Government of Northwest Territories
Gouvernement des Territoires du Nord-Ouest

2017/2018 NWT Water Stewardship Strategy Progress Review Comprehensive Raw Data Spreadsheet

Environment and Natural Resources (ENR) released the NWT Water Stewardship Strategy Action Plan 2016-2020 (Action Plan) in 2016. The second progress review of the Action Plan for the implementation period 2017-2018 was undertaken in 2018, assessing 54 Performance Indicators and 119 Action Items. This spreadsheet contains data for each Performance Indicator and Action Item that were assessed during the 2017/2018 review.

Data are organized into four sections that represent the four components of water stewardship in the NWT: Work Together; Know and Plan; Use Responsibly; and Check Our Progress. Sections of the 2016-2020 Action Plan (e.g., 1.1 - Partnerships) are listed in the first column under each component. The second column lists the Keys to Success identified in the 2016-2020 Action Plan (e.g., 1.1 B - Ensure water partners understand their roles and responsibilities for implementing the Water Strategy). The remaining columns provide Performance Indicator and Action Item data from the progress review for each Key to Success.

The Performance Indicator information is limited to a short summary of the Performance Indicator result determined from the progress review (e.g., 33 out of 45 water partner respondents indicated they are aware of their role implementing the Water Strategy). The Action Item information includes the Action Item as identified in the 2016-2020 Action Plan, the lead water partners responsible for the Action Item, the completion status of the Action Item (i.e., not started, in progress, complete, or complete for reporting period and ongoing), and a brief description of the work done towards completing the Action Item. The Action Item status and description are based on information provided by the lead water partners during the progress review.

The 2017/2018 NWT Water Stewardship Strategy Progress Review Summary is available on the ENR website.

List of Acronyms

AEMP	Aquatic Effects Monitoring Program
ARI	Aurora Research Institute
ASC	Aboriginal Steering Committee
BMC	Bilateral Water Management Committee
BWMA	Bilateral Water Management Agreements
CABIN	Canadian Aquatic Biomonitoring Network
CBM	NWT-wide Community-based Water Quality Monitoring Program
Dechinta	Dechinta Centre for Research and Learning
Dehcho AAROM	Dehcho Aboriginal Aquatic Resource and Oceans Management Program
ECCC	Environment and Climate Change Canada
ENR	Environment and Natural Resources, GNWT
FOD	Field Operations Directive
GNWT	Government of the Northwest Territories
HSS	Health and Social Services, GNWT
Lands	Lands, GNWT
LWB/IWB	Land and Water Boards (Gwich'in Land and Water Board, Mackenzie Land and Water Board, Sahtù Land and Water Board, and Wek'èezhìı Land and Water Board, Inuvialuit Land and Water Board)
MACA	Municipal and Community Affairs, GNWT
MRBB	Mackenzie River Basin Board
MVEIRB	Mackenzie Valley Environmental Impact Review Board
MVLWB	Mackenzie Valley Land and Water Board
MVRMA	Mackenzie Valley Resource Management Act
NWT	Northwest Territories
NWT CIMP	NWT Cumulative Impact Monitoring Program
QA/QC	Quality Assurance/Quality Control
SNP	Surveillance Network Program
SRDP	Slave River and Delta Partnership
SRRB	Sahtú Renewable Resource Board
WLWB	Wek'èezhìı Land and Water Board
WLU	Wilfird Laurier University
WRO	Water Resource Officer

Work Together

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.1 - Partnerships	1.1 A - Ensure the Water Strategy is integrated with watershed and natural resource planning and management frameworks in the NWT (e.g. land-use planning framework, recreational land management framework, energy priorities framework, conservation planning and climate change strategy).	4 NWT watershed and natural resource planning and management frameworks reference the Water Strategy.	1.1.A.1. Establish partnerships with organizations to ensure the Water Strategy vision and goals are considered in watershed and natural resource planning and management frameworks.	ENR (Environment and Natural Resources)	Complete for reporting period, and ongoing	The partnership-based approach laid out in the Water Strategy facilitates the strengthening of existing partnerships and forging new partnerships. The Water Strategy vision and goals are considered in four watershed and natural resource planning and management frameworks, including: *Northern Lands Northern Leadership: The GNWT Land Use Sustainability Framework;* Sahtu Land Use Plan Background Report; NWT Power Corporation Strategic Plan; and the *2030 NWT Climate Change Strategic Framework* . Several water partner organizations refer to and acknowledge the Water Strategy vision and goals in their work, including: Ecology North; Ducks Unlimited Canada (DUC); Wilfrid Laurier University's (WLU) Cold Regions Research Centre and Institute for Water Science; and Land and Water Boards (LWBs/IWB).
	1.1 B - Ensure water partners understand their roles and responsibilities for implementing the Water Strategy.	33 (out of 45) water partner respondents indicated they are aware of their role implementing the Water Strategy.* 27 (out of 46) water partner respondents indicated they are actively engaged in specific Keys to Success.* **2 measures informing 1 Performance Indicator*	1.1.B.1. Create and routinely update a plain language document outlining water partners' roles and responsibilities for the Water Strategy and Action Plan.	ENR	In progress	A stand-alone plain language document summarizing lead and supporting water partners' roles and responsibilities specific to the 2016-2020 Action Plan was reviewed by water partners in 2017/18. The document is under final review and is anticipated to be released in fall 2018.
			1.1.B.2. Identify challenges for lead and supporting water partners for each Key to Success through routine dialogue and formal or informal reviews.	ENR	In progress	The 8th Annual Water Strategy Implementation Workshop in November 2017 brought both lead and supporting water partners together to share information and knowledge, discuss opportunities to collaborate, review outcomes of the 2016/17 progress review and discuss proposed Water Strategy research priorities. The 2017/18 progress review process also provided opportunities for water partners to outline implementation challenges.
			1.1 B.3. Identify opportunities for water partners to support Water Strategy initiatives by developing and implementing initiatives through collaborative partnerships and available funding opportunities.	ENR	Complete for reporting period, and ongoing	The Water Strategy and Action Plans were developed by water partners to create a collaborative, partnership-based approach to enhance and promote water stewardship in the NWT at all levels. Active water stewardship partnerships in 2017/18 included partnerships within ENR and between Government of the Northwest Territories (GNWT) departments; the NWT-wide Community-based Water Quality Monitoring Program (CBM); the Mackenzie River Basin Board (MRBB); the Slave River and Delta Partnership (SRDP); the Tracking Change research project; the GNWT-WLU Partnership; the Interdepartmental Drinking Water and Waste Management Committee; and various academic partnerships including Brock University, Carleton University, the University of Saskatchewan, the University of Waterloo, the Univeristy of New Brunswick and the University of Alberta.

	Key to Success	2017/18 Performance Indicator Result	**Action Item** (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.2 - Information Management	1.2 A - Improve data collection and data and information management for water and water-related monitoring programs.	10 water monitoring and research projects are managed in Lodestar. 16 (out of 36) water partner respondents indicated that some or all of the water quality monitoring activities coordinated or supported by their organization have standardized protocols.	1.2.A 1. Establish standardized water quality sampling protocols (e.g. sample and data collection protocols) to ensure data are comparable across programs (e.g. Surveillance Network Program (SNP) and CBM Program, and Aquatic Effects Monitoring Programs (AEMPs)).	ENR, LWB/IWB	In progress	Water partners reported using various standardized water quality sampling protocols to ensure data are comparable within programs; however, few standardized protocols are used across programs.The NWT Cumulative Impact Monitoring Program (NWT CIMP) promotes the use of standardized data collection protocols for all NWT CIMP funded projects, enabling data comparisons between areas. In 2017/18, nine NWT CIMP projects reported using standardized protocols in the collection of water quality data. All 21 communities participating in the CBM Program also follow standardized water quality sampling protocols, enabling data comparison between communities and over time. Environment and Climate Change Canada (ECCC) uses the Canadian Aquatic Biomonitoring Network (CABIN) protocol to ensure that water quality and benthic invertebrate samples are standardized. A benthic invertebrate sampling pilot program began on the Hay and Slave Rivers in 2017 using a modified CABIN approach. ECCC also follows internal protocols for data management and Quality Assurance/Quality Control (QA/QC) procedures.
			1.2.A.3. Develop and implement guidelines on metadata to determine if water quality data sets are comparable and regional assessments can take place.	ENR, LWB/IWB	Complete for reporting period, and ongoing	NWT CIMP finalized metadata guidelines in 2017 after review by key stakeholders. NWT CIMP recommends metadata accompany data when it is provided through various means, including environmental assessments and regulatory processes. The guidelines are available on the ENR website (enr.gov.nt.ca).
			1.2.A.4. Develop guidelines to establish water quality baseline to help ensure that similar data are collected, and collected in ways that are comparable across programs.	ENR, LWB/IWB	In progress	Water quality baseline guidelines were developed and circulated for review in 2017/18. The process is being directed by a steering committee with representatives from the Mackenzie Valley Environmental Impact Review Board (MVEIRB), LWB/IWBs and ENR. The guidelines are intended to fill a gap in the system and support the review and update of the Aquatic Effects Monitoring Program (AEMP) guidelines and are anticipated to be finalized in 2018.
			1.2.A.6. Coordinate snow surveys, including collection, data management, archiving and dissemination.	ENR	Complete for reporting period, and ongoing	ENR maintains a small network of snow survey stations. The data are disseminated to water partners and others via Spring Outlook Reports and are available on the ENR website (enr.gov.nt.ca). The *2018 Spring Outlook Report* was distributed broadly and provided data for 60 sites sampled in 2018.
	1.2 B - Improve the sharing of monitoring and research data and findings among water partners and with the public.	The ENR website houses data for 60 snow data sites surveyed in 2018. The NWT Discovery Portal had 1,735 total users in 2017/18, averaging 145 users per month. Mackenzie DataStream had 4,302 total users in 2017/18, averaging 358 users per month.	1.2.B.1. Water partners continue to use and populate the NWT Discovery Portal with monitoring and research findings.	ENR	Complete for reporting period, and ongoing	The NWT Discovery Portal (nwtdiscoveryportal.enr.gov.nt.ca) averaged 145 users per month in 2017/18, approximately 34% of which were NWT users. The Portal averaged 1,106 page views per month in 2017/18, including repeated views of single pages.
			1.2.B.2. Data collected through the NWT-wide Community-based Water Quality Monitoring program are shared publicly (e.g. through Mackenzie DataStream).	ENR	In progress	Data from the NWT-wide Community-based Water Quality Monitoring program are shared through Mackenzie DataStream (mackenziedatastream.ca).

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.2 - Information Management (continued)	1.2 B (continued) - Improve the sharing of monitoring and research data and findings among water partners and with the public.	64 % of water partners (29 respondents) indicated that they have access to up-to-date water-related research at their work.	1.2.B.3. Long-term monitoring results that are compiled in existing databases are made available to water partners on request.	ENR	In progress	Long-term water quality monitoring data in existing databases are available to water partners on request. Data from Lodestar are most frequently requested by other government agencies, academic researchers and industry. Requests for water quality data are being tracked and linkages to Mackenzie DataStream are being enhanced to have more data available online. Snow data and climate station data require additional work to ensure data are appropriately archived and disseminated.
			1.2.B.4. Update the NWT water monitoring inventory on a regular basis and include a research section in the inventory.	ENR	Not started	The NWT Water Monitoring Inventory was originally released in 2013 and is anticipated to be updated in 2018.
	1.2 C - Ensure the effective use of traditional, local and western scientific knowledge in water stewardship initiatives, decision-making processes and implementation of water-related programs.	73% of water partners (19 respondents) indicated they use western science often to inform decision-making within their organization.* 49% of water partners (22 respondents) indicated they use traditional and local knowledge often to inform decision-making within their organization.* * 2 measures informing 1 Performance Indicator 3 out of 4 components of the Action Plan have an underlying approach to using traditional, local, and western scientific knowledge.	1.2.C.1. With collaborative input from traditional, local and western scientific knowledge holders, continue working together to develop effective approaches towards implementing the different components of the Action Plan to inform water stewardship decisions.	ENR	In progress	21 (out of 43) water partner respondents indicated they agree or strongly agree that input from traditional, local and western science knowledge holders is informing effective approaches to implement different components of the Action Plan. Implementation activities under Work Together, Know and Plan, and Use Responsibly all have various approaches for how to include traditional, local and western science knowledge in Water Strategy implementation.
			1.2.C.2. Integrate technology (e.g. tablets) for information collection and sharing on the land with elders, youth and other land users.	ENR	In progress	Past efforts to pilot test devices to record different types of information when travelling on the land and water (e.g. recording wildlife tracks) did not perform as intended. There were no active uses of technology (e.g. tablets) for information collection and sharing on the land with elders, youth and other land users in 2017/18.
			1.2.C.3. Promote the use of plain language formats to help facilitate understanding and translation of materials into Indigenous languages.	ENR	In progress	Due to the success of the 2016 NWT CIMP overview video, two additional plain-language videos were launched online in 2017: *Wildfire Impacts on the North Slave Region Ecosystem* (available in English and French) and *Boots on the Ground: Traditional Knowledge Monitoring of Caribou* (available in Tłı̨chǫ, English and French). A two-page plain language summary of the 2016-2020 Water Stewardship Strategy Action Plan was released in 2016. The summary was translated and audio recorded into all nine NWT official languages in early 2018. The audio summaries are available on the water stewardship website (nwtwaterstewardship.ca). ENR also prepared plain language summaries of both the five-year program evaluation and technical review for the CBM Program. Both summaries are anticipated to be publically available by fall 2018.
			1.2.C.4. Communicate with and support technical experts/researchers to present information tailored to NWT communities (e.g. by using the existing template, *Communicating Results with Communities*).	Aurora Research Institute (ARI), ENR	In progress	NWT CIMP hosts an annual region-specific results-based workshop every year. In 2017, the workshop was held in Fort Resolution and focused on projects conducted in both the North Slave and South Slave regions. In addition to the thirteen results presentations, three break-out groups were held to discuss approaches to sharing information and how to better involve traditional knowledge. ARI supports and encourages technical experts and researchers to share information aimed at NWT communities through various means. For example, ARI maintains a *Compendium of Research* that provides a plain language summary of current and past research projects in the NWT. ARI staff (manager of scientific services) also liaise with researchers and communities to help facilitate communications. *Communicating Results with Communities* templates are also available online on the ARI website (nwtresearch.com) and NWT Water Stewardship website (nwtwaterstewardship.ca).
			1.2.C.5. Continue to explore the development of a water classification system that supports the inclusion of traditional and local knowledge and spiritual and cultural aspects of water in decision-making (also see Key to Success 3.2 C).	ENR	In progress	Work on the Water Classification System is on hold. Work is ongoing to assess the concept and determine if and how such a system could support assessments of water resources and regulatory decision making. Further, proposed amendments to the *Waters Act* are currently the focus of ENR's regulatory improvement initiatives.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.2 - Information Management (continued)	1.2 D - Promote the use of traditional and local knowledge in ways that help ensure water stewardship activities respect community values.	4 presentations at the 8th Annual Water Strategy Implementation Workshop (November 2017) reflected traditional knowledge in research. 23% of water partners (10 respondents) are satisfied or very satisfied with how traditional and local knowledge are included in research taking place in the NWT. Water partner survey results regarding traditional knowledge and community concerns being incorporated in the Aquatic Effects Monitoring Programs (AEMPs) are unclear. The majority of responses were 'don't know'.	1.2.D.1. Support the implementation of traditional knowledge protocols.	ASC (Aboriginal Steering Committee)	In progress	ASC members support the use of traditional knowledge protocols to ensure research and monitoring projects respect community values, that traditional knowledge is gathered in a meaningful way and that it is used to inform decision-making. ASC members provide guidance on relevant traditional knowledge projects as they are contacted, through interactions with researchers at ASC meetings and by promoting and circulating respective traditional knowledge protocols at related meetings and gatherings, online and as requested. ASC members also support the implementation of respective traditional knowledge protocols through implementation of their own work and projects.
			1.2.D.2. Establish traditional knowledge research guidelines for the Sahtù region	SRRB (Sahtú Renewable Resource Board)	In progress	SRRB has initiated work on traditional knowledge guidelines for the Sahtú Region. However, due to the SRRB's focus on the barren-ground caribou management hearing in 2016/17, work on the guidelines remains on hold.
			1.2.D.3. For research supporting Water Strategy implementation, researchers, regional organizations and community members discuss and communicate about how data will be stored, used and shared.	ENR	In progress	18 (out of 44) water partner respondents indicated they have initiated or been involved in discussions about how traditional and local knowledge data will be stored, used and shared in research supporting Water Strategy implementation. These discussions were facilitated in various ways, including: ongoing communication (teleconference, email and in-person contact) with local resource boards, research participants, band councils, research advisory committees, communities and water partners; storytelling and active on-the-land research participation; workshops with research participants and partners; formal and informal community meetings; regulatory proceedings; guideline development and review; regional and community council meetings and intellectual property rights and consent agreements.
			1.2.D.4. Work to ensure that traditional knowledge and community concerns are included in projects or monitoring programs such as AEMPs.	LWB/IWB, ENR	In progress	LWBs/IWBs use an online public review system and hold community meetings to encourage the inclusion of traditional knowledge and community concerns into the water licencing review process. MVEIRB prepares Terms of Reference documents that describes the information a project developer must provide during an environmental assessment, which includes making all reasonable efforts to work with potentially affected Indigenous communities and incorporating traditional knowledge. The ASC provides ongoing advice to researchers undertaking traditional knowledge projects. Six projects received advice from the ASC in 2017/18 regarding traditional knowledge. The ASC also supports and promotes the use of traditional knowledge protocols to ensure research and monitoring projects respect community values, traditional knowledge is gathered in a meaningful way and it is used to inform decision-making. An Alberta-NWT Traditional Knowledge Working Group held its first meeting in early 2018 to coordinate bilateral traditional and local knowledge activities related to implementation of the Alberta-NWT Bilateral Water Management Agreement.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.3 - Communication and Engagement	1.3 A - Effectively maintain communications among water partners and the public on Water Strategy implementation progress.	69% of water partners (18 respondents) indicated they are satisfied or very satisfied with Water Strategy implementation progress. 10 significant updates were made to the water stewardship website in 2017.	1.3.A.1. Water partners provide updates on their implementation activities, including reports, videos, workshops and webinars, and these are posted on the water stewardship website.	ENR	In progress	Water partners provided updates on their implementation activities at the NWT Water Strategy Implementation Workshop in November 2017, in additional to various other means. Posters and panel presentations delivered at the workshop are available on the water stewardship website (nwtwaterstewardship.ca). Additional water partner implementation updates posted to the website include the release of the 2016/17 NWT Water Stewardship Strategy Progress Review, release of translated audio summaries for the 2016-2020 Water Stewardship Strategy Action Plan, release of the updated 2018 NWT Water Stewardship Strategy, launch of the 2017 Youth Photo Contest, release of the 2017/18 Youth Water Stewardship Opportunities Calendar and release of *Working Together to Manage Our Shared Waters: Alberta-Northwest Territories Bilateral Management Committee Annual Report to Ministers - 2015/16.* Water partners also provided specific implementation updates through community meetings and reporting, workshops, blog posts, personal contact, conferences, community posters and other forums such as the NWT drinking water website and Geoscience Forum.
			1.3.A.2. Use plain language tools and products to make progress reporting available to water partners.	ENR	*Complete for reporting period, and ongoing*	The status of all 2017 Action Items was reported in *Check Our Progress – 2016/17 NWT Water Stewardship Strategy Progress Review Summary* and *2016/17 NWT Water Stewardship Strategy Progress Progress Report Comprehensive Raw Data Spreadsheet*. These reports were communicated to water partners and the public in plain language text and infographics online and in print. The results of the progress review were also presented at the NWT Water Strategy Implementation Workshop in November 2017.
	1.3 B - Maintain the roles and responsibilities of the ASC.	5 ASC meetings were held in 2017. 7 Water Strategy projects received guidance from the ASC in 2017.	1.3.B.1. Serve as the liaison between their respective Indigenous governments or organizations and the Water Strategy.	ASC	Complete for reporting period, and ongoing	ASC members serve as the liaison between their respective Indigenous governments or organizations and the Water Strategy on an ongoing basis by bringing issues to discussion at ASC meetings and ensuring that any decisions and relevant information that come out of the discussions flow back to respective Indigenous leadership. Regional updates are included on every ASC meeting agenda to facilitate sharing of relevant regional information among ASC members.
			1.3.B.2. Report regularly on the Water Strategy to their communities and leadership on ASC activities and Water Strategy implementation initiatives.	ASC	Complete for reporting period, and ongoing	ASC members communicate on a frequent basis with their respective Indigenous governments, providing updates after each ASC meeting. These updates are typically provided through letters, presentations, reports, email communication, verbal updates and regular meetings with Chief and Council, elders and harvesters.
			1.3.B.3. Provide advice to water partners on how to effectively engage Indigenous governments or organizations and NWT communities with respect to implementation activities and information sharing.	ASC	Complete for reporting period, and ongoing	Seven projects received guidance from the ASC in 2017: 1. 2016/17 Water Strategy Progress Review Data Collection Approaches and Tools 2. 2018 Water Stewardship Youth Leadership Workshop 3. Water use on the Land Project (Brock University – Diane Dupont) 4. Implementation of the AB-NWT Bilateral Water Management Agreement 5. Implementation of the BC-NWT Bilateral Water Management Agreement 6. November 2017 Annual Water Strategy Implementation Workshop 7. From Intercultural Engagement to Informed Consent: Exploring Experiences of the NWT Water Stewardship Strategy (Wilfird Laurier University - Alex Latta)
			1.3.B.4. Provide advice to water partners, where appropriate, on work and activities related to traditional knowledge.	ASC	Complete for reporting period, and ongoing	Six projects received advice from the ASC in 2017 regarding traditional knowledge: 1. Tracking change: Local and traditional knowledge in watershed governance (University of Alberta and ENR) 2. Implementation of the AB-NWT Bilateral Water Management Agreement (ENR) 3. Implementation of the BC-NWT Bilateral Water Management Agreement (ENR) 4. From Intercultural Engagement to Informed Consent: Exploring Experiences of the NWT Water Stewardship Strategy (WLU) 5. November 2017 Annual Water Stewardship Strategy Implementation Workshop (ENR) 6. Water use on the Land Project (Brock University and University of Alberta)

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.3 - Communication and Engagement (continued)	1.3 B (continued) - Maintain the roles and responsibilities of the ASC.		1.3.B.5. Report on relevant regional initiatives at ASC meetings.	ASC	Complete for reporting period, and ongoing	ASC members report on relevant regional initiatives at ASC meetings as they relate and arise. ASC meetings have a standing agenda item for members to provide regional updates. In 2017, ASC members shared various updates on programs and projects being undertaken by their respective regions, including the Tłı̨chǫ Aquatic Effects Monitoring Program, Indigenous Guardians Program, funding opportunities for community-based water quality monitoring activities, the Tracking Change research project, MRBB, and Bilateral Water Management Committees.
1.4 - Capacity Building, Leadership Training and Education	1.4 A - Increase community capacity in water management, and aquatic research and monitoring.	29 (out of 33) communities are involved in aquatic community-based monitoring. The types of capacity increases as a result of involvement in research and monitoring included monitoring program administration and management skills and technical skills in water quality instruments installation, sampling, monitoring, and reporting. The number of on-the-land capacity building opportunities provided by water partners is unclear due to limited responses to the Water Partner survey.	1.4.A.1. Provide monitoring results to communities in the appropriate context and in plain language formats.	ENR	In progress	In 2017, NWT CIMP developed, published and distributed six brief plain language summaries of various environmental research projects in the NWT. The series is called the Northern Environmental Research Bulletin. All 33 NWT CIMP-funded research projects are required to present results at a relevant northern meeting. In 2017, the NWT CIMP regional results workshop showcased projects specific to the North and South Slave regions. Data from the CBM Program are shared through Mackenzie DataStream (mackenziedatastream.ca). Additional plain language documents and monitoring reports are available on the ENR website (enr.gov.nt.ca/en/services/water-management/water-quality-monitoring-networks).
			1.4.A.2. Develop or promote existing culturally appropriate tools and processes when involving communities in research and monitoring activities.	ENR	In progress	Information is relatively limited about specific tools and processes that were developed. However, water partners often seek community input into the water research and monitoring project design (i.e., site selection, identification of research questions based on community concerns, research process and approach, best practices for information distribution) to ensure that the project is culturally appropriate. Some water partners also seek guidance from the ASC regarding the use of culturally appropriate research tools and approaches. See Status Description for 1.3.B.3. and 1.3.B.4. for examples.
			1.4.A.3. Establish measurable indicators for capacity-building within community-based monitoring programs. Monitor and report on indicators over time.	ENR	In progress	In 2017, ENR launched a five-year program review of the CBM Program. The review included an evaluation of how community capacity has changed as a result of the program. Findings indicate that the capacity among partners to become more independent varies across all communities. The review recommends identifying capacity-building targets and indicators at regional and community scales, in addition to encouraging monitors to undertake self-assessments so that capacity-building and the impacts of the training can be better monitored and understood.
			1.4.A.5. Promote local and distance learning opportunities for community-based water monitors and future water leaders (also see Keys 2.2 A and 2.2 B).	Aurora College, ENR, Dehcho Aboriginal Aquatic Resource and Oceans Management Program (AAROM), Dechinta Centre for Research and Learning (Dechinta)	In progress	NWT CIMP supports community capacity-building and provides local learning opportunities through hiring and training local community members to develop their community-based monitoring skills in the field. In 2017, NWT CIMP funded several projects that resulted in enhanced community capacity. In 2017, the Dehcho AAROM program faciliated hands-on training to AAROM water quality monitors/guardians on a monthly basis. This training was intended to build capacity and understandings of water quality monitoring protocols and use of monitoring equipment. Monitors/guardians were also selected to attend educational workshops through NWT CIMP and the Northern Contaminants Program.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.4 - Capacity Building, Leadership Training and Education (continued)	1.4 A (continued) - Increase community capacity in water management, and aquatic research and monitoring.		1.4.A.6. Promote intergenerational on-the-land water education/leadership camps as a way of involving communities in monitoring and research, and to interact with scientists.	Tides Canada, ENR	Complete for reporting period, and ongoing	Water partners hosted and supported various on-the-land programs that have community-based monitoring elements in 2017. These included the Tundra Science and Culture Camp, Dehcho Youth Ecology Camp, Tłı̨chǫ Summer Students Research Assistant Program, Dechinta Water Programming and the Tłı̨chǫ Imbe Program and Indigenous Guardians Programming. Tides Canada supports on-the-land and community-led research and monitoring programming in all the NWT regions. These often feature elders and youth being involved in water research and monitoring. Partners supported additional programming through the NWT On-The-Land Collaborative Fund, including the Hay River Outdoor Leadership Program: On The Land Connections; Dechita Naowo - Environmental Monitoring and Traditional Knowledge Application in the Digital Age; and Aklavik On The Land Training/Mentorship Program.
			1.4.A.7. Post relevant information on the water stewardship website.	ENR	Complete for reporting period, and ongoing	The water stewardship website provides educational information about water research and monitoring in the NWT, including an overview of aquatic ecosystem health and how it is measured, community-based monitoring programs in the NWT, information for researchers pursuing water-related work in the NWT, and ways to access NWT monitoring and research information. In early 2018, ENR uploaded a protocols manual for collecting water quality samples as part of the CBM Program. The manual was developed to educate and help build capacity for community-based water quality monitoring in the NWT.
	1.4 B - Promote the importance of water and water stewardship through educational and public outreach activities and communication products.	30 water stewardship outreach activities were undertaken in 2017 as a result of Canada Water Week and other initiatives.	1.4.B.1. Deliver water educational programs and participate at science fairs to discuss protection of aquatic ecosystems.	ENR	Complete for reporting period, and ongoing	Water partners led, supported and participated in various water education programs in 2017/18. Examples of activities relevant to the protection of aquatic ecosystems include: Rivers to Oceans Day, Water Stewardship Strategy Youth Leadership Workshop in Yellowknife, Ecology North water education outreach activities at eight schools in seven communities, and various public documentary film screening events.
			1.4.B. 2. Identify opportunities for water partners to support each other's educational initiatives (including sharing of electronic and physical resources).	ENR	Complete for reporting period, and ongoing	The water stewardship website includes an educational resources page intended to connect water partners' educational water stewardship resources to other water partners, teachers and non-governmental organizations involved in education activities regarding water stewardship. In 2017, Ecology North launched NWT Science Focus - an online database of environmental science-related lesson plans intended to facilitate the sharing of education resources among NWT educators. Water is one of six key resources themes. Ecology North also hosted two water-focused seminars for northern educators at the NWT Educators Conference. The seminars provided educators with water education resources, sample lesson plans and hands-on activities. In 2017, ENR released an 18-month Youth Water Stewardship Calendar that compiles youth water education and outreach initiatives hosted by water partners across the NWT. The calendar is intended to help connect NWT youth with water stewardship-related education initiatives and opportunities.
			1.4.B. 3. Coordinate and develop activities to celebrate Canada Water Week.	ENR	Complete for reporting period, and ongoing	In March 2018, ENR hosted a two-day Water Stewardship Strategy Youth Leadership Workshop in Yellowknife. The workshop brought together eleven youth from across the NWT to learn about and share ideas, knowledge and concerns related to NWT water stewardship. The workshop also included a one-day interactive training session on Project WET (Water Education for Teachers) to promote water leadership skills, tools and knowledge. Ecology North's 2018 Canada Water Week celebrations included film screenings in four communities, a Youth Water Education session in Behchokǫ̀ and fish fry in Yellowknife.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.4 - Capacity Building, Leadership Training and Education (continued)	1.4 B (continued) - Promote the importance of water and water stewardship through educational and public outreach activities and communication products.		1.4.B.4. Provide educational programs and workshops about water treatment in the NWT.	Ecology North	Complete for reporting period, and ongoing	Ecology North staff and volunteers visited eight schools in seven communities to deliver drinking water education activities and introduce teachers to Ecology North's Drinking Water in the NWT Curriculum. Ecology North also coordinated a public water treatment plant tour and hosted film screenings of *Water Detectives* and *Water Warriors,* followed by post-film discussions.
			1.4.B.5. Conduct research and educate residents on the costs (environmental and economic) of imported bottled water versus tap water.	Ecology North, ENR	Complete for reporting period, and ongoing	In 2017, Ecology North continued implementing the *#loveNWTwater campaign* to educate residents on the benefits of consuming NWT water over bottled water. Ecology North hosted *#loveNWTwater campaign* booths at nine community fairs (Fort Liard, Hay River, Enterprise, Fort McPherson, Lutsel K'e, Tulita, Deline, Kakisa, Fort Resolution) and several Yellowknife events, including Yellowknife Community Showcase, Annual Community BBQ, Pride, Ramble and Ride, Folk on the Rocks and various tradeshows. Ecology North also developed a Sustainable Event Guide for Yellowknife, which includes a section on the impacts of disposable water bottles and the benefits of providing municipal drinking water at public events. Work is underway to develop a similar guide for events held outside of Yellowknife.
1.5 - Transboundary Discussions, Agreements and Obligations	1.5 A - Successfully negotiate bilateral transboundary water management agreements with neighbouring jurisdictions.	0 bilateral transboundary water management agreements were completed or updated in 2017. 5 (of 5) ASC meetings held in 2017 provided an update on transboundary water management activities. 2 opportunities for public input were provided for bilateral transboundary water management agreement negotiation in 2017.	1.5.A.1. Continue to develop NWT interests, mandates and options to inform transboundary negotiations in partnership with Indigenous governments.	ENR	In progress	Once Intentions Documents for Bilateral Water Management Agreements (BWMAs) with Saskatchewan (SK), Yukon (YT) and Nunavut (NU) are ready, Aboriginal consultation and public engagement will continue. This consultation and engagement will build on the Aboriginal consultation and public engagement that was done to develop NWT interests, negotiation positions, and Intentions Documents for agreements with Alberta (AB) and British Columbia (BC).
			1.5.A.2. Advance negotiations and sign bilateral transboundary water management agreements with the remaining respective jurisdictions.	ENR	In progress	There are three remaining transboundary water management agreements to establish or update: 1) YT-NWT Agreement (update to existing agreement); 2) SK-NWT Agreement; and 3) NU-NWT Agreement. Discussions to update and align the 2002 YT-NWT Transboundary Water Management Agreement with more recently signed Mackenzie River Basin BWMAs occurred in fall 2017 and winter 2018. The SK government is conducting an internal review after discussions in 2015 and 2016 to develop a SK-NWT Agreement. Discussions are anticipated to resume in 2018. NWT is ready to continue discussions toward a NU-NWT Agreement. NU is expected to be ready to engage with the NWT once a NU Water Strategy is complete and discussions on devolution are clearer.
			1.5.A.3. Continue public engagement and consultation with Indigenous governments during negotiation processes.	ENR	In progress	See Status Description for 1.5.A.1.
			1.5.A.4. Communicate with water partners, Indigenous governments and the public about the progress of negotiations, through plain language materials and the water stewardship website.	ENR	Complete for reporting period, and ongoing	Information about the progress on negotiations has been communicated during ASC meetings, presentations (e.g., Keepers XI: Tu Beta Ts'ena (Water is Life) Gathering (August 2017), Water Strategy Implementation Workshop (November 2017)), the 2016/17 Water Strategy Progress Review Summary and the water stewardship website (nwtwaterstewardship.ca).
	1.5 B - Successfully implement bilateral transboundary water management agreements.	4 opportunities for public input were provided for bilateral transboundary water management agreement implementation in 2017.	1.5.B.1. Establish a Bilateral Management Committee for each completed agreement.	ENR	In progress	A Bilateral Water Management Committee (BMC) was established under the AB-NWT BWMA in 2016. AB and NWT have appointed government members to the BMC. NWT has appointed an Indigenous BMC member. Work is underway to establish a BMC under the BC-NWT BWMA. NWT has appointed its members and it is anticipated that the BMC will be fully established in the fall of 2018.

	Key to Success	2017/18 Performance Indicator Result	**Action Item** (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
1.5 - Transboundary Discussions, Agreements and Obligations (continued)	1.5 B (continued) - Successfully implement bilateral transboundary water management agreements.	2 implementation activities are in progress and 12 were completed under the AB-NWT BWMA in 2017.* 1 implementation activity is in progress and 3 were completed under the BC-NWT BWMA in 2017.* ** 2 measures informing 1 Performance Indicator* 1 annual report was completed under the AB-NWT BWMA in 2017.	1.5.B.2. Create and implement a multi-year work plan for each completed agreement.	ENR	In progress	A multi-year work plan was created for the AB-NWT BWMA in 2016 and was updated in 2017. NWT and BC are discussing implementation priorities and a preliminary work plan to share with the BC-NWT BMC, once it is established.
			1.5.B.3. Monitor and learn about aquatic ecosystems, including surface and groundwater quality and quantity, biology and traditional use, in the transboundary watersheds.	ENR	In progress	GNWT and ECCC are continuing routine monitoring of surface water quality and quantity. The frequency of GNWT mercury sampling in the Slave and Hay River AB-NWT border sites was increased to help develop mercury triggers for implementation of the AB-NWT BWMA. Several state-of-the-knowledge reports were completed in 2017/18 and other research activities took place to increase our knowledge of the Slave, Hay, and Liard/Petitot watersheds.
			1.5.B.4. Establish information sharing and prior notification mechanisms with neighbouring jurisdictions.	ENR	In progress	An information sharing and prior notification mechanism was established in 2016 for developments and activities that might affect the ecological integrity of the aquatic ecosystem of shared AB-NWT waters. It will be reviewed for its effectiveness regularly.
			1.5.B.5. Communicate with water partners, Indigenous governments and the public about the progress of implementation, through plain language materials, the water stewardship website and other formats as appropriate.	ENR	Complete for reporting period, and ongoing	The first AB-NWT annual report (2015-2016) on implementation progress was released in November 2017. The 2016/17 annual report is being drafted and public release is anticipated for 2018. Information about implementation progress for the AB-NWT agreement was also communicated during ASC meetings, presentations (e.g., Canadian Water Resources Association Conference (June 2017), Keepers XI: Tu Beta Ts'ena (Water is Life) Gathering (August 2017), and Water Strategy Implementation Workshop (November 2017)), the 2016/17 Water Strategy Progress Review Summary and the water stewardship website (nwtwaterstewardship.ca).

Know and Plan

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components	2.1 A - Continuously review and prioritize implementation of water monitoring networks (long-term water quality and quantity programs) and develop plans to address monitoring gaps.	Full-scale reviews of NWT water quality and quantity networks are not conducted regularly; however, Environment and Climate Change Canada (ECCC) has reviews in place that identify gaps in their water quality and quantity monitoring networks. The total number of monitoring gaps addressed is unclear. ECCC is working to develop a risk-informed and adaptive management apporach to prioritize gaps to be addressed.	2.1.A.1. Long-term data sets are prioritized when reviewing current water monitoring networks to allow for trend and climate change analyses.	ENR	In progress	Work to prioritize data sets is primarily aimed at working with water partners to leverage existing monitoring networks to collaborate and enhance the overall network. The ENR Water Resources Division is working with the Climate Change section to incorporate Action Items into the Climate Change Strategic Framework Action Plan, which will assess and prioritize existing long-term water monitoring networks suitable to analyze climate change trends and/or impacts.
	2.1 B - Increase understanding of aquatic ecosystems and establish common approaches to monitor key aspects of aquatic ecosystem health in the NWT.	*Information supporting this Performance Indicator is drawn from Performance Indicators under Keys to Success 1.2A and 2.2A:* 16 (out of 36) water partner respondents indicated that some or all of the water quality monitoring activities coordinated or supported by their organization have standardized protocols. 8 community-based monitoring programs have defined goals and 6 have standardized monitoring processes (2.2A).	2.1.B.1. Develop consistent approaches to monitor aquatic ecosystem health required under transboundary water management agreements.	ENR	In progress	The approaches to monitor water quality, water quantity and suspended sediment are consistent for all NWT transboundary rivers (Slave River, Hay River, Liard River, and Peel River). Work is underway to develop an approach to monitor benthic invertebrates in NWT's large transboundary rivers. In 2017/18, ENR initiated discussions with experts from provincial, territorial and federal governments, academia, and Indigenous governments and organizations to identify the most suitable biological indicators to implement the AB-NWT BWMA.
			2.1.B.2. Work with organizations that conduct monitoring to communicate their protocols and identify common approaches to gather information about aquatic ecosystem health.	ENR	In progress	Water partners reported using various standardized water quality sampling protocols to ensure data are comparable within programs; however, few standardized protocols are used across programs. This is primarily due to different programs having specific monitoring objectives, and in turn being limited to specific protocols that are not always comparable. Recipients of NWT CIMP funding are asked to use standardized protocols where possible. Communities participating in the CBM Program also follow standardized water quality sampling protocols to ensure data comparability between communities. ECCC uses the CABIN protocol to ensure that benthic invertebrate samples are standardized and comparable. ECCC also follows internal protocols for data management and QA/QC procedures.
			2.1.B.3. Advance the establishment of a wetland inventory approach using remote sensing imagery.	DUC, NWT Centre for Geomatics	In progress	DUC is leading the advancement of the wetland classification inventory, which is based on satellite imagery, field data and supplementary information collected for each project area. In 2017/18, DUC signed a Memorandum of Understanding with the Akaitcho Treaty 8 Tribal Corporation, which helps support the wetland mapping project. To date, nearly 200 million acres (80 million hectares) of wetlands have been mapped using DUC remote sensing standards throughout the boreal in BC, AB, SK and Manitoba. Boreal wetland mapping in the NWT is anticipated to begin in 2018. The NWT Centre for Geomatics will provide input as needed.
			2.1.B.5. Follow guidance documents, like *Working Together Towards Relevant Monitoring and Research in the NWT* , to ensure community engagement and existing information is identified and considered when developing a research project.	ENR	Complete for reporting period, and ongoing	NWT CIMP promotes the approaches contained in the *Working Together Towards Relevant Monitoring and Research in the NWT* document and the *Pathway Approach* for the development of new projects, through its annual funding process and proposal guides.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued)	2.1 B (continued) - Increase understanding of aquatic ecosystems and establish common approaches to monitor key aspects of aquatic ecosystem health in the NWT.		2.1.B.6. Communicate aquatic ecosystem monitoring and research findings to water partners.	ENR	Complete for reporting period, and ongoing	Aquatic ecosystem monitoring and research findings were communicated to water partners through posters and presentations at the Water Strategy Implementation Workshop in November 2017. Posters and presentations are available on the water stewardship website (nwtwaterstewardship.ca). Additional research and monitoring findings are available online on the water stewardship website resources page, ENR Water Management website (enr.gov.nt.ca), Mackenzie DataStream (mackenziedatastream.ca) and the NWT Discovery Portal (nwtdiscoveryportal.enr.gov.nt.ca).
			2.1.B.7. Publish monitoring trends analysis reports and plain language documents for the long-term river monitoring programs.	ENR	In progress	A status and trends report for Great Slave Lake tributaries was completed in 2017 and included monitoring data dating back to the 1980s. Status and trends reports for Hay River, Slave River, Coppermine River and Peel River were completed prior to 2016. A report focusing on organic compounds and metals in the Slave, Hay, Liard and Peel Rivers is currently being developed and is anticipated for completion in March 2019. A general hydrologic overview of NWT rivers and lakes is currently being developed in partnership with WLU and is anticipated to be completed in 2019.
	2.1 C - Maintain and enhance, where feasible, the existing water quality and quantity monitoring networks in the NWT.	The current water quality and quantity network is made up of 206 stations/sites (98 hydrometric stations and 108 water quality sites). Note: includes federal and territorial government and 3rd party sites; excludes SNP and AEMP sites.	2.1.C.1. Establish and maintain monitoring agreements and partnerships with interested third parties (academic institutions, industry or different levels of governments) to maintain and/or enhance existing water quality monitoring networks.	ENR, ECCC	Complete for reporting period, and ongoing	The ENR Water Resources Division monitors 34 long-term water quality sites and collaborates with 21 communities to monitor an additional 40 water quality sites under the CBM program. In 2017, ECCC had seven agreements with other government departments to support their northern long-term water monitoring network. As part of this network, ECCC and Parks Canada maintain 34 long-term water quality sites in the NWT.
			2.1.C.2. Establish and maintain monitoring agreements and partnerships with interested third parties (academic institutions, industry or different levels of governments) to maintain and/or enhance existing water quantity monitoring networks.	ENR, ECCC	Complete for reporting period, and ongoing	The NWT water quantity monitoring network is made up of 98 stations, including 19 stations funded by GNWT, 23 stations jointly funded by GNWT and ECCC, 41 stations funded by ECCC and 15 stations funded by third parties. Regulatory hydromet stations are included in the third party numbers.
			2.1.C.3. Implement monitoring agreements and partnerships as necessary.	ENR, ECCC	Complete for reporting period, and ongoing	See Status Description for 2.1.C. 1 and 2.1.C. 2.
	2.1 D - Implement a groundwater monitoring network in the NWT.	3 basins have been identified as priorities for groundwater monitoring for the NWT and transboundary areas.	2.1.D.1 Establish a hydrogeologist position at ENR.	ENR	Complete	The hydrogeologist position was filled in May 2016.
			2.1.D.2. Determine the existing state of the knowledge of NWT groundwater resources.	ENR	In progress	The *Preliminary State of Groundwater Knowledge in the Transboundary Regions of the Mackenzie River Basin , NWT* report was completed in 2016. This report and other preliminary work to determine the state of knowledge for NWT groundwater suggest a general lack of knowledge on groundwater across the NWT. In 2017, ENR began contacting many departments, institutions and private contractors to gather information on past and present monitoring groundwater wells in the NWT. Information and data from the Office of the Regulator of Oil and Gas Operations, Municipal and Community Affairs (MACA), NWT Geological Survey and ENR-Environment Division has been collected and is being compiled. The *Best Practices in Groundwater Monitoring for Northern Canada* report was developed by Université de Montréal and McGill University. The report highlighted tools available in the NWT and other jurisdictions for better groundwater monitoring practices and regulation of groundwater resources.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued)	2.1 E - Improve the assessment of cumulative effects on water from climate change and industrial development.	19 NWT CIMP (ENR) funded projects were identified as being able to contribute to an environmental decision. 4 AEMPs are partially comparable across data sets (i.e., only some parameters are comparable due to differences in the frequency and timing of sampling).	2.1.E.1. Analyze existing information to identify cumulative effects on water and aquatic ecosystems in prioritized or specific areas.	ENR, MVEIRB	In progress	*The Mackenzie Valley Resource Management Act (MVRMA)* requires the MVEIRB to consider cumulative effects in every environmental assessment; however, project-specific environmental assessments may not be the ideal tool for a comprehensive assessment of cumulative impacts that relate to many projects across time and space. Regional studies or strategic environmental assessments may be well-suited for cumulative effects assessments across larger assessment areas and timeframes. Provisions related to regional studies are not currently in force in the MVRMA, but may come into force soon. Through the Pan-Territorial Environmental Assessment and Regulatory Board Forum and other bilateral meetings, MVEIRB has had preliminary discussions with other territorial and federal assessment bodies to help understand how regional studies could contribute to integrated resource management in the NWT.
			2.1.E.2. NWT CIMP results are made available to regulatory decision-makers, technical reviewers, Aboriginal organizations, industry and the public.	ENR	Complete for reporting period, and ongoing	NWT CIMP results are made available to regulatory decision-makers, technical reviewers, Indigenous organizations, industry and the public through several means: the online NWT Discovery Portal, community-oriented results workshops or meetings that are a requirement of all NWT CIMP funded projects, NWT Environmental Research Bulletins, annual reports, environmental assessment and regulatory processes and research results booklets.
		16 NWT CIMP (ENR) Final Project Reports for 2017/18 are under review before being posted on the NWT Discovery Portal.* NWT CIMP (ENR) is working with 39 partners, including Indigenous government/ organizations, co-management boards, Canadian universities, federal and territorial governments.* 11 peer-reviewed papers were published in 2017/2018 stemming from NWT CIMP (ENR) funded projects. 9 more peer-reviewed papers are in the process of being published.* * 3 measures informing 1 Performance Indicator	2.1.E.3. Use available information on cumulative effects in regulatory decision-making.	MVEIRB, LWB/IWB	Complete for reporting period, and ongoing	The MVRMA requires MVEIRB to consider cumulative effects in its environmental assessment decision making. This requirement is reflected in all environmental assessment processes and reasons for decision. A recent example of how available information was used to assess cumulative effects was the Jay Project environmental assessment (see section 4.3 of the environmental assessment report). The developer presented water quality models for Lac de Gras that incorporated discharge from both Diavik and Ekati mines. Every time the LWB/IWBs do a screening, information is used to assess cumulative effects. Anytime cumulative effects analysis is used in a regulatory board's decision, it is reported and publically available as part of the reasons for a decision. A structured cumulative framework on water would further assist the land and water boards in their decision-making processes. Cumulative effects assessment is challenged by the limited availability of information and the ability to combine information from a variety of sources. Recently developed metadata standards guidelines could be part of the solution to this issue.
			2.1.E.4. Communicate the methods and approaches undertaken by regulatory boards to assess cumulative effects to water partners.	MVEIRB, LWB/IWB	Complete for reporting period, and ongoing	The Terms of Reference for an environmental assessment set out the methods and approach for cumulative effects assessment that the proponent must follow. The draft Terms of Reference and scope of assessment are informed by in-person scoping sessions (both technical and community sessions) and distributed for review to environmental assessment participants prior to being finalized by the MVEIRB. When the decision is made on a project, environmental assessment participants and the media are notified and the reasons for a decision are publically reported (online). LWB/IWBs communicate reasons for a decision on water licencing to stakeholders and to the public via an online registry.
			2.1.E.5. Address high priority cumulative impact monitoring questions by key regulators for water and fish.	ENR	Complete for reporting period, and ongoing	NWT CIMP's Monitoring Blueprints identify the program's priorities for funding new projects. These Blueprints are revised annually with input from key stakeholders, including key regulators for water and fish. Through this mechanism, NWT CIMP ensures that funded projects are meeting key stakeholders' information needs. NWT CIMP's Monitoring Blueprints are available on the NWT CIMP website (nwtcimp.ca).

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued)	2.1 E (continued) - Improve the assessment of cumulative effects on water from climate change and industrial development.		2.1.E.6. Define traditional knowledge monitoring priorities that support cumulative impact assessment.	ENR	In progress	NWT CIMP promotes the use of traditional knowledge in cumulative impact monitoring. In keeping with the holistic nature of traditional knowledge, the general focus of traditional knowledge monitoring in the program is on the biophysical environment, but the specific focus to be examined is at the discretion of the community or Indigenous organization conducting the monitoring. The goal is to support traditional knowledge that will result in information that can be incorporated into land and water use decision-making.
			2.1.E.8. Determine trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends.	ENR	In progress	*GNWT's NWT State of the Environment Reports* provide an assessment of environmental status and trends in the NWT, including trend reports on water flow and quality, vegetation, and wildlife. ENR also released *Status and Trends Report for Great Slave Lake Tributaries* in early 2017.
			2.1.E.9. Support cumulative effects research taking place in the NWT and communicate research findings to water partners.	ENR	Complete for reporting period, and ongoing	In 2017 NWT CIMP provided funding for 33 cumulative impact-related projects. Findings from this research was made available through a community-oriented results workshop and/or other relevant northern meetings. 6 projects were highlighted in the NWT Environmental Research Bulletins.
			2.1.E.10. Complete technical transfer of *Climate Impacts Tracking Analysis System* to the NWT Centre for Geomatics and create web map tool for this information.	ENR, NWT Centre for Geomatics	In progress	The technical transfer for the Climate Impacts Tracking Analysis System application was completed during the 2016/17 fiscal year. The full development of the application has been paused pending funding. There has been no further development since the initial pilot was developed due to resource restraints.
			2.1.E.11. Update the Mackenzie River Basin Hydraulic Model to investigate hydrological trends and quantify the effects of climate change and industrial development on water quantity in the Slave River watershed.	ENR	In progress	The timeline for completing the Mackenzie River Basin Hydraulic Model has been extended due to further adjustments required. A contract was started in 2015 to update the model and add more data to refine the predictions and the model's ability to investigate the effects of climate change and industrial development. Work is underway to determine scope for further changes and to pursue options and partners to continue the project.
	2.1 F - Increase the use of biological indicators in aquatic monitoring to assess ecosystem health.	6 water partner respondents indicated that 42 individuals were trained in biological monitoring in 2017. 2 respondents indicated that their organization provided training but didn't know how many people were trained. 6 water partner respondents indicated that a total of 19 aquatic monitoring projects or programs were reported to have a biological component.	2.1 F.1. Further identify how more biological indicators can be part of ongoing aquatic monitoring, with a focus on lower trophic levels to provide early warnings about changes in the aquatic ecosystem.	ENR	In progress	A review of past biological monitoring in the Slave and Hay River Basins was done in 2017/18. The review included work to date on ecosystem health indicators in the Mackenzie River Basin, along with a recommendations report on indicators that could be used for the Slave and Hay Rivers. Researchers from the University of Saskatchewan produced a report to summarize the health and biological data of fish collected from the Athabasca and Slave Rivers between 2011-2015 and to compare that data with similar data collected during the 1990s. A workshop to advance on the selection of biological indicators for BWMA's was held in early 2018. Development of a benthic macroinvertebrates monitoring recommendations report and monitoring plan, in collaboration with the University of New Brunswick, informs the selection and application of biological indicators. Monitoring of benthic macroinvertebrates took place on the Slave and Hay rivers using a kick sampling technique and a passive technique (Hester-Dendy samplers) in the summer and fall 2017. Work by the MRBB State of the Aquatic Ecosystem Report and Traditional and Knowledge and Strengthening Partnerships Committees will help identify ecological health indicators using multiple knowledges.
	2.1 G - Integrate social science into water-related research to improve understanding of the human dimensions of water management (e.g. governance, adaptation, food and water security, sustainable livelihoods, and linking different knowledge systems).	9 directly freshwater-related research projects with a social science focus were licensed by the Aurora Research Institute (ARI) for 2017.* 6 indirectly freshwater-related research projects with a social science focus were licensed by ARI for 2017.* * 2 measures informing 1 Performance Indicator	2.1.G.1. Explore partnerships to undertake collaborative social science research that builds on identified research priorities for the Water Strategy.	ENR	In progress	Water partners are continuing to explore and develop partnerships to undertake social science research projects linked to the goals of the Water Strategy. Examples of partnerships that have led to successful projects include: the Tracking Change research project (co-led by University of Alberta, ENR and the MRBB); the SRDP (includes academic, territorial and federal government and Indigenous partners); Water use on the Land Project (partnership with Brock University, University of Alberta, NWT communities and ENR); and From Intercultural Engagement to Informed Consent: Exploring Experiences of the NWT Water Stewardship Strategy (partnership with WLU, ASC, ENR).

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued)	2.1 G (continued) - Integrate social science into water-related research to improve understanding of the human dimensions of water management (e.g. governance, adaptation, food and water security, sustainable livelihoods, and linking different knowledge systems).		2.1.G.2. Water partners support research exploring NWT residents' and communities' interactions and relationships with the aquatic environment.	ENR	Complete for reporting period, and ongoing	In 2017, water partners led and supported a range of research projects exploring different dimensions of human interactions and relationships with the aquatic environment. Project topics were mainly aimed at better understanding the links between aquatic environmental change and associated impacts on people's livelihoods and community well-being, including adaptation and building resilience. Research also focused on traditional knowledge activities related to aquatic environments and better understanding the different values people assign to aquatic environments (social, economic, cultural, ecological). Examples of relevant projects include: Human Dimensions of a Thawing Landscape; On the Land and in the Water: Connecting and Disconnecting the Mackenzie Delta; Tracking Denesoline Knowledge and Narratives along the Ancestral Waters of the Snowdrift River; Decolonizing Water Indigenous Research Methods; the Sustainable Water Governance and Indigenous Law Project; Understanding Changes in the Freshwater Ecosystems and Drinking Water in Northern Canada; and Using Inuvialuit and Gwich'in Observations to Monitor Environmental Change in the Beaufort Delta Region.
	2.1 H - Identify research priorities to strengthen and inform the goals of the Water Strategy.	71 water partners were formally engaged in the identification of water research priorities in 2017. 8 broad water research priorities were identified in 2017.	2.1.H.1. Water partners identify research priorities for each goal of the Water Strategy.	ENR	In progress	In September 2017, ENR, with guidance from the ASC, circulated an online Water Strategy research priorities survey to water partners. Based on prior research priority discussions with water partners, the survey asked water partners about research topics, gaps and types of knowledge that are priorities for their work related to the Water Strategy and communities. Survey results were presented and discussed at the NWT Water Strategy Implementation Workshop in November 2017. Overall, water partners came to consensus on the importance of broad Water Strategy research topics, not on specific research priorities. The outcomes of the survey and discussions that took place at the workshop are summarized in *NWT Water Stewardship Strategy: 2017-18 Research Priorities Summary*. The document is anticipated to be available on the Water Stewardship website by fall 2018. NWT CIMP, in collaboration with regulators and subject matter experts, has developed three Blueprints that outline NWT CIMP's specific research and monitoring priorities for water, fish and caribou in the NWT.
			2.1.H. 2. Communicate research priorities to academic institutions.	ENR, ARI	Complete for reporting period, and ongoing	In 2017, water partners came to consensus on the importance of broad Water Strategy research topics, not on specific research priorities. Water partners identified a number of factors that make it difficult to select specific Water Strategy research priorities to communicate to academic institutions. Instead, water partners recommended supporting collaborative research processes and existing NWT research protocols that would enable researchers to identify specific water research priorities through collaboration with communities.
			2.1.H. 3. Report and review research priorities at annual implementation workshops.	ENR	In progress	See Status Description for 2.1 H. 1.

	Key to Success	2017/18 Performance Indicator Result	**Action Item** (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued)	2.1 I - Build upon existing geomatics capacity and capabilities in the NWT to collect and analyze water-related information to fill identified monitoring gaps.	15 (out of 36) water partner respondents indicated their organization is currently using geomatics tools; however, the number of specific monitoring programs is unclear.	2.1.I.1. Share information about existing water-related geomatics and/or remote sensing uses to interested water partners.	ENR, NWT Centre for Geomatics	Complete for reporting period, and ongoing	In 2017, NWT CIMP made annual updates to the Inventory of Landscape Change human disturbance dataset. The dataset can be used to visualize and download spatial data related to human and natural disturbance in the NWT. NWT CIMP obtained 2016/17 Sentinel 2 satellite imagery and had a normalized mosaic developed for the NWT. The NWT Centre for Geomatics acquired new hydro-enforced digital elevation model data in 2017/18 that is openly available to all GNWT department and partners collaborating on projects on behalf of the GNWT. At the Water Stewardship Strategy Implementation Workshop in November 2017, C-Core provided a panel presentation on the Slave River and Delta and Great Slave Lake Community-Based Water Portal project. The project is a satellite-based water monitoring program that uses remote sensing to measure water trends and impacts in the Slave River Delta.
			2.1.I.2. Water-related indicators using remote sensing imagery are monitored and information is publically accessible.	ENR	In progress	In 2017/18, ENR continued to work in partnership with C-Core, who is leading the Slave River and Delta and Great Slave Lake Community-Based Water Portal project. The program monitors key environmental indicators using both satellite imagery and community-based sampling data. Indicators include: water levels and flooding, course changes, temperature, ice build-up, sediment deposits and vegetation. All data will be made available through free and accessible online services such as Mackenzie DataStream and C-Core's web portal – NWT Water Monitoring Service (looknorthservices.com/watermonitoring/). The web portal was launched in 2017 with water quality, temperature, and sediment data for the Slave River and Delta region.
			2.1.I.3. When new data are acquired, improvements are made to the existing digital elevation model, which in turn can improve the hydrological model for the NWT.	NWT Centre for Geomatics	Complete for reporting period, and ongoing	The NWT Centre for Geomatics acquired new data in 2017/18, which inherently improved existing baseline data for the NWT topographical fabric. This data helps refine hydrological models for the NWT. Data has not yet been acquired for all of the NWT due to cost limitations; however, additional blocks are purchased every year when funding becomes available. Approximately 60% of the NWT hydro-enforced digital elevation model information has been purchased.
	2.1 J - Continue to support source water protection planning in NWT communities.	1 source water protection planning initiative was undertaken in 2017.	2.1.J.2. Link source water protection planning to land and water management, including supporting communities to develop source water protection plans where requested.	ENR	In progress	ENR promotes and helps to support Source Water Protection planning in the NWT through existing tools (e.g., the Source Water Assessment and Protection guidance document and associated workbook) and providing in-kind technical support for communities interested in developing a source water protection plan. The University of Alberta and Brock University are working with the communities of Dél̨ı̨ne and Łutsel K'e to explore land-based water consumption practices and the factors that influence perceptions of water quality on the land. This project will identify opportunities for source water protection planning, public education and outreach needs, and potential new community-based monitoring sites to address community concerns. Water quality information at three rivers, monitored monthly since 1999, located near Yellowknife (Marian, Yellowknife, and Cameron Rivers) is collected and assessed as a matter of local community interest for source water protection.
			2.1.J.3. Use source water protection planning to support and communicate about the importance of municipal water licencing.	ENR, LWB/IWB	In progress	The LWB/IWBs undertake indirect initiatives to promote source water protection planning. For example, applying the Board's Water and Effluent Quality Management Policy allows the Boards to choose appropriate effluent quality criteria for the discharge of municipal wastewater that flows to the receiving environment. Water Licence conditions are written to protect the regional aquatic environment through the proper management of municipal waste and wastewater and confirmed through the application of monitoring water quality under the water licence's SNP. Further development of guidelines and templates for municipalities help improve municipal operations and reduce impacts on regional watersheds and source waters.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
2.2 - Collaborative Approach to Community-based Monitoring	2.2 A - Ensure continued support of aquatic community-based monitoring programs.	7 community-based monitoring programs were active in 2017, involving a total of 29 communities. 7 community-based monitoring programs have defined goals and 5 have standardized monitoring processes.	2.2.A.1. Continue to support community-based monitoring programs to build capacity, ensure proper data collection and analysis, and communicate results to communities and decision-makers.	ENR	Complete for reporting period, and ongoing	Seven aquatic community-based monitoring programs were active in the NWT in 2017/18. The programs are led by different water partners and vary in scope, size and approaches to monitoring. Programs include: the CBM program, Tłı̨cho Aquatic Ecosystem Monitoring Project; Marian Watershed Monitoring Program; Lutsel K'e Dene First Nation's Ni hat'ni Dene Watching the Land Monitoring Program; Inuvialuit Settlement Region Community-based Monitoring Program; Long-term Monitoring of Great Bear Lake Fisheries and the Aquatic Ecosystem; Deh Cho K'ehondi Program. Common methods of capacity-building and community participation include: involving community members in field work; providing opportunities for water quality sampling and equipment training; and seeking community input into the project design. Dechinta provides students with opportunities to work closely with elders, faculty and traditional knowledge on various initiatives including water research projects.
			2.2.A.2. Ensure community-based monitoring data is relevant to local decision-making and helps to address community concerns.	ENR, Dehcho AAROM	Complete for reporting period, and ongoing	A five-year evaluation of the CBM Program was completed in 2017. The review confirmed that the data quality is of excellent standard, highlighting that the protocols are being followed and there is minimal contamination in the samples (less than 2%). The review concluded that the CBM data can be successfully used to detect changes and trends in water quality across the NWT, which have been identified as key areas of concern by NWT communities. Communities have also expressed an interest in better understanding why certain changes in water quality are being observed. The water quality data collected through the CBM program provides insight into these concerns, suggesting that differences in water quality across the NWT may be related to the speed of water flow, and the type of rocks that the water is flowing through. Water quality in some regions is also being affected by climate change.
			2.2.A.3. Conduct a five-year review of the NWT-wide Community-based Water Quality Monitoring Program.	ENR	Complete	The five-year evaluation of the CBM Program was completed in 2017 and suggests that respondents feel that the program is well managed and important to those involved with it. There is agreement among the respondents on the purpose of the program and a review of the program's documentation established that the original intent, purpose, and goals have remained consistent with the Water Strategy. There appears to be a strong commitment to the program.
	2.2 B - Improve community participation and leadership in aquatic research projects.	26 aquatic research projects actively involving communities were identified via ARI research licence database for 2017 (out of 85). A total of 4 (out of 6) local Indigenous government and municipal government respondents indicated their community is leading a water-related research project.* 10 aquatic research projects where communities are part of leading the project were identified via the ARI research licence database for 2017.* * 2 measures informing 1 Performance Indicator	2.2.B.1. Work with community monitors and others to build capacity to participate in and undertake research projects.	Academic Partners, Aurora College	In progress	Many academic water partners actively engage community members and monitors in aquatic research and monitoring projects. Common methods of capacity building and participation include: involving community members in field work; providing opportunities for water quality sampling and equipment training; and seeking community input into the project design (i.e., site selection, identification of research questions based on community concerns; best practices for information distribution). Dechinta also provides students with opportunities to work closely with elders, faculty and traditional knowledge on various initiatives including water research projects.
			2.2.B.2. Provide information about research activities via newspaper and radio.	Academic Partners	In progress	Few aquatic research projects were identified that provided information to communities via newspaper and/or radio. Most aquatic research activities are reported to communities through other communication channels such as annual progress reports, individual face-to-face meetings, public open houses, workshops plain language summary documents, written summaries distributed via email, information accessible on a website or online portal, posters and presentations.

Use Responsibly

	Key to Success	2017/18 Performance Indicator Result	**Action Item** (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
3.1 - Municipal	3.1 A - Improve the sharing of information on municipal drinking water in the NWT.	21 (out of 32) water partner respondents agree or strongly agree that the roles and responsibilities associated with drinking water in the NWT are clear.* 21 (out of 31) water partner respondents agree or strongly agree that the roles and responsibilities associated with a municipal water licence (water use, wastewater, and waste) are clear.* 2107 members of the public accessed the drinking water website in 2017, 180 of which from within the GNWT network.* * 3 measures informing 1 Performance Indicator	3.1.A.1. Provide information to NWT residents on treatment and distribution of municipal drinking water by maintaining the new drinking water website and producing annual reports.	GNWT Interdepartmental Drinking Water and Waste Management Committee	Complete for reporting period, and ongoing	The new drinking water website (nwtdrinkingwater.ca) is up to date. The *2016 GNWT Report on Drinking Water* is available on the website. The *2017 GNWT Report on Drinking Water* is under development and is anticipated for release in summer 2018. The public drinking water database containing chemical sampling results and weekly bacteriological samples is currently being updated. Public posting of results will be done twice yearly beginning in fall 2018 after the new database is launched.
			3.1.A.2. Continue to promote water tank maintenance and provide educational information.	GNWT Interdepartmental Drinking Water and Waste Management Committee	In progress	Communicating the importance of maintaining healthy drinking water practices, including water tank maintenance and proper cleaning is a key part of ensuring safe drinking water. The GNWT departments of Health and Social Services (HSS) and MACA continue to encourage annual water tank cleaning when possible. Improvements have also been made to the public handout/fact sheet for how to clean inaccessible water tanks. The fact sheets provide clearer directions on cleaning water tanks to all residents. The fact sheets are available on the HSS website.
			3.1.A.3. Maintain or enhance the current public drinking water database containing chemical sampling results and weekly bacteriological samples.	HSS, MACA	In progress	The existing database for bacterial samples was up to date with results until December 31, 2016. Work is ongoing within HSS to utilize a new database for bacterial water sample results. MACA is continuing to enter chemical results data into the new database. Public posting of results will be done bi-annually once the new database is launched in fall 2018.
			3.1.A.4. Maintain the Circuit Rider Program training for water treatment plant operators, including routine maintenance, record keeping, course delivery for certification and drinking water sampling.	MACA	Complete for reporting period, and ongoing	MACA's Circuit Rider Program provides onsite training to operators, technical support for communities on water and waste issues, and periodic system reviews to ensure that infrastructure is in good working order. The program is ongoing. In 2017, 17 communities were involved in the program.
			3.1.A.5. Upgrade remote monitoring of drinking water parameters at specific water treatment plants.	MACA	In progress	MACA is continuing to implement the remote drinking water monitoring system at several water treatment plants.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
3.1 - Municipal (continued)	3.1 B - Improve municipal waste and wastewater systems in the NWT through waste management activities and the development of standards and guidelines.	1 guideline document was revised in 2017/2018 to support municipal waste and wastewater systems in the NWT.	3.1.B.1. Create and update guidelines to improve wastewater treatment systems in the NWT.	LWB/IWB, ENR	In progress	In 2017, the Mackenzie Valley Land and Water Board (MVLWB), ENR and MACA formed a working group to revise Schedule I (Standards for Process Effluent Discharged to Municipal Sewage Systems) of the GNWT's *Guideline for Industrial Waste Discharges.* This project is near completion. In March 2018, MVLWB updated *Operation and Maintenance Plan Templates* for Municipal Water Licences for Sewage Disposal Facilities and Water Treatment Plants. The templates are available on the Land and Water Boards' website. Information about these templates is communicated to municipal governments and MACA on an ongoing basis. MVLWB, ENR and MACA are participating on a Standard Council of Canada's Project to develop a *Guideline for Passive (lagoon/wetland) Wastewater Treatment Systems in Canada's North* under the project management of the Canadian Standards Association. The project remains in the research phase. Some research in coastal communities in Nunavut conducted previously by Dalhousie's Centre for Water Resource Studies is informing the process but there are still large information gaps regarding non-coastal areas. The large research questions are around the effectiveness of treatments systems in a Northern climate when maintained appropriately.
			3.1.B.3. Develop visual communication material with clear descriptions of the various processes for municipal water licences and the respective roles and responsibilities.	LWB/IWB	Complete for reporting period, and ongoing	The *Municipal Water Licence Roles and Responsibilities Guideline* was developed in early 2018. This guideline, adapted from the Inuvialuit Water Board, will help to clarify the roles and responsibilities of various organizations in community water and waste management and is available on the MVLWB website (mvlwb.com/content/municipal-water-licences-roles-and-responsibilities-guideline).
			3.1.B.4. Finalize NWT Guidelines for Municipal Landfills to improve leachate management practices for landfills in the NWT.	LWB, ENR	Complete	In 2017, ECCC published the *Solid Waste Management for Northern and Remote Communities, Planning and Technical Guidance Document,* which the Boards formally adopted as a guidance document for municipal solid waste management. The *NWT Guidelines for Municipal Landfills* project is no longer active due to using the ECCC guidance document.
			3.1. B.7. Update the *Good Engineering Practices for Northern Water and Sewage Systems* .	MACA	Complete	The *Good Engineering Practice for Northern Water and Sewer Systems, Second Edition* was updated and released in 2017. The document is available on the MACA website (maca.gov.nt.ca/sites/maca/files/resources/goodengpractice2ed.pdf).
	3.1 C - Improve municipal water licence compliance by addressing challenges and providing support and training.	0 formal meetings were held in support of maintaining and improving compliance; however, LWB/IWB staff liaise and communicate with municipalities on a regular basis through the year.	3.1.C.1. Clarify the approach to measure municipal water licence compliance in a meaningful and comprehensive manner.	LWB/IWB, ENR	Complete for reporting period, and ongoing	ENR Water Resource Officers (WROs) conduct inspections for water licence holders and report on compliance in water use inspection reports. LWB/IWB staff tabulate water licence compliance information for each community based on the outcomes of the inspection. These compilations consist of the requirements for the water licence, plan submissions, submission dates, etc.
			3.1.C.2. Track and report on number of inspections of municipal water licences.	ENR	Complete for reporting period, and ongoing	The number of inspections of municipal water licenses is tracked by ENR WROs. WROs report municipal water licence inspection information using the IRRA system. In 2017, 18 municipal water licence inspections were tracked and reported in the IRRA system, and 6 were tracked but not reported in IRRA.
			3.1. C.3 Develop and implement a plan to enhance municipal water licence compliance and address community issues and concerns.	LWB/IWB, ENR	In progress	Work to develop and implement a plan to enhance municipal water licence compliance is ongoing under the LWB/IWB's policies and areas of operation. Additional efforts to support communities to apply for, or comply with, their municipal water licence include outreach, education and template documents. See Status Description 3.1 C.4.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
3.1 - Municipal (continued)	3.1 C (continued) - Improve municipal water licence compliance by addressing challenges and providing support and training.	For 2016/2017, 62% of the municipal water licences holders submitted annual reports and 67% provided SNP monitoring data.	3.1.C.4. Identify items, such as training, support and outreach activities, that would enable communities to apply for, or comply with, their municipal water licence.	LWB/IWB, ENR	In progress	The LWBs/IWB support communities to apply for, or comply with their municipal water licence through various means, including outreach and education initiatives, development of template documents, community meetings and ongoing communication and support from Board Staff. ENR also participates in relevant outreach and education activities when opportunities arise, such as sharing information and presenting at the Northern Territories Water and Waste Association Conference and Operators Workshop.
			3.1.C.5. Work with municipalities to ensure unauthorized waste is not accepted at the landfills.	LWB/IWB, ENR	Complete for reporting period, and ongoing	Conditions to ensure that unauthorized waste is not accepted at municipal landfills are written into water licence requirements. The LWBs/IWB also communicate with municipalities on an ongoing basis to ensure municipalities are aware of nearby industrial operations and that the associated industrial water licences do not allow for the use of municipal landfills, unless authorized by an inspector. As part of the water licence review process (including review of applications and reports), ENR provides comments and flags scenarios where there may be a risk of unauthorized waste being accepted at municipal landfills. WROs also monitor and enforce unauthorized waste requirements during water licence inspections.
			3.1.C.6. Support communities by providing technical support and training for monitoring of SNP sites.	LWB/IWB, ENR	In progress	When there is capacity to do so, the LWBs/IWB work with ENR WROs and community governments to provide technical assistance and training to community members to conduct and complete the SNP sampling and reporting. Additional support is provided through broad outreach and education initiatives, the development of template documents and ongoing communication and support from LWB/IWB staff. The MVLWB is working towards developing customized SNP sampling manuals for municipal licencees to aid with SNP compliance. These manuals are still in the development phase and are anticipated for completion in spring 2019. WROs provide technical assistance and training for SNP sampling whenever possible. Completion of the SNP sampling manuals may facilitate additional opportunities for SNP training workshops for licenced communities.
			3.1.C.7. Continue to promote the standardized application, renewal, compliance and reporting templates for municipal water licensing.	LWB/IWB	Complete for reporting period, and ongoing	Templates have been created and are available on the LWBs/IWB websites. These templates are updated on a frequent basis. Information about these templates is communicated to municipal governments and MACA on an ongoing basis. Of note, regional Boards such as the Gwich'in Land and Water Board and IWB, bring members of the community together to discuss roles and responsibilities of the Board and the municipal government. LWB/IWB staff make efforts to work with ENR WROs to train the community workers to conduct and complete the SNP sampling and reporting. LWB/IWB staff are pursuing opportunities to present and promote municipal water licensing support tools at the NWT Association of Communities Annual General Meeting in 2018.
	3.1 D - Improve the understanding of waste and wastewater systems in NWT communities and consider traditional knowledge in municipal water licensing processes.	0 research projects on environmental impacts of municipal waste and wastewater were active in 2017.	3.1 .D.1. Work with water partners and prioritize and support research areas to improve the understanding of the environmental impacts of waste and wastewater in NWT communities.	ENR	In progress	Research to improve the understanding of the environmental impacts of waste and wastewater in NWT communities has primarily been linked to the development and revisions of municial waste and wastewater guidelines. See Status Description 3.1 B.1.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
	3.1 D (continued) - Improve the understanding of waste and wastewater systems in NWT communities and consider traditional knowledge in municipal water licensing processes.		3.1 .D.2. Ensure opportunities to include traditional and local knowledge in municipal water licencing are clearly communicated.	LWB/IWB	In progress	LWBs/IWB have an online public review system. Staff from LWBs/IWB also visit communities to hold meetings and hear concerns. These meetings are advertised beforehand and provide an opportunity for local community members to share traditional and local knowledge and their concerns.
3.2 -Industrial Development	3.2 A - Ensure clarity and facilitate understanding of water use, waste and wastewater regulatory processes.	21 (out of 32) water partner respondents agreed that they know who to contact if regulatory roles and responsibilities are not clear.* 16 (out of 28) water partner respondents agreed that industrial water licensing roles and responsibilities are clear.* * 2 measures informing 1 Performance Indicator	3.2.A.1. Ensure plain language information on regulatory processes for environmental assessments and water licensing is available to water partners.	LWB/IWB, MVEIRB, ENR	Complete for reporting period, and ongoing	The LWBs/IWB have plain language documents available on regulatory processes, including a water licence application guide and plain language information on NWT water regulations. MVEIRB provides plain language environmental assessment information to the public, including information outlining the various environmental assessment steps (http://reviewboard.ca/process_information/step_by_step_information) and environmental assessment guidelines (http://reviewboard.ca/process_information/guidance_documentation/guidelines). MVEIRB is also developing a series of plain language pop-up displays, booklets, and videos.
			3.2.A.2. Provide information on how to participate in the regulatory process at community meetings and other events.	LWB/IWB, MVEIRB, ENR	Complete for reporting period, and ongoing	LWBs/IWB and MVEIRB publish notices of meetings, hearings and reviews in newspapers and in other ways based on direction from staff at the communities involved. At community scoping sessions and hearings, MVEIRB staff provide explanations about how to participate in the regulatory process. In February 2018, MVEIRB, LWBs/IWB and the territorial and federal governments hosted a Resource Co-Management Workshop. The workshop - *Mackenzie Valley Resource Management Act (MVRMA) Workshop - A Project Gets the Green Light: Now What?* - focused on the follow-up, monitoring and compliance of developments projects in the Mackenzie Valley. The content of the workshop considered the stages of a project lifecycle after the environmental assessment is complete, including regulatory permitting, ongoing project monitoring and compliance, and closure and reclamation. The workshop also served to identify opportunities for Indigenous and public input in the process.
			3.2.A.3. Describe in plain language and communicate how traditional and local knowledge can be included in water licences and environmental assessments.	LWB/IWB, MVEIRB, ENR	In progress	LWBs/IWB have an online public review system for members of the public to provide comments on water licening, including traditional and local knowledge. Staff from LWBs/IWB also visit communities to hold meetings where community members can share traditional and local knowledge and concerns. MVERIB prepares a Terms of Reference that describes the information a project developer must provide during an environmental assessment. MVEIRB requires the developer to make all reasonable efforts to work with potentially affected Indigenous communities and incorporate traditional knowledge into the following: project design; predictions and evaluations of impacts from the project on the environment and people; mitigations proposed to avoid or eliminate impacts; and follow-up and monitoring. This information assists in evaluating the incorporation and use of traditional knowledge in its determinations of significant adverse impacts. The methods used in the acquisition, analysis and presentation of traditional knowledge should be consistent with MVEIRB's *Guidelines for Incorporating Traditional Knowledge into the Environmental Impact Assessment Process* and must follow local protocols.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
3.2 -Industrial Development (continued)	3.2 B - Improve clarity and facilitate understanding of industrial water licence compliance.		3.2.B.1. Clarify roles and responsibilities for industrial compliance and identify areas for policy improvements.	LWB/IWB, ENR, Lands	In progress	The day-to-day roles and responsibilities of the GNWT Inspectors are to be clarified in a new Field Operations Directive (FOD). However, the FOD is currently on hold as the GNWT is conducting a policy review to update an Enforcement Policy that is intended to provide guidance and a foundation for compliance and enforcement associated with land permits and water licences. The department of Lands has identified this policy review as a high priority for 2018/19 and anticipates the updated Enforcement and Compliance policy to be completed in spring 2019. The FOD will be updated based on the policy update. In the interim, the old directive is in place.
			3.2.B.2. Track and report on number of inspections of industrial water licences.	ENR, Lands	Complete for reporting period, and ongoing	Industrial water licence inspections were tracked in 2017. 33 inspections were completed in the North Slave Region, five were completed in the South Slave Region, one was completed in the Dehcho Region and six inspections were completed in the Inuvik Region. There were no active operations that required inspection in the Sahtu Region.
	3.2 C - Review and develop guidelines and regulations to clarify existing regulatory and environmental assessment processes.	2 pieces of water legislation were under review in 2017. 5 guidelines were under review in 2017.	3.2.C.1. Identify the components of an integrated water management system (e.g. water classification system, site-specific water quality objective derivation process, baseline data collection, mixing zone, environmental assessment initiation) to support the Water and Effluent Quality Management policy and decision-making in environmental assessments.	LWB/IWB, ENR	In progress	The integrated water management system consists of a number of initiatives intended to support the regulatory regime in the NWT. Below is an update on these various initiatives: • Work on the water classification system continues to be on hold. Work is underway to reassess the concept and determine if and how such a system could enable assessment of water resources and support decision making. • Water Quality Baseline Guidelines were developed and circulated for review in 2017/18. The process is being directed by a steering committee with representatives from MVEIRB, LWBs/IWB and ENR. The guidelines are intended to fill a gap and support the review and update of the AEMP guidelines which are anticipated to be finalized in early 2019. • Mixing Zone Guidelines were developed by ENR and the LWBs/IWB. The guidelines were approved by the Boards and GNWT and released jointly in September 2017.
			3.2.C.3. Provide a short description of water license requirements and management plans.	LWB/IWB, ENR	In progress	There are supporting documents publically available regarding water license requirements in the NWT. However, there is a need to improve how lead partners communicate information about water licenses and management plans and how they relate to one another. LWBs/IWB are currently working on a new plain language G*uide to the Water Licensing Process* that will be released in 2018. A *Municipal Water Licence Roles and Responsibilities Guideline* was developed in early 2018 . See Status Description for 3.2 B.3.
			3.2.C.4. Review territorial legislation relevant to water management and identify areas for improvement.	ENR	In progress	A review of the *NWT Waters Act* and Regulations began in 2016 and is ongoing. The *Waters Act* is anticipated to be completed in early 2019.

	Key to Success	2017/18 Performance Indicator Result	Action Item (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
3.2 -Industrial Development (continued)	3.2 C (continued) - Review and develop guidelines and regulations to clarify existing regulatory and environmental assessment processes.		3.2.C.5. Review existing regulatory guidelines and policies relevant to water management post devolution and revise as necessary.	ENR	Complete for reporting period, and ongoing	Five regulatory guidelines were reviewed in 2017/18 - Guidelines on Mixing Zones (finalized), Water Quality Baseline Guidelines (under review), Aquatic Effects Monitoring Program Guidelines (under development), Guidelines for Hydrocarbon Contaminated Soil Treatment Facilities (under development), and Guidelines for Closure and Reclamation Cost Estimates for Mines (finalized).
			3.2.C.6. Review and revise existing AEMP Guidelines.	LWB/IWB, ENR	In progress	A review of the A*quatic Effects Monitoring Program Guidelines* was initiated in 2017 and is being led by the LWBs/IWB with ENR and MVEIRB. The guidelines are being revised following the closure of the initial review period to address reviewer comments. The guidelines are anticipated to be completed in early 2019.
			3.2.C.8. Develop guidelines for project descriptions in environmental assessments to support decision-making.	MVEIRB	In progress	MVERIB is developing Environmental Assessment Initiation Guidelines to describe the information needed to begin an environmental assessment. The concept of the guidelines was presented at the 2016 NWT Geoscience Forum and a concept paper was released in April 2018. A workshop is planned for June 2018, after which a draft guideline will be completed and sent out for public review.

Check Our Progress

	Key to Success	2017/18 Performance Indicator Result	**Action Item** (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
4.1: Routine Checks	4.1 A - Ensure progress on the Action Plan occurs.	54 Performance Indicators and 119 Action Items were assessed in the 2017/18 progress review (the second annual progress report).	4.1.A.1. Survey appropriate water partners to assess progress on specific Keys to Success using performance indicators, and to identify challenges and successes.	ENR	Complete for reporting period, and ongoing	ENR launched a survey that was circulated to lead and supporting water partners in April 2018. ENR also contacted various water partners directly to collect additional information on the Water Strategy implementation progress for 2017. Progress is determined by defined Action Items and Performance Indicators in the NWT Water Stewardship Strategy Action Plan 2016-2020. Action Items are activities that specific water partners are leading and Performance Indicators are intended to measure the outcomes of those activities.
			4.1.A.2. Routinely update water partners on implementation activities (e.g. annual reports and website).	ENR	Complete for reporting period, and ongoing	Implementation updates were primarily provided to water partners through the 8th Annual Water Strategy Implementation Workshop held in November 2017. Water partners shared updates of recently completed, ongoing and planned implementation activities through posters and panel presentations. Water Strategy implementation progress for 2016/17 was communicated to water partners and the public through the release of *Check Our Progress – 2016/17 NWT Water Stewardship Strategy Progress Review Summary* and *NWT Water Strategy Action Plan 2016/17 Progress Report – Comprehensive Raw Data Spreadsheet* . The 2016/17 summary is intended for a public audience and uses plain language text and infographics to convey implementation status. Additional water partner implementation updates were posted to the website. See Status Description for 1.3 A.1.
			4.1.A.3. Hold an annual workshop to report on successes, improvements and remaining challenges.	ENR	Complete for reporting period, and ongoing	ENR hosted the 8th Annual Water Strategy Implementation Workshop in Dettah in November 2017. The objectives of the workshop were to review implementation of the Water Strategy, including updates on Water Strategy initiatives and aquatic ecosystem monitoring and research results; review and discuss the outcomes of the *2016/17 NWT Water Stewardship Strategy Progress Review Summary;* and review proposed Water Strategy research priorities for the upcoming year. The workshop included five themed panels with a total of 20 panelists, five additional presentations from water partners, a poster fair with twelve poster presentations and a story telling panel from four community partners. Water partners also participated in a two-hour break-out session to discuss research priorities.

	Key to Success	2017/18 Performance Indicator Result	**Action Item** (2017, 2018 and ongoing)	Action Item Lead	2017/18 Action Item Status	2017/18 Action Item Status Description
4.1: Routine Checks (continued)	4.1 A (continued) - Ensure progress on the Action Plan occurs.		4.1.A.4. Document and share how traditional and local knowledge information is included in the different components of the Action Plan and make it part of routine reporting.	ENR	Complete for reporting period, and ongoing	Implementation activities under the Work Together, Know and Plan and Use Responsibly components of the 2016-2020 Action Plan all identify approaches for including traditional and local knowledge in Water Strategy implementation. Approaches include: providing opportunities for knowledge holders to provide guidance and input at regulatory workshops, meetings and hearings; integrating technologies for information collection and sharing on the land and water; including traditional and local water-related knowledge in existing school curriculums and science fairs; holding intergenerational on-the-land camps; developing Traditional Knowledge Research Guidelines for the Sahtú Region; providing opportunities for researchers and traditional knowledge holders to interact and exchange experiences and knowledge; supporting community-led water-related traditional knowledge projects; defining and implementing traditional knowledge monitoring priorities related to cumulative impacts; and working to ensure that traditional knowledge and community concerns are included in projects or monitoring programs such as Aquatic Effects Monitoring Programs (AEMP) for industrial activities in the NWT. Water Strategy implementation activities that included traditional and local knowledge in 2017 included: ongoing guidance from the Aboriginal Steering Committee on research activities related to traditional knowledge; supporting on-the-land camps; initiated development of an approach for traditional knowledge informing selection of biological indicators for NWT's large transboundary rivers; storytelling panels and presentations at the Water Strategy Implementation Workshop in November 2017; hosting a two-eyed seeing workshop in May 2017 to support identification of indicators for the upcoming State of the Aquatic Ecosystem Report by the MRBB; supporting community-led water related traditional knowledge projects (e.g., tracking change); and working to ensure opportunities to include traditional and local knowledge in municipal water licencing are clearly communicated.
4.2: Independent Evaluation	4.2 A - Ensure an independent evaluation of the Water Strategy takes place every five years and recommends actions to be undertaken.	*No Performance Indicators or Action Items with 2017 or 2018 deliverable date*				