



By Design

Spring 2007
Volume XVII • Number 2

Total Maximum Daily Load Limits (TMDLs) are Here to Stay

Minnesota's waters are a valuable resource. Many of these water resources cannot currently support some designated uses because of pollution problems.

Minnesota has tested approximately 20 percent of its waters to date and has already designated more than 2,000 waters as officially impaired. When all waters are given a designated use and tested, there could be more than 10,000 impaired waters in the State of Minnesota! If you are not presently affected by an officially designated impaired water, it is likely that you will be in the future.

One part of the solution to the problem of impaired waters is the establishment of Total Maximum Daily Loads (TMDL) for use in regulating pollutants. A TMDL study identifies the sources of various pollutants such as phosphorous, mercury and coliform bacteria that affect water quality standards. It also defines the amount of the pollutant that can be in the water body without affecting designated uses.

Most cities have become familiar with requirements associated with National Pollutant Discharge Elimination System (NPDES) Phase II permitting. Permitting procedures rely on Best Management Practices to improve the water quality of storm water runoff and other non-point sources.

Although Phase II requirements are the key component of water quality management, the potential extent of impaired waters in Minnesota means that storm water management in the future is likely to be governed by the quality of the receiving waters. Based on discussions with the Minnesota Pollution Control Agency (MPCA), Bolton & Menk Water Resources staff believes that the emphasis of future permits will be on the quality of the

downstream waters and the level of effort required by each particular contributor to improve or protect those waters.

The 1987 amendment of the Water Pollution Control Act, Section 303d, included a process for rating the designated use of the receiving water and setting water quality standards for that water. Most states are in the process of assessing their waters—measuring the water quality against water use. The chart below describes the process.

After a water body is determined to be impaired, it will be subjected to an individual study of the likely sources of the impairment. The maximum allowable amount of the pollutant that can be discharged without further damage to the water will then be established. The process calls for MPCA to assemble a TMDL stakeholders' group to review the sources and allocate the allowable pollutant limits from each contributor.

Affected parties may be invited or volunteer to participate in the stakeholder process.

Bolton & Menk is actively involved in several TMDL stakeholder meetings, both as an invited expert and as a client representative.

As shown by the chart, the TMDL cycle continues until the water quality improves to the extent that it is no longer determined to be impaired. The water then becomes classified as a special water to be protected. The most likely way to protect these special waters is continuation of the same TMDL process that was instrumental in the improved water quality.

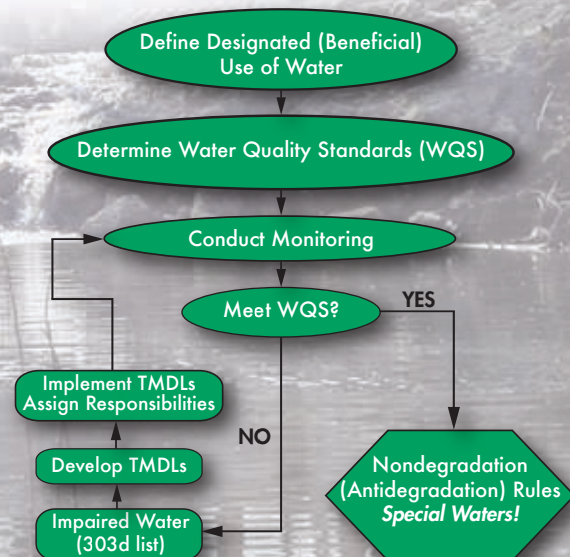
If you have questions regarding TMDLs and how they may affect you, please contact Bill Douglass, P.E., Bolton & Menk Water Resources Group Manager and Board Member for the Minnesota River Citizens Advisory Group, at (507) 625-4171.

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VOLUME XVII • NUMBER 2

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Peter Blethen, L.S.

**MSPS Names Peter W. Blethen, L.S.
2006 Surveyor of the Year**

The Minnesota Society of Professional Surveyors (MSPS) recently named Peter W. Blethen, L.S. as the 2006 Surveyor of the Year. The honor of Surveyor of the Year is presented to an active member of MSPS for recent and significant contributions of time and talent to the benefit of the Society.

Peter was an MSPS Chapter Secretary for four years, Chapter Vice President for two years and Chapter President for four years. He served on the MSPS Board as Secretary for one year and Director for two years, and was also an MSPS President Elect, President and Past President.

Peter joined Bolton & Menk, Inc. in 1983. He currently serves as the Civil Division Survey Coordinator and is responsible for the inter-office coordination of survey crews. This coordination involves project coordination and the coordination of survey standards and quality assurance.

Founded in 1953, MSPS has a membership of over 600 and is dedicated to the unification and betterment of the surveying profession. Some of the initiatives of the society include: support of the Minnesota college and university surveying programs, legislation related to surveying, continuing education, public relations, and protection of the public by doing work with precision and integrity.



Teresa Burgess, P.E.

Teresa Burgess, P.E. Passes the CPESC® Exam

It is our pleasure to announce that Teresa Burgess, P.E., Project Engineer in our Mankato office, has passed the CPESC® (Certified Professional in Erosion and Sediment Control) exam administered by CPESC, Inc. The CPESC® program is recognized by the US Environmental Protection Agency and the USDA Natural Resources Conservation Service. The program is designed to develop standards and procedures for certifying persons qualified to practice in the fields of erosion and sediment control or storm water quality.

The CPESC® certification is gained through education, experience and a four-hour examination. These factors signify that the professional demonstrates knowledge of effective and economical methods of minimizing soil erosion and sediment transport due to land-disturbing activities.

Teresa recognized the benefits this certification would bring to her clients. These benefits include: promotion of public awareness of the erosion and sediment control profession, greater influence on policy decisions affecting technical and professional issues, and gained access to unique sources of information and educational opportunities.

Teresa completed her undergraduate degree in Civil Engineering at South Dakota State University and is a licensed professional engineer in Minnesota, Iowa and South Dakota with over fifteen years of experience. She is responsible for the planning, design and preparation of construction plans and specifications for a variety of municipal and private projects.

Bolton & Menk Breaks Into the ENR Top 300

The annual ranking of the Top 500 Engineering Design Firms was released in the April 23, 2007 issue of Engineering News Record. Bolton & Menk, Inc. has climbed to number 297. This represents a 14-position improvement over our 311 ranking in 2006.

Bolton & Menk emphasizes the importance of maintaining clients through the high quality and efficient work that our people perform. This helps us achieve our client's goals and surpass their expectations. Expanding our client base has also contributed significantly to our growth. We have a highly regarded reputation for technical expertise, high performance teams and a focus on quality.

Minnesota Cities Benefit From Bolton & Menk MSA Reviews

Minnesota cities with a population of 5,000 or greater receive an annual apportionment of Municipal State Aid (MSA) funds for use in constructing, improving and maintaining the streets that they have designated on their Municipal State Aid System (MSAS). One-half of the State's annual MSA apportionment dollars are distributed based on population. The other half of the apportionment is based on construction "needs", which is defined as the relative cost to construct and maintain the designated MSA streets within the city. Each year City Engineers for MSA cities must update the information used to calculate the construction needs for each MSA route within their respective cities.

Over the past several years, Bolton & Menk, Inc. has performed MSA construction needs reviews for over 25 communities. In addition, Bolton & Menk engineers serve as the designated City Engineer and MSAS representative for 13 Minnesota cities. We have extensive experience working with

the MSAS and have excellent working relationships with many of the District State Aid Engineers, the MSAS Needs Unit, and other State Aid staff. Many of the recent construction needs reviews have resulted in significant apportionment increases in the years following our review.

In analyzing a city's construction needs, Bolton & Menk will conduct field reviews of MSAS streets, along with available as-built information. We will compare our findings with the city's latest construction needs report and present specific strategies to maximize the city's apportionment dollars. We will also review the city's most recent *Certification of Mileage* and recommend ways to designate all available MSAS

mileage. Bolton & Menk can also assist Minnesota cities that are new to the MSA system in establishing their MSA street system.

Bolton & Menk's broad experience with MSA construction needs reporting stems from our work with numerous State Aid communities. This experience has given

"Having Bolton and Menk review our Municipal State Aid Street System was a benefit to the City of Albert Lea.

Their experience with the Municipal State Aid Needs System allowed us to identify areas where we were not receiving the full Needs."

Steven Jahnke, P.E.
Public Works Director
City of Albert Lea

"This service helped Bloomington get on track for maximizing our MSA apportionment potential both now and into the future."

Jen Desrude, P.E.
Development Coordinator
City of Bloomington

us a thorough knowledge of the reporting process and has allowed us to share our successful strategies with each of our client communities. Bolton & Menk's perspective has benefited each of our clients with increased annual apportionment dollars. Our expertise allows us to complete the analysis and reporting cost-effectively, and in most cases, for less than the resulting apportionment increase.

Bolton & Menk is available to meet with Minnesota State Aid communities to further explain how we can assist you in potentially increasing your MSAS apportionment dollars. Please contact Dan Sarff, Mankato Office Manager, at 507-625-4171 for more information.

MnDOT to Require Certified Survey Technicians on Job-Sites Bolton & Menk responds with a company-wide training and testing program

Bolton & Menk, Inc. has recently taken the initiative to organize a company-wide training and testing program for surveying technicians to become certified through the National Society of Professional Surveyors (NSPS).

The Minnesota Department of Transportation (MnDOT) made the announcement that they would begin to require Certified Survey Technicians (CST) on job-sites beginning in August 2007. At the time of the announcement, Bolton & Menk

began a training program for staff survey technicians to assist them in preparing for the certification exam.



Bolton & Menk surveying staff taking the CST exam

Some of the topics covered in these training sessions were; field equipment and instruments, survey computations, control points, first aid and safety. Each of the sessions were directly related to work elements that made up the exam.

Bolton & Menk held the six-hour-long exam at a testing center on February 7, 2007 and is proud to have 23 CSTs on staff today. The results of this comprehensive survey exam nearly tripled the number

of CSTs in the State of Minnesota as of the February 2007 testing date. Bolton & Menk will now use these results as a part of individual employee development plans.

NSPS sponsors the comprehensive national certification program for survey technicians. The program is recognized by the U.S. Department of Labor as part of the National Apprenticeship Program. The Survey Technician Certification Board, which administers this program, recognizes the importance of technicians to the surveying and mapping profession.

This four-level certification program for surveying technicians throughout the United States indicates official recognition by NSPS that a person has demonstrated that he or she is competent to perform surveying tasks at a specified technical level.

SMSC Wastewater Reclamation Facility Honored for Excellence

The Shakopee Mdewakanton Sioux Community (SMSC) Wastewater Reclamation Facility, which opened in August 2006, has been honored by three organizations for its excellence.

The Minnesota American Council of Engineering Companies (ACEC) presented the SMSC with a Grand Award at a banquet held January 26, 2007. The SMSC project won one of seven Grand Awards for the best overall engineering achievement. The ACEC competition recognizes projects that demonstrate a high degree of achievement, value, and ingenuity. For more than 40 years, this competition has awarded uniqueness and originality; future value to the engineering profession and perception by the public; social, economic, and sustainable development considerations; complexity; and successful fulfillment of client/owner's needs, including schedule and budget.

The Minnesota Society of Professional Engineers (MSPE) 2007 Seven Wonders of Engineering Award was presented to the SMSC February 23, 2007, at the Hotel

Sofitel in Bloomington, Minnesota, as part of MSPE's Engineers Week celebration. Entries were judged on the engineering methods, systems, and skills utilized by the project team; the project's advancement of the engineering profession; the complexity of the project and how the project team overcame this complexity; the significance of the project to society; and the extent to which the entry meets the needs of the market, client, or owner.

The SMSC facility was also awarded the Minnesota Governor's Award for Excellence in Waste and Pollution Prevention. The 16th annual award was presented during a banquet on February 28, 2007. The award honors superior environmental achievement by Minnesota non-profit organizations, businesses, and private institutions for programs or projects that benefit the environment by reducing or eliminating wastes and pollutants at the source. Award winners selected by the Minnesota Pollution Control Agency for this award are leaders at the highest level of environmental achievement.

Rice County Transportation Plan Receives ACEC Honor Award

The Minnesota American Council of Engineering Companies (ACEC) presented Rice County with an Honor Award at the Council's annual awards banquet in February.

Rice County hired Bolton & Menk to guide the development of the County's first ever transportation plan. Bolton & Menk focused on improving the continuity of the system by creating a countywide roadway Continuity



ACEC Awards Presentation

Corridor Vision. To help assure that this Vision is implemented, consensus on the Vision was developed and documented in a Memorandum of Understanding (MOU) between Rice County and its cities and townships. The MOU serves as a valuable tool to affirm responsibilities and obligations of each group.

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DESIGNING FOR A BETTER TOMORROW

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