

Appendix 1. Description of how the State or Province promotes Environmentally Sound and Economically Feasible Water Conservation Measures

Goal 1: Foster long-term sustainable water use that takes ecosystems health and varied water uses into account

Objective 1: Review existing laws and enact new legislation as needed

No.	Measure in effect or being developed	Date of entry into force/Status	Justification	Five-year objective of measure	Annual indicators for 2014	Status of 2014 indicator	Evaluation of achievement of five-year objective
Target 1.1: Include the provisions of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement in Québec legislation							
1	Entry into force of the Act to Affirm the Collective Nature of Water Resources and Provide for Increased Water Resource Protection (Water Act)	Adopted on June 11, 2009; fully in force on August 14, 2014	The Act includes the provisions of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement in the Environment Quality Act (sections 31.88 to 31.104) and introducing section 31.101 which presents considerations on water conservation and efficiency programs.	Include the requirements of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement in Québec legislation by implementing all the provisions of the Water Act. (Adopted in 2009, only the subdivision concerning the "management of water resources" remained to be implemented.)	Entry into force of regulations implementing the Agreement - Regulation respecting the framework for authorization of certain projects to transfer water out of the St. Lawrence River Basin (adoption June 11, 2011, entry into force September 1, 2011) - Regulation to amend the Regulation respecting the declaration of water withdrawals (provisions of the Agreement), (adoption June 11, 2011, entry into force September 1, 2011) - Water Withdrawal and Protection Regulation (adoption July 16, 2014, entry into force August 14, 2014)	All regulations have come into force, including the Water Withdrawal and Protection Regulation, which was adopted in July 2014 and came into force on August 14, 2014.	All requirements of the Agreement are included in Québec legislation through the coming into force of all provisions of the Water Act.
Target 1.2: Enact the regulations required to control water withdrawals							
2	Entry into force of the Regulation respecting the declaration of water withdrawals (RDWW)	Adopted on August 12, 2009, implemented on September 10, 2009 and amended on June 22, 2011	<i>Also meets objective 4.</i> The entry into force of this regulation provides a framework for water withdrawals by enabling us to know the volumes of water withdrawn and consumed in Québec. The regulation concerns withdrawals of 75 000 litres or more per day, with exceptions. This information will provide knowledge about water uses that will serve in determining the potential impact of new or increased withdrawals and the need for water conservation and efficiency.	Implementation of all provisions of the Regulation respecting the declaration of water withdrawals. (The regulation entered fully into force in 2011.)	Measure completed	Measure completed	
3	Entry into force of the Regulation respecting the framework for authorization of certain projects to transfer water out of the St. Lawrence River Basin	Adopted on June 22, 2011 and implemented on September 1, 2011	The entry into force of this regulation provides a framework for certain cases that are exempt from the prohibition against water transfers in order to supply municipal water systems. Section 3 of the regulation indicates that an application for authorization must be filed with the MDDELCC for any new or increased transfer of water out of the St. Lawrence River Basin. For a transfer to be authorized, the withdrawer must implement water conservation and efficiency measures.	Implementation of all provisions of the Regulation respecting the framework for authorization of certain projects to transfer water out of the St. Lawrence River Basin. (The regulation entered fully into force in 2011.)	Measure completed	Measure completed	All provisions of the Regulation respecting the framework for authorization of certain projects to transfer water out of the St. Lawrence River Basin have been implemented.
4	Entry into force of the Water Withdrawal and Protection Regulation (WWPR)	Adopted on July 17, 2014 and implemented on August 14, 2014	<i>Also meets objective 12.</i> The entry into force of this regulation provides a framework for water withdrawals. It sets terms and conditions for the authorization of water withdrawals, and administrative and penal provisions to ensure that it is respected. To be authorized, withdrawals of 379 000 litres or more per day that are subject to section 31.95 of the Environment Quality Act must respect certain conditions, notably the putting in place of water conservation and efficiency measures. Authorization of withdrawals of 75 000 to 379 000 litres per day could be conditional on the implementation of water conservation and efficiency measures consistent with the vulnerability of the environment.	Entry into force of the Water Withdrawal and Protection Regulation (WWPR). (The WWPR came into force on August 14, 2014, except for sections 11 to 30, which enter into force on March 2, 2015, and sections 68 and 75, which enter into force on April 1, 2015.)	Entry into force of the WWPR except for sections 11 to 30 and sections 68 and 75	The WWPR came into force on August 14, 2014 except for sections 11 to 30 and sections 68 and 75	

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Objective 2: Promote reduced water use in all sectors

Target 2.1: Set up policy frameworks to promote reduced water use in institutional and municipal sectors

6	Drinking water economy strategy (SEEP)	April 1, 2012	This strategy requires municipalities to establish an action plan to reduce the consumption of drinking water; to put in place, if necessary, a leak detection and repair program; to adopt a municipal by-law on the use of drinking water; and to produce an annual report on water management. This MAMOT measure will lead to reduced water use in all sectors of activity that obtain water from municipal systems.	Support Québec municipalities that have drinking water distribution systems in their water economy efforts.	Analysis and approval of the water use forms submitted by municipalities for 2012.	As of November 29, 2013 a total of 564 municipalities, representing 94% of the population served by water distribution systems in Québec, had submitted the form to MAMOT.	
7	Amendment of the Québec Construction Code (Plumbing and Building chapters) prohibiting the sale or installation of water-wasteful equipment (part of the drinking water economy strategy [SEEP])	Underway; amendments planned for 2013	For the clientele concerned, the construction code will prohibit the installation of toilets that use more than 6 litres/flush, urinals that use more than 1.9 litre/flush, and automatic flush urinals, along with cooling and air conditioning systems that use non-recirculating drinking water. This measure will reduce the use of drinking water in the residential and institutional sectors.	Through amendments to the construction code, prohibit the installation of toilets that use more than 6 litres/flush, urinals that use more than 1.9 litre/flush, and automatic flush urinals, along with cooling and air conditioning systems that use non-recirculating drinking water.	Amend the construction code to prohibit, for the clientele concerned, the installation of toilets using more than 6 litres/flush, urinals using more than 1.9 litre/flush, and automatic flush urinals.	Construction code revised on April 29, 2014.	
44	Québec Water Strategy 2016-2030	In development/launch expected in 2016	The Québec Water Strategy 2016-2030 (in development) should include an objective for sustainable water quantity management. The Strategy will take the form of five-year action plans including measures to promote a reduction in water use in all sectors of activity.	With the adoption of a Québec Water Strategy and five-year action plans, put in place an action framework to promote a reduction in water use in all sectors of activity.	Preparation of a draft strategy	A draft strategy is being drawn up.	
8	Continue the implementation of drinking water economy policies in government buildings and those of the health and education systems	Ongoing	This measure enables the adoption of action plans and the implementation of targeted corrective measures in government buildings to reduce drinking water use in the institutional sector.	Adoption of action plans and implementation of targeted corrective measures in government buildings to reduce the use of drinking water in the institutional sector.	Adoption of action plans in the health system, cégeps and universities.	Action plans adopted.	

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Target 2.2: Put in place economic incentives that encourage water users to reduce the volume of their water withdrawals

9	Entry into force of the Regulation respecting the charges payable for the use of water	Adopted on December 1, 2010 and implemented on January 1, 2011	<i>Also meets objective 11.</i> This regulation obliges all water withdrawers of 75 000 litres or more per day to pay a charge (sections 1 to 15) based on the volume of water withdrawn. It is an economic incentive that promotes a reduction in water use in all sectors of activity.	Put in place economic incentives to encourage water users to reduce the volume of their water withdrawals. The objective for the next 5 years is to monitor annual variations in the volumes of water withdrawn by withdrawers who have paid water use charges.	Total volume of water (m3) on which a charge was paid on October 1, 2014 (for 2013).	869 755 238 m3	
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Target 2.3: Determine effective water conservation and efficiency measures applicable to every sector within the withdrawal authorization system

10	Development of water conservation and efficiency measures applicable to each sector of activity within the framework for the authorization of new or increased water withdrawals	Underway. First version expected for autumn 2013, with ongoing updates.	This measure is part of the new authorization regime for water withdrawals planned in the draft Water Withdrawal and Protection Regulation. For new or increased withdrawals, water withdrawers of 75 000 litres or more per day must demonstrate the acceptability of their application and, among other things, may propose water conservation and efficiency measures to reduce their withdrawals. Also, withdrawers of 379 000 litres or more per day who are subject to sec. 31.95 of the Environment Quality Act must implement water conservation and efficiency measures in order to apply for authorization. Production of a reference list of suggested water conservation and efficiency measures adapted to each sector will facilitate the adoption of such measures by those concerned.	Existence of a reference document on water conservation and efficiency measures appropriate for each sector of activity, containing current knowledge and available to promoters and analysts.	Perform documentary research on each sector of activity. Obtain a preliminary version of the document.	Research carried out in summer 2013. Preliminary version obtained in autumn 2013.	
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Objective 3: Promote efforts to maintain adequate water quantity and quality to ensure ecosystem integrity

Target 3.1: Develop and apply methods to take into account the cumulative impacts of withdrawals on the carrying capacity of ecosystems and the vulnerability of drinking water withdrawals

11	Evaluation of cumulative impacts when analyzing applications for withdrawals, consumption and transfers of water (water withdrawal impact analysis [AIPE])	Underway	<i>Also meets objective 5.</i> The method developed for analyzing the cumulative impacts of water withdrawals makes it possible to ensure that sufficient quantities of water are available to maintain the integrity of ecosystems. Under the new authorization regime in the draft Water Withdrawal and Protection Regulation, withdrawers must implement water conservation and efficiency measures that are consistent with the potential impact of their withdrawals on the integrity of ecosystems.	Establish a process/methodology that accounts for the cumulative impacts of withdrawals, to form part of the MDDELCC's authorization process.	Participate in the work of the subcommittee of the Canadian Council of Ministers of the Environment (CCME) on environmental flows and examples from other jurisdictions. Participate in the development of research projects with the Centre d'expertise hydrique du Québec and Ouranos. Projects will be chosen in autumn 2014.	Final report with four case studies delivered to the CCME in June 2014. No project have been choose in 2014.	
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Target 3.2: Adapt water quantity management to take into account the carrying capacity of ecosystems

12	Adaptation of the management of public dams	Ongoing	The management plans of works managed by the Centre d'expertise hydrique du Québec (CEHQ) contain operating parameters that take into account high- and low-runoff periods. Where necessary, management plans are adapted to respect the support capacity of ecosystems.	Provide ongoing ecosystemic management of government-owned dams, to optimize the support capacity of ecosystems in high-water and low-water periods.	Continuous monitoring of the 39 public dams of the Government of Québec.	The 39 public dams of the Government of Québec have been constantly monitored.	
13	Ottawa River Regulation Planning Board (ORRPB)	Underway	The Board consists of representatives from Canada, Ontario and Québec and provides integrated management of the main reservoirs of the Ottawa River watershed. It attempts to prevent flooding along the Ottawa River and its tributaries as well as in the Montréal region, taking into account the interests of different users. The reservoirs provide supplementary water in low-water periods, helping to maintain the integrity of ecosystems. The Board sets common objectives to optimize integrated management in low-water periods.	In high-water periods, continuous ecosystemic management of dams in accordance with the ORRPB Agreement to optimize the support capacity of ecosystems. In low-water periods, continuous ecosystemic management of dams in accordance with the ORRPB Agreement to optimize the support capacity of ecosystems.	Submission of the 2013 annual report of the ORRPB on the management plans in low-level periods, for dams included in the ORRPB Agreement. Renewal of the verbal agreement to ensure the support capacity of ecosystems in low-level periods, for dams included in the ORRPB Agreement.	The 2013 annual report of the ORRPB has been presented. In 2014, minutes of the March and/or June meeting indicating that the verbal agreement on the support capacity of ecosystems in low-level periods, for dams included in the ORRPB Agreement, was adopted.	

Goal 2: Adopt and implement a supply and demand management approach that takes into account the expected impact of climate change

Objective 4: Accurately measure the amount of water withdrawn, consumed, and disposed of in Quebec

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Target 4.1: Establish a water withdrawal management system							
14	Launch of the Québec water withdrawal management database (GPE)	March 2010	The system provides a way to collect, in a database, all of the information on water withdrawals obtained under the Regulation respecting the declaration of water withdrawals and the Regulation respecting the charges payable for the use of water. This data gives a portrait of the quantities of water withdrawn in Québec (volumes of 75 000 litres or more per day), presented in a structured way thanks to the GPE system.	By March 2009, to have developed and put online a water withdrawal management system for the purposes of the Regulation respecting the declaration of water withdrawals.	GPE online and in operation.	GPE went online in 2009 and is 100% operational.	The water withdrawal management database has been developed and brought online. The system is 100% operational and allows the collection of data on water withdrawals in Québec.

Target 4.2: Develop and strengthen knowledge on withdrawn water quantities for all activity sectors

15	MAPAQ-MDDELCC administrative agreement on the declaration of water withdrawals for agricultural and fish-farming purposes	Dec. 7, 2011; terminates on Sept. 30, 2016 with tacit renewal	This agreement facilitates the declaration of water withdrawals by agricultural and fish-farming producers. It provides for the setting up of a project to monitor water withdrawals by typical fish-farming businesses. This information served in establishing standards to facilitate the annual declaration of withdrawals by such businesses under the Regulation respecting the declaration of water withdrawals (adopted June 22, 2011). This measure contributes to improving knowledge about the volumes of water withdrawn and consumed in agriculture and fish-farming.	Consolidate knowledge about water use by the agricultural and fish-farming sectors.	MAPAQ has sent MDDELCC the 2013 data on agricultural and fish-farming water withdrawals throughout the territory of Québec. Draft guide produced for agricultural and fish-farming producers on the application of the Regulation respecting the declaration of water withdrawals.	2013 data obtained by MAPAQ. Draft application guide produced.	
2	Entry into force of the Regulation respecting the declaration of water withdrawals (RDWW)	Adopted on August 12, 2009, implemented on September 10, 2009 and amended on June 22, 2011	<i>Also meets objective 1.</i> Section 9 of the Regulation obliges withdrawers of 75 000 litres or more per day, across Québec, to declare their water withdrawals. For withdrawers on the territory of the Great Lakes St-Lawrence River Basin Sustainable Water Resources Agreement, and that are able to withdraw 379 000 litres or more per day, section 18.7 makes it mandatory to declare the volumes withdrawn, consumed and transferred out of the St. Lawrence River Basin. This measure will increase knowledge about the quantities of water withdrawn in each sector of activity across Québec.	Know the quantities of water withdrawn throughout the territory of Québec by all sectors of activity.	Receive the annual declarations of all water withdrawers concerned by the regulation and implement the quality assurance protocol for data.	Annual declarations received from all water withdrawers concerned by the regulation. The quality assurance protocol, to ensure the quality of data transmitted, was put into application.	

Objective 5: Take into account the impact of climate change on water supply and demand

Target 5.1: Develop and strengthen knowledge on groundwater supply

16	Knowledge acquisition program on groundwater (PACES)	First official announcements of funding in spring 2009	The knowledge acquisition program was designed to accumulate knowledge about the volume and recharging of groundwater aquifers. The measure increases knowledge about the groundwater supply.	Over the next 5 years, pursue the knowledge acquisition program on groundwater (PACES) for southern Québec	Area covered for municipalized southern Québec (in %)	54%	
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Target 5.2: Develop and strengthen knowledge on the effects of climate change on surface water supply

17	Production of the Atlas hydroclimatique du Québec méridional (hydroclimatic atlas of southern Québec) for 2050	March 2013	The atlas illustrates the impacts of climate change on the water regime of tributaries of the St. Lawrence River projected to 2050. It also suggests how the surface water supply will evolve in response to climate change, which can be used to determine the need for water conservation and efficiency measures in vulnerable watersheds.	By 2020, produce a series of hydroclimatic atlases (3) with iterative improvements on the content and underlying methodology.	Perform 50% of the work toward production of the 2015 atlas.	Work done. A hydrologic modelling platform has been implemented for southern Québec. This platform will be used to produce the hydrologic simulations necessary for the atlas.	
18	Implementation of the St. Lawrence Action Plan (SLAP) 2011-2026	November 29, 2011	<p><i>Also meets objectives 9 and 12.</i></p> <p>The Numerical Environmental Prediction Program in SLAP 2011-2026 provides a better understanding of the ecosystem of the St. Lawrence, notably with regard to water levels and flows. It serves in assessing the impact of climate change on water resources and determining the need for water conservation and efficiency measures in vulnerable watersheds.</p> <p>The work of the Climate Change Coordination Committee will provide an overall portrait of the issues surrounding the impact of climate change on the St. Lawrence, and of needs for knowledge development about impacts and adaptation needs. Climate change adaptation could include putting in place water conservation and efficiency measures. Project 7.2.1 in the Sustainable Use issue, entitled "Study the impact of climate change on water flows", will produce knowledge about the effects of climate change on water supplies.</p>	<p>In the next 5 years, implement the activities in SLAP that concern more specifically the impacts of climate change on water supply and demand:</p> <ul style="list-style-type: none"> - By 2016, complete project 7.2.1 "Study the impacts of climate change on water supplies". - By 2016, complete project 7.2.3 "Set up a Climate Change Coordination Committee". <p>In the program of activities for 2016-2021, develop projects on the impact of climate change on water supply and demand.</p> <p>For the next 5 years, continue the work of the Numerical Environmental Prediction Working Group.</p>	<p>2013-2014: monitor project 7.2.1 "Study the impacts of climate change on water flow".</p> <p>2013-2014: monitor project 7.2.3 "Set up a Climate Change Coordination Committee".</p> <p>Monitor work by the Numerical Environmental Prediction Working Group.</p>	<p>Project 7.2.1 "Study the impacts of climate change on water flows" is proceeding as planned.</p> <p>Project 7.2.3 "Set up a Climate Change Coordination Committee" is proceeding as planned.</p> <p>The work of the Numerical Environmental Prediction Working Group is proceeding as planned.</p>	

Target 5.3: Set up a climate change policy framework that takes into account water resources

19	Implementation of the 2013–2020 Government Strategy for Climate Change Adaptation	April 2013	The Government Strategy for Climate Change Adaptation is aimed at strengthening society's resilience to the impacts of climate change. It accords great importance to water resources. The sixteenth objective of the Strategy is to prioritize the conservation and protection of water resources, with a view toward conserving biodiversity and the benefits offered by ecosystems. Climate change adaptation and the protection of water resources can include the adoption of water conservation and efficiency measures.	Implementation of the climate change adaptation strategy.	Launch of the climate change adaptation strategy, which includes an objective that prioritizes the conservation of water resources.	Climate change adaptation strategy, including an objective (#16) that prioritizes the conservation of water resources; launched in June 2012.	The Climate Change Adaptation Strategy was launched in 2012 and includes an objective on water conservation.
20	Support for research projects by the Ouranos consortium on climate change and water conservation and efficiency, as part of the implementation of the 2013-2020 action plan (PACC 2013-2020) on climate change.	April 2013	Priority 6 of PACC 2013-2020 is to support research in climate change adaptation. This includes funding research by the Ouranos consortium to improve knowledge about water resources. This in turn will increase knowledge about the relationship between climate change and water conservation and efficiency, and will aid in developing adaptation solutions.	Increase knowledge about the impact of climate change on water conservation and efficiency, and on adaptation solutions, as part of PACC 2013-2020.	Number of Ouranos research projects funded under PACC 2013-2020 concerning climate change and water conservation and efficiency.	1 project funded: Probable maximum precipitation and probable maximum flood under changing climate conditions.	

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Target 5.4: Develop and apply a method to take into account cumulative impacts (including climate change impacts) on water resources

11	Evaluation of cumulative impacts when analyzing applications for withdrawals, consumption and transfers of water (water withdrawal impact analysis [AIPE])	Underway	<p><i>Also meets objective 3.</i></p> <p><i>The impact of climate change on the water regime (hydrologic indicators) is taken into account in the evaluation of cumulative impacts on sensitive components of the basin (ecosystems and uses). This measure takes into account the impact of climate change on the vulnerability of watersheds, and will aid in planning water conservation and efficiency measures to reduce that vulnerability.</i></p>	Establish a process/methodology that takes into account the cumulative impacts of withdrawals, to form part of the MDDELCC's authorization process.	<p>Participate in the work of the subcommittee of the Canadian Council of Ministers of the Environment (CCME) on environmental flows and examples from other jurisdictions.</p> <p>Participate in the development of research projects with the Centre d'expertise hydrique du Québec and Ouranos. Projects will be chosen in autumn 2014.</p>	<p>Final report with four case studies delivered to the CCME in June 2014.</p> <p>No project have been choose in 2014.</p>	
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Goal 3: Set up monitoring measures for the Water Conservation and Efficiency Program

Objective 6: Develop and implement a process to evaluate whether the objectives are being met

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Target 6.1: Determine and apply the annual assessment process and the five-year review of the Program

E1	Determine five-year targets for each objective of the program	Underway	To facilitate evaluation of the progress of the program in terms of the achievement of each objective, we must be able to determine the different facets of the objectives. These facets are determined within five-year targets. The first targets are established on the basis of measures contained in the inventory when the first version of the program was tabled.	Define five-year targets for each objective to facilitate monitoring and the five-year evaluation of the program.	Define five-year targets for each objective of the program tabled in September 2013.	Five-year targets have been defined.	
E2	Determine indicators for each measure of the program	Underway	In collaboration with those responsible for measures in each ministry concerned, determine annual targets that will be measured with the different indicators.	Define, in collaboration with measure officers, five-year objectives and annual monitoring indicators for each measure.	Define five-year objectives for each measure of the program filed in September 2013. Define annual monitoring indicators for each measure of the program filed in September 2013.	Five-year objectives have been defined for each measure. Annual monitoring indicators have been defined for each measure.	
E3	Carry out annual monitoring of program measures	Underway	Annually, the MDDELCC must monitor measure indicators as defined in collaboration with the ministries concerned. This annual evaluation must be made public.	Annually, monitor the measure indicators in collaboration with the officers for each measure in the ministries concerned. Prepare the annual report of the program and send it to the Conseil régional (regional council). The latter will publish the report.	Monitoring of the 2014 indicators for each measure is performed in collaboration with the ministries concerned. The 2014 annual report of the program is prepared. The 2014 annual report is sent to the Conseil régional. The 2014 report is made public by the Conseil régional.	Monitoring of the 2014 indicators for each measure was performed in collaboration with the ministries concerned. The 2014 annual report of the program has been prepared. The 2014 annual report has been sent to the Conseil régional. The 2014 report was made public by the Conseil régional.	
E4	Perform the five-year evaluation of targets	Underway	Every five years, the MDDELCC must perform an assessment of the conservation program. This will consist of evaluating the achievement of objectives relative to progress within the five-year targets.	In 2018, conduct a five-year evaluation of the targets.	N/A	N/A	
E5	Identify new measures being developed and integrate them into the program	Underway	During annual monitoring, new measures being developed in each ministry concerned will be identified in order to add them to the program.	Enrich the program with the addition of new measures.	Identify new measures being developed and integrate them into the program. Number of measures added.	Each ministry was queried for the purpose of identifying new measures being developed. No new measures were added.	

Target 6.2: Use acquired knowledge to adapt the Water Conservation and Efficiency Program

E6	Make changes to the program to take new knowledge into account	Underway	The Québec program must take into account the modifications made to regional objectives. The latter are revised every 5 years on the basis of new knowledge about the cumulative impacts of water withdrawals.	Adapt the program based on the modifications made to regional objectives.	Modify the program based on the new regional objectives.	No modification of regional objectives.	
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Objective 7: Make monitoring a source of new knowledge and know-how for Agreement signatories and all other water stakeholders and users

Target 7.1: Disseminate the results of the annual assessment and the five-year review of the Water Conservation and Efficiency Program

E7	Publish results from the annual monitoring of measures on the water knowledge portal	Annually	Annually, the MDDELCC must monitor the progress of measures and make its report public. Publication will be on the water knowledge portal.	Once the water knowledge portal is online and accessible (measure 38), publish results from the annual monitoring of measures.	Publication of results from the annual monitoring of measures on the water knowledge portal.	The water knowledge portal is in development. In the meantime, results are published on the website of the MDDELCC.
E8	Present the five-year evaluation report to the Conseil régional and publish it on the water knowledge portal	Every 5 years starting 2013 (2018)	Every five years, the MDDELCC must evaluate the achievement of program objectives. The report must be submitted to the Conseil régional and made public via publication on the water knowledge portal.	In 2018, send the five-year evaluation report to the Conseil régional and publish it on the water knowledge portal.	N/A	N/A

Goal 4: Promote scientific research, technological development and knowledge acquisition

Objective 8: Strengthen research efforts on water conservation and efficiency measures

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Target 8.1: Develop and strengthen knowledge on water conservation and efficiency in the municipal, mining and agricultural sectors							
21	Participation in events and committees that bring together experts in the field to improve knowledge in MAMOT about concepts related to water economy (part of the Drinking water economy strategy)	Ongoing	MAMOT participates in training offered by the American Water Works Association (AWWA) and in the Canadian committee on water economy. This measure will develop and consolidate knowledge on water conservation and efficiency in the municipal sector.	Participation in events and committees that bring together experts in the field to improve knowledge in MAMOT on concepts surrounding water economy.	Participation in the conference of the International Water Association (IWA). Participation in Canadian and Québec committees on water economy.	Presentation given at, and participation in, an IWA training session. Participation in Canadian and Québec committees on water economy.	
22	Organize and prepare training sessions in water economy to support municipalities (part of the Drinking water economy strategy)	Ongoing	The 18 training sessions offered in the regions and the 2 web conferences organized by MAMOT benefited more than 700 representatives from municipal circles to support them in their efforts. An annual 2-day training course on the Drinking water economy strategy (SEEP), prepared in collaboration with Réseau Environnement, reached over 250 stakeholders. A web conference on SEEP monitoring and the new form is now available for free on the Québec Municipal website. The Strategy will be presented at twenty conventions and conferences per year. This measure will foster the consolidation and sharing of knowledge about water conservation and efficiency for stakeholders in the municipal sector.	Consolidate and share knowledge about water conservation and efficiency for stakeholders in the municipal sector by organizing training sessions on water economy.	Organize and prepare training sessions on water economy.	Session on the cost of water services and infrastructure management with the City of Hamilton at the INFRA conference of the Centre d'expertise et de recherche en infrastructures urbaines (CERIU). A training day on water meters and backup systems with North American specialists, organized by Réseau Environnement. Training on water and watering organized by the Fédération interdisciplinaire de l'horticulture ornementale du Québec (FIHOQ - interdisciplinary federation for ornamental horticulture). Sections and videos on best practices in water economy, and on outstanding municipalities, in collaboration with Source magazine.	
23	Annual production of municipal reports on water use to evaluate the quantities of water distributed and water losses in distribution systems (part of the Drinking water economy strategy)	June 8, 2012	Under SEEP, municipalities must produce an annual report on their water use. A central database collects the data sent in by municipalities (about 200 data items per municipality). This measure consolidates knowledge about the quantities of water distributed and water system losses in the municipal sector.	Consolidate knowledge on the quantities of water distributed and on water system losses for the municipal sector, through updates of the annual reports on drinking water.	Update of the annual report on drinking water management with 2012 data.	Report updated on November 29, 2013 with 2012 data.	
24	Partnership research program on sustainable development of the mining sector	Decree approved on March 27, 2013/ 2012-2013 to 2016-2017	In this program, a number of research priorities have to do with water: water infiltration control, acid mine drainage, management of mine tailings in water, passive water treatment, reduction of water consumption. This measure will develop knowledge on water use in the mining sector (industrial).	Acquire knowledge about water conservation and efficiency by funding research projects in partnership with the mining sector, under the partnership research program on sustainable development of the mining sector, promoted by the Fonds de Recherche du Québec - Nature et Technologie (FRQNT). Over the next 5 years, three calls for proposals will be launched for a total of \$15 million.	Number of projects funded on water conservation and efficiency during the first call of proposals	First call for proposals made in June 2013: 1 project funded on water conservation and efficiency	

No.	Measure in effect or being developed	Date of entry into force/Status	Justification	Five-year objective of measure	Annual indicators for 2014	Status of 2014 indicator	Evaluation of achievement of five-year objective
25	Research and technology transfer projects concerning the conservation and optimal use of water in agriculture, under the action framework to develop water management and conservation strategies in the 2013-2020 action plan on climate change	Underway	This measure promotes research and technology transfer projects on the conservation and optimal use of water in agriculture. Project results contribute to knowledge about water use in the agricultural sector, and will aid in finding effective ways to reduce water use in this sector.	Completion of 5 research projects on water conservation and efficiency by 2018.	Number of research projects completed	No research projects completed	
26	Characterization project on water use in irrigation	Underway from April 2013 to March 2016	This project's objectives are to quantify irrigation doses and the water storage capacity of soils, to test methods of estimating water withdrawals, and to produce a seasonal report on water inputs, with a view toward estimating the extent to which irrigation inputs are insufficient or excessive. The results of these projects will increase knowledge on the topic, and could aid in efforts to optimize the use of irrigation in agriculture.	Completion of the characterization project on water use in irrigation by 2016	Percentage by which the research project has progressed (%)	Research project 33% complete.	

Objective 9: Foster research partnerships, multidisciplinary studies and collaborative activities

Target 9.1: Develop and set up a collaboration work space for water researchers

27	Collaboration space on the water knowledge portal	Underway	The collaboration space is intended as a place for exchanging knowledge and know-how by a range of actors and users (governments, municipalities, businesses, associations, watershed committees, etc.) along with university researchers. This measure will encourage research partnerships and collaborative activities.	In the next 5 years, creation of a pilot project with researchers in the field of water.	Start-up of the detailed architecture of the collaborative portal (see measure 38).	The objectives for 2014 have been achieved: the detailed architecture of the platform is being created.	
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Target 9.2: Include the notions of partnership, multidisciplinary and collaboration in the definition of government's water research projects

18	Implementation of the St. Lawrence Action Plan 2011-2026 (SLAP)	November 29, 2011	<i>Also meets objectives 5 and 12.</i> Projects included under SLAP must be designed and conducted in collaboration with at least one department of the provincial and federal governments. One objective of the Climate Change Coordination Committee is to determine research projects in collaboration with local stakeholders. The implementation of integrated management of the St. Lawrence by holding an annual forum, and the creation of regional collaboration tables (RCTs) will encourage participation by communities.	Programmation of joint activities for 2011-2016, along with program activities for monitoring the status of the St. Lawrence and for numerical environmental prediction are done. Integrated management of the St. Lawrence achieved by holding an annual forum and by creating 6 RCTs. By 2016, develop and implement the 2016-2021 plan.	Follow up on the 2013-2014 report on projects and activities. Continue the creation of RCTs. Hold an annual forum on the St. Lawrence.	The 2013-2014 report on the projects and activities of SLAP was produced in May 2014. Four RCTs have been designated. The 2014 forum on the St. Lawrence took place.	
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No.	Measure in effect or being developed	Date of entry into force/Status	Justification	Five-year objective of measure	Annual indicators for 2014	Status of 2014 indicator	Evaluation of achievement of five-year objective
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Objective 10: Encourage the development of innovative water technologies

Target 10.1: Introduce the water conservation and efficiency component into strategies and programs aimed at supporting technology development

28	Committee on new technologies for domestic wastewater treatment	Committee created in 1999; Protocol published in 2008	The committee works to safeguard public health and protect the environment by validating the performance claims for water treatment technologies, and provides quality control on projects authorized by the MDDELCC or funded by MAMOT. It also publishes and makes available technical information about these technologies. This measure provides quality control on new water technologies.	Publication of information on new technologies in domestic wastewater treatment and drinking water treatment, with relation to water conservation and efficiency.	Number of technical information sheets on the new technologies published on the website of the MDDELCC in relation to water conservation and efficiency.	8 technical information sheets published.	
29	National policy on research and innovation	In development; schedule to come	<p>One objective of the component to support technological innovation in business, which is part of the innovation support program created under the Strategy, is to support the development and marketing of processes and technologies for limiting and repairing water-related damage.</p> <p>In the national policy on research and innovation, two innovation assistance programs can support projects and centres concerned with water conservation and efficiency. They are: the innovation support program (PAI) (start-up support for new technological businesses), component 1; and the support program for technology enhancement and transfer (PSVT), component 1, envelope for college centres for technology transfer (CCTT). One of the existing centres is dedicated to this area: the Centre des technologies de l'eau (CTE).</p> <p>This measure supports the development of new water technologies.</p>	Support the development of new technologies related to water conservation and efficiency.	<p>Number of technological businesses created (under the PAI and CTE) around water conservation and efficiency.</p> <p>Number of patents issued to small and medium enterprises (SMEs) involving water conservation and efficiency (under the PAI and CTE).</p> <p>Median revenue growth rate of businesses involved with water conservation and efficiency, in business with the CTE.</p>	<p>Under the PAI: Businesses created: 0 Patents issued: 0 Median growth rate: n/a</p> <p>Under the CTE: Businesses created: 1 Patents issued: 0 Median growth rate: n/a</p>	
30	Projects of the agrifood innovation support program (PSIA) / Innov'Action agroalimentaire program (starting 2013)	2009	Some projects funded under the PSIA concern the optimization of water use in agriculture. This measure supports the development of new water technologies in agriculture.	Support the development of processes and technologies in agriculture by funding 15 projects on optimizing water use or improving water quality.	Number of projects terminated.	4 projects terminated.	
31	Canada-Québec Water Supply Expansion Program (CQWSEP)	Program terminated in 2009	The CQWSEP encouraged individual and group projects to optimize irrigation in agriculture. This measure supported the development of new water technologies in agriculture.	Complete the Canada-Québec Water Supply Expansion Program (CQWSEP).	Measure completed	Measure completed	The program was completed in 2009.

Goal 5: Develop education programs, information sharing networks, resources, and tools to mobilize all water stakeholder and users

Objective 11: Make water stakeholders and users more aware of the value of water

No.	Measure in effect or being developed	Date of entry into force/Status	Justification	Five-year objective of measure	Annual indicators for 2014	Status of 2014 indicator	Evaluation of achievement of five-year objective
Target 11.1: Develop and implement awareness tools intended for youth and the general public							
32	Le coin de Rafale	Underway and ongoing	This section of the MDDELCC's website is specifically addressed to youth. This measure contributes to raising the awareness of young people about water conservation and efficiency.	Raise the awareness of young people using "Did you know" information capsules and Rafale adventures on the theme of water conservation and efficiency.	Put online a "Did you know" information capsule on rainwater recovery barrels.	The "Did you know" information capsule on rainwater recovery barrels was put online in May 2014.	
33	Website of the MDDELCC	Page online as of September 1, 2013; annual update on September 1 of each year.	A page on the water conservation and efficiency program is published on the website of the MDDELCC in the Water section. It presents the program and helps to build public awareness of the value of water.	Provide content about the program on the MDDELCC website.	Page on the water conservation and efficiency program put online.	Went online on September 1, 2013.	
34	Educational program for 5th-year students in collaboration with the Centre d'interprétation de l'eau (water interpretation centre) and the Ministère de l'Éducation, des Loisirs et des Sports (under the Drinking water economy strategy)	Development underway / first version expected in 2013	This measure raises youth awareness about water conservation and efficiency.	Raise youth awareness about water conservation and efficiency by setting up an educational program.	Launch of the educational program Fantastiko. "J'aime l'eau, j'en prends soin" - I love water, I look after it.	Program launched on September 29, 2014.	The Fantastiko program was launched on September 29, 2014. It raises youth awareness about water conservation and efficiency.
35	Continue the partnership with Réseau Environnement for the drinking water economy program (PEEP), which raises citizen awareness in collaboration with municipalities (part of the Drinking water economy strategy)	Ongoing	Some 85 municipalities participated in PEEP in 2011. The Facebook page "Je consomme EAUrement" has nearly 500 friends (from 350 to 1200 visits per week). In early 2012, a radio advertisement was broadcast across Québec. This measure raises public awareness about water conservation and efficiency.	Raise public awareness about water conservation and efficiency through the Facebook page "Je consomme EAUrement" and encourage municipalities to participate in PEEP.	Participation by municipalities in the drinking water economy program and visits to the Facebook page "Je consomme EAUrement".	118 municipalities participated in PEEP in 2014. The Facebook page "Je consomme EAUrement" has 616 friends (around a hundred visits per week).	
36	Adoption of WaterSense certification, which labels equipment that uses 20% less water (part of the Drinking water economy strategy)	June 7, 2012	MAMOT and MDDELCC announced an agreement to promote the voluntary certification and labelling program WaterSense in Québec. The MFQ promotes the program in the business community. This measure raises public awareness about water conservation and efficiency.	Agreement to promote the voluntary certification and labelling program WaterSense in Québec. This measure raises public awareness about water conservation and efficiency. Disseminate information in business circles about WaterSense certification.	Conclusion of an agreement to promote the voluntary certification and labelling program WaterSense in Québec. Number of promotional activities or tools provided to entrepreneurs.	On June 28, 2012 MAMOT and MDDELCC announced an agreement to promote the voluntary certification and labelling program WaterSense in Québec. Hydro-Québec's program for water- and energy-saving products uses WaterSense certified equipment (shower heads and faucet aerators). Publication of two guides on best business practices in water management, mentioning WaterSense certification, in the repertoire of sustainable development tools in the Businesses section of the Québec Portal website.	An agreement was concluded to promote the voluntary certification and labelling program WaterSense in Québec. Two information guides for businesses were published about WaterSense certification.

No.	Measure in effect or being developed	Date of entry into force/Status	Justification	Five-year objective of measure	Annual indicators for 2014	Status of 2014 indicator	Evaluation of achievement of five-year objective
9	Entry into force of the Regulation respecting the charges payable for the use of water	Adopted on December 1, 2010 and implemented on January 1, 2011	<i>Also meets objective 2.</i> By obliging water withdrawers of 75 000 litres or more per day to pay a charge based on their water withdrawals, this regulation will have the effect of raising awareness about the value of water and encouraging efficient water use.	Put in place economic incentives to encourage water users to reduce the volume of their water withdrawals. The objective for the next 5 years is to monitor the annual variations in volumes of water withdrawn by withdrawers who have paid charges on water use.	Total volume of water (m3) on which a charge was paid on Octobre 2014 (for 2013).	869 755 238 m3	

Objective 12: Make information on water resources, water quality, aquatic ecosystems and the various uses of water more accessible to all stakeholders

Target 12.1: Develop platforms to make information on water resources public, and promote knowledge-sharing

37	Create a special section about the Drinking water economy strategy (SEEP) on the MAMOT website	Ongoing	A section on SEEP was added to the MAMOT website, providing all the documentation needed by municipalities. New documents are added on a regular basis. This measure makes information accessible to all on a public platform, to promote water conservation and efficiency in municipalities.	Create a special section about SEEP on the MAMOT website.	Create a special section about SEEP on the MAMOT website.	A special section about SEEP was added to the MAMOT website.	A special section about SEEP was added to the MAMOT website.
38	Creation of the water knowledge portal	Underway	The portal will foster collaboration, a culture of knowledge sharing about water, the integration of that knowledge, and its dissemination. Social media resources like Facebook and Twitter will also be used as a way of offering scientific and technical information in a manner attractive to the general public.	Creation and launch of the collaborative portal.	Start-up of the detailed architecture of the collaborative portal.	Detailed architecture of the platform now being developed.	
39	Publication of the report on the status of water resources and aquatic ecosystems (<i>Rapport sur l'état des ressources en eau et des écosystèmes aquatiques</i>)	Underway: 2014	The five-year report is a way of providing information to all groups and individuals concerned about water and aquatic ecosystems to enrich their knowledge and give them a better understanding of the issues surrounding both topics.	Online publication of the 2014 report and summary. Preparation of the second report for publication in 2019.	Publication online of the 2014 report.	The 2014 report is available online.	
4	Entry into force of the Water Withdrawal and Protection Regulation	Underway; draft regulation published Dec. 28, 2011; new draft regulation published May 29, 2013; adoption and entry into force expected in 2013	<i>Also meets objective 1.</i> The WWPR requires that part of the analysis report on the vulnerability of water withdrawals for human consumption be published on the website of the entity responsible for the withdrawal. Elements that must be made public include the location of the withdrawal site, the location of protected areas (at immediate, intermediate and remote distances), and the vulnerability of those areas as determined in accordance with provisions of the WWPR. This measure contributes to making information accessible on the vulnerability of water sources.	Make the publication of information on the vulnerability of water sources mandatory, through the entry into force of sections 68 and 75 of the WWPR.	N/A	N/A	
18	Implementation of the St. Lawrence Action Plan 2011-2026 (SLAP)	November 29, 2011	<i>Also meets objectives 5 and 10.</i> The results of work conducted under the Numerical Environmental Prediction Program are published on the SLAP website. Some of these results inform the general public and decision-makers on the evolution of the water regime of the St. Lawrence.	Share knowledge on the evolution of the water regime of the St. Lawrence by putting the results of work by the Numerical Environmental Prediction Program online, on the SLAP website.	Put the results of work by the Numerical Environmental Prediction Program online, on the SLAP website.	No results have been put online.	

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Objective 13: Ensure that water stakeholders and users have access to water conservation and efficiency tools.

Target 13.1: Develop tools to help municipal and agricultural water stakeholders set up water conservation and efficiency practices

41	Production of guides and translation of manuals of the American Water Works Association (AWWA) (part of the Drinking water economy strategy)	Ongoing	To equip municipalities, documents have been produced (model municipal by-law on water use, simple form for measuring results, guide on drinking water and municipalities, AWWA manuals translated into French, economic assessment of the Strategy, etc.). Other documents are in preparation (sample specification for leak detection, economic impact study on the use of water counters and fees, etc.). For all government departments, consumption studies are underway in 50 institutional buildings and a guide is in production.	Production of guides and translation of AWWA manuals	Production and updating of guides, and translation of AWWA manuals	A number of documents have been produced or updated: model municipal by-law on water use, updated form on water use, updated guide on drinking water and municipalities, AWWA manuals translated into French, economic assessment of the Strategy, sample specification for leak detection, methodological guide on auditing water in the institutional sector (produced by the Centre des technologies de l'eau).	
42	Information sheet for entrepreneurs on best practices in water management, to be made available on the website of the Ministère de l'Économie, de l'Innovation et des Exportations and on the Québec Portal.	Underway	<i>To be defined.</i>	Provide information for small and medium enterprises (SMEs) on best practices in water management by producing an information sheet and publishing it online.	Drafting of an information sheet for SMEs on best practices in water management.	Information sheet completed. Now in proof-reading.	

Objective 14: Recognize exemplary water conservation and efficiency actions by water stakeholders and users in the various sectors

Target 14.1: Develop a means to recognize exemplary actions in the municipal sector

43	Create, with the partners concerned, a recognition program for successful municipalities	2013	The efforts of successful municipalities could be highlighted at conventions of municipal associations. This measure will showcase exemplary actions in the municipal sector and encourage the pursuit of efforts toward water conservation and efficiency.	Showcase successful municipalities.	Various means used to showcase successful municipalities.	Articles and videos distributed on best practices in water economy and outstanding municipalities, in collaboration with Source magazine.	
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