



Canadian Council of Ministers  
of the Environment      Le Conseil canadien  
des ministres  
de l'environnement

# **CANADA-WIDE STRATEGY FOR THE MANAGEMENT OF MUNICIPAL WASTEWATER EFFLUENT**

## **2014 Progress Report**

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The Canadian Council of Ministers of the Environment (CCME) is the primary minister-led intergovernmental forum for collective action on environmental issues of national and international concern.

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# TABLE OF CONTENTS

<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>2.0 FIVE YEAR COMMITMENTS.....</b>	<b>1</b>
2.1 Jurisdictional Commitments.....	2
2.1.1 Risk Level .....	2
2.1.2 Overflows Due to Development .....	4
2.1.3 Harmonized Requirements .....	6
2.1.4 Harmonization - Completion of Bi-Lateral Agreements .....	9
2.1.5 Reporting .....	11
2.2 CCME Commitments.....	11
2.2.1 Municipal Wastewater Effluent Coordinating Committee (MWE CC).....	11
2.2.2 Environmental Monitoring .....	12
2.2.3 Performance Standards for Canada’s Far North.....	12
2.2.4 Science and Research Coordination Working Group.....	13
2.2.5 Targeted Research Program.....	13
2.2.6 Review of Strategy .....	14
<b>3.0 EMERGING ISSUES AND TECHNICAL CLARIFICATION.....</b>	<b>14</b>
3.1 Emerging Issues .....	14
3.2 Technical Clarification.....	15

## 1.0 INTRODUCTION

The Canada-wide Strategy for the Management of Municipal Wastewater Effluent (the Strategy) was endorsed by a majority of the members of the Canadian Council of Ministers of the Environment (CCME) on February 17, 2009. The Strategy was not endorsed by Newfoundland and Labrador, Québec and Nunavut.

The Strategy articulates the collective agreement reached by ministers of the environment in Canada to ensure that wastewater facility owners (municipal, First Nations and federal) will have regulatory clarity in managing municipal wastewater effluent under a harmonized framework that is protective of human health and the environment.

To achieve this goal, the Strategy focuses on two outcomes:

1. Improved human health and environmental protection.
2. Improved clarity about the way municipal wastewater effluent is managed and regulated.

The Strategy requires implementation progress to be assessed and reported to CCME Ministers and Canadians every five years, with the first report being in 2014. It also includes a requirement to review the Strategy every five years. This document reports on progress in implementing the commitments by individual signatory jurisdictions and CCME collectively, as well as the results of a review of the Strategy.

## 2.0 FIVE YEAR COMMITMENTS

This report outlines progress by signatory federal, provincial and territorial jurisdictions on the commitments made in the Strategy. This report does not cover the status of the implementation of Strategy requirements which fall upon the owners of municipal wastewater systems (i.e., Canadian municipalities) either through the federal Wastewater Systems Effluent Regulation (WSER) or any applicable provincial regulatory framework (e.g., meeting effluent quality standards).

The Strategy includes a total of eleven commitments, described below, that should be completed by 2014. Five commitments are the responsibility of jurisdictions while the remaining six commitments are the responsibility of CCME.

## 2.1 Jurisdictional Commitments

### 2.1.1 Risk Level

Commitment: Within one year, jurisdictions will determine the initial risk level for facilities that do not meet the national performance standards to determine high, medium or low risk, and thereby determine the timelines to meet the national performance standards.

Outcome Addressed: Improved human health and environmental protection

Measure: Assessment completed by each jurisdiction within one year.

Response:

#### ***Alberta***

Alberta has met this commitment. The suggested risk assessment and compliance with the timelines are ongoing compliance practice in Alberta. Alberta's provincial Standards are more stringent than the national performance standards.

#### ***British Columbia***

British Columbia has met this commitment. An initial risk assessment was completed in 2008 using risk assessment criteria suggested at the time. In 2012 a further high level assessment was completed using the final risk ranking matrix published in the WSER. Despite high level assessments completed by the province, individual facility owners are still expected to confirm their own risk rankings and comply with any obligations under WSER.

#### ***Canada***

The federal WSER, published in June 2012, set out the criteria and point scheme upon which the risk rankings for wastewater systems discharging inadequately treated wastewater effluent will be determined. Wastewater systems needing to upgrade to a secondary level of wastewater treatment need to apply for and receive a transitional authorization under the WSER in order to be allowed to continue to discharge wastewater effluent. Wastewater systems posing a high risk are required to meet the effluent quality standards by December 31, 2020, those posing medium risk by December 31, 2030, and those posing low risk by December 31, 2040.

#### ***Manitoba***

Manitoba had established effluent standards prior to the strategy that are considered to be as or more stringent than the national performance standards. Manitoba continues to work with facilities that were not/are not in compliance with Manitoba's standards and by bringing those into compliance will ensure they meet the national performance standards. Manitoba has very few high risk facilities and all are actively working with Manitoba to implement compliance plans.

Manitoba was intending to use data collected into the federal database to assist with further determining risk levels for the medium and low risk facilities. It has not yet been determined if this approach will be viable or if an alternative will be developed but this is the subject of ongoing discussions.

### ***New Brunswick***

New Brunswick has met this commitment. New Brunswick completed an initial risk level assessment for all municipal wastewater facilities based on 2008 data and communicated timelines to meet the national performance standards to municipalities.

### ***Northwest Territories***

This requirement does not yet apply in Northwest Territories, given the five-year time period provided to examine northern issues. Between 2007 and 2010, research was conducted to assess the performance of northern wastewater systems, in comparison with national performance standards.

In 2011, a study into preliminary options for development of revised criteria for the calculation of risk level for wastewater facilities in Canada's Far North was completed. Further refinement of the draft revised risk criteria is required. On-going research into the performance of northern wastewater systems will provide additional data to support the development of risk criteria. Once northern performance standards and adapted risk assessment procedures have been finalized for Canada's Far North, Northwest Territories will use community wastewater system data to assess risk levels.

### ***Nova Scotia***

Nova Scotia has met this commitment. Nova Scotia completed an initial risk level assessment in the fall of 2010. This assessment is expected to change over time as facilities upgrade to meet the objectives of the Strategy.

### ***Ontario***

Ontario has met this commitment. An initial risk level scoring was completed in 2008 using risk scoring criteria in a draft of the CCME Wastewater Strategy and most recently in 2013 per the risk scoring requirements in the WSER, for Ontario's internal purposes. Individual facility owners not able to meet national effluent quality standards for secondary treatment under WSER may choose to apply to Canada for an authorization to deposit effluent if they anticipate not being able to meet secondary effluent standards by 2015, and as part of the application process must conduct a risk level scoring themselves.

### ***Prince Edward Island***

Prince Edward Island has met this commitment. Prince Edward Island has completed an initial assessment of wastewater treatment facilities within the Province and all systems examined provide, as a minimum, secondary levels of wastewater treatment. In addition, with the exception of a few systems which would fall in the low risk category, all systems meet the national performance standards prescribed in the Strategy. For these systems falling in the low risk category, measures are currently underway to address any outstanding non-compliance issues with the national performance standards prior to deadlines outlined in the strategy.

### ***Saskatchewan***

Saskatchewan has met this commitment. Saskatchewan continues to work towards implementing the requirements of the Strategy in the province. There are approximately 91 municipal wastewater treatment plants in Saskatchewan that discharge treated effluent to natural waterways, such as creeks and/or rivers. Approximately 98% of these systems utilize lagoons as the treatment method, with another 2% systems that use mechanical treatment plants. Saskatchewan has completed the risk assessment for these communities based on available discharge data and assessment criteria specified in Technical Supplement 2: Environmental Risk Management: Framework and Guidance. Based on the assessment, risk levels (low, medium, and high risk) for all of the 88 communities were identified and the timeline to meet the national performance standards determined.

### ***Yukon***

Yukon went through the exercise for its small number of systems that trigger the strategy. The majority were in the “low” risk category. Once the trigger elements for the regulation were finalized, and local upgrades already in process were advanced, it became apparent that all these systems would meet the national performance standards and the assignment of risk (for placing on an upgrade/replacement schedule) ceased to be relevant.

## **2.1.2 Overflows Due to Development**

Commitment: Effective immediately, jurisdictions will ensure that combined sewer overflows and sanitary sewer overflows will not increase in frequency due to development, unless it occurs as part of an approved long-term management plan.

Outcome Addressed: Improved human health and environmental protection

Measure: Demonstrate through reference to pre-existing policy/programs or new policy/programs, that action was taken as soon as reasonably possible after the signing of the Strategy to implement this commitment.

Jurisdiction Response:

### ***Alberta***

Alberta has met this commitment. In Alberta, combined sewer overflows have not been allowed since the mid-1980s.

### ***British Columbia***

British Columbia has met this commitment. The construction and expansion of combined sewers is not permitted under existing provincial regulation and existing combined sewers must be separated upon repair or renewal. Sanitary sewer overflows also must not occur at a frequency exceeding a 5-year return period, unless a liquid waste management plan is developed which commits to a long term management and reduction plan for overflows.

### ***Canada***

The WSER requires owners and operators of wastewater systems with combined sewers to record information on the quantity and frequency of effluent discharged from them and to submit annual reports. Overflows from combined and sanitary sewers are not authorized under the WSER.

### ***Manitoba***

Manitoba has met this commitment. Manitoba does not have many communities with combined sewer overflows and has not permitted their construction for decades. Significant progress has been made to reduce overflows. One jurisdiction represents the most significant remaining source of combined sewer overflows. A site-specific Environment Act Licence was issued September 4, 2013 that requires preparation of a plan for reducing or eliminating overflow events and meeting specified effluent quality criteria. The Licence specifically stipulates that the frequency or volume of combined sewer overflows shall not be increased due to new or upgraded land development activities.

### ***New Brunswick***

New Brunswick has met this commitment. New Brunswick has implemented requirements through municipal wastewater approvals for system owners to record overflow length and frequency and report to the Department of Environment and Local Government annually. New Brunswick requires Overflow Management Plans for upgraded lift stations associated with new development. All municipalities are required through their approval to develop long-term plans to reduce combined sewer overflows and reduce overflows from infiltration by January 1, 2016.

### ***Northwest Territories***

Northwest Territories has met this commitment. No Northwest Territories communities have combined sewer and storm water systems. In communities that have piped water and wastewater, there are no regular occurrences of wastewater overflow, and there have been no increases in sanitary sewer overflows due to development

### ***Nova Scotia***

Nova Scotia is developing a provincial wastewater standard to address the objectives of the Strategy. The standard will address wastewater treatment but will also consider an approach to overflows that is appropriate to Nova Scotia.

### ***Ontario***

Ontario has met this commitment. Ontario's policies for combined sewer systems and guidelines for the design of sewage works do not allow the construction of new combined sewers. No proposals for construction of combined sewers have received approval since 1985. For existing combined sewer systems, Ontario policy requires capture and treatment of wet weather flow, and prohibits dry weather overflows.

### ***Prince Edward Island***

Prince Edward Island has met this commitment. The Province of Prince Edward Island has not approved any new combined sewers for many years, and a program to eliminate combined sewer overflows in the sole remaining community with combined sanitary-storm sewers is nearing completion

### ***Saskatchewan***

This commitment does not apply to Saskatchewan as combined sewers, and therefore overflows, are prohibited in the province as per provincial regulatory requirements.

### ***Yukon***

Yukon does not have, or plan to install, combined sewer systems, therefore overflows are not an issue. Every sanitary sewer system is required to have some provision for overflow in an emergency such as a power failure. However, no changes are planned or anticipated to existing municipal infrastructure, even within the context of future growth.

## **2.1.3 Harmonized Requirements**

Commitment: By February 2012, jurisdictions will incorporate requirements into their respective regulatory frameworks.

Outcome Addressed: Improved clarity

Measure: Policy/programs in place.

Jurisdiction Response:

### ***Canada***

In June 2012, Canada put in place the WSER, under the *Fisheries Act*. The WSER fulfills the federal government's commitment under the CCME Strategy to establish a regulation under the *Fisheries Act* reflecting agreed-to effluent quality standards in the CCME Strategy. In addition to national effluent quality standards, the WSER includes requirements concerning toxicity, effluent monitoring, record-keeping and reporting. The WSER sets out the criteria and point scheme for establishing the risk rankings for wastewater systems needing upgrades as well as the timelines for upgrades. The WSER requires the recording and reporting on the quantity and frequency of combined sewer overflows.

### ***Alberta***

Alberta has met this commitment. Alberta's current regulations and requirements are consistent with the Strategy's national performance standards, and requirements for monitoring and for establishing site specific discharge objectives based on the receiving environment. Alberta is working closely with Environment Canada to assess Alberta's regulatory framework in relation to the WSER to identify specific amendments that may be required in order to reach an equivalency agreement.

### ***British Columbia***

British Columbia has met this commitment. British Columbia's existing regulatory framework is consistent with the Strategy's national performance standards. The province is working closely with Environment Canada to assess its regulatory framework in relation to the WSER to identify specific amendments that will support an equivalency agreement.

### ***Manitoba***

Manitoba has met this commitment. Manitoba specifies effluent criteria and monitoring requirements in site-specific licences issued to each wastewater treatment facility (approximately 500 facilities). Manitoba changed the minimum standards from a maximum 30 mg/L for biological oxygen demand (BOD) and total suspended solids (TSS) to a maximum 25 mg/L for BOD and TSS. Since carbonaceous biological oxygen demand (CBOD) is a component of BOD and the average will by definition be lower than the maximum, this change results in limits that are more stringent than the national performance standards for these compounds.

In 2011, the minimum effluent standards were enshrined in the Water Quality Standards, Objectives and Guideline Regulation under *The Water Protection Act*. Standards for wastewater treatment effluent include CBOD, BOD, TSS, fecal coliform organisms, *Escherichia coli* organisms, ammonia, total phosphorus, total nitrogen, and best practical technology for beneficial use of valuable resources such as nutrient, organic matter and energy contained within municipal biosolids and sludge. Site specific effluent requirements may be stricter than the minimum standards and include limits for additional compounds. Where chlorine is used as a disinfectant for wastewater treatment, the Water Quality Objective for chlorine is met by including a maximum chlorine limit of 0.02 mg/L in the licence.

### ***New Brunswick***

New Brunswick has met this commitment. New Brunswick has incorporated into the Approvals to Operate issued to system owners by the Minister of Environment and Local Government the national performance standards, chlorinated effluent, toxicity, monitoring, effluent characterization and discharge objectives, and long term combined sewer overflow plans to achieve jurisdictional overflow objectives according to the timeframes in the Strategy. Deadlines for the completion of environmental risk assessment studies have also been incorporated into Approvals for all municipal systems.

### ***Northwest Territories***

This requirement does not yet apply in the Northwest Territories, given the five-year time period provided in the Strategy to examine northern issues further, including research into the performance of northern wastewater systems. Northwest Territories Water Boards consider effluent discharge objectives in setting current water license requirements.

### ***Nova Scotia***

Nova Scotia is developing a provincial wastewater standard to implement the objectives of the Strategy. The anticipated timeline for completion of this standard is 2014, pending discussion on an equivalency agreement related to the WSER. Nova Scotia is no longer approving the construction of treatment facilities that do not meet the national standards, at a minimum. Some Environmental Risk Assessments have been submitted.

### ***Ontario***

Ontario has met this commitment. In Ontario, effluent quality limits and other conditions in sewage works environmental compliance approvals are based on minimum or baseline policy for municipal wastewater, and also on a site specific assessment if needed to address environmental needs in the receiving water body. Ontario policy requires receiving water assessments to be

performed, which may result in site specific effluent limits more stringent than, or in addition to, the standards in the Strategy.

In regard to secondary treatment, Ontario policy for municipal wastewater also mandates that the normal level of treatment shall be secondary or equivalent. In regard to total residual chlorine from the effluent disinfection process, effluent limits to control residual chlorine may be set where warranted based on site-specific receiving water assessments. In regard to acute toxicity, when warranted by site-specific receiving water assessments, environmental compliance approvals contain appropriate effluent limits and monitoring.

The Strategy contains commitments to characterize effluent from larger municipal treatment plants for non-conventional pollutants by 2013 on a one-time basis and, if needed, establish a process for setting site-specific effluent discharge objectives (EDOs) by 2016. Ontario has a process for setting site-specific effluent objectives or limits which can be applied to any pollutant in a wastewater discharge.

Existing Ontario policy is consistent with and exceeds the level of environmental protection provided by the Strategy's national combined and sanitary sewer overflow standards, and jurisdictional combined sewer overflow CSO action plans.

### ***Prince Edward Island***

Prince Edward Island incorporates the national performance standards in all Certificates of Approval for the operation of all wastewater treatment facilities in the Province. ultra-violet disinfection of effluents is practiced rather than chlorination, thus chlorinated effluent is not an issue. Monitoring requirements are specified in the Province's Drinking Water and Wastewater Facility Operating Regulations, and are generally consistent with those prescribed under WSER with a few minor exceptions. While some work has been completed on characterization of effluent quality, work has not yet been conducted on the development of EDOs. It is the Province's intention to develop EDOs for a selection of representative system classes over the next few years.

### ***Saskatchewan***

Saskatchewan has met this commitment. Presently, Saskatchewan is working on revising its existing regulation, The Water Regulations, 2002, and the revised regulation is expected to be passed by early 2014. The draft Regulations contain the national performance standards from the Strategy and the un-ionized ammonia standard specified in the federal WSER. The Environmental and Municipal Management Services (EMMS) Division of Saskatchewan's Water Security Agency (formerly known as Municipal Branch of Saskatchewan Ministry of Environment), has already started implementing the Strategy by enforcing the national performance standards and including the numerical limits in operational permits of municipalities that are affected by the Strategy. Affected municipalities were also requested to monitor ammonia (as per WSER requirements) and toxicity levels in their treated wastewater effluent and to conduct studies to establish site-specific EDOs. During 2011-12 and 2012-13 fiscal years, EMMS Division spent approximately \$200,000 from its operating budget to conduct the effluent characterization studies for selected communities in the province. Some of the results of characterization studies have been presented to stakeholders and discussions continue in order to develop final site-specific

EDOs for selective affected communities. Once the initial characterization studies are completed, all of the affected communities in the province are required to conduct a review, analysis, and risk assessment to establish site-specific EDOs as per the Strategy. EMMS Division of the Water Security Agency proposes to conduct characterization studies for “very small” category communities in the next three years and develop site-specific EDOs for these communities. No municipalities in Saskatchewan are currently using chlorine for disinfection of their treated wastewater effluent.

### ***Yukon***

Yukon is working to achieve equivalency with the requirements of the Strategy, primarily through amendments to existing water use licenses. Affected systems meet or exceed national performance standards, however, revised language regarding accredited labs and acute lethality test methodology was required to meet the intent of the Strategy. Yukon’s licensing body, the Yukon Water Board, published licensing guidelines for Municipal Undertakings in August 2013. This guidance specifies adherence to WSER and recognizes the Strategy as reference material.

## **2.1.4 Harmonization - Completion of Bi-lateral Agreements**

Commitment: By February 2012, jurisdictions will establish federal-provincial and federal-Yukon agreements. For the Northwest Territories and Nunavut, an agreement in each of these territories will be developed among the jurisdictions clarifying the roles and responsibilities of the various regulatory bodies in the respective territory.

Outcome Addressed: Improved clarity

Measure: Equivalency and/or administrative agreements completed by February 2012.

Jurisdiction Response:

The development of bi-lateral agreements under section 4.1 and 4.2 of the federal *Fisheries Act* is an unprecedented approach to the implementation of a federal regulation in an area of shared jurisdiction. This approach has proved challenging and has not been achieved within the timeline laid out in this Strategy. Jurisdictions remain committed to achieving this goal as quickly as possible.

### ***Canada***

In September 2011 Canada officially invited jurisdictions to negotiate bilateral agreements for WSER. Also, in 2012 new authorities added to the *Fisheries Act* allow Canada to enter into equivalency agreements if provincial provisions are deemed to be equivalent in effect to federal provisions. The agreements will clarify roles and responsibilities of jurisdictions with respect to the management of wastewater effluent and reduce regulatory duplication and overlap. The establishment of agreements will set a major precedent in the area of cooperative wastewater management in Canada. A proposed WSER administrative agreement for Canada-New Brunswick was published in Canada Gazette in February 2014 for public comment. A final agreement is expected later in 2014. Proposed WSER equivalency agreements for Canada-Yukon and Canada-

Québec are also targeted for publication in Canada Gazette later in 2014. Advancing the other agreements, which are currently at various stages of development, remains a priority.

### ***Alberta***

Effort is ongoing in Alberta to meet this commitment. Alberta is currently discussing an equivalency agreement with Environment Canada and is waiting for Canada's evaluation of whether Alberta's regulatory regime is equivalent to federal requirements and for further federal consultation with Alberta regarding the next step.

### ***British Columbia***

In 2012 Canada and British Columbia signed an agreement to collaborate on wastewater management. The two parties are actively working towards an equivalency agreement that will clarify the roles and responsibilities for wastewater management in the province. It is expected that an agreement will result in the federal regulation standing down in British Columbia in favour of the provincial regulatory framework.

### ***Manitoba***

Manitoba has been working with Canada towards the development of a bi-lateral agreement and work is ongoing.

### ***New Brunswick***

New Brunswick has a draft Administrative Agreement that has been agreed to in principal by New Brunswick and Canada with final approval expected in early 2014.

### ***Northwest Territories***

On April 1, 2014, the Government of Canada will transfer administration and control of rights in respect of waters to the Government of the Northwest Territories. In addition, the structure for Land and Water boards in the Northwest Territories is being modified through changes to legislation. Any agreement under the Strategy for the purposes of wastewater effluent management would be negotiated after devolution so that roles and responsibilities are properly addressed.

### ***Nova Scotia***

Nova Scotia does not have a federal-provincial administrative or equivalency agreement in place at this time.

### ***Ontario***

Ontario is pursuing an equivalency agreement with Canada. The two governments have issued a joint Collaboration Agreement signifying their intent. Ontario is currently awaiting Canada's evaluation of whether Ontario's framework is equivalent in effect to federal requirements and for further federal consultation with Ontario regarding next steps.

### ***Prince Edward Island***

Prince Edward Island is currently in the early stages of negotiating an equivalency agreement with Canada with respect to WSER.

### ***Saskatchewan***

Presently, Saskatchewan is working with Canada to finalize a bi-lateral agreement and expects to complete this by early 2014.

### ***Yukon***

Good progress has been made towards “equivalency” and a draft agreement is presently going through the final stages of review in both the federal and territorial regimes. It is anticipated that the Yukon agreement will be the first such agreement posted to Canada Gazette I in 2014.

## **2.1.5 Reporting**

Commitment: The federal government will develop a national database to house the regulatory reporting information.

Outcome Addressed: Improved clarity

Measure: Database and reporting system operational prior to implementation of federal wastewater regulation.

### Jurisdiction Response:

Canada has put in place the Effluent Regulatory Reporting Information System (ERRIS). ERRIS allows wastewater system owners and operators to submit various reports required under the WSER. It utilizes Environment Canada's Single Window system where WSER regulatees establish user accounts, manage their organization information and connect to ERRIS. ERRIS fulfills the federal government's commitment under the Strategy to develop a national database to house the regulatory reporting information.

## **2.2 CCME Commitments**

### **2.2.1 Municipal Wastewater Effluent Coordinating Committee (MWWE CC)**

Commitment: By February 2010, a coordinating committee will be established to coordinate implementation of the Strategy

Outcome Addressed: Improved clarity

Measure: Coordinating Committee selected and operating by January 1, 2010.

MWWE CC Response: The Municipal Wastewater Effluent Coordinating Committee was formed after the signing of the Strategy, with its Terms of Reference established in July 2009. The committee provides a forum for jurisdictions to discuss long-term planning, cooperative work and issues arising from implementation of the Strategy. The committee includes a representative from each CCME jurisdiction as well as an observer from the Table of Provincial/Territorial Deputy Ministers Responsible for Local Government.

## 2.2.2 Environmental Monitoring

Commitment: By February 2014 a mechanism will be developed under CCME for jurisdictions to monitor the receiving environment at a watershed level.

Outcome Addressed: Improved human health and environmental protection

Measure: A mechanism is developed for jurisdictions to monitor the receiving environment at a watershed level by March 31, 2014.

MWWE CC Response: Jurisdictions worked together to develop an environmental effects monitoring mechanism and reviewed other existing options to monitor the receiving environment at a watershed level. Jurisdictions may adopt the environmental effects monitoring approach, or continue their current monitoring for receiving environments.

## 2.2.3 Performance Standards for Canada's Far North

Commitment: The governments of Northwest Territories, Nunavut, Québec, Newfoundland and Labrador, and Canada will work collaboratively for up to 5 years to undertake research into factors that affect performance of wastewater facilities in northern conditions and to:

- assess the performance of existing wastewater facilities and factors affecting these
- develop northern performance standards
- develop initial risk level criteria and timelines for implementation of northern performance standards with due consideration of the economic implications in the short, medium and long-term
- adapt the environmental risk assessment approach as appropriate for the Far North
- adapt monitoring and reporting requirements.

Outcome Addressed: Improved human health and environmental protection

Measure: Undertake work collaboratively through a Northern Working Group to provide a forum to address issues outlined in the commitments in the Strategy related to Canada's Far North.

MWWE CC Response: Northwest Territories, Nunavut, Québec, Newfoundland and Labrador and Canada worked collaboratively through a Northern Working Group to examine issues related to the Far North and to engage stakeholders.

Towards developing northern performance standards, the Northern Working Group has completed preliminary work on risk level criteria and timelines for implementation, adapting the existing risk level criteria in the Strategy and taking into consideration the challenges faced in Canada's Far North. The potential costs of building new facilities capable of achieving the Strategy's national performance standards or adding to existing wastewater treatment lagoons was examined. The Northern Working Group undertook consultations with representatives of the public sector (federal, provincial, territorial and municipal governments), Aboriginal communities and organizations, the private sector, academia and Land and Water Boards on risk level criteria, performance standards, and monitoring and reporting.

Outside of CCME, Nunavut is currently conducting research to better understand wastewater treatment under northern conditions. Results from this research will be available in early 2015. Nunavut will continue to provide status updates on its research to CCME.

Effluent quality requirements including effluent standards, compliance, monitoring and reporting requirements. in existing Water Board authorizations and the general prohibition of the federal *Fisheries Act* continue to apply in the Far North. They may not be aligned in all cases.

## **2.2.4 Science and Research Coordination Working Group**

Commitment: During the first two years of implementation, the MWWE CC will work with stakeholders to establish a research coordination and information dissemination committee.

Outcome Addressed: Improved human health and environmental protection

Measure: Coordination committee establishes research coordination and information dissemination committee group by Jan. 1, 2011.

MWWE CC Response:

This commitment was achieved.

The Strategy identifies the need for coordination of research being conducted on municipal wastewater effluent issues in Canada and the establishment of a Canada-wide science and research coordination body (SRCB).

A core group of members for SRCB was established, and by late 2010 the Core Group composed of Environment Canada (EC), the Canada Water Network (CWN), the Canadian Water and Wastewater Association (CWWA), and one representative from each of the CCME Biosolids Task Group and CCME Wastewater Coordinating Committee, developed a proposal for establishing a national research agenda. A consortium approach was recommended drawing on the experience and expertise of EC, CWN and CWWA. Provincial and municipal associations were seen to have a role in engaging municipalities, with coordination by CWWA.

## **2.2.5 Targeted Research Program**

Commitment: Within five years the MWWE CC will help develop a targeted research program which will encompass biosolids, the North, emerging substances, treatment technology, and source control.

Outcome Addressed: Improved human health and environmental protection

Measure: Research coordination and dissemination body/program in place and operating, by January 1, 2014.

MWWE CC Response:

The commitment has been achieved. The National Research Agenda for Municipal Wastewater and Biosolids was completed in 2012. SRCB also developed a process for setting the agenda which was recommended to be repeated every five years. Six research projects have been funded and are being managed through CWN's Canadian Municipal Water Consortium. These projects will significantly advance the science and knowledge in Canada in the areas of municipal wastewater and biosolids. Partners from the private sector, municipalities and government are collectively contributing over \$1.5 million and CWN has invested over \$1.1 million in the six priority wastewater and biosolid projects. EC, CWN and CWWA supplemented CCME's contribution with both in kind and additional funding to ensure the successful development of the National Research Agenda for Wastewater and Biosolids.

## **2.2.6 Review of Strategy**

Commitment: Within five years CCME will assess implementation of and review the Strategy, and every five years thereafter. Within five years jurisdictions will provide a progress report to CCME ministers and Canadians, and every five years thereafter.

Outcome Addressed: Improved clarity

Measure: Coordination Committee completes five-year review by Jan. 1, 2014.

MWWE CC Response: The Strategy states that the Coordinating Committee will monitor implementation with a focus on continuous improvement. MWWE CC has reported on the status of implementation of the Strategy across Canada in this report. It should be noted that economic issues in relation to the implementation of the Strategy are considered to be out of scope for this report. However, the Strategy's Economic Plan demonstrated that the Strategy is affordable if wastewater is made a priority for investment by governments. Therefore, the level of investment by governments will need to be a consideration in future progress reports

## **3.0 EMERGING ISSUES AND TECHNICAL CLARIFICATION**

### **3.1 Emerging Issues**

MWWE CC has identified the following new or emerging issues that are of concern to some jurisdictions regarding wastewater management since the development of the Strategy.

In molluscan shellfish growing areas where treated wastewater may be discharged, the impact of enteric viruses are being assessed in greater detail. Health Canada has completed a health risk assessment reviewing the potential impact of viruses from treated wastewater effluent and their potential impacts on shellfish growing areas as it relates to food safety. More research is needed to better understand viral reduction through different treatment levels and technologies, efficacy of disinfection methods, verification of treatment levels, etc.

In many communities in Canada's Far North, wastewater treatment systems release treated effluent into natural wetland systems, where the effluent undergoes further treatment prior to reaching surface water. Continued research to understand the treatment efficacy of natural wetland systems and to assist in the determination of potential design parameters for northern wetlands is a key component in developing northern performance standards.

### **3.2 Technical Clarification**

The Strategy states: "Within five years, CCME will assess implementation of and review the Strategy, and every five years thereafter." MWWCC interprets this to mean that any review would focus on technical requirements for municipal wastewater management, and not on the broader commitments made in the Strategy. As a result of the review and jurisdictions' implementation experience, MWWCC offers the following clarification of the Strategy.

#### ***Clarification of requirements for chronic toxicity testing***

The CCME Canada-wide Strategy for the Management of Municipal Wastewater Effluents commits to having environmental risk assessment (ERA) completed for all facilities and site-specific effluent discharge objectives (EDOs) established where necessary. The details of completing an ERA are outlined in Technical Supplement 2. This document is intended to be a guidance document for jurisdictions to implement the ERA component of the Strategy. It is important to note that the EDOs established by the ERAs are not part of the Federal Government's WSER under the *Fisheries Act* and therefore are solely the responsibility of the individual jurisdiction to develop and implement.

Technical Supplement 2 is a Framework and Guidance Document for conducting ERAs, and provides guidance on effluent monitoring, including the initial characterization of effluent. Table 3 of Technical Supplement 2 is referenced in the Strategy as Appendix A Table A1 - Monitoring for Substances and Test Groups for Initial Characterization (monitored over one year), Continuous Discharge. This information should be considered guidance only and not a requirement of the Strategy. While it is still recommended that the prescribed testing in Technical Supplement 2 be completed for initial effluent characterization, jurisdictions have the flexibility to implement chronic toxicity testing as they require in regular ongoing monitoring. It should also be noted that ongoing chronic toxicity testing is not required as part of the WSER under the *Fisheries Act*.

Information on toxicity is available through the initial effluent characterization, other existing monitoring programs in jurisdictions, and environmental monitoring at the watershed level.