dene laws and values are recognized and used while on the land and doing monitoring. Involving youth and Elders and presenting information in Indigenous languages are important to the success of these programs. The people need to see themselves and their culture within these programs. The National Indigenous Guardians Network would provide the necessary resource and capacity to support Dehcho stewardship programs. It is so important to recognize that a guardian program is not only about monitoring, it is about cultural revitalization, including revitalizing languages, rebuilding spiritual connections to the land, and reconciling history.

The Indigenous Leadership Initiative recognizes that \$500 million is a large amount of money; however, it is what is needed to do it right. The money will go to Indigenous environmental stewardship programs that are already established and will ultimately create a national network of 200 or more programs¹.

Questions from Water Partners:

Comment from Peter Redvers, Kátł'odeeche First Nation: Kátł'odeeche First Nation is experiencing the same challenges and is in the process of developing a stewardship program. We have put together an internal proposal seeking funding to move forward and are planning a workshop to put together a draft monitoring program that will operate on a seasonal basis. During the winter season the program will monitor moose and caribou while monitoring in summer season will focus on fish. The program will be managed by full-time staff and will also involve a number of Elder harvesters. Traditional knowledge will be a key part of this program. We see the proposed National Indigenous Guardians Network as being very positive for the North. Having national funding will help critical programs get off the ground.

Stephen Kakfwi: Agreed that these initiatives come at a critical time. We know the extent of negative impacts our people have experienced. We see the National Indigenous Guardians Network as one way to regroup. The spiritual component will play a big role in the programs. It needs to be invigorating, respectful and Indigenous.

Question directed at Larry Innes: Through the Innu program, how was resource management enforced?

Larry Innes: The first core funding we received came from Fisheries and Oceans Canada following the Sparrow Supreme Court case. The Innu used the funding for training and capacity building to become conservation officers in 1992. 25 years later, the Innu Government is now in a position with the ability to have officers and resources for enforcement. It is all about building trust and sharing resources. When the forestry industry started to expand, the Innu responded

¹ NOTE: In March 2017 the federal government announced an initial investment of \$25 million over five years in the 2017-2018 federal budget.

with a blockade. Ultimately the Innu and provincial government came to an agreement to develop a forest management plan together. The plan allowed the Innu to identify sacred areas and other important areas based on traditional knowledge, which informed the legally binding document outlining what can and cannot be touched.

Question to the panel: How does the Australian program work?

A: The Australian program recognizes that sending workers from the cities to remote regions to complete monitoring is inefficient. For that reason, they see training those people who already live in these regions to do the monitoring as a more effective use of resources and funds. The Indigenous people in these remote regions are equipped with the knowledge and skills to complete this monitoring resourcefully and in turn make this program better.

Question to the panel: Can you explain the dollar return findings once more?

A: Researchers found that for every \$1 spent on the program they saw a \$3 return in social value. What this means is that the Australian Government saves money because of the program. The program actually addresses many social challenges present within the Aboriginal population such as substance abuse, poverty, social distractions, etc.

As these guardian programs grow, it is important that we continue to talk to the people to see how their lifestyles are being affected. The government sees the return and evaluations as positive projections but we want to be sure we see them ourselves.

8. Workshop Wrap-up

Robert Jenkins, Director of the Water Resources Division at GNWT-ENR, thanked everyone for their input.

Chief Sangris provided closing remarks for the workshop.

The Yellowknives Dene Drummers concluded with a closing prayer song.

Appendix A: Workshop Participants

Aboriginal Governments and Community Members	
Leon Andrew	Sahtu Secretariat Inc.
Priscilla Canadien	Deh Gah Gotie First Nation
Tim Heron	Northwest Territory Métis Nation
Dean Holman	Liidii Kue First Nation
David Krutko	Gwich'in Tribal Council
Alex Power	Yellowknives Dene First Nation
Peter Redvers	Kátł'odeeche First Nation
Henry Tambour	Kátł'odeeche First Nation
Dahti Tsetso	Dehcho First Nations
Sjoerd van der Wielen	Tł'chǫ Government
Shin Shiga	North Slave Métis Alliance
Peter Bertrand	Acho Dene Koe First Nation
Steve Kotchea	Acho Dene Koe First Nation
Narcisse Chocolate	Tł'chǫ Water Monitor
Earl Evans	Northwest Territory Métis Nation and Water Monitor
Denise Golden	Mikisew Cree First Nation
William Koe	Tetlit Gwich'in Renewable Resources Council
Lawrence Mantla	Yellowknives Dene First Nation
James Sangris	Yellowknives Dene First Nation
Regulatory and Renewable Resources Boards	
Bijaya Adikari	Inuvialuit Water Board
Erin Freeland-Ballantyne	Dechinta Centre for Research and Learning
Rebecca Chouinard	Mackenzie Valley Land and Water Board
Erica Janes	Mackenzie Valley Land and Water Board
Heather Scott	Mackenzie Valley Land and Water Board
Boyan Tracz	Wek'èezhii Renewable Resource Board
Ruari Carthew	Mackenzie Valley Environmental Impact Review Board
Mark Cliffe-Phillips	Mackenzie Valley Environmental Impact Review Board
Catherine Fairbairn	Mackenzie Valley Environmental Impact Review Board
Robyn Paddison	Mackenzie Valley Environmental Impact Review Board
Industry, Environmental Non-Government Organizations and Others	
Kelsey Wrightson	University of British Columbia
Matthew Miller	Northwest Territories Power Corporation
Joseph Chamberland	C-Core
Glen Coulthard	University of British Columbia/Yellowknives Dene First Nation
Carolyn DuBois	Walter and Duncan Gordon Foundation
Stacey Dumanski	Changing Gold Regions Network/Global Water Futures
Becky Kostka	Slave River Coalition

Derek Gray	Wilfrid Laurier University
Alex Latta	Wilfrid Laurier University
Mike Low	Dehcho Aboriginal Aquatic Resources and Oceans Management
Cristina Soto	Ducks Unlimited Canada
Andrea Darnett	Ducks Unlimited Canada
Karen Bakker	University of British Columbia
Caleb Behn	Keepers of the Water
Liz Hendriks	World Wildlife Fund
Gerald Inglangasuk	Fisheries Joint Management Committee
Sarah Rosolen	Aurora Research Institute
Government of Canada	
Mark D'Aguiar	Fisheries and Oceans Canada
Angie McLellan	Fisheries and Oceans Canada
Anita Gue	Environment and Climate Change Canada
Vicky Johnson	Environment and Climate Change Canada
Government of the Northwest Territories	
Erin Kelly	Directorate- ENR
Jeanne Arsenault	Water Resources Division - ENR
Meghan Beveridge	Water Resources Division - ENR
Blair Carter	Water Resources Division - ENR
Michele Culhane	Water Resources Division - ENR
Andrea Czarnecki	Water Resources Division - ENR
Nicole Dion	Water Resources Division - ENR
Scott Dowler	Water Resources Division - ENR
Derek Faria	Water Resources Division - ENR
Jennifer Fresque-Baxter	Water Resources Division - ENR
Stefan Goodman	Water Resources Division - ENR
Ryan Gregory	Water Resources Division - ENR
Madison Hurst	Water Resources Division - ENR
Bryana Matthews	Water Resources Division - ENR
Theri Petak-Dube	Water Resources Division - ENR
Nathan Richea	Water Resources Division - ENR
Gila Somers	Water Resources Division - ENR
Bruce Stuart	Water Resources Division - ENR
Katherine Trembath	Water Resources Division - ENR
Lindsay Vician	Water Resources Division - ENR
Gerald Enns	Environmental Protection - ENR
Kelly Fischer	Environmental Protection - ENR
Julian Kanigan	Cumulative Impact and Monitoring Program - ENR
Joanne Speakman	Cumulative Impact and Monitoring Program - ENR
Greg Hamann	Municipal and Community Affairs
Justin Hazenburg	Municipal and Community Affairs
Lara Mountain	Conservation, Assessment and Monitoring - ENR
Laura Seddon	Population Health – Health and Social Services
Sarah True	Field Support Unit/Water Resources Division - ENR
Steve Schwarz	Informatics Shared Services – ITI/Lands/ENR



Appendix B: Workshop Agenda

NWT Water Stewardship Strategy Implementation Workshop November 8-9, 2016

Chief Drygeese Centre, Dettah

NWT water partners ² are invited to a two-day NWT Water Stewardship Strategy (Water Strategy) Implementation Workshop at the Chief Drygeese Centre, in Dettah, NT (Chief Drygeese Territory). This annual workshop brings water partners together to share information and knowledge, learn from one another, and discuss how we can collaborate, prioritize and work together to protect the water in the NWT.

Workshop Objectives

- **Review implementation of the Water Strategy:**

Provide brief updates on water strategy initiatives, water-related research and monitoring, and commitments and progress with transboundary agreements.

- **Review and discuss implementation and research priorities:**

Water partners' participation in reviewing, discussing and affirming implementation priorities for the next year is crucial to help set direction for implementing the Water Strategy in 2017 and beyond. Water partners are encouraged to come prepared with ideas about their specific priorities and how they fit with the Keys to Success in the 2016-2020 Action Plan.

If you have any questions, please contact Blair Carter:

Phone: 867-767-9234 ext. 53142 | Email: Blair_Carter@gov.nt.ca

² Water partners are anyone with a role in water stewardship. This includes governments, Aboriginal organizations, communities, regulatory boards, non-government organizations, industry and academia.



Agenda

Tuesday November 8th

8:30 am	Bus leaves from Days Inn (Yellowknife)
9:00 am	Arrival and Opening Ceremony (Chief Edward Sangris & Yellowknives Dene Drummers)
9:25 am	Welcoming Remarks (Erin Kelly, Acting Deputy Minister, ENR) and Agenda Overview (Michele Culhane, ENR)
9:40 am	Aboriginal Steering Committee (ASC) Update
10:10 am	<i>Confirming Our Priorities</i> Blair Carter, Environment and Natural Resources
10:30 am	Water Strategy Implementation Updates <ul style="list-style-type: none">• <i>Transboundary Status Update on Negotiation and Implementation of Bilateral Water Management Agreements</i> Robert Jenkins, Environment and Natural Resources• <i>Wetland Stewardship in the NWT: A Trail Map</i> Cristina Soto, Ducks Unlimited Canada• <i>GNWT Traditional Knowledge Policy Update</i> Jennifer Fresque-Baxter & Sarah True, Environment and Natural Resources• <i>Water Stewardship: An Update from the MVLWB</i> Heather Scott, Mackenzie Valley Land and Water Board
12:00 pm	Lunch (Provided)

1:00 pm	Storytelling Series
2:00 pm	Water Strategy Implementation Updates
	<ul style="list-style-type: none">• NWT Cumulative Impact Monitoring Program Julian Kanigan, Environment and Natural Resources• Dechinta Centre for Research and Learning Erin Freeland-Ballantyne• Water Quality Monitoring Update Anita Gue, Environment and Climate Change Canada
3:00 pm	Water Stewardship Poster Fair & Photo Display
<u>Poster Fair</u>	<u>Photo Display</u> <p>Learn about additional Water Strategy initiatives that are underway in the NWT, including topics such as:</p> <ul style="list-style-type: none">• <i>Mackenzie DataStream</i>• <i>NWT-wide Community-based Water Monitoring</i>• <i>Impacts of Melting Permafrost on Water Quality and Zooplankton Communities in the Inuvik Region</i>• <i>Impacts of Linear Development on Fish</i>• <i>Muskrat Pushup Abundance Along the Slave River</i>• <i>Concentrations of Mercury and Other Heavy Metals in Furbearers from the Slave River</i>• <i>Dissolved Organic Matter and Water Quality</i>• <i>Changing Cold Regions Network/Global Water Futures</i>• <i>Water and River Ice Monitoring: Results from Space</i>• <i>Canadian Heritage Rivers System</i> <p>Take a bingo card and fill out the correct answers for a chance to win a set of canoe paddles!</p>

Wednesday November 9th

8:30 am **Bus leaves from Days Inn (Yellowknife)**

9:00 am **Day Two Agenda Overview**

9:15 am **Delta Dialogue Video**

9:30 am **Water Strategy Implementation Updates**

- ***Tracking Change Project Update***
Members of the Tracking Change Team

- ***Update on Wilfrid Laurier University Research in the NWT***
Alex Latta, Wilfrid Laurier University

- ***Changing Cold Regions Network & Introduction to Global Water Futures***
Stacey Dumanski, Changing Cold Regions Network

10:30 am **Confirming Our Priorities**

- ***Break-out Groups: Work Together; Know and Plan; Use Responsibly***

12:00 pm **Lunch (Provided)**

1:00 pm **Priority Setting Summary and Discussion: Putting the Pieces Together**

2:15 pm **National Indigenous Guardians Network Update**

3:00 pm **Prize Announcements: Photo Contest & Poster Fair**

3:30 pm **Closing Remarks (Robert Jenkins, ENR) and Closing Ceremony
(Yellowknives Dene Drummers)**

4:10 pm **Bus leaves at the Chief Drygeese Centre**