Government of Northwest Territories
Gouvernement des Territoires du Nord-Ouest

**2018/2019 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* (2016-2020 Action Plan) in 2016. The third progress review of the 2016-2020 Action Plan for the 2018/2019 implementation period was undertaken in 2019, assessing 54 Performance Indicators and 131 Action Items. This spreadsheet contains data for each Performance Indicator and Action Item that were assessed during the 2018/2019 review.

Data are organized into four sections which 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 results determined from the progress review survey (e.g. 26 out of 43 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 2018/2019 NWT Water Stewardship Strategy Progress Review Summary is available on the ENR website.

**List of Acronyms**

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| AEMP | Aquatic Effects Monitoring Program |
| ARI | Aurora Research Institute |
| ASC | Aboriginal Steering Committee |
| BMC | Bilateral Management Committee |
| BWMA | Bilateral Water Management Agreement |
| 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 | Department of Environment and Natural Resources, GNWT |
| FOD | Field Operations Directive |
| GNWT | Government of the Northwest Territories |
| HSS | Department of Health and Social Services, GNWT |
| Lands | Department of Lands, GNWT |
| LWB/IWB | Land and Water Boards (Gwich'in Land and Water Board, Mackenzie Valley Land and Water Board, Sahtú Land and Water Board, and Wek'èezhìı Land and Water Board) and Inuvialuit Water Board |
| MACA | Department of 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 | ʔehdzo Got'ı̨nę Gots'ę́ Nákedı (Sahtú Renewable Resource Board) |
| WLWB | Wek'èezhìı Land and Water Board |
| WLU | Wilfird Laurier University |
| WRO | Water Resource Officer |

## Work Together

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description • |
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| 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). | 7 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.<br><br>The Water Strategy vision and goals are considered in six watershed and natural resource planning and management frameworks, including: *Northern Lands, Northern Leadership: The GNWT Land Use Sustainability Framework* ; Sahtù Land Use Plan Background Report; NWT Power Corporation Strategic Plan; the *2030 NWT Climate Change Strategic Framework* ; the *2019-2023 Climate Change Strategic Framework Action Plan* ; the *Waste Resource Management Strategy Discussion Paper* ; and the Draft Waste Resource Management Strategy.<br><br>Several water partner organizations refer to and acknowledge the Water Strategy vision and goals in their work, including:<br>• Ecology North;<br>• Ducks Unlimited Canada (DUC);<br>• Wilfrid Laurier University's (WLU) Cold Regions Research Centre and Institute for Water Science;<br>• Land and Water Boards and the Inuvialuit Water Board. |
| | 1.1 B - Ensure water partners understand their roles and responsibilities for implementing the Water Strategy. | 26 (out of 43) water partner respondents indicated they are aware of their role implementating the Water Strategy.*<br><br>13 (out of 43) water partners respondents indicated they are actively engaged in specific Keys to Succes.*<br><br>**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 | Complete for reporting period, and ongoing | A stand-alone plain language document summarizing lead and supporting water partners' roles and responsibilities specific to the 2016-2020 Action Plan was created and released in September 2018. An audio version of a plain language Action Plan summary is available in NWT's eleven languages.<br><br>The *Northern Voices, Northern Waters: NWT Water Stewardship Strategy* was updated in 2018 to reflect significant policy changes stemming from the NWT Lands and Resources Devolution Agreement that came into effect on April 1, 2014. |
| | | | 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 9th Annual Water Strategy Implementation Workshop in October 2018 brought both lead and supporting water partners together to share information and knowledge and discuss opportunities to collaborate, particularly around the theme of ways of knowing and linking knowledge systems. |
| | | | 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 2018/19 included;<br>• partnerships within ENR and among Government of the Northwest Territories (GNWT) departments;<br>• NWT-wide Community-based Water Quality Monitoring (CBM) Program;<br>• Mackenzie River Basin Board (MRBB);<br>• Slave River and Delta Partnership (SRDP);<br>• Tracking Change research project;<br>• GNWT-Wilfrid Laurier (WLU) Partnership;<br>• Interdepartmental Drinking Water and Waste Management Committee;<br>• various academic partnerships such Northern Water Futures. |

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| 1.2 - Information Management | 1.2 A - Improve data collection and data and information management for water and water-related monitoring programs. | 12 water monitoring and research projects are managed in Lodestar.<br><br>18 (out of 32) water partners indicated that water quality monitoring activities coordinated, supported or required 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.<br><br>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. ECCC also follows internal protocols for data management and quality assurance/quality control (QA/QC) procedures.<br><br>The NWT Cumulative Impact Monitoring Program (NWT CIMP) promotes the use of standardized data collection protocols, enabling data comparisons between areas. Recipients of NWT CIMP funding are asked to use standardized protocols where possible. In 2018/19, 10 NWT CIMP projects reported using standardized protocols in the collection of water quality data.<br><br>All 21 communities participating in the NWT-wide CBM Program follow standardized water quality sampling protocols, enabling data comparison between communities over time. |
| | | | 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 is also currently working with the Land and Water Boards on the development and implementation of water quality reporting guidelines (currently under review). The objective of the guidelines is to address the inconsistences in water quality information posted to the Public Registry and provide clear expectations to project proponents. |
| | | | 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 Guideline development continued in 2018/19. The process is being directed by a Steering Committee with representatives from Mackenzie Valley Environmental Impact Review Board (MVEIRB), LWBs and ENR. The guidelines are intended to fill a gap in the system and support the review and update of the AEMP guidelines which were finalized early 2019. In January and February 2019, ENR finalized the Water Quality Baseline Guideline document based on reviewer comments and recommendations from the Steering Committee and created a comment response table for all 121 public recommendations. The Final Baseline Guidelines are to presented to the Mackenzie Valley Land and Water Board (MVLWB) Chairs Committee in April 2019. |
| | | | 1.2.A. 5. Establish protocol to store, manage and report data from SNP sites. | LWB/IWB | In progress | The LWBs/IWB set the conditions for the Surveillance Network Program (SNP) locations, parameters and limits based on the water licence application and supporting documents. To maintain the quality of the SNP monitoring data, the quality assurance/quality control (QA/QC) plan is approved by the analyst (i.e. Taiga Lab). Municipal licencees under the MVLWB have agreed to allow Taiga Lab to send direct lab results to ENR and the LWBs. With this data sharing agreement with each community, analytical reports for SNP data are sent directly to board staff and the inspector at the same time the lab sends the data to the community's staff.<br><br>SNP data results are presented within annual reports and are shared on the LWBs/IWB public registries.<br><br>The LWBs/IWB and ENR continue to work towards developing metadata standards that may, in time, be applied to requirements to data submissions to the boards. |
| | | | 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. The 2019 Spring Outlook Report was distributed broadly and provided data for 60 sites sampled in 2019. |

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| 1.2 - Information Management (continued) | 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 2019.<br><br>The NWT Discovery Portal had 1,816 total users in 2018/19, averaging 151 users per month.<br><br>The number of total Mackenzie DataStream users in 2018/19 was 5,194. The average number of users per month was 433.<br><br>25 (out of 39 respondents) water partners indicated that they have access to up-to-date water-related research at their work. | 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 averaged 151 users per month in 2018/19, approximately 59% of which were NWT users. The Portal averaged 1,157 page views per month in 2018/19, which represents the total number of pages viewed, 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. The five-year (2012-16) technical report and plain language summary were published in late 2018. The plain language summary was sent out to community partners and collaborators. It is available on both the ENR website and Mackenzie Datastream. |
| | | | 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 | In progress | The NWT Water Monitoring Inventory was originally released in 2013 and is currently undergoing updates. |
| | 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. | 27 (out of 38 respondents) indicated that their organization often uses western scientific knowledge to inform decision-making within their organization.*<br><br>18 (out of 38 respondents) indicated that their organization often uses traditional and local knowledge to inform decision-making within their organization.*<br><br>* 2 measures informing 1 Performance Indicator<br><br>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 | Complete for reporting and ongoing | 20 (out of 37) 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 that 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 2018/19. |
| | | | 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 | ENR prepared the technical report plain language summaries for the CBM Program that was published in the winter of 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 results-based workshop. In 2018, the workshop was held in Yellowknife and featured research and monitoring projects conducted across the NWT. In addition to the 13 results presentations, break-out group discussions were well-attended and provided valuable input for planning the next five years of NWT CIMP.<br><br>ARI continues to support 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. |

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| 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. | 28 (out of 37 respondents) water partners indicated that they were neither dissatisfied nor satisfied with how traditional and local knowledge is being included in water-related research within the NWT.<br><br>4 (out of 10) water partners respondents feel that community concerns have been incorporated in the AEMPs. | 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, traditional knowledge is gathered in a meaningful way and traditional knowledge informs decision-making. ASC members provide guidance on relevant traditional knowledge projects 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.<br><br>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 Sahtú region | ʔehdzo Gotʼıné Gotsʼé Nákedı (Sahtú Renewable Resource Board - SRRB) | In progress | SRRB has initiated work on traditional knowledge guidelines for the Sahtú Region. However, due to the SRRB's capacity constraints, 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 | 15 (out of 38) water partners respondents initiated or have 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:<br>• ongoing communication (teleconference, email and in-person contact) with local resource boards, research participants, band councils, research advisory committees, communities and water partners;<br>• storytelling and active on-the-land research participation;<br>• workshops with research participants and partners; formal and informal community meetings;<br>• regulatory proceedings; guideline development and review;<br>• 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 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.<br><br>The IWB has no online public review system. The IWB distributes water licence application packages to stakeholders (e.g. community and government organizations) via email for their review and comment. The IWB does not hold community meetings as this is a requirement of the applicant. The applicant provides a community consultation record with the application package.<br><br>MVEIRB prepares Terms of Reference documents that describe the information a project developer must provide during an environmental assessment, including evidence of making all reasonable efforts to work with potentially affected Indigenous communities and incorporating traditional knowledge.<br><br>The ASC provides ongoing advice to researchers undertaking traditional knowledge projects. Six projects received advice from the ASC in 2018/19 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 traditional knowledge informs decision-making.<br><br>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. |

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| 1.3 - Communication and Engagement | 1.3 A - Effectively maintain communications among water partners and the public on Water Strategy implementation progress. | 12 (out of 18) water partner respondents indicated they are satisfied with the Water Strategy implementation progress.<br><br>8 updates were made to the water stewardship website in 2018. | 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 October 2018, in addition 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 2017/18 NWT Water Stewardship Strategy Progress Review, release of the updated 2018 NWT Water Stewardship Strategy, and launch of the 2018 Youth Photo Contest.<br><br>Water partners also provided specific implementation updates through community meetings, research collaborations, workshops, blog posts, personal contact, annual reports, conferences, community posters and other forums such as the Wetlands Mapping Inventory. |
| | | | 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 2018 Action Items was reported in Check Our Progress – 2017/2018 NWT Water Stewardship Strategy Progress Review Summary and 2017/18 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 online and in print.<br><br>18 (out of 39) water partner respondents indicated that they feel informed about the Water Strategy implementation progress. |
| | 1.3 B - Maintain the roles and responsibilities of the ASC. | 7 ASC meetings were held in 2018.<br><br>9 Water Strategy projects received guidance from the ASC in 2018/19. | 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 | Nine projects received guidance from the ASC in 2018/19:<br>1. Tracking Change: Local and Traditional Knowledge in watershed governance (University of Alberta, MRBB and ENR)<br>2. Youth Water Stewardship and Mentorship Grant Program<br>3. Annual 2018 NWT Water Strategy Implementation Workshop<br>4. Implementation of the Alberta-NWT Bilateral Water Management Agreement<br>5. Implementation of the British Columbia-NWT Bilateral Water Management Agreement<br>6. Negotiation of a revised Yukon-NWT Bilateral Water Management Agreement<br>7. NWT-wide Community-based Water Quality Monitoring (CBM) Program<br>8. NWT Water Act Amendments<br>9. Bottled Water Use on the Land Project |
| | | | 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 | Five projects received advice from the ASC in 2018/19 regarding traditional knowledge:<br>1. Tracking Change: Local and Traditional Knowledge in watershed governance (University of Alberta, MRBB and ENR)<br>2. Implementation of the Alberta-NWT Bilateral Water Management Agreement (ENR)<br>3. Implementation of the British Columbia-NWT Bilateral Water Management Agreement (ENR)<br>4. Annual 2018 Water Stewardship Strategy Implementation Workshop (ENR)<br>5. Mackenzie River Basin Board (MRBB) State of Aquatic Ecosystem Report (SOAER) |
| | | | 1.3.B.5. Report on relevant regional initiatives at ASC meetings. | ASC | Complete for reporting period, and ongoing | ASC meetings have a standing agenda item for members to provide regional updates. In 2018, ASC members shared various updates on programs and projects being undertaken by their respective regions, including the Tłı̨chǫ Aquatic Effects Monitoring Program, Indigenous Guardians Programs, funding opportunities for community-based water quality monitoring activities, the Tracking Change research project, and Bilateral Management Committees for the completed transboundary water agreements. |

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| 1.4 - Capacity Building, Leadership Training and Education | 1.4 A - Increase community capacity in water management, and aquatic research and monitoring. | 28 (out of 33) communities are involved in aquatic community-based monitoring.<br><br>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 instrument installation, aquatic safety, sampling, monitoring, and reporting.<br><br>13 (out of 34 respondents) water partners identified that their organization provided on-the-land capacity-building opportunities. The exact number of opportunities and number of attendees that took part in these on-the-land capacity-building opportunities is unclear due to limited responses to the Water Partner survey question. | 1.4.A.1. Provide monitoring results to communities in the appropriate context and in plain language formats. | ENR | In progress | In 2018, NWT CIMP developed, published and distributed two brief plain language summaries of various environmental research projects in the NWT. The series is called the Northern Environmental Research Bulletin (NERB). All 27 NWT CIMP-funded research projects are required to present results at a relevant northern meeting. In 2018, the NWT CIMP results workshop featured research and monitoring projects conducted across the NWT. |
| | | | 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. 4. Support ways to tie traditional and local water-related knowledge into the existing school curriculums and science fairs. | ENR | Complete for reporting period, and ongoing | In May 2018, Tracking Change: Local and Traditional Knowledge in Watershed Governance research initiative hosted its third annual Youth Knowledge Fair in Edmonton, AB at the University of Alberta Campus. Youth, grades 11-12, from communities across the Mackenzie River Basin attended the three-day event. Objectives of the knowledge fair included creating opportunities for high school youth to connect with each other; support students to learn about their own histories; ecosystems and communities, encourage the development of research and written/oral communication skills; create opportunities for youth and schools to network with other youth globally on issues of climate change through the Centre for Global Education.<br><br>Ecology North held numerous classroom sessions about water treatment in the NWT and outdoor drinking water education activities. They also provided mentorship for the successful youth water stewardship mentorship and grant applicants for their projects, and coordinated the Youth Water Stewardship Gathering in Yellowknife in March 2018.<br><br>2018 Youth Water Stewardship Mentorship and Grant Program recipients (Melissa MacLellan, North Slave Métis Alliance World Water Week Celebration; and Kathleen Fordy, A Flow of New Water Keepers and the Water Ways of the Ancestors) carried out their projects which included a youth photo contest, water workshop, film night, and water treatment plant tour. ENR hosted also its annual NWT Youth Water Stewardship Mulitmedia Contest, inviting youth to submit photos and videos and art with captions that describe their connection to water.<br><br>Rivers to Oceans Day took place in June and 300 Yellowknife youth (grades one and five) spent the day circulating around 15+ stations that had various water/river/ocean-related activities. |

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| 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.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.<br><br>Dehcho AAROM has been heavily involved in increasing capacity in the communities to carry out water management through both education, formal and informal training and employment. In 2018, Deh Cho First Nations coordinated a "Guardians Training Program", in Fort Simpson. Participants received training and certification in Environmental Monitoring, Boat Safety, First Aid, Gun Safety, Bear Awareness and Radio Operator. Following successful completion of the program, Guardians were tasked with monitoring the Enbridge Pipeline replacement and will play important roles in monitoring the Edéhzhíe Protected Area. Dehcho guardians, trained in the previous year, continued to carry out monitoring in partnership with the NWT-wide CBM program. Most guardians are now able to conduct sampling and monitoring activities independently, if required. In addition, Dehcho AAROM hired a AAROM Technician/CBM Coordinator in Kakisa as well as an another community member to assist with monitoring activities. Both new employees have received and continue to take part in training with ENR and the Dehcho AAROM Coordinator.<br><br>ARI Western Arctic Research Centre (WARC) participated in workshop training initiatives, outreach and training, including Climate Monitoring Training and Imaryuk Monitor training to develop community environmental monitor expertise. |
| | | | 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 2018. These included the Tundra Science and Culture Camp, Dehcho Youth Ecology Camp, Dechinta Water Programming and the Tłı̨chǫ Imbe Program and Indigenous Guardians Programming. SRRB continued their participation in Tracking Change: Local and Traditional Knowledge in Watershed Governance program with an on-the-land camp, in partnership with the Fort Good Hope ʔehdzo Gotı̨nę (Renewable Resources Council).<br><br>Tides Canada continues to support on-the-land and community-led research and monitoring programming in the NWT. Through the NWT On-The-Land Collaborative funding issued in 2018/2019, support was provided to Indigenous Guardian programming in the NWT, such as the Dehcho K'ehodi Stewardship and Guardian Program. In addition, Tides Canada hosted a pan-northern Indigenous Guardian gathering in Yellowknife, bringing together guardians from all three territories. Discussions focused on the training needs of guardian programs, including building the skills required for effective water monitoring and management. |
| | | | 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. Upgrades to the site content and architecture are underway and anticipated to be complete in 2019. |
| | 1.4 B - Promote the importance of water and water stewardship through educational and public outreach activities and communication products. | | 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 2018/19. Examples of activities relevant to the protection of aquatic ecosystems include:<br>• Rivers to Oceans Day<br>• Water Stewardship Strategy Youth Leadership Workshop in Yellowknife<br>• school visits<br>• Tracking Change Youth Knowledge Fair<br>• NWT Youth Water Stewardship Multimedia Contest<br>• NWT Youth Water Stewardship and Mentorship Grant Program Projects (A Flow of New Water Keepers and the Water Ways of the Ancestors; World Water Week Celebration North Slave Métis Alliance)<br>• Community Healthy Living Fairs. |

| | Key to Success | 2018/2019 Performance Indicator Result | Action Item (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description • |
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| 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. | 24 water stewardship outreach activities were undertaken in 2018 as a result of Canada Water Week and other initiatives. | 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.<br><br>In 2018, ENR announced a new pilot mentorship grant program to support NWT youth in making their water stewardship project ideas a reality. The purpose of the grant program is to support youth engagement and leadership in water stewardship and help connect young people to experiences and resources that further build their skills and interest in water stewardship. The program, with a total of $10,000, offers support through mentorship and a number of small project grants. |
| | | | 1.4.B. 3. Coordinate and develop activities to celebrate Canada Water Week. | ENR | Complete for reporting period, and ongoing | In March 2019, Ecology North 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.<br><br>The IWB has initiated a program to go to the Inuvialuit Settlement Region (ISR) communities to celebrate various events (e.g. World Water Day, Waste Reduction Week) within the framework of the IWB Communication Strategy. |
| | | | 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 held numerous classroom sessions about water treatment in the NWT, hosted outdoor drinking water education activities, provided mentorship for youth water stewardship mentorship and grant applicants for their projects, and coordinated the Youth Water Stewardship Gathering in Yellowknife. |
| | | | 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 | Ecology North visited eight communities in the NWT for the Community Healthy Living Fairs. At the Drinking Water Education booth, community members learned about the health and ecological impacts of plastics. Ecology North continued to encourage the public to do their part and sign the #loveNWTwater pledge and gave out reusable water bottles. Ecology North also had booths set up at several events in Yellowknife in 2018/19. |
| 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 2018.<br><br>7 (of 7) ASC meetings held in 2018 provided an update on transboundary water management activities.<br><br>2 opportunities for public input were provided for bilateral transboundary water management agreement negotiation in 2018. | 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 with Saskatchewan, Yukon and Nunavut 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 and British Columbia. |
| | | | 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) Yukon-NWT Agreement (update to existing agreement); 2) Saskatchewan-NWT Agreement; and 3) Nunavut-NWT Agreement.<br><br>5 meetings to update and align the 2002 Yukon-NWT Transboundary Water Management Agreement with more recently signed Mackenzie River Basin Agreements occurred in 2018.<br><br>The Saskatchewan government is conducting an internal review after discussions in 2015 and 2016 to develop a Saskatchewan-NWT Agreement. Discussions are anticipated to resume in 2019.<br><br>NWT is ready to continue discussions toward a Nunavut-NWT Agreement. Nunavut is expected to be ready to engage with the NWT once a Nunavut 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. |

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description • |
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| 1.5 - Transboundary Discussions, Agreements and Obligations (continued) | | | 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 progress on negotiations has been communicated during ASC meetings, presentations (e.g. Project WET course in July 2018, Water Strategy Implementation Workshop in October 2018), the 2017/18 Water Strategy Progress Review Summary and the water stewardship website (nwtwaterstewardship.ca). |
| | 1.5 B - Successfully implement bilateral transboundary water management agreements. | 3 opportunities for public input were provided for bilateral transboundary water management agreement implementation in 2018 (Peace River Watershed Planning and Advisory Council AGM meeting, Project WET Course, annual Water Stewardship Strategy Workshop).<br><br>15 implementation activities are in progress and 9 were completed under the Alberta-NWT Agreement in 2018.*<br><br>3 implementation activities were in progress under the British Columbia-NWT Agreement in 2018.*<br><br>* 2 measures informing 1 Performance Indicator | 1.5.B.1. Establish a Bilateral Management Committee for each completed agreement. | ENR | In progress | A Bilateral Management Committee was established under the Alberta-NWT Agreement in 2016. The Bilateral Management Committee meets at least annually to approve work plans and annual reports to the responsible Ministers.<br><br>Work is underway to establish a Bilateral Management Committee under the British Columbia-NWT Agreement with a meeting planned for April 2019. |
| | | | 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 Alberta-NWT Agreement in 2016 and is updated annually.<br><br>The NWT and British Columbia are discussing implementation priorities and a terms of reference for the British Columbia-NWT Bilateral Management Committee. |
| | | | 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 Alberta-NWT border sites was increased to help develop mercury triggers for implementation of the Alberta-NWT Agreement. A biological indicators workshop took place in January 2018 to begin planning biological monitoring for the Hay and Slave Rivers. Benthic macroinvertebrate monitoring continued in 2018. |
| | | | 1.5.B.4. Establish information sharing and prior notification mechanisms with neighbouring jurisdictions. | ENR | In progress | NWT regularly tracks upstream development and activities that might affect the ecological integrity of the aquatic ecosystem of shared Alberta-NWT waters and has created a tracking mechnism to do so. NWT is working on a similar tracking process for upstream development and activities that might affect the ecological integrity of the aquatic ecosystem of shared British Columbia-NWT waters. |
| | | 2 annual reports were completed in 2018, for the Alberta-NWT Agreement and the British Columbia-NWT Agreement. | 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 second Alberta-NWT annual report (2016-2017) on implementation progress was released in November 2018. The 2017/18 annual report is being drafted and public release is anticipated for late 2019.<br><br>Information about implementation progress for the Alberta-NWT Agreement was also communicated during ASC meetings, presentations (e.g. Watershed and Partnership Advisory Council AGM in Peace River, AB (June 2018), a Project WET course (July 2018), and Water Strategy Implementation Workshop (October 2018)), the 2017/18 Water Strategy Progress Review Summary and the water stewardship website (nwtwaterstewardship.ca). |

## Know and Plan

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 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.<br><br>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.<br><br>The ENR Water Management and Monitoring Division worked with the Climate Change section to incorporate Action Items into the Climate Change Strategic Framework Action Plan that assess and prioritize existing long-term water monitoring networks suitable to analyze climate change trends and/or impacts. |
| | | | 2.1. A. 2. Identify and prioritize monitoring gaps and identify options to address gaps in a holistic manner. | ENR, ECCC | In progress | ECCC's network is continuously being reviewed using a risk-based approach. Financial constraint is a barrier to expanding the network to fill gaps. |
| | | | 2.1. A. 3. Make information on reviews and revisions to monitoring programs available to water partners. | ENR, ECCC | Complete for reporting period, and ongoing | ENR developed a plain language summary presenting findings from the Five-year Technical Review of the NWT-Wide Community Based Water Quality Monitoring Program. The summary was release in December 2018. |
| | 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.<br><br>18 (out of 32) water partner respondents indicated that some or all of the water quality monitoring activities coordinated or supported by their organization have standardized protocols. | 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.<br><br>A biological indicators workshop took place in January 2018 to begin working towards planning biological monitoring under the Alberta-NWT Agreement. A workshop report was developed and released in late 2018. The report can be found at enr.gov.nt.ca.<br><br>Benthic macroinvertebrate monitoring continued in 2018. |
| | | | 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.<br><br>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. The Akaitcho Wetland Mapping Inventory project was under development in 2018 and will be completed in spring 2019. Akaitcho Treaty #8 Tribal Corporation intends to begin using imagery for future Land Use Planning initiaves for Akaitcho region. The Dehcho Wetland Mapping Inventory project is in progress and will be completed in 2020 . The Wood Buffalo National Park Wetland Mapping Inventory project will be completed in 2020. DUC is also currently working with the community of Fort Good Hope and Tłı̨chǫ Government on Wetland Mapping Inventory Projects. |

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 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. | 11 community-based monitoring programs have defined goals and have standardized monitoring processes (2.2A). | 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'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 can be found at www.nwtcimp.ca. |
| | | | 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 October 2018. 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.<br><br>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 2020.<br><br>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 (99 hydrometric stations and 107 water quality sites). Note: 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 Management and Monitoring Division monitors 34 long-term water quality sites and collaborates with 21 communities to monitor approximately 40 water quality sites under the NWT-wide Community-based Water Quality Monitoring Program (CBM program). ECCC maintains 19 water quality sites in the NWT. Federal and territorial government monitoring networks are reviewed periodically and leveraged to maximize coverage in the NWT.<br><br>Data from ENR monitoring programs are freely shared and enhance numerous research, government, and community partnerships. Data for long-term monitoring sites managed by ECCC are available on the Government of Canada Open Data Portal (2000-present) and Mackenzie DataStream (2000-present). Data prior to the year 2000 can be requested through a formal data request to ECCC. |
| | | | 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 99 stations, including 20 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 hydrometric 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. |

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued) | 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. 1 groundwater monitoring network is being established in the Liard River. | 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 | A *Best Practices in Groundwater Monitoring for Northern Canada* report was developed by Université de Montréal and McGill University. The report highlights tools available in the NWT and other jurisdictions for better groundwater monitoring practices and regulation of groundwater resources. The report identifies questions related to groundwater in the NWT and provided recommendations to address these questions to ensure appropriate and sustainable groundwater management. These questions include: how is rapid warming and permafrost thaw impacting hydrological regimes and groundwater supply, vulnerability and recharge; and how best should groundwater be protected in the face of contamination, over-extraction and climate change? Report recommendations include collaborating with communities and stakeholders to identify key values to inform groundwater monitoring and protection strategies; creating a groundwater and permafrost database to house all data related to hydrogeological conditions across the territory; and establishing a preliminary groundwater observation network. The final report is currently under review prior to publication. |
| | | | 2.1. D. 3. Explore how traditional knowledge can inform the state of the knowledge of NWT groundwater resources and monitoring priorities. | ENR | Not started | |
| | | | 2.1. D. 4. Identify priorities for future groundwater monitoring for the NWT and transboundary areas. | ENR | In progress | 'The Liard River Basin and the Hay River Basin have been identified as priorities for groundwater monitoring due to potential exploration and exploitation activities.<br><br>ENR is a partner with the G360 Institute of Groundwater Research at the University of Guelph on a project to implement a groundwater monitoring network in the Liard River Basin. This baseline groundwater investigation aims to determine the quantity and quality of groundwater within the Liard Basin, characterize the groundwater flow system and interaction with surface water bodies, and evaluate the vulnerability of local and regional aquifers. The important freshwater aquifer being targeted with this monitoring study is the Dunvegan Formation. A land use permit was approved in 2019 and boreholes will be drilled in summer 2019 and (likely) winter/summer 2020 to depths of c. 100-150 meters below the ground surface to monitor the top, middle and bottom of the aquifer unit. |

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 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. | 23 NWT CIMP-funded projects were identified as being able to contribute to an environmental decision.<br><br>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. MVRMA provisions related to regional studies recently came into force with Bill C-88. 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 governments and 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. |
| | | There are 8 NWT CIMP Final Project Reports for 2018/19. 7 are currently under review and have not yet been posted on the NWT Discovery Portal, and 1 has been posted.*<br><br>NWT CIMP is working with 32 partners, including Indigenous governments and organizations, co-management boards, Canadian universities, federal and territorial governments.*<br><br>8 peer-reviewed papers were published in 2018/2019 stemming from NWT CIMP-funded projects. 5 more peer-reviewed papers are in the process of being published.*<br><br>* 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 the MVEIRB to consider cumulative effects in its environmental assessment decision-making. Face-to-face technical sessions, cultural community sessions, and public hearings (technical and community) are just some of the methods commonly used to communicate cumulative effects. 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 - http://reviewboard.ca/upload/project_document/EA1314-01_Report_of_Environmental_Assesment_and_Reasons_for_Decision.PDF). The developer presented water quality models for Lac de Gras that incorporated discharge from both Diavik and Ekati mines. In the 2019, the Diavik environmental assessment (proposal to deposit processed kimberlite into pits and underground), the MVEIRB scope of assessment identifies cumulative effects to water quality in Lac de Gras as something that will be carefully considered.<br><br>Every time the LWBs/IWB 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 effects framework on water would further assist the LWBs in their decision-making processes. In accordance with the Inuvialuit Final Agreement, the environmental screening is conducted by the Environmental Impact Screening Committee. The IWB may consider cumulative effects in their decision-making if concerns are brought to their attention during the application review process.<br><br>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). A Terms of Reference example can be found on pg. 28 here (http://reviewboard.ca/upload/project_document/EA1314-01_Report_of_Environmental_Assesment_and_Reasons_for_Decision.PDF).<br><br>LWB/IWBs also communicate reasons for a decision on water licencing to stakeholders and to the public via an online registry. |

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 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.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.<br><br>NWT CIMP's Monitoring Blueprints are available on the NWT CIMP website (nwtcimp.ca). |
| | | | 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. |
| | | | 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 2018/19, NWT CIMP provided funding for 27 cumulative impact-related projects. Key findings from this research were made available through a community-oriented results workshop and/or other relevant northern meetings. Two projects were highlighted in the NWT Environmental Research Bulletins (NERB). |
| | | | 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. Current work has involved a detailed statistical analysis of historic streamflow and level data using the R statistical computing program. Further work is underway to parameterise the Raven hydrological framework for sub-basins within the Mackenzie River, which will allow for scenario testing under future climate predictions. |
| | 2.1 F - Increase the use of biological indicators in aquatic monitoring to assess ecosystem health. | 4 water partner respondents indicated that 130 individuals were trained in biological monitoring in 2018. 1 respondent indicated that their organization provided training but didn't know how many people were trained.<br><br>4 water partner respondents indicated that a total of 11 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 | Benthic macroinvertebrate monitoring continued in the summer and fall of 2018 in the Slave and Hay Rivers. Monitoring activities in 2018 involved kick sampling (per modified CABIN procedures) and passive sampling (Hester-Dendy samplers). Comparison of the sampling techniques is ongoing, but preliminary results indicate kick sampling is the more representative sampling technique.<br><br>Benthic macroinvertebrate monitoring is expected to continue in the Hay and Slave rivers in 2019. ENR staff have been in contact with ECCC staff who plan to initiate a similar program on the Liard and Petitot rivers in summer 2019.<br><br>Based on the 2018 biological indicators workshop, early planning was initiated for a fish monitoring program on the Slave River in partnership Wilfred Laurier University and University of Saskatchewan.<br><br>Work by the MRBB State of the Aquatic Ecosystem Report (SOAER) and Traditional and Knowledge and Strengthening Partnerships Committees will help identify ecological health indicators using multiple knowledges. |

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued) | 2.1 F (continued) - Increase the use of biological indicators in aquatic monitoring to assess ecosystem health. | | 2.1. F. 2. Integrate biological indicators into aquatic monitoring by building on current biomonitoring initiatives, relevant research in the NWT and transboundary water management agreement implementation. | ENR | In progress | ENR initiated a contract to explore the integration of datasets produced from various historic and ongoing research and monitoring programs for the Slave River. Historical and ongoing studies have focused on metals or organic compounds in one or two components of the aquatic ecosystem (e.g. fish, sediment, or in surface water), and little is known about the way these pollutants move through the aquatic ecosystem. This work explores linkages between biological and water quality indicators, and will support the development of triggers and biological objectives, and will identify key knowledge gaps to guide future work. |
| | 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). | 8 directly freshwater-related research projects with a social science focus were licensed by the Aurora Research Institute (ARI) for 2018.*<br><br>12 indirectly freshwater-related research projects with a social science focus were licensed by ARI for 2018.*<br><br>* 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:<br>• Tracking Change research project (co-led by University of Alberta, ENR and the MRBB);<br>• SRDP (includes academic, territorial and federal government and Indigenous partners);<br>• Bottled Water Use on the Land;<br>• Northern Water Futures program.<br>The SRRB also continued to partner with University of Waterloo's Human Biomonitoring project with the communities of Fort Good Hope, Tulıt'a and Déļınę to support community knowledge about safety of local water and country foods consumption. |
| | | | 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 2018, 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).<br><br>MRBB's Traditional Knowledge and Strenthening Partnerships (TKSP) Committee has continued to work with SOAER Committee to develop an approach to incorporate scientific and TK systems into the upcoming SOAER. In Spring 2018, the MRBB met, in Whitehorse, to discuss the use of TK in the upcoming SOAER. The Committees are developing a series of meaningful questions pertaining to aquatic ecosystem health that draw from both science and TK. The intent is to use various signs and signals that emerge from both science and TK to tell a story of the basin. The TK used in the SOAER will be drawn from publically available information and Tracking Change projects where permission is granted. |
| | 2.1 H - Identify research priorities to strengthen and inform the goals of the Water Strategy. | | 2.1.H.1. Water partners identify research priorities for each goal of the Water Strategy. | ENR | Complete | Water partners came to consensus on the importance of broad Water Strategy research topics in 2017. However, water partners agreed research priorities need to be locally and community driven. Water partners recommended supporting and enhancing existing research processes and protocols that identify specific research priorities in collaboration with communities. For more information, *NWT Water Strategy Research Priorities: Summary of Survey Results and 2017 NWT Water Strategy Implementation Workshop Discussion* is available at nwtwaterstewardship.ca.<br><br>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 | Water partners continue supporting collaborative research processes and existing NWT research protocols that would enable researchers to identify specific water research priorities through collaboration with communities. ARI is supporting these initiatives also through the POLAR licencing system and are engaging researchers to contribute and/or participate in ARI outreach programs and initiatives related to water sampling protocols and skill sets and community driven water sampling strategies. |
| | | | 2.1.H. 3. Report and review research priorities at annual implementation workshops. | ENR | In progress | See Status Description for 2.1 H. 1. |

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| 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. | 12 (out of 31) 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 2018/19, NWT CIMP updated the Inventory of Landscape Change human disturbance data set. The data set can be used to visualize and download spatial data related to human and natural disturbance in the NWT. The NWT Centre for Geomatics (NWTCG) will be scoping out a technical transfer from a consultant who has been updating this dataset to date. With this dataset, the NWTCG will take over the annual update process for these data.<br><br>At the Water Stewardship Strategy Implementation Workshop in October 2018, C-Core provided a panel presentation on the Slave River and Delta and Great Slave Lake Community-Based Water Portal project. See Status Description for 2.1.I.2. |
| | | | 2.1.I.2. Water-related indicators using remote sensing imagery are monitored and information is publically accessible. | ENR | In progress | In 2018/19, 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: temperature, ice build-up, suspended sediment, and chlorophyll. All data are currently available through free and accessible online services on C-Core's web portal – NWT Water Monitoring Service (looknorthservices.com/watermonitoring/). Long-term housing for the data needs to be addressed. 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 Arctic digital elevation model (DEM) has been released for the entire circumpolar region, including the NWT. As such, the digital elevation model has been improved to 5 metre resolution. Plans are underway for these data to be improved to 2 metre resolution as new satellite imagery becomes available. As such, more detailed hydrological modeling can take place. Although the NWTCG is not the authority for these data, the data can be made available to any GNWT employee through the Spatial Data Warehouse. |
| | 2.1 J - Continue to support source water protection planning in NWT communities. | 1 source water protection planning initative was undertaken in 2018. | 2.1.J.1 Engage with NWT residents to identify key concerns about their source water. | 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.<br><br>ENR did not conduct specific engagement with NWT residents on identifying key concerns about their source water in 2018/19. |
| | | | 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 | See Status Description 2. 1. J. 1.<br><br>The University of Alberta and Brock University are working with the communities of Dél̨ı̨nę 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, Bottled Water on the Land, will identify opportunities for source water protection planning, public education and outreach needs, and potential new community-based monitoring sites to address community concerns.<br><br>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. |

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| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued) | 2.1 J (continued) - Continue to support source water protection planning in NWT communities. | | 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 LWBs/IWB 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.<br><br>The LWBs are assisting with the development of a MACA course for community operators on Source Water, in partnership with ENR and MACA.<br><br>The IWB organizes a municipal water and waste management workshop annually to create an awareness and to disseminate information regarding efficient water use and waste management systems. The IWB has developed templates for municipal solid, sewage, hazardous waste management and spill contingency plans which are available on the IWB website. |
| 2.2 - Collaborative Approach to Community-based Monitoring | 2.2 A - Ensure continued support of aquatic community-based monitoring programs. | 10 community-based monitoring programs were active in 2018.<br><br>10 community-based monitoring programs have defined goals and 9 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 | Ten aquatic community-based monitoring programs were active in the NWT in 2018/19. 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; Łutselk'e Dene First Nation's Ni hat'ni Dene Watching the Land Monitoring Program; Long-term Monitoring of Great Bear Lake Fisheries and the Aquatic Ecosystem; Deh Cho K'ehondi, Dehcho AAROM Program, Akaitcho AAROM, NWT Métis AAROM, and Lower Mackenzie Whitefish Project.<br><br>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.<br><br>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 provide 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.<br><br>Dehcho AAROM continue to collaborate with all Dehcho communities to ensure continued success of the CBM program. The CBM program has become a key to the success of the Dehcho AAROM and K'ehodi Guardian programs. The Guardians have combined their CBM duties with other research and monitoring initiatives with University of Waterloo, WLU, DFO, ECCC and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). The collaboration with these groups is possible in large part due to the CBM program and the capacity it has helped built. |
| | | | 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. The technical review was released publically in 2018. |

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 2.2 - Collaborative Approach to Community-based Monitoring (continued) | 2.2 B - Improve community participation and leadership in aquatic research projects. | 29 aquatic research projects actively involving communities were identified via the ARI research licence database for 2018 (out of 85).<br><br>A total of 2 (out of 10) local Indigenous government and municipal government respondents indicated their community is leading a water-related research project.<br><br>10 aquatic research projects where communities are part of leading the project were identified via the ARI research licence database for 2018.*<br><br>* 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).<br><br>Dechinta Centre for Research and Learning continues to provide students with opportunities to work closely with community leaders, elders, faculty, land users and traditional knowledge holders on various initiatives including water research projects. As of summer 2018, Dechinta is able to hold its own Social Sciences and Humanities Research Council grants. In October 2018, Dechinta received three SSRHC Connections grants (Land as Solidarity; Dreaming New Worlds; and Land as Pedagogy) to support future research and collaboration in reconciliation. For more information on the grant projects, visit Dechinta.ca.<br><br>See Status Description 2. 2. A. 2. |
| | | | 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. |
| | | | 2.2. B. 3. Create and implement a plan to hand over responsibility and leadership of applicable research projects to communities. | Academic Partners | In progress | Academic partners continue to work to build capacity by carrying out research, working with local community members, having them assist with monitoring and sampling activities. |

## Use Responsibly

| | Key to Success | 2017/2018 Performance Indicator Result | Action Item (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 3.1 - Municipal | 3.1 A - Improve the sharing of information on municipal drinking water in the NWT. | 17 (out of 29) water partner respondents agree or strongly agree that the roles and responsibilities associated with drinking water are clear.*<br><br>16 (out of 29) water partners respondents agree or strongly agree that the roles and responsibilities associated with a municipal water licence are clear.*<br><br>The number of members of the public that accessed the drinking water website in 2018 is unclear as a result of the website reconstruction activities.*<br><br>* 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 Inter-departmental Drinking Water and Waste Management Committee | Complete for reporting period, and ongoing | The drinking water website is currently undergoing a redesign to meet new standards. A new interface for water quality data is to be developed for the new website. Relevant information is temporarily being stored on a MACA website to maintain public access. The 2016 GNWT Report on Drinking Water was completed in 2018 and is available on the MACA website. The 2017 annual report has been completed and awaiting approval for posting. The report for 2018 is currently under development. |
| | | | 3.1.A.2. Continue to promote water tank maintenance and provide educational information. | GNWT Inter-departmental 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. Instructional videos providing directions on how to clean your water tank are available on the HSS website. A new handout for "How to clean your water tank" is in development. |
| | | | 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 | Chemical data for 2017 and earlier are available on the legacy database. Chemical data for 2017 to present are now being entered into a database maintained by WaterTrax. Output from WaterTrax will be made available when the udpated website is launched. In the meantime, chemical data requests can be made directly to MACA Water and Sanitation. Bacterial sample results as submitted by communities are reviewed by HSS. Reporting and database work is ongoing. At this time requests for bacterial results information can be made directly to HSS. |
| | | | 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 | In progress | 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 continues to operate successfully, with 17 communities involved. Two additional communities are scheduled to be added to the program in 2019/2020. |
| | | | 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 monitoring system. There are nine communities with systems currently installed with an additional six to be added by the end 2020. |
| | 3.1 B - Improve municipal waste and wastewater systems in the NWT through waste management activities and the development of standards and guidelines. | | 3.1.B.1. Create and update guidelines to improve wastewater treatment systems in the NWT. | LWB/IWB, ENR | In progress | No further work was conducted on the review of Schedule 1 in the Guideline for Industrial Waste Discharges in the NWT, pertaining to the discharge of non-sewage effluent into municipal wastewater systems.<br><br>In March 2018, MVLWB updated Operation and Maintenance Plan Templates for Municipal Water Licences for Sewage Disposal Facilities and Water Treatment Plans. The templates are available on the LWBs' websites. Information about these templates is communicated to municipal governments and MACA on an ongoing basis. |

| | Key to Success | 2017/2018 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 3.1 - Municipal (continued) | 3.1 B (continued) - 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 2018/2019 to support municipal waste and wastewater systems in the NWT. | 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 Guidelines* was developed in 2018. This guideline document, adapted from the IWB, helps to clarify the roles and responsibilities of various organizations in community water and waste management. It 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 | The IWB used the ECCC's Solid Waste Management for Northern and Remote Communities, Planning and Technical Guidance Document (2017) and MACA's *Solid Waste Disposal Guidelines* (2003) in combination to develop the municipal solid waste disposal facilities O&M plan template.<br><br>ENR continued to remove electronic waste through its e-waste program. Several municipal and community initiatives took place under the *Waste Reduction and Recycling Initiative* . ENR was involved with the removal of significant quantities of hazardous waste from Fort Good Hope and Tulita's landfills, under the *Environmental Liabilities Fund* initiative. MACA was involved with removal of hazardous waste and old vehicles from Ulukhaktok, as part of the Waste Reduction and Recycling initiative. The Hamlet of Enterprise also diverted scrap metal from their solid waste site on their own initiative.<br><br>The LWBs, in collaboration with the GNWT, updated the Operation and Maintenance Plan Templates for Municipal Water Licences for Solid Waste Disposal Facilities to further define leachate management. The templates are available on the LWBs' websites. Information about these templates is communicated to municipal governments and MACA on an ongoing basis.<br><br>LWBs, MACA and ENR participated in a leachate management course. |
| | | | 3.1. B. 5. Implement NWT Guidelines for Municipal Landfills. | LWB/IWB, ENR, MACA | In Progress | In 2018, ENR published the revised Guideline for Hazardous Waste Management and the Guideline for Waste Lead and Lead Paint.<br><br>In 2019, ENR, MACA and the LWBs of the Mackenzie Valley met to establish a seed document for a Canadian Standards Association standard for Northern Solid Waste Facilities. The CSA standard will form the basis for a territorial regulation on solid waste. |
| | | | 3.1. B. 6. Identify opportunities to enhance community waste infrastructure through ongoing initiatives (e.g. Waste Reduction and Recycling Initiative and and the Household Hazardous Waste Collection, and review of funding structure for solid waste management activities). | ENR, MACA | Complete for reporting period, and ongoing | Opportunities to enhance community waste infrastructure through ongoing initiatives in 2018/19 included:<br>• Investing in Canada Infrastructure Plan (ICIP). This is a federal initiative where communities and MACA are encouraged to apply for funding for solid waste infrastructure improvements in 2019, 2021, and 2023.<br>• The Waste Resource Management Strategy developed by MACA and ENR was released in summer 2019. The integrated strategy is intended to improve waste management practices in the territory and prioritize waste reduction and diversion.<br>• The Waste Reduction and Recycling Initiative is administered by ENR and communities regularly apply for improvements in their community.<br>• Each year, MACA works with ENR and Finance to allocate limited resources from the Environmental Liability Fund to proactively remove hazardous waste from municipal solid waste sites. |

| | Key to Success | 2017/2018 Performance Indicator Result | Action Item (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 3.1 - Municipal (continued) | 3.1 B (continued) - Improve municipal waste and wastewater systems in the NWT through waste management activities and the development of standards and guidelines. | | 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 2018, 26 municipal water licence inspections were tracked and reported in the IRRA system. 3 were tracked but not reported in the IRRA system. |
| | | | 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.<br><br>LWBs, in partnership with ENR and MACA, have developed various tools (templates and standards) to provide assistance with water licence compliance and continue to discuss collaborative improvement methods. LWBs are working to develop SNP (sampling) manuals for all municipalities |
| | | | 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 LWB/IWB staff.<br><br>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.<br><br>In partnership with ENR and MACA, the LWBs have developed various tools (templates and standards) to provide assistance with water licence compliance and continue to discuss collaborative improvement methods. LWBs are working to develop SNP (sampling) manuals for all municipalities.<br><br>MACA is in the process of developing a Source Water Protection course that is designed to assist the municipal employee to understand the importance of protecting the NWT Municipal water sources. |

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| 3.1 - Municipal (continued) | 3.1 C (continued) - Improve municipal water licence compliance by addressing challenges and providing support and training. | For 2018/19, 67% of the municipal water licences holders submitted annual reports and 62% provided SNP monitoring data. | 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.<br><br>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.<br><br>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 2019. Completion of the SNP sampling manuals may facilitate additional opportunities for SNP training workshops for licenced communities.<br><br>The IWB organizes an annual municipal water and waste management workshop to bring awareness and to disseminate information regarding efficient water use and waste management systems. |
| | | | 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's 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 LWBs such as the Gwich'in Land and Water Board, and IWB, bring members of the community together to discuss roles and responsibilities of the LWB/IWB 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 pursued opportunities to present and promote municipal water licensing support tools at the NWT Association of Communities Annual General Meeting in 2018. LWB will present at LGANT Conference/AGM in Fall 2019. |
| | 3.1 D - Improve the understanding of waste and wastewater systems in NWT communities and consider traditional knowledge in municipal water licensing processes. | 1 research project on environmental impacts of municipal waste and wastewater was active in 2018. | 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 | Various research partnership initiatives have been established between ENR, MACA and Dalhousie University or Fleming College, in order to better understand the specificities and complexities of wastewater treatment in the north, as well as possible impacts of NWT municipal wastewater discharges to the environment.<br><br>Specific research and monitoring "Blueprints" have been developed for each of NWT CIMP's three priority valued components (caribou, water and fish) in partnership with NWT land and water regulators, subject-matter experts, and the NWT CIMP Steering Committee. The Blueprints inform funding applicants of NWT CIMP funding priorities, and guide program work planning.<br><br>The Water Blueprint was developed to inform NWT CIMP funding applicants of priority water-related monitoring and research for the program. It describes information that is necessary to understand cumulative impacts on water and is aligned with the priorities of the 2017 GNWT Knowledge Agenda and the NWT Water Stewardship Strategy. |

| | Key to Success | 2017/2018 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 3.1 - Municipal (continued) | 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 | Traditional knowledge (TK) is considered at various stages in the regulatory process including the public review, the proponent's engagement with potentially affected communities, and the setting of licence conditions. Under the MVRMA, the LWBs are legally obligated to consider TK evidence as well as scientific information, and the IWB has stated similar direction in its strategic planning. The LWBs have an online public review system. Staff from LWBs 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. The IWB has no online public review system. The IWB distributes water licence application packages to stakeholders (e.g. community and government organizations) via email for their review and comment.<br><br>TK may influence determining the location of SNP monitoring sites for municipal facilities, design and placement of municipal facilities, and licence conditions related to TK/land use. A recent example is the inclusion of conditions in Sambaa K'e First Nation's new municipal water licence related to traditional disposal practices around infant waste. The LWBs also commonly work with community staff on setting SNP locations. |
| 3.2 -Industrial Development | 3.2 A - Ensure clarity and facilitate understanding of water use, waste and wastewater regulatory processes. | 17 (out of 29) water partner respondents agreed that they know who to contact if regulatory roles and responsibilities are not clear.*<br><br>17 (out of 29) water partner respondents agreed that industrial water licensing roles and responsibilities are clear*<br><br>* 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.<br><br>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 the environmental assessment guidelines (http://reviewboard.ca/process_information/guidance_documentation/guidelines).<br><br>MVEIRB is also developing a series of plain language pop-up displays, booklets, and videos. They are also working with the NWT Board Forum to develop reference guides and online courses, including an Orientation to Resource Management in the NWT, available at www.nwtboardforum.com.<br><br>The IWB has developed a step-by-step licence process in the ISR (https://www.inuvwb.ca/licencing/do-i-need-licence-my-project). |
| | | | 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.<br><br>In February 2019, MVEIRB, LWBs/IWB and the territorial and federal governments hosted a Resource Co-Management Workshop in Inuvik. The workshop discussed all aspects of resource management, including opportunities for Indigenous and public involvement. The MVEIRB also hosted or participated in various other outreach events in multiple regions of the NWT to help people understand and participate effectively in environmental assessment processes. (http://reviewboard.ca/reference_material/practitioners_workshop) |

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| 3.2 -Industrial Development (continued) | 3.2 A (continued) - Ensure clarity and facilitate understanding of water use, waste and wastewater regulatory processes. | | 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 | See Status Description for 3. 1. D. 2.<br><br>The MVEIRB prepares a Terms of Reference that describes the information a project developer must provide during an environmental assessment. In late 2018, the MVEIRB released draft environmental assessment initiation guidelines for developers of major projects. MVEIRB requires the developer to make all reasonable efforts to work with potentially affected Indigenous communities and incorporate traditional knowledge into the following: baseline 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. During scoping at co-management workshops and other events, the incorporation of traditional knowledge into envorinmental assessment processes and decisions is always a topic of discussion. The MVEIRB's consideration and incorporation of traditional knowledge in decisions is explained in its reasons for decision/reports of environmental assessment. The MVEIRB is committed to working with co-management partners, developers, and Indigenous governments and organizations to continue improving how traditional knowledge is incorporated in environmental assessments. The methods used in the acquisition, analysis and presentation of traditional knowledge should be consistent with the MVEIRB's *Guidelines for Incorporating Traditional Knowledge into the Environmental Impact Assessment Process* and must follow local protocols.<br><br>Licence conditions may directly address traditional knowledge collection and consideration. A recent example is the WLWB's inclusion of traditional knowledge conditions in the water licence for the Misery Underground Project at Ekati. These require the proponent to consider and incorporate traditional knowledge into required submissions; to identify traditional knowledge-related recommendations and describe how they were incorporated; and to operate in accordance with a traditional knowledge management framework. Traditional knowledge may also be addressed through the review process, providing direction to proponents to design criteria and parameters for closure and monitoring that involve local and traditional knowledge. |
| | 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. The FOD will be updated based on the policy update and will further clarify roles and responsibilites of GNWT inspectors. |
| | | | 3.2.B.2. Track and report on number of inspections of industrial water licences. | ENR, Lands | Complete for reporting period, and ongoing | 53 industrial water licence inspections were tracked in 2018. 41 inspections were completed in the North Slave Region, six were completed in the South Slave Region, one was completed in the Dehcho Region, four inspections were completed in the Inuvik Region, and one inspection in the Sahtu Region. |

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| 3.2 -Industrial Development (continued) | 3.2 C - Review and develop guidelines and regulations to clarify existing regulatory and environmental assessment processes. | 1 piece of water legislation was under review in 2018.<br><br>4 guidelines were under review in 2018. | 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. An update on these various initiatives is as follows:<br>• 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.<br>• 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.<br>• 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 Baseline Guidelines are anticipated to be completed in early 2020. The guidelines are intended to fill a gap and support AEMP guidelines. MVEIRB provided input and intends to reference and encourage proponents to follow the guidelines, although MVEIRB is not a co-author. The guidelines are intended to fill a gap and support the review and update of the AEMP<br>• Environmental Assessment Initiation Guidelines are being developed by MVEIRB. They were presented at the 2016 NWT Geoscience Forum and are now advancing to the drafting stage. Focus groups/collaborative meetings will occur before the draft is circulated for public review. MVEIRB held a session with chamber of mines in early 2019. ENR staff will participate in this process. |
| | | | 3.2.C.3. Provide a short description of water license requirements and management plans. | LWB/IWB, ENR | In progress | Supporting documents are 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 developed a new plain language *Guide to the Water Licensing Process* . The draft will be distributed summer 2019. A *Municipal Water Licence Roles and Responsibilities Guideline* was developed in early 2018 . |
| | | | 3.2.C.4. Review territorial legislation relevant to water management and identify areas for improvement. | ENR | In progress | A review of the *Waters Act* and the Waters Regulations began in 2016 and is ongoing. The *Waters Act* review is anticipated to be complete in 2021. |
| | | | 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 | Four regulatory guidelines were reviewed in 2018/19:<br>1. Water Quality Baseline Guidelines (pending final approvals)<br>2. Aquatic Effects Monitoring Program Guidelines (finalized in conjunction with LWBs in March 2019)<br>3. Security Deposit Policy (currently being reviewed - ENR is participating in the review and Department of Lands is the lead)<br>4. Guideline for Hydrocarbon Contaminated Soil Treatment Facilities (under development) |
| | | | 3.2.C.6. Review and revise existing AEMP Guidelines. | LWB/IWB, ENR | Complete | A review of the *Aquatic Effects Monitoring Program Guidelines* was initiated in 2017. The guidelines were being revised following the closure of the initial review period to address reviewer comments. As of March 2019, the guidelines have been finalized in conjunction with the LWBs. |
| | | | 3.2.C.8. Develop guidelines for project descriptions in environmental assessments to support decision-making. | MVEIRB | In progress | MVEIRB held a workshop in June 2018, considered the workshop feedback, developed "draft environmental assessment initiation guidelines for developers of major projects", released the draft in November 2018, engaged interested parties through bilateral and small group meetings, workshops, and wrote up the received comments up until the end of April 2019. The Review Board is now analyzing all the comments and considering next steps. |

## Check Our Progress

| | Key to Success | 2018/2019 Performance Indicator Result | **Action Item** (2017, 2018, 2019 and ongoing) | Action Item Lead | 2018/2019 Action Item Status | 2018/2019 Action Item Status Description |
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| 4.1: Routine Checks | 4.1 A - Ensure progress on the Action Plan occurs. | 54 Performance Indicators and 131 Action Items were assessed in the 2018/19 progress review (the third 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 2019. ENR also contacted various water partners directly to collect additional information on Water Strategy implementation progress for 2019.<br><br>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 9th Annual Water Strategy Implementation Workshop held in October 2018. Water partners shared updates of recently completed, ongoing and planned implementation activities through posters and panel presentations.<br><br>Water Strategy implementation progress for 2017/18 was communicated to water partners and the public through the release of Check Our Progress – 2017/18 NWT Water Stewardship Strategy Progress Review Summary and NWT Water Strategy Action Plan 2017/18 Progress Report – Comprehensive Raw Data Spreadsheet. The 2017/18 summary is intended for a public audience and uses plain language text and infographics to convey implementation status. |
| | | | 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 9th Annual Water Strategy Implementation Workshop in Dettah in October 2018. The theme of the workshop was Linking Knowledges and Ways of Knowing. The objectives of the workshop were to emphasize the importance of our individual and collective responsiblities to ensure the waters of NWT remain clear, abundant and productive for all time;<br>• increase awareness of water partners' implementation initiatives towards water stewardship in the NWT emphasizing those that link different knowledge systems and ways of knowing;<br>• provide opportunities for meaningful discussion, knowledge sharing and relationship-building among water partners;<br>• identify new opportunities for collaboration or partnership towards water stewardship in the NWT.<br>The workshop included five-themed panels followed by individual knowledge discussion break outs, a poster fair with one-minute speed round presentations and a story telling panel from traditional knowledge holders. |

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| 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:<br>• providing opportunities for knowledge holders to provide guidance and input at regulatory workshops, meetings and hearings;<br>• 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;<br>• holding intergenerational on-the-land camps; developing Traditional Knowledge Research Guidelines for the Sahtú Region;<br>• providing opportunities for researchers and traditional knowledge holders to interact and exchange experiences and knowledge;<br>• supporting community-led water-related traditional knowledge projects;<br>• defining and implementing traditional knowledge monitoring priorities related to cumulative impacts;<br>• working to ensure that traditional knowledge and community concerns are included in projects or monitoring programs such as AEMPs for industrial activities in the NWT.<br><br>Water Strategy implementation activities that included traditional and local knowledge in 2018 included:<br>• ongoing guidance from the Aboriginal Steering Committee on research activities related to traditional knowledge;<br>• supporting on-the-land camps;<br>• initiating development of an approach for traditional knowledge informing selection of biological indicators for NWT's large transboundary rivers;<br>• storytelling panels and presentations at the Water Strategy Implementation Workshop in October 2018; 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. | | 4.2. A. 2. Establish an evaluation plan | ENR | Not started | Discussions with the Aboriginal Steering Committee to establish an advisory committee who will guide the development of the evaluation plan, are set to begin in Spring 2019. |