Great Lakes- St. Lawrence River Basin Water Resources Compact
Agreement Article 300 – Compact Section 3.4
Water Conservation and Efficiency Annual Program Review
November 21, 2011

State of Minnesota

1. Lead agency/agencies and contact person(s).

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Note: All underlined items are linked to the appropriate or referenced Websites

2. Status of Minnesota's water conservation and efficiency goals and objectives consistent with the Basin-wide goals and objectives.

Minnesota's current water law, rules, policy, and their implementation, address in most respects all of the Goals and Objectives identified in the Compact, Sustainable Water Resources Agreement, and of the Basin-wide Conservation and Efficiency Initiative (Attachment A). The laws cited and programs described in Item 3 a) and b) provide a framework for sustainable water management that promotes efficient use of the state's water resources. State-wide programs that monitor and protect water resources are managed by several Minnesota agencies, including the DNR, Pollution Control Agency, Department of Health, Department of Agriculture, and the Board of Water and Soil Resources. Minnesota DNR applies an adaptive approach to its water management so that expanding science knowledge and improvements in technology lead to improvements in natural resource use and protection.

The Minnesota Legislature directed the University of Minnesota in 2008 to develop a framework that describes what needs to be done to assure a sustainable water future in Minnesota. That Report was released in January of 2011. One of the top five recommendations of the Framework Report was to revise Minnesota's water appropriation permitting system to better protect and restore water quantity. With funding received from Minnesota's constitutionally dedicated Clean Water Fund, the DNR has embarked on the development of a web-based permitting system for water appropriators, the acceleration of surface and groundwater monitoring systems, and the piloting of groundwater management areas around the state (though none are yet in the Great Lakes Basin).

Despite significant budget problems and the slashing of agency budgets this biennium, in Minnesota we are fortunate that in 2008 voters approved a constitutional amendment that dedicates proceeds from 3/8's of one percent of sales tax to provide for clean water, natural resource protection, recreation and cultural heritage protection. Thirty three percent of the funds collected are to go to Clean Water activities, with at least 5% of the Clean Water monies spent to protect drinking water sources. Current projections are that this amounts to roughly $80 million per year until 2034, which will be dedicated to efforts that protect and restore surface and ground waters in Minnesota. With these funds we are able to embark on new efforts toward the implementation of the Water Conservation and Efficiency goals adopted by the Council and Regional Body.

3. Water Conservation and Efficiency Program Overview.

a) Citations to implementing laws, regulations and policies.

The statutes and rules listed below are available at http://www.leg.state.mn.us

Primary:

- *Minnesota Statutes*, chapter 103A. Water policy and information
- Minnesota Statutes, chapter 103G. Waters of the State (primary regulatory statute)
- *Minnesota Statutes*, section 103G.801, Great Lakes – St. Lawrence River Basin Water Resources Compact
- *Minnesota Rules*, parts 6115,0010-6115-0120. Permit, inspection and monitoring
- *Minnesota Rules*, parts 6115.0600 – parts 6115.0600 – 6115.0810. Water appropriations and use permits and use management plans.
- *Minnesota Rules*, part 6115.0770. Water conservation must be employed

Related:

- *Minnesota Statutes*, section 103B. Water Planning and Project Implementation
- *Minnesota Statutes*, section 103F. Protection of Water Resources
- *Minnesota Statutes*, chapter 103H. Groundwater Protection
- *Minnesota Statutes*, chapter 103I. Wells, Borings and Underground Uses
- *Minnesota Statutes*, section 116B.01 Environmental Rights
- *Minnesota Statutes*, chapter 116D. Environmental Policy

b) Summary of program elements both mandatory and voluntary.

Minnesota's water conservation program is integrated with permitting and planning requirements.

Mandatory:

- A water appropriation (use or withdrawal) permit is required for all users withdrawing more than 10,000 gallons of water per day or 1 million gallons per year. The efficient use of water can be required through the permitting process (*Minnesota Rules*, part 6115.0770).
- Water users must measure water volumes appropriated. Flow meters are required but other fairly accurate methods, such as timers or electrical use meters, can be approved for smaller water users.
- Public Water Suppliers must meet demand reduction and conservation rates:
  - Public water suppliers serving more than 1000 people are required to prepare a Water Supply Plan every ten years that is approved by the DNR. In these plans, suppliers identify water demand projections, development plans, water sources, and demand reduction and conservation measures. The 2006 plan format had a strong emphasis on water conservation and efficiency.
  - Benchmarks for public water suppliers were developed in consultation with the Minnesota Section of the American Water Works Association. The benchmarks, which include standards for unaccounted water, per capita use, rate structure and peak demand are used in reviewing water supply plans and for water appropriation permit review.
  - Before requesting approval to construct a public water supply well or to increase authorized water volumes, demand reduction strategies must be employed by the public water suppliers. Required demand reduction measures include the use of a conservation rate structure, water conservation ordinances and restrictions, and a public education program for water conservation.

    - Conservation rate structures are required by January 1, 2013 for public water suppliers in the Basin which serve more than 1000 people.
- Landscape irrigation systems that operate automatically are required to have technology that inhibits or interrupts operation during periods of sufficient moisture.
- Minnesota Statutes establish water use priorities for the allocation of waters during periods of limited supplies. Non-essential uses are the lowest priority and are subject to restrictions prior to other higher priority uses *Minnesota Statutes*, section 103G.261.
- Minnesota's Statewide Drought Plan provides a framework for preparing for and responding to droughts including steps for public water suppliers to take for water conservation.
- Groundwater withdrawals for large once-through HVAC systems are prohibited as of Dec. 31, 2010 and existing systems have been converted to water efficient systems.
- Applicants for water appropriation permits may be required to provide alternatives to proposed actions, including conservation measures to improve water use efficiencies and reduce water demand [*Minnesota Statutes*, section 103G.301, subd. 1 (b)(3)]
- Applicants for wastewater discharge permits are required to evaluate potential reuses of the discharged wastewater [Minnesota Statutes, section 115.03, subdivision 1, item (e), subitem (10)].
- Surface water use can be and has been suspended during low flow periods in Minnesota. Published procedures lay out exactly when surface water users will be suspended. At present, the standard is that when flow in streams and rivers fall below the Q90 for that watercourse, all direct appropriation must be suspended. Ecologically-based low flow thresholds can and have been developed for some surface waters, but Minnesota does not yet have standard protocols for developing ecologically based thresholds.

Voluntary:

- A number of public water suppliers provide water conservation information to customers.
- Minnesota Statutes that require demand reduction measures for new public water supply wells or increased water volumes also provide consideration for voluntary programs to retrofit water fixtures. Some local governments have partnered with private industry to offer water saving fixtures and other items such as soil moisture sensors.
- Minnesota Statutes encourage the reuse of non-consumptive water and the evaluation of reuse options as part of applications for water discharge permits.
- All public water suppliers and the general public are referred to a website developed by the Metropolitan Council, in cooperation with the DNR, which contains water conservation tips and resources for individual water users and program guidance for public water suppliers.

4. Identify how the State/Provincial program is consistent with the regional objectives:

OBJECTIVE 1: Guide programs toward long-term sustainable water use.

- The DNR's Division of Ecological and Water Resources recently published a water availability assessment of the state's water resources as a step toward measuring and assuring sustainability. The assessment looked at 10 year trends and concluded that certain parts of Minnesota are starting to experience water availability problems, and the Great Lakes Basin part of Minnesota experienced slightly below normal streamflow conditions the past 10 years.
- The DNR's Division of Ecological and Water Resources recently completed an assessment of what it would take to develop a comprehensive statewide groundwater monitoring system that

would allow us to fully assess whether long-term sustainable water use goals can be met. It was determined that such a system would cost $94 million over the next 30 years.

- In 2010, the DNR's Division of Ecological and Water Resources completed an evaluation of and recommendations for options to provide for the long-term protection of the state's surface water and groundwater resources and the funding of programs to provide this protection. The report recommends funding of over $400 million over the next 25 years to fully implement water resource protection and monitoring efforts.
- As mentioned in Number 2 of this report, the University of Minnesota completed its Water Sustainability Framework, which may be used to guide future funding of water sustainability efforts in Minnesota. Some of the recommendations of that report are already being implemented.

OBJECTIVE 2: Adopt and implement supply and demand management to promote efficient use and conservation of water resources.

- The DNR in cooperation with the owners of water supply systems can analyze water use practices and has required more efficient water use practices to be employed.
- Public water suppliers must implement demand reduction measures before requesting approvals for new wells or increases in authorized water volumes.
- Reuse of water is encouraged and funding was provided by the legislature in 2009 for projects that reuse municipal wastewater for the conservation and protection of water resources.
- Public water suppliers are currently required to include demand forecasting in ten year water supply plans and water efficiency benchmarks are used for evaluating water supply plans and permit and well installation requests.

OBJECTIVE 3: Improve monitoring and standardize data reporting among State and Provincial water conservation and efficiency programs.

- Minnesota continues to work with the other Great Lakes states and provinces on strategies to share data and procedures for data collection and recently made minor modifications to the water use database to comply with the Great Lake Regional Water Use Database system.
- Minnesota tracks the effectiveness of water conservation measures through annual water use reporting. Public water suppliers report water use by customer categories and unaccounted water volumes. Information on water rates and peak use volumes is also requested.
- Ground and Surface Water monitoring improvements are occurring rapidly, with the influx of funding from the state's new dedicated Clean Water Funds, and roughly 35 new monitoring wells and 25 new stream gaging stations have been added so far. Several gaging stations in the Great Lakes Basin have been improved as a result and live readings from these gaging stations can be seen on DNR's website.
- Development of an online permit application and water use reporting system has begun that will enable efficient access to data for conducting cumulative impact and other studies.

OBJECTIVE 4: Develop science, technology and research.

- DNR has merged its divisions of ecological resources and waters into one division with shared goals. This organizational change fosters a watershed wide approach to ecological and water resource management to address linkages between water use, conservation and ecological services.
- DNR encourages innovative management practices by promoting aquifer water use management planning. This concept involves the definition of a management area and the

involvement of a wide range of interests in the development of these plans. About $2.3 million has been appropriated from the state's Clean Water Fund this biennium to work on modeling and strategies needed to implement such groundwater management planning efforts in select parts of the state.

- A Clean Water Funded project is underway to develop or assess watercourse stressors, with an emphasis on hydrologic impacts caused by various in-channel and watershed based impairments.
- Minnesota is implementing a water monitoring database (Aquarius system) that is shared between several MN state agencies.

OBJECTIVE 5: Develop education programs and information sharing for all water users.

- Minnesota Project WET trains classroom and other educators in hands-on, interactive lessons that are focused on water and encourage critical thinking. By providing training, materials, and support to these educators, MN Project WET works to improve Minnesotans' understanding of our water resources. Educators from the Basin have participated in these lessons.
- The DNR, Minnesota Rural Water Association and other organizations help promote conservation with presentations at workshops and other events. Sources of water conservation information are available through DNR's website.
- Minnesota's Lake Superior Coastal Program is a voluntary federal-state partnership dedicated to the comprehensive management of our coastal resources. The Program provides technical and financial resources for local communities in the Lake Superior coastal area.
- DNR's website devotes a page for Great Lakes Compact information and links.
- The Minnesota DNR recently became a Promotional Partner in EPA's WaterSense Program, which seeks to promote water efficiency and water efficient products.
- The Minnesota Technical Assistance Program (MnTAP) is an outreach program at the University of Minnesota that helps Minnesota businesses develop and implement industry-tailored solutions that prevent pollution at the source, maximize efficient use of resources, and reduce energy use and cost to improve public health and the environment.
- The DNR refers water suppliers and water users to the Metropolitan Council website's Water Conservation Toolbox.

5. Description of Minnesota's conservation and efficiency program implementation timeline and status.

Minnesota has a number of water conservation measures that are currently in place and integrated with the water appropriation permit program. Water supply plans for public water suppliers must be updated and approved every ten years. Water conservation rate structures for public water suppliers within the Basin must be implemented by 2013. All of the other efforts described above have funding related timelines. For example, the online permitting system is scheduled to be available to the public by June 30, 2013, but it is likely that additional funding will be needed to provide an assessment tool like the one employed by Michigan.