



## 2016/2017 NWT Water Stewardship Strategy Progress Review Comprehensive Raw Data Spreadsheet

One year since the release of the NWT Water Stewardship Strategy Action Plan 2016-2020, the comprehensive 2016/2017 NWT Water Stewardship Strategy Progress Review took place and assessed 52 Performance Indicators and 84 Action Items. This spreadsheet contains data for each Performance Indicator and Action Item that was assessed during the 2016/2017 review.

Data are organized into four sections that represent the four components of water stewardship in the NWT: Work Together; Know and Plan; Use Responsibly; and Check Our Progress.

Sections of the 2016-2020 Action Plan (e.g., *1.1 -Partnerships*) are listed in the first column under each component. The second column lists the Keys to Success identified in the 2016-2020 Action Plan (e.g., *1.1 B - Ensure water partners understand their roles and responsibilities for implementing the Water Strategy*). The remaining columns provide Performance Indicator and Action Item data from the progress review for each Key to Success.

The Performance Indicator information is limited to a short summary of the Performance Indicator result determined from the progress review (e.g., *15 out of 20 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. ☐

**Work Together**

|                              | Key to Success  | Performance Indicator Result   | Action Item (2017 and ongoing)   | Action Item Lead | Action Item Status                         | Action Item Status Description   |
|------------------------------|---|--|--|------------------|--|--|
| 1.1 - Partnerships           | 1.1 A - Ensure the Water Strategy is integrated with watershed and natural resource planning and management frameworks in the NWT (e.g. land-use planning framework, recreational land management framework, energy priorities framework, conservation planning and climate change strategy). | 3 NWT watershed and natural resource planning and management frameworks reference the Water Strategy .   | <i>No Action Items with 2017 deliverable date</i>  |                  |  |  |
|                              | 1.1 B - Ensure water partners understand their roles and responsibilities for implementing the Water Strategy.  | 15 (out of 20) water partner respondents indicated they are aware of their role implementing the Water Strategy.*<br><br>11 (out of 20) water partner respondents indicated they are actively engaged in specific Keys to Success. *<br><br>* 2 measures informing 1 Performance Indicator | Create and routinely update a plain language document outlining water partners' roles and responsibilities for the Water Strategy and Action Plan.   | ENR              | In progress                                | Work is underway to develop a stand-alone plain language document summarizing lead and supporting water partners' roles and responsibilities specific to the 2016-2020 Action Plan.  |
|                              |   |  | 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 7th Annual Water Strategy Implementation Workshop in Dettah in November 2016 brought lead and supporting water partners together to share information and knowledge, discuss opportunities to collaborate and review implementation progress. The 2016/2017 Progress Review also illuminates challenges that lead and supporting water partners experience with implementation.  |
|                              |   |  | 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. Various collaborative partnerships were undertaken in 2016 to support Water Strategy initiatives. For example, the NWT-wide Community-based Water Quality Monitoring Program; the Slave River and Delta Partnership; the Tracking Change research project; and the Interdepartmental Drinking Water and Wastewater Management Committee. ☐ |
| 1.2 - Information Management | 1.2 A - Improve data collection and data and information management for water and water-related monitoring programs.  | 7 water monitoring and research projects are managed in Lodestar.<br><br>12 (out of 26) water partner respondents indicated that the water quality monitoring activities coordinated or supported by their organization have standardized protocols.                                       | Develop and implement guidelines on metadata to determine if water quality data sets are comparable and regional assessments can take place.   | ENR, LWB/IWB     | In progress                                | Guidelines were drafted by the NWT Cumulative Impact Monitoring Program (NWT CIMP) in 2016 and have been reviewed by key stakeholders. NWT CIMP is currently reviewing the comments and planning next steps. Metadata guidelines will assist larger initiatives, for example, developing guidelines for establishing water quality baseline conditions and revising Aquatic Effects Monitoring Program (AEMP) guidelines.  |
|                              |   |  | 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 <i>Spring Outlook Reports</i> and are available on the ENR website. The <i>2017 Spring Outlook Report</i> was distributed broadly and provided data for 71 sites sampled in 2017.  |

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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 50 snow data sites surveyed in 2016.<br><br>Mackenzie Datastream had 6,168 total users in 2016, averaging 514 users per month. The NWT Discovery Portal had 6,007 total users in 2016, averaging 501 users per month.<br><br>51.5% of water partners (17 respondents) indicated that they have access to up-to-date water-related research at their work.   | 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 501 users per month in 2016, approximately 20% of which were NWT users. The Portal averaged 3,827 page views per month in 2016, which represents the total number of pages viewed, including repeated views of single pages. ☐   |
|  |   |   | Data collected through the NWT-wide Community-based Water Quality Monitoring program are shared publicly (e.g. through the Mackenzie DataStream).  | ENR                                  | In progress                                | Data from the NWT-wide Community-based Water Quality Monitoring program are shared through Mackenzie DataStream. Additional public communication approaches to disseminate monitoring results in 2016 was limited.   |
|  |   |   | Long-term monitoring results that are compiled in existing databases are made available to water partners on request.  | ENR                                  | Complete for reporting period, and ongoing | Long-term 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. Work is underway to develop a system to formally track data requests.  |
|  |   |   | Update the NWT water monitoring inventory on a regular basis and include a research section in the inventory.  | ENR                                  | Not started                                | The NWT Water Monitoring Inventory was originally released in 2013 and will be updated in 2017.  |
|  | 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. | 57.6 % of water partners (19 respondents) indicated they use Western Science often to inform decision-making within their organization.*<br><br>39.4% of water partners (13 respondents) indicated they use traditional and local knowledge often to inform decision-making within their organization. *<br><br>3 out of 4 components of the Action Plan have an underlying approach to using traditional, local, and western scientific knowledge.<br><br>* 2 measures informing 1 Performance Indicator | Integrate technology (e.g. tablets) for information collection and sharing on the land with elders, youth and other land users.  | ENR                                  | In progress                                | YUMA is a device used to record different types of information when travelling on the land and water (e.g., recording wildlife tracks). YUMAS are expected to be piloted in 2017 as part of the NWT-wide Community-based Water Quality Monitoring Program.   |
|  |   |   | Promote the use of plain language formats to help facilitate understanding and translation of materials into Aboriginal languages.   | ENR                                  | In progress                                | A plain language explanatory video about NWT CIMP was launched online in 2016 in four Aboriginal languages.<br>A two-page plain language summary of the 2016-2020 Water Stewardship Strategy Action Plan was released in 2016. The summary was translated into six Aboriginal languages and recorded on audio files. The document will be translated and recorded in two additional Aboriginal languages in 2017.  |
|  |   |   | 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                                | In 2016, ARI hosted 25 public presentations from 22 different organizations, reaching over 550 people. This speaker series was developed to help researchers connect with communities.<br><br>The ARI Compendium of Research provides a plain language summary of research projects happening in the NWT, also available on data.nwtresearch.com<br><br>ARI staff (manager of scientific services) liaises with researchers and communities to help facilitate communications.<br><br><i>Communicating Results with Communities</i> templates are available online at the ARI and NWT Water Stewardship websites.<br><br>NWT CIMP hosts one region-specific results based workshop each year. In 2016, the workshop was held in and focused on projects conducted in the Wek'eezhii Settlement Area. In addition to 11 results presentations, 3 break-out groups were held to discuss approaches to sharing information and how to better involve traditional knowledge. |

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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. | 5 presentations at the 7th Annual Water Strategy Implementation Workshop (November 2016) reflected traditional knowledge in research.<br><br>39.4% of water partners (13 respondents) are satisfied or very satisfied with how traditional and local knowledge are included in research taking place in the NWT.<br><br>Water partner survey results regarding traditional knowledge and community concerns being incorporated in the Aquatic Effects Monitoring Programs (AEMPs) are unclear. The majority of responses were 'don't know'. | Support the implementation of traditional knowledge protocols.   | ASC              | In progress                                | Aboriginal Steering Committee (ASC) members support the use of traditional knowledge protocols to ensure research and monitoring projects respect community values, that traditional knowledge is gathered in a meaningful way and that it is used to inform decision-making. ASC members provide guidance on relevant traditional knowledge projects as they are contacted, and by making respective protocols available to researchers online or as requested.   |
|  |  |   | Establish traditional knowledge research guidelines for the Sahtú region   | SRRB             | In progress                                | The Sahtú Renewable Resource Board (SRBB) has initiated work on traditional knowledge guidelines for the Sahtú Region. However, due to the SRRB's focus on the barren-ground caribou management hearing in 2016, work on the guidelines is on hold.  |
|  |  |   | 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                                | Water partners conducting Water Strategy implementation research discussed and communicated how data will be stored, used and shared in many ways. These include community meetings, discussions with the project community coordinator, ongoing communication with local resource boards and councils, and workshops with research participants.  |
| 1.3 - Communications and Engagement      | 1.3 A - Effectively maintain communications among water partners and the public on Water Strategy implementation progress.                 | 45.44% of water partners (15 respondents) indicated they are satisfied or very satisfied with implementation progress.<br><br>7 significant updates were made to the NWT Water Stewardship website in 2016.   | Water partners provide updates on their implementation activities, including reports, videos, workshops and webinars, and these are posted on the NWT Water Stewardship website.             | ENR              | In progress                                | Water partners provided implementation updates via posters and presentations at the NWT Water Stewardship Implementation Workshop in November 2016. Posters and presentations are available on the Water Stewardship website. Additional water partner implementation updates posted to the website include the Community of Sambaa K'e Source Water Protection Plan; Report on the Preliminary State of Groundwater Knowledge in the Transboundary Region of the Mackenzie River Basin, NWT; 2015-2016 Implementation Highlights report for the Alberta-NWT Bilateral Water Management Agreement, and the launch of the Mackenzie DataStream Video. ☐ |
|  |  |   | Serve as the liaison between their respective Aboriginal governments or organizations and the Water Strategy.  | ASC              | Complete for reporting period, and ongoing | ASC members serve as the liaison between their respective Aboriginal 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 Aboriginal leadership.   |
|  | 1.3 B - Maintain the roles and responsibilities of the ASC.  | 5 ASC meetings were held in 2016.<br><br>11 Water Strategy projects received guidance from the ASC in 2016.   | 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 Aboriginal governments, providing updates after each ASC meeting. ASC members report to local Aboriginal governments and community organizations by letters, presentations, reports and email communication.   |
|  |  |   | Provide advice to water partners on how to effectively engage Aboriginal governments or organizations and NWT communities with respect to implementation activities and information sharing. | ASC              | Complete for reporting period, and ongoing | 11 projects received guidance from the ASC in 2016.  |
|  |  |   | Provide advice to water partners, where appropriate, on work and activities related to traditional knowledge.  | ASC              | Complete for reporting period, and ongoing | 8 projects received advice from the ASC in 2016 regarding traditional Knowledge.   |
|  |  |   | Report on relevant regional initiatives at ASC meetings.   | ASC              | Complete for reporting period, and ongoing | ASC members report on relevant regional initiatives at ASC meetings as they relate and arise. In 2016 the ASC provided updates on the Mackenzie River Basin Board Meeting held in Whitehorse, the Indigenous Guardians Gathering that was held in Ottawa, activities under the Slave River and Delta Partnership and some project-specific updates such as the Deh Cho K'ehondi Program.   |

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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. | <p>28 (out of 33) communities are involved in aquatic community-based monitoring.</p> <p>The number of on-the-land capacity building opportunities provided by water partners is unclear due to limited responses to the Water Partner survey.</p> <p>The types of capacity increases as a result of involvement in research and monitoring is unclear due to limited responses to the Water Partner survey.</p> | Provide monitoring results to communities in the appropriate context and in plain language formats.   | ENR   | In progress                                | <p>In 2016, NWT CIMP developed, published and distributed 8 brief plain language summaries of various environmental research projects in the NWT. The series is called the Northern Environmental Research Bulletin. All 31 NWT CIMP funded research projects are required to present results at a relevant northern meeting. In 2016, the NWT CIMP regional results workshop showcased projects specific to the Wek'eezhii Settlement Area.</p> <p>Data from the NWT-wide Community-based Water Quality Monitoring program is shared through Mackenzie DataStream. Additional plain language documents and monitoring reports are available on the ENR website (e.g., <a href="http://www.enr.gov.nt.ca/en/services/water-management/water-quality-monitoring-networks">http://www.enr.gov.nt.ca/en/services/water-management/water-quality-monitoring-networks</a>).</p> |
|  |   |  | 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 | In progress                                | <p>Information is relatively limited about specific learning opportunities. However, in 2016, Dehcho AAROM technical advisor and seasonal ENR water technicians provided hands-on training to AAROM water quality monitors/guardians. ENR also hosted a train-the-trainer workshop with ENR staff and Dehcho AAROM staff focused on monitoring protocols and the use of monitoring equipment.</p> <p>NWT CIMP supports community capacity building and provides local learning opportunities through hiring and training local community members to develop their community-based monitoring skills in the field. In 2016, NWT CIMP funded several projects that resulted in enhanced community capacity.</p>  |
|  |   |  | 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 | <p>Water partners hosted and supported various on-the-land programs that have community-based monitoring elements in 2016, including Tundra Science and Culture Camp, Dehcho Youth Ecology Camp, Tjichq Youth on the Land Program, Tjichq Summer Students Research Assistant Program, Dechinta Water Programming and the Tjichq Imbe Program. Partners supported additional programming through the NWT On-The-Land Collaborative Fund. For example, Tides Canada made direct grants in support of Indigenous-led water monitoring programs (e.g., the Ni Hat'Ni Dene and the Dehcho K'ehodi programs).</p>  |
|  |   |  | Post relevant information on the NWT Water Stewardship website.   | ENR   | In progress                                | <p>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 support and programs in the NWT, information for researchers pursuing water-related work in the NWT, and ways to access NWT monitoring and research information.</p>  |

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| 1.4 - Capacity Building, Leadership Training and Education (continued) | 1.4 B - 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 2017 as a result of Canada Water Week and other initiatives.  | 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 throughout the NWT in 2016. Examples include hosting Rivers to Oceans Day, the Great Canadian Shoreline Clean-up and Education Event, Canada Water Week celebrations, participation in the City of Yellowknife science fair, and guest speaker presentations at elementary, secondary and post-secondary levels.   |
|  |  |   | Identify opportunities for water partners to support each other's educational initiatives (including sharing of electronic and physical resources).                                | ENR                | In progress                                | The NWT Water Stewardship website includes an educational resources page intended to connect water partners' educational water stewardship resources to other water partners, teachers, non-governmental organizations and others who are involved in education activities regarding water stewardship. Additional work is needed to update the page.   |
|  |  |   | Coordinate and develop activities to celebrate Canada Water Week   | ENR                | Complete for reporting period, and ongoing | ENR provided support to Ecology North to coordinate and develop activities across the NWT to celebrate Canada Water Week in March 2016 and 2017. Ecology North staff visited every year 16 classrooms in 6 communities to deliver various water programs and activities. Ecology North also coordinated and hosted 9 public community events every year (in 6 communities in 2017 and 7 communities in 2016) to celebrate Canada Water Week.                |
|  |  |   | Provide educational programs and workshops about water treatment in the NWT.   | Ecology North      | Complete for reporting period, and ongoing | Ecology North staff and volunteers visited schools in 8 communities to deliver drinking water education and introduce teachers to Ecology North's Drinking Water in the NWT Curriculum. Ecology North also coordinated various public water treatment plant tours throughout the NWT, and hosted film screenings of <i>Cold Amazon</i> and <i>Tapped</i> , followed by post-film discussions.   |
|  |  |   | Conduct research and educate residents on the costs (environmental and economic) of imported bottled water versus tap water.   | Ecology North, ENR | Complete for reporting period, and ongoing | In 2016, Ecology North, with support from ENR, conducted a study on bottled water consumption in the NWT for the year 2014-2015. Following the release of the report, Ecology North launched a successful and ongoing campaign to educate residents on the benefits of consuming NWT water over bottled water.  |
| 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 2016.<br><br>4 ASC meetings were held in 2016 that provided an update on transboundary water management activities.<br><br>0 opportunities for input from the public were provided in 2016 due to delays in the negotiation process. | Continue to develop NWT interests, mandates and options to inform transboundary negotiations in partnership with Aboriginal governments.   | ENR                | In progress                                | Once Intentions Documents for bilateral water management agreements (BWMA) with Saskatchewan (SK), Yukon (YT) and Nunavut (NU) are ready, Aboriginal consultation and public engagement will continue. This consultation and engagement will build on the Aboriginal consultation and public engagement that was done to develop NWT interests, negotiation positions, and Intentions Documents for agreements with Alberta (AB) and British Columbia (BC). |
|  |  |   | Advance negotiations and sign bilateral transboundary water management agreements with the remaining respective jurisdictions.   | ENR                | In progress                                | There are 3 remaining transboundary water management agreements to negotiate: 1) SK-NWT Agreement (ongoing discussions); 2) YT-NWT Agreement (ongoing discussions); and, 3) NU-NWT Agreement (anticipated to begin 2018/2019).  |
|  |  |   | Continue public engagement and consultation with Aboriginal governments during negotiation processes.  | ENR                | In progress                                | See 1.5 A Action Item 1   |
|  |  |   | Communicate with water partners, Aboriginal governments and the public about the progress of negotiations, through plain language materials and the NWT Water Stewardship website. | ENR                | Complete for reporting period, and ongoing | Information about the progress on negotiations has been communicated during ASC meetings and public presentations (e.g., a speakers' panel event during Canada Water Week in March 2017, the Annual Water Strategy Implementation Workshop held in Dettah in November 2016). Information presented during the Water Strategy workshop can be found on the Water Stewardship website.  |

|   | Key to Success  | Performance Indicator Result   | Action Item (2017 and ongoing)  | Action Item Lead | Action Item Status                         | Action Item Status Description  |
|---|---|--|---|------------------|--|---|
| 1.5 - Transboundary Discussions, Agreements and Obligations (continued) | 1.5 B - Successfully implement bilateral transboundary water management agreements. | 7 implementation activities are in progress and 11 were completed under the AB-NWT BWMA in 2016.*<br><br>3 implementation activities were completed under the BC-NWT BWMA in 2016.*<br><br>1 summary annual report was completed under the AB-NWT BWMA in 2016.<br><br>1 opportunity was provided specifically for public input into the implementation of BWMA in 2016.<br><br>* 2 measures informing 1 Performance Indicator | Establish a Bilateral Management Committee for each completed agreement   | ENR              | In progress                                | A Bilateral Water Management Committee (BMC) was established under the AB-NWT BWMA in 2016. AB and NWT have appointed government members to the BMC. NWT has appointed an Aboriginal BMC member. Work is underway to establish a BMC under the BC-NWT BWMA. NWT has appointed its members. It is anticipated that the BMC will be fully established in the fall of 2017.  |
|   |   |  | Create and implement a multi-year work plan for each completed agreement.   | ENR              | In progress                                | A multi-year work plan was created for the AB-NWT BWMA. NWT and BC are discussing work plan priorities for the BC-NWT BWMA.   |
|   |   |  | Monitor and learn about aquatic ecosystems, including surface and groundwater quality and quantity, biology and traditional use, in the transboundary watersheds.   | ENR              | In progress                                | The Government of the Northwest Territories (GNWT) and Environment and Climate Change Canada (ECCC) are continuing routine monitoring of surface water quality and quantity. The frequency of GNWT mercury sampling in the Slave and Hay River AB-NWT border sites increased to help develop mercury triggers in the near future. Several state-of-the-knowledge reports were completed and other research activities took place to increase our knowledge of the Slave, Hay, and Liard/Petitot watersheds. |
|   |   |  | Establish information sharing and prior notification mechanisms with neighbouring jurisdictions   | ENR              | In progress                                | An information sharing and prior notification mechanism was established in 2016 for developments and activities that might affect the ecological integrity of the aquatic ecosystem of shared AB-NWT waters. It will be reviewed for its effectiveness regularly.   |
|   |   |  | Communicate with water partners, Aboriginal governments and the public about the progress of implementation, through plain language materials, the NWT Water Stewardship website and other formats as appropriate | ENR              | Complete for reporting period, and ongoing | See 1.5B Action Item 4<br><br>An Implementation Highlights report for 2015/2016 was released in March 2017 and summarizes implementation progress during the first year of implementation activities for the AB-NWT BWMA.   |

**Know and Plan**

|  | Key to Success   | Performance Indicator Result   | Action Item (2017 and ongoing)   | Action Item Lead        | Action Item Status                         | Action Item Status Description  |
|--|--|--|--|-------------------------|--|---|
| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components | 2.1 A - Continuously review and prioritize implementation of water monitoring networks (long-term water quality and quantity programs) and develop plans to address monitoring gaps. | <p>27 water quality monitoring spatial gaps were identified and prioritized in 2014. However, full-scale reviews of NWT water quality/quantity networks are not conducted regularly.</p> <p>The total number of monitoring gaps addressed is unclear due to limited responses to the Water Partner survey. Water quality monitoring network gaps are addressed as opportunities arise to collaborate with water partners.</p>                | 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. In 2016, 2 new sites were established at Daring Lake and Hoarfrost River. The Daring Lake site is a hub of scientific research and monitoring in the NWT.   |
|  | 2.1 B - Increase understanding of the aquatic ecosystems and establish common approaches to monitor key aspects of aquatic ecosystem health in the NWT.                              | <p>Information supporting this Performance Indicator is drawn from Performance Indicators under Keys to Success 1.2A and 2.2A:</p> <p>12 (out of 26) water partner respondents indicated that the water quality monitoring activities that are coordinated, supported or required by their organization have standardized protocols (1.2 A).</p> <p>6 community-based monitoring programs have standardized monitoring processes (2.2A).</p> | 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 sediments are consistent for all of NWT's transboundary rivers (Slave River, Hay River, Liard River, and Peel River). Work is underway to develop and pilot an approach to monitor benthic invertebrates in NWT's large transboundary rivers.   |
|  |  |  | Follow guidance documents, like the <i>Working Together Towards Relevant Monitoring and Research in the NWT</i> , to ensure community engagement and existing information is identified and considered when developing a research project. | ENR                     | Complete for reporting period, and ongoing | NWT CIMP promotes the <i>Working Together Towards Relevant Monitoring and Research in the NWT</i> document and the <i>Pathway Approach</i> for the development of new projects, through its annual funding process and proposal guides.   |
|  |  |  | 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 Annual Water Stewardship Strategy Implementation Workshop in November 2016 (available on the Water Stewardship website). Additional research and monitoring findings are available online through the NWT Water Stewardship Website, Mackenzie DataStream and the NWT Discovery Portal. ☐ |
|  |  |  | Publish monitoring trends analysis reports and plain language documents for the long-term river monitoring programs.   | ENR                     | Complete for reporting period, and ongoing | A status and trends report for Great Slave Lake tributaries was completed in 2016 and included monitoring data dating back to the 1980s. The document will be available online in 2017. A status and trends reports for Hay River, Slave River and Coppermine River was completed prior to 2016.  |
| d)   |  |  | 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, Environment Canada | Complete for reporting period, and ongoing | The ENR Water Resources Division monitors 34 long-term water quality sites and collaborates with 21 communities to monitor an additional 41 water quality sites under the NWT-Wide Water Community-based Water Quality Program (CBM program). ECCC maintains 34 water quality sites in the NWT. ☐   |

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| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continue) | 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 200 stations/sites (93 hydrometric stations and 107 water quality sites). <i>Note: excludes SNP and AEMP sites.</i>   | 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, Environment Canada  | Complete for reporting period, and ongoing | The NWT water quantity monitoring network is made up of 13 stations funded by GNWT, 23 stations jointly funded by GNWT and ECCC, 42 stations funded by ECCC and 15 stations funded by third parties. This network excludes sites for Surveillance Network Program (SNP) and Aquatic Effects Monitoring Program monitoring. ☐   |
|   |   |  | Implement monitoring agreements and partnerships as necessary.   | ENR, Environment Canada  | Complete for reporting period, and ongoing | See 2.1 C Action Items 1 and 2   |
|   | 2.1 D - Implement a groundwater monitoring network in the NWT.  | 3 basins have been identified as priorities for groundwater monitoring for the NWT and transboundary areas.  | Establish a hydrogeologist position at ENR   | ENR  | Complete                                   | The hydrogeologist position was filled in May 2016.  |
|   |   |  | Determine the existing state of the knowledge of NWT groundwater resources.  | ENR  | In progress                                | <i>The Preliminary State of Groundwater Knowledge in the Transboundary Regions of the Mackenzie River Basin, NWT</i> report was completed in 2016. This report, and other preliminary work to determine the state of knowledge for NWT groundwater, suggest a general lack of knowledge on groundwater across the NWT. ENR is working with different water partners to gather additional information. Work prior to 2016 include the <i>Central Mackenzie Surface Water and Groundwater Baseline Assessment</i> .  |
|   | 2.1 E - Improve the assessment of cumulative effects on water from climate change and industrial development.         | 15 NWT CIMP (ENR) 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). | Analyze existing information to identify cumulative effects on water and aquatic ecosystems in prioritized or specific areas.  | ENR, Mackenzie Valley Environmental Impact Review Board (MVEIRB) | In progress                                | The Mackenzie Valley Resource Management Act (MVRMA) requires the Board 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 to cumulative effects assessments across larger assessment areas and timeframes. Provisions related to regional studies are not currently in force in the MVRMA, but may come into force soon. Through the Pan-Territorial Environmental Assessment and Regulatory Board Forum and other, bilateral meetings, MVEIRB has had preliminary discussions with other territorial and federal assessment bodies to help NWT consider how regional studies could contribute to the integrated resource management system. |
|   |   |  | NWT CIMP (ENR) 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, Aboriginal organizations, industry and the public through several means: the NWT Discovery Portal online, community-oriented results workshops that are a requirement of all NWT CIMP funded projects, NWT Environmental Research Bulletins (NERB), Annual Reports, environmental assessment and regulatory processes and Research Results Booklets.   |

|  | Key to Success  | Performance Indicator Result   | Action Item (2017 and ongoing)  | Action Item Lead  | Action Item Status                         | Action Item Status Description   |
|--|---|--|---|---|--|--|
| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued) | 2.1 E - Improve the assessment of cumulative effects on water from climate change and industrial development (continued). | <p>10 of 10 final NWT CIMP (ENR) reports were posted on the NWT Discovery Portal.*</p> <p>NWT CIMP (ENR) is working with 31 partners, including Aboriginal Government/ Organizations, Co-management Boards, Canadian Universities, Federal and Territorial Governments.*</p> <p>12 peer-reviewed papers were published in 2016/2017 stemming from NWT CIMP (ENR) funded projects.*</p> <p>* 3 measures informing 1 Performance Indicator</p> | Use available information on cumulative effects in regulatory decision-making.  | MVEIRB, Land and Water Boards of the Mackenzie Valley (LWB), Inuvialuit Water Board (IWB) | Complete for reporting period, and ongoing | <p>The MVRMA requires MVEIRB to consider cumulative effects in its environmental assessment decision making. This requirement is reflected in all environmental assessment processes and reasons for decision. A recent example of how available information was used to assess cumulative effects was the Jay Project environmental assessment (see section 4.3 of the environmental assessment report). The developer presented water quality models for Lac de Gras that incorporated discharge from both Diavik and Ekati mines.</p> <p>Every time the Land and Water Boards do a screening, information is used to assess cumulative effects. Anytime cumulative effects analysis is used in a decision, it is reported and publically available as part of the reasons for a decision. A structured cumulative framework on water would further assist the land and water boards in their decision-making processes.</p> <p>Cumulative effects assessment is challenged by the limited availability of Information and the ability to combine information from a variety of sources. Development of metadata guidelines could be part of the solution to this issue.</p> |
|  |   |  | Communicate the methods and approaches undertaken by regulatory boards to assess cumulative effects to water partners   | MVEIRB, Land and Water Boards of the Mackenzie Valley (LWB), Inuvialuit Water Board (IWB) | Complete for reporting period, and ongoing | Land Water Boards distribute their reasons for decision to stakeholders and to the public via an Online Registry. The Terms of Reference for an environmental assessment set out the methods and approach for cumulative effects assessment that are to be used by the proponent. 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 by environmental assessment participants prior to being finalized by the Board. 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).   |
|  |   |  | Determine trends in environmental quality, potential contributing factors to changes in the environment and the significance of those trends.   | ENR   | In progress                                | GNWTs <i>NWT State of the Environment Reports</i> provides an assessment of environmental status and trends in the NWT, including trend reports on water flow and quality, vegetation, and wildlife. ENR also released Status and Trends Report for Great Slave Lake Tributaries in early 2017.  |
|  |   |  | Support cumulative effects research taking place in the NWT and communicate research findings to water partners.  | ENR   | Complete for reporting period, and ongoing | In 2016 NWT CIMP provided funding for 31 cumulative impact-related projects. Findings from this research was made available through a community-oriented results workshop and/or other relevant northern meetings. 8 projects were highlighted in the NWT Environmental Research Bulletins (NERB).   |
|  |   |  | Complete technical transfer of <i>Climate Impacts Tracking Analysis System</i> 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 <i>Climate Impacts Tracking Analysis System</i> application was completed during the 2016-2017 fiscal year. The full development of the application has been paused pending funding. Continuing the project will be contingent on resource availability.  |
|  |   |  | 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 been extended due to further adjustments required. A contract was started in 2015 to update the model and add more data to refine the predictions and the model's ability to investigate the effects of climate change and industrial development. Work is underway to determine scope for further changes and to pursue funding options and partners to continue the project.   |

|  | Key to Success  | Performance Indicator Result  | Action Item (2017 and ongoing)  | Action Item Lead | Action Item Status  | Action Item Status Description   |
|--|---|---|---|------------------|---|--|
| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued) | 2.1 F - Increase the use of biological indicators in aquatic monitoring to assess ecosystem health.   | <p>2 water partner respondents indicated that 18 individuals were trained in biological monitoring in 2016. 5 respondents indicated that 0 individuals were trained, and 6 respondents didn't know how many people were trained.</p> <p>3 water partner respondents indicated that a total of 30 aquatic monitoring projects or programs were reported to have a biological component. 3 respondents did not know and 1 respondent preferred not to answer.</p> | 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   | Several projects have been initiated to advance on the selection and use of biological indicators for NWT's transboundary rivers. Projects include a review of past biological monitoring in the Slave and Hay River Basins and work that has been done to date on ecosystem health indicators in the Mackenzie River Basin, along with a recommendations report on indicators that could be used for the Slave and Hay River. Researchers from the University of Saskatchewan produced a report to summarize the health and biological data of fish collected from the Athabasca and Slave Rivers between 2011-2015, compared to similar data collected during the 1990s. Other work that could inform the selection and application of biological indicators include the benthic macroinvertebrates monitoring recommendations report and monitoring plan developed in collaboration with the University of New Brunswick, and work by the Mackenzie River Basin Board State of the Aquatic Ecosystem Report and Traditional and Knowledge and Strengthening Partnerships Committees to identify ecological health indicators using multiple knowledges. |
|  | 2.1 G - Integrate social science into water-related research to improve understanding of the human dimensions of water management (e.g. governance, adaptation, food and water security, sustainable livelihoods, and linking different knowledge systems). | <p>8 directly freshwater-related research projects with a social science focus were licensed by the Aurora Research Institute (ARI) for 2016.*</p> <p>4 indirectly freshwater-related research projects with a social science focus were licensed by ARI for 2016.*</p> <p>* 2 measures informing 1 Performance Indicator</p>   | 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: Tracking Change - Local and traditional knowledge in watershed governance (co-led by University of Alberta, ENR and the Mackenzie River Basin Board); the Slave River and Delta Partnership (includes academic, territorial and federal government and First Nation partners); and the Delta Dialogue Network (partnership with Peace-Athabasca Delta Ecological Monitoring Program, Slave River and Delta Partnership, ENR, Parks Canada). ☐  |
|  |   |   | Water partners support research exploring NWT residents' and communities' interactions and relationships with the aquatic environment.  | ENR              | Complete for reporting period, and ongoing  | In 2016 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 changes and the associated impacts on human livelihoods, including adaptation. Research also focused on traditional knowledge activities related to aquatic environments and better understanding the many values of aquatic environments (social, economic, cultural, ecological) that contribute to human well-being.  |
| 2.1 H - Identify research priorities to strengthen and inform the goals of the Water Strategy.                       | <p>0 water partners were formally engaged in the identification of water research priorities in 2016.</p> <p>0 water research priorities were identified in 2016.</p>   | Water partners identify research priorities for each goal of the Water Strategy.  | ENR   | In progress      | <p>Work is ongoing to develop a collaborative approach among water partners to identify water research priorities. ENR has engaged in discussions with the ASC for input on the best ways to identify research gaps and questions that would help water partners' fulfill their roles and responsibilities related to the Water Strategy. ENR anticipates launching an NWT Water Strategy Research Priorities online survey to water partners in the fall of 2017.</p> <p>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.</p> |  |

|  | Key to Success   | Performance Indicator Result  | Action Item (2017 and ongoing)   | Action Item Lead              | Action Item Status                         | Action Item Status Description   |
|--|--|---|--|-------------------------------|--|--|
| 2.1 - Aquatic Ecosystems, including Water Quality, Water Quantity, Groundwater and Biological Components (continued) | 2.1 I: Build upon existing geomatics capacity and capabilities in the NWT to collect and analyze water-related information to fill identified monitoring gaps. | 7 (out of 19) water partner respondents indicated their organization is currently using geomatics tools, however the number of specific monitoring programs is unclear.   | 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 2016, NWT CIMP made annual updates to 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. At the Water Stewardship Strategy Implementation Workshop in November 2016, C-Core, in partnership with GNWT and the University of Saskatchewan presented a research poster about a project using remote sensing to measure water trends and impacts in the Slave River Delta (also available on the Water Stewardship website).  |
|  |  |   | 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 | New LiDAR data were purchased in 2016 that can be shared with partners to improve the NWT topographical fabric, which helps refine the hydrological models for the NWT. The NWT Centre for Geomatics purchased hydrologically enforced Digital Elevation Models from Intermap in 2016 to improve modeling.   |
|  | 2.1 J - Continue to support source water protection planning in NWT communities.   | 2 source water protection planning initiatives were undertaken in 2016.   | <i>No Action Items with 2017 deliverable date</i>  |                               |  |  |
| 2.2 - Collaborative Approach to Community-based Monitoring   | 2.2 A - Ensure continued support of aquatic community-based monitoring programs  | 9 community-based monitoring programs were active in 2016, involving a total of 28 communities.<br><br>7 community-based monitoring programs have defined goals and 6 have standardized monitoring processes.   | 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 | The NWT-wide Community-based Monitoring Program is a large undertaking building capacity in 21 communities through training sessions and hands-on monitoring experience. In 2016, over 300 samples were taken at 39 sites. Results from the program was made available through Mackenzie DataStream and various community presentations. An evaluation of the program, completed in early 2017, confirmed that the program is well supported and the commitment among the partners is high.  |
|  |  |   | Ensure community-based monitoring collects data relevant to local decision-making and helps to address community concerns.   | ENR, Dehcho AAROM             | In progress                                | An evaluation of the NWT-wide Community-based Monitoring Program, completed in early 2017, indicated that the monitoring results are read in the communities but it is unclear if and how the monitoring results are being used in decision-making. Involved partners can request data and monitoring results from ENR. In addition, a technical review of the quality of the data will be completed by the fall of 2017 and will provide recommendations on how to better address community concerns and inform decision-making in the NWT.   |
|  | 2.2 B - Improve community participation and leadership in aquatic research projects  | 27 aquatic research projects actively involving communities were identified via ARI research licence database for 2016 (out of 79).<br><br>A total of 3 (out of 16) Local Aboriginal Government and Municipal Government respondents indicated their community is leading a water-related research project.*<br><br>8 aquatic research projects where communities are part of leading the project identified via the ARI research licence database for 2016.*<br><br>* 2 measures informing 1 Performance Indicator | 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, plain language summary documents, written summaries distributed via email, information accessible on a website or online portal, posters and presentations.  |

Use Responsibly

|   | Key to Success   | Performance Indicator Result  | Action Item (2017 and ongoing)   | Action Item Lead  | Action Item Status  | Action Item Status Description  |  |
|---|--|---|--|---|---|---|--|
| 3.1 - Municipal   | 3.1 A - Improve the sharing of information on municipal drinking water in the NWT.   | 12 (out of 17) water partner respondents agree or strongly agree that the roles and responsibilities associated with drinking water in the NWT are clear.*  | Provide information to NWT residents on treatment and distribution of municipal drinking water by maintaining the new drinking water website and producing annual reports.                     | GNWT Interdepartmental Drinking Water and Waste Management Committee      | Complete for reporting period, and ongoing  | The new drinking water website is up to date. The 2016 GNWT Report on Drinking Water is under final development and is anticipated to be released in fall 2017.   |  |
|   |  | 10 (out of 17) water partner respondents agree or strongly agree that the roles and responsibilities associated with a municipal water licence (water use, wastewater, and waste) are clear.*             | Maintain or enhance the current public drinking water database containing chemical sampling results and weekly bacteriological samples.  | Health and Social Services (GNWT), Municipal and Community Affairs (GNWT) | In progress   | The current database was updated December 31, 2016. Work is ongoing within the department of HSS to update the database for bacterial water sample results. MACA is evaluating a replacement database and anticipates implementation by March 2018.   |  |
|   |  | Number of members of the public that accessed the drinking water website was not tracked for 2016. Discussions are underway to initiate tracking number of visits to the drinking water website for 2017. | Maintain the Circuit Rider Program training for water treatment plant operators, including routine maintenance, record keeping, course delivery for certification and drinking water sampling. | Municipal and Community Affairs (GNWT)                                    | Complete for reporting period, and ongoing  | During the 2016/2017 fiscal year, 19 Circuit Rider Program training trips were completed in 13 different communities. In March 2017 the Circuit Rider Program trainers put on a week-long Small Systems Water Operator Training Course in Yellowknife. 15 Circuit Rider Program training trips have been planned for the summer/fall of 2017.   |  |
|   |  | * 2 measures informing 1 Performance Indicator  | Upgrade remote monitoring of drinking water parameters at specific water treatment plants.   | Municipal and Community Affairs (GNWT)                                    | In progress   | MACA is working toward filling a position for 2017. One of the primary duties will be to continue work towards adding additional communities to the remote monitoring system.   |  |
|   | 3.1 B - Improve municipal waste and wastewater systems in the NWT through waste management activities and the development of standards and guidelines. | 1 document with guidelines was developed in 2016/2017 that support municipal waste and wastewater systems in the NWT.   | <i>No Action Items with 2017 deliverable date</i>  |   |   |   |  |
|   | 3.1 C - Improve municipal water licence compliance by addressing challenges and providing support and training.  | The number of communities visited and meetings held in support of maintaining and improving compliance was not tracked for 2016.  | 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 licences is tracked by ENR Water Resource Officers (WROs). WROs report municipal water licence inspection information using the IRRA system. In 2016, 13 municipal water licence inspections were tracked and reported in the IRRA system, and 2 were tracked but not reported in IRRA.  |  |
|   |  | 2015/2016<br>% 72 of the municipal water licences holders submitted annual reports.<br><br>56% of the municipal water licence holders provided SNP monitoring data.                                       | 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 Land and Water Boards website. Information about these templates is communicated to municipal governments and MACA on an ongoing basis. Of note, regional Boards such as the Gwich'in Land and Water Board (GLWB) brings members of the community together to discuss roles and responsibilities of the Board and the municipal government. All Land and Water boards make efforts to work with ENR Water Resource Officers to train the community workers to conduct and complete the SNP sampling and reporting. |  |
| 3.1 D - Improve the understanding of waste and wastewater systems in NWT communities and consider traditional knowledge in municipal water licensing processes. | 0 reseach projects on environmental impacts of municipal waste and wastewater indentified via ARI research licence database for 2016.                  | Ensure opportunities to include traditional and local knowledge in municipal water licencing are clearly communicated.  | LWB/IWB  | In progress   | Land and Water Boards have an online public review system. Staff from Land and Water Boards 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. |   |  |

|                             | Key to Success   | Performance Indicator Result   | Action Item (2017 and ongoing)  | Action Item Lead           | Action Item Status                         | Action Item Status Description  |
|-----------------------------|--|--|---|----------------------------|--|---|
| 3.2 -Industrial Development | 3.2 A - Ensure clarity and facilitate understanding of water use, waste and wastewater regulatory processes. | 11 (out of 17) water partner respondents agreed that they know who to contact if regulatory roles and responsibilities are not clear.*<br><br>10 (out of 17) water partner respondents agreed that industrial water licensing roles and responsibilities are clear.* | 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 | MVEIRB ensures that environmental assessment processes, guidelines and policies are available to the public in plain language. Examples include plain language diagrams outlining the various environmental assessment processes, environmental assessment guidelines, and a two-page document outlining the stages of the environmental assessment process.<br><br>The Land and Water Boards also have plain language documents available on regulatory processes, including a water licence application guide and plain language information on NWT water regulations posted online. ☐  |
|                             |  |  | 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 | A Resource Co-Management Workshop with 300 attendants representing all NWT communities and all the regulatory boards took place in Yellowknife in 2016. The workshop was held to discuss the integrated resource management system in the Mackenzie Valley and identify steps that could be taken to improve, clarify, and standardize processes within and across institutions. The resource co-management workshops take place annually in the various regions. In January-February 2017, workshops took place in Hay River (with participants from Dehcho and Akaitcho regions) and Norman Wells (Sahtu Region) to facilitate more discussion of topics of particular interest in the regions. Land and Water Boards 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. |
|                             |  |  | Clarify roles and responsibilities for industrial compliance and identify areas for policy improvements.                                    | LWB/IWB, ENR, Lands (GNWT) | 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 for the GNWT pertaining to land permits and water licences. The department of Lands is conducting this policy review and will update the FOD based on the outcomes. In the interim, the old directive is in place. The GNWT departments and Regulatory Boards need to further discuss compliance and the various roles.  |
|                             | 3.2 B - Improve clarity and facilitate understanding of industrial water licence compliance.                 | * 2 measures informing 1 Performance Indicator   | Track and report on number of inspections of industrial water licences.   | ENR, Lands (GNWT)          | Complete for reporting period, and ongoing | Industrial water licence inspections (industrial undertakings, mining and milling, and power undertaking) were tracked in 2016. 30 inspections were completed in the North Slave Region and 2 were completed in the South Slave Region<br>There are a total of 15 Type A licences in the NWT related to Industrial development/ hydro development.  |

|   | Key to Success   | Performance Indicator Result  | Action Item (2017 and ongoing)  | Action Item Lead | Action Item Status                         | Action Item Status Description  |
|---|--|---|---|------------------|--|---|
| 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/regulation was under review in 2016.<br><br>4 regulatory guidelines were under review in 2016. | 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. | ENR, LWB/IWB     | In progress                                | The integrated water management system consists of a number of initiatives intended to support the regulatory regime in the NWT. Below is an update on these various initiatives:<br><ul style="list-style-type: none"> <li>• There is continued engagement on the development of a water classification system. At this time, work on the water classification system itself has been put on hold due to concerns shared by water partners on its methods and intent. Engagement is underway to reassess the concept and determine if and how such a system could enable assessment of water resources.</li> <li>• Baseline Data Collection Guidelines are under development and are being directed by a steering committee. Steering committee members include representatives from MVEIRB, LWB and ENR. The guidelines are intended to fill a gap in the system and support the review and update of the AEMP guidelines.</li> <li>• Mixing Zone Guidelines were developed together with ENR and Land and Water Boards. The guidelines were approved by the Boards and it is expected to be approved by the GNWT in 2017 and released jointly.</li> <li>• 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 February. ☐</li> </ul> |
|   |  |   | Provide a short description of water license requirements and management plans.   | LWB/IWB, ENR     | In progress                                | There are supporting documents publically available regarding water license requirements in the NWT. However, there is a need to improve how lead partners communicate information about water licenses and management plans and how they relate to one another. Land and Water Boards are currently working on a new plain language "Guide to the Water Licensing Process" that will be released in 2018.  |
|   |  |   | Review territorial legislation relevant to water management and identify areas for improvement.   | ENR              | In progress                                | A review of the <i>NWT Water Act</i> and Regulations was initiated in 2016 and <b>is</b> in progress.   |
|   |  |   | Review existing regulatory guidelines and policies relevant to water management post devolution and revise as necessary.  | ENR              | Complete for reporting period, and ongoing | 4 regulatory guidelines were reviewed in 2016 - Guidelines on Mixing Zones (finalized), Water Quality Baseline Guidelines (drafted), Aquatic Effects Monitoring Program Guidelines (currently being reviewed), and Guidelines for Closure and Reclamation Cost Estimates for Mines (currently being reviewed).  |

**Check Our Progress**

|                              | Key to Success   | Performance Indicator Result   | Action Item (2017 and ongoing)   | Action Item Lead | Action Item Status                         | Action Item Status Description  |
|------------------------------|--|--|--|------------------|--|---|
| 4.1 - Routine Checks         | 4.1 A - Ensure progress on the Action Plan occurs.   | 52 Performance Indicators and 84 Action Items were assessed in the 2016/2017 progress review (the first annual progress report). | 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 May 2017. ENR also scheduled meetings with various water partners to collect additional information on the Water Strategy implementation progress for 2016. 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 intending to measure the outcomes of those activities.  |
|                              |  |  | Routinely update water partners on implementation activities (e.g. annual reports and website).  | ENR              | In progress                                | Implementation updates were primarily provided to water partners through the 7th Annual Water Strategy Implementation Workshop held in Dettah in November 2016 . Water partners shared updates of recently completed, ongoing and planned implementation activities through posters and presentations.<br>The Water Stewardship website also was updated to communicate progress on implementation activities such as bilateral water management agreement implementation activities, youth water stewardship engagement activities and water strategy implementation workshop reports.                                 |
|                              |  |  | Hold an annual workshop to report on successes, improvements and remaining challenges.   | ENR              | Complete for reporting period, and ongoing | ENR hosted the 7th Annual Water Strategy Implementation Workshop held in Dettah in November 2016. The objectives of the workshop were to review implementation of the Water Strategy, including updates on water strategy initiatives and water-related research and monitoring; and to identify and discuss implementation and research priorities. The workshop included 14 presentations from water partners, a poster fair with eight poster presentations and a story telling panel from four community partners. Water partners also participated in a two hour break-out session to discuss research priorities. |
| 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. | <i>No Performance Indicators or Action Items with 2017 deliverable date</i>  |  |                  |  |   |