Sustaining Wisconsin’s water

By Shaili Pfeiffer

Wisconsin is a water rich state with 15,000 lakes, 32,000 miles of rivers and streams, 1,000 miles of Great Lakes shoreline, 1.2 quadrillion gallons of groundwater, 5.3 million acres of wetlands and almost 11,000 springs. Yet these water resources are not evenly distributed across the state and the need for water does not always match up with water availability. The DNR’s new water use program – part of the Drinking Water and Groundwater Bureau - is focused on achieving the state’s goal for sustainable water use. This program was created in 2008 as a home for water use management and to address water quantity issues in the DNR. The program’s responsibilities include implementation of the Great Lakes Compact and the 2004 Groundwater Quantity Law.

The Great Lakes Compact and Wisconsin’s implementing legislation passed in 2008 with overwhelming supporting in both the State Senate and Assembly. The Compact is a legally binding agreement between the eight Great Lakes states to collectively sustainably manage and protect water quantity in the Great Lakes basin – including protection of groundwater, lakes and rivers in the Great Lakes watershed and the Great Lakes themselves. The Compact also promotes water conservation and water use efficiency and prohibits diversion of Great Lakes water out of the basin, with some narrowly tailored exceptions. A companion agreement includes Ontario and Quebec to ensure cohesive management of this international resource.

A commitment to water conservation and water use efficiency is a core component of the Great Lakes Compact. Thus the DNR is developing a statewide water conservation and water use efficiency program in conjunction with the Public Service Commission and the Department of Commerce. This statewide voluntary program is grounded in the importance of good stewardship of water resources and will look to promote water conservation practices and efficient water use by sector, and build upon and support existing efforts of water utilities, industries and agricultural operations. Some water conservation requirements will be mandatory in the Great Lakes basin and these requirements are outlined later in this article.

To better understand water use in the state, the department is developing a new water use data system and moving to an online water use registration and reporting system. Having information about how water is used available in a readily accessible system is fundamental to sustainable water use management. This data system is the means to carrying out the state’s commitment, under the Compact implementing legislation, to develop and maintain a statewide water resources inventory. The registration and reporting requirements apply to large water users with a capacity to withdraw more than 100,000 gallons per day averaged over 30 days. Similar requirements were put in place for high capacity wells in 2004, but the new requirements apply to all surface water withdrawals as well. These requirements apply statewide to mirror the existing requirements for groundwater withdrawals.

To better manage water use in the Great Lakes Basin, all withdrawals, including surface and groundwater, of more than 100,000 gallons per day averaged over 30 days will be required to have a water use permit beginning December 8, 2011. Existing withdrawals will automatically be issued a water use permit by this date. The permits are divided into general permits and
individual permits. General permits, with a 25 year term, apply to withdrawals between 100,000 gallons per day averaged over 30 days and 1 million gallons per day for 30 consecutive days. Individual permits, with a 10 year term, apply to withdrawals of 1 million gallons of water or more per day for 30 consecutive days. Applicants for new or increased withdrawals at the individual permit level will also undergo an environmental review with consideration of factors such as the potential for significant adverse impacts and the implementation of water conservation measures. The permits are structured to identify the allowable water withdrawal limit, water conservation requirements and water use monitoring requirements.

Water use management in the Great Lakes Basin is also strengthened by the implementation of a new water conservation and water use efficiency rule that applies to new or increased water withdrawals over 100,000 gallons per day averaged over 30 days and any new or increased diversions of Great Lakes water. This rule requires measurement of all sources of water, a water use audit, a leak detection and repair program, and education for customers and staff. Additional requirements are sector specific and required for new or increased withdrawals at the individual permit level, diversions and proposals with high water loss.

Finally, to understand the impacts of our water use, the DNR is working with partners at the U.S. Geological Survey and the Wisconsin Geological and Natural History Survey to improve the groundwater monitoring network and the stream gaging network. These networks are both vital for understanding historic, current and future water availability and water use impacts in Wisconsin.

DNR’s new water use program is being built to understand water use, manage water use, track water use impacts, and promote efficient water use. These efforts will help us realize our goal of water use sustainability, to protect our rich water heritage and ensure that water is available to be used to protect our health, economy, and environment now and into the future.

Please visit the water use program webpage for additional information at http://dnr.wi.gov/org/water/dwg/wateruse.html, and or contact Shaili Pfeiffer at Shaili.Pfeiffer@wi.gov or (608)-267-7630.