

2006 Performance Report

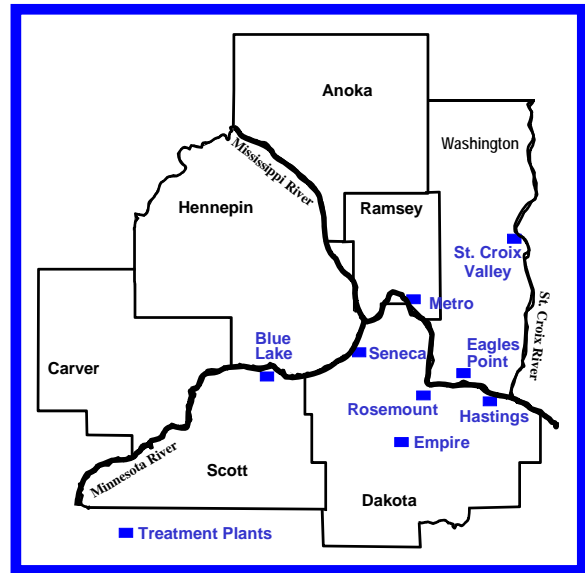


Pictured above are exterior and interior photos of the Metropolitan Plant's Solids Management Building, which earned a "2006 National Environmental Achievement Award" from the National Association of Clean Water Agencies.

Introduction

Metropolitan Council Environmental Services (MCES) collects and treats wastewater at its eight regional treatment plants. Our mission is to “provide wastewater services that protect the public health and environment while supporting regional growth.” In providing this service to the metropolitan area, MCES:

- Operates and maintains approximately 600 miles of regional sewers that connect wastewater flows from 5,000 miles of sewers owned by 104 communities,
- Treats approximately 300 million gallons of wastewater daily at eight regional treatment plants,
- Continues to achieve near-perfect compliance with federal and state clean water standards,
- Establishes user fees that pay 100 percent of wastewater operations and debt service costs,
- Maintains wastewater service rates consistently below the national average,
- Works with approximately 800 industrial clients to substantially reduce the amount of pollution entering our wastewater collection system,
- Provides water resources monitoring and analysis for the region, and
- Partners with numerous public, private and nonprofit groups committed to a clean environment.



Purpose and Organization of Report

This report highlights MCES’s key accomplishments during 2006 in meeting the goals set forth by the Council’s mission and MCES’s mission. Results achieved help set the stage for continued success in the years ahead and are an integral part of the Council’s history and evolution as a regional planning and service delivery agency.

The report is divided into six sections that capture the activity of the organization’s skilled, experienced employees. The sections are 1) Operations Performance, 2) Capital Projects, 3) Customer Service, 4) Finance, 5) Employees in the Workplace, and 6) Water Resources Management.

We welcome your comments about this report. The MCES management team is listed on the back cover of this report. For more information on what is happening at MCES, visit our website at www.metrocouncil.org/environment.

William G. Moore
MCES General Manager

OPERATIONS PERFORMANCE

Wastewater Collection and Treatment System operated at high performance level

MCES's plants continued to perform at a high level in complying with clean water discharge permits. All eight plants received "Peak Performance



Awards" from the National Association of Clean Water Agencies (NACWA) for 2005 results. The Seneca Plant heads the list, earning a Platinum Award for achieving five consecutive years (2001–2005) of full compliance with clean water discharge permits. This is the second platinum award for the Seneca Plant, which also registered full compliance from 1994 through 1998. Plants earning Gold Awards for full compliance during 2005 were Empire, Hastings, Metropolitan, Rosemount and St. Croix Valley.

In addition, the Minnesota Pollution Control Agency (MPCA) recognized six treatment plants for outstanding operation, maintenance and management from October 2004 through September 2005. The Empire, Hastings, Metropolitan, Rosemount, St. Croix Valley and Seneca Plants earned certificates of commendation at the annual MPCA awards program in March.

Wastewater treated to greater than 99.7% compliance with NPDES permit limits in 2006

Wastewater was treated to 99.7% compliance with NPDES permit limits in 2006. There were four permit exceedances: 1) an effluent total suspended solids exceedance in February at the Empire Plant, and 2) three mercury effluent limit exceedances in April at the Metropolitan Plant.

Solids Management Building recognized with national award and Minnesota award (see picture on front cover)

Barely into its second year of full operation, the Metropolitan Plant's Solids Management Building earned a prestigious "2006 National Environmental Achievement Award" from NACWA. The award, in the operations category, cited the successful planning, design, construction and now operation of the Solids Management Building.

In addition to the NACWA award, the Minnesota Public Works Association presented MCES with a "2006 Project of the Year Award" in November. This award recognizes outstanding projects that highlight specified diverse facets of public works projects.

**Solids Management Building
(continued)**

The state-of-the-art Solids Management Building includes three new fluidized-bed incinerators, more efficient and effective energy recovery and pollution control systems, and improved solids dewatering equipment that operates with reduced odors. With a processing capacity of 315 tons per day, it is the largest fluidized-bed incinerator facility in North America.

**Thousands of water quality
analyses completed in 2006**

On average, over 111,500 analyses must be completed annually and 88 monthly reports must be submitted to the Minnesota Pollution Control Agency (MPCA) from all eight treatment plants. In 2006, high-quality analysis was performed consistently by MCES's laboratory, which is considered one of the top water quality labs in the country. Lab quality is confirmed through peer review.



**New equipment reduces air
emissions**

The Metropolitan Plant had two exceedances of air emission limits. The first one, volatile hazardous air pollutants (VHAPs), was not representative of operation. Staff suspected contamination of the stack gas samples in the private laboratory and retesting was scheduled. The retest passed. The second exceedance occurred in November due to holes in the FBR3 secondary heat exchanger tubes that allowed some particulate into the exhaust stack. Despite these occurrences, air emissions have been greatly reduced since the startup of the new fluidized-bed incinerators.

All other limits have been met, as demonstrated by performance stack tests. The Seneca Plant met all air emission limits.

CAPITAL PROJECTS

Key capital projects implemented

New 12-mile outfall pipe to Mississippi is part of Empire Plant expansion

Northeast sewer project entertains awestruck residents with short-lived excitement in their quiet neighborhood

Capital projects and improvements for 2006 that support regional growth and regulatory compliance are summarized in this section.

Construction of all phases of the Empire Plant and

Outfall project were initiated by April and are on track to be completed December 2007. Completion of the outfall will allow the plant to stop discharging effluent into the environmentally-sensitive Vermillion River. Additionally, the city of Rosemount has entered an agreement with the Council to use some of the reserve capacity to periodically convey treated stormwater to the Mississippi River. Completion of plant and outfall construction will mark the closing of the Rosemount Plant. Wastewater will still be collected at the old plant site, but will be treated at the Empire Plant. A new interceptor sewer from the old plant site will be installed in the same pipe trench as the outfall pipe.

Construction was initiated in February for the three-mile long White Bear Area Diversion Interceptor Sewer project

and work continues into 2007. Because the pipe will run through a predominantly developed area, it would have been very disruptive to install by traditional open-trench pipe methods. Instead horizontal drilling methods were used, thus avoiding a long stretch of

disruption to the streets. The work also created a high level of excitement and interest among residents as the heavy equipment and one 2,000-foot-long, 90-ton section of pipeline arrived in a neighborhood. The Council's contractor believes this is among the largest horizontal directional drilling projects in the country. The new pipe will add capacity in the growing northeast part of the region.



Empire Plant outfall. Hand-mining and reinforcing walls at head of a tunnel.



Regulatory projects assure continued success in meeting NPDES permit limits and rehabilitating facilities

Construction was completed in March, on schedule, for the Metropolitan Plant’s Liquid Treatment Project. Besides providing additional phosphorus removal, this project significantly reduces odor and upgrades the liquid treatment facilities to ensure 20 more years of competent service.

Design was initiated in May for the Blue Lake Plant Improvements Project and the Seneca Disinfection and Phosphorus Project. The first construction contract is scheduled for June 2007. These projects will provide additional phosphorus removal, reduce odor, and rehabilitate and add capacity to the existing systems.

As part of the Council’s long-term phosphorus reduction strategy, these plants use a naturally occurring bacteria in the disinfection process that “eats” phosphorus. This process, known as Bio-P, has been introduced into the system over the last few years.



Metro Plant's secondary liquid treatment tanks on a cold morning

Refer to a February 2006 article in the Council’s *Directions* newsletter (www.metrocouncil.org/directions) for more information on this process and the steady improvement of reduced phosphorus levels from all of MCES’s treatment plants.

Projects related to regional growth support long-term Council plans

Following are some of the numerous projects to support regional growth that were at various stages of planning, design and construction during 2006.

- **Rosemount Interceptor:** This parallel interceptor to the Empire outfall pipe will convey wastewater from the Rosemount Plant to the Empire Plant. Construction on the pipeline and lift station was initiated with scheduled completion in 2008.
- **Blue Lake System Improvements–Victoria Area:** Design was initiated for improvements for the Victoria area interceptors in May with scheduled completion for this phase of the project in 2010. Lift stations and interceptors will be expanded and rehabilitated or replaced as necessary to accommodate growth in this area.
- **Elm Creek Interceptor–Corcoran, Dayton and Hassan Extensions:** Construction was initiated in August for the Dayton extension and Phase I of the Corcoran-Hassan extension. At completion in 2008, long-term service will be provided to the above communities as well as Brooklyn Park, Maple Grove, Medina and Plymouth.

Projects related to regional growth support long-term Council plans (continued)

- **Anoka (L-42) Lift Station and Forcemain:** Construction was initiated in June and is on schedule for completion in 2007 to increase long-term wastewater service needs to Anoka and Ramsey.
- **Bloomington-Edina-Richfield Area Improvements:** Planning is under way to meet needs created by redevelopment in the I-494 corridor and Southdale areas. This includes improved interceptor facilities to meet increased capacity demand. Completion is scheduled for 2010.
- **Blaine Interceptor:** Planning is under way on this project that will provide additional capacity to Blaine, Circle Pines, Lexington and Lino Lakes with completion scheduled for 2010.
- **Chaska Lift Station:** The 21 mgd custom-built pumping station will be completed in 2008 on the site of the phased-out Chaska Treatment Plant.
- **South Washington County–Lake Elmo Connections:** Design and land acquisition are under way and final connection to Woodbury Northeast is planned for 2008. This final phase of the project provides additional conveyance capacity for Lake Elmo.
- **Elko-New Market:** The first phase of this project (County Road 2 section of interceptor) was completed and design of the second phase for the remaining portion of the interceptor was initiated to provide service to this growing area and phase out the municipally-operated plant.
- **Northeast Interceptor Improvements–Phase I (St. Paul/Maplewood):** Growth plans for communities in this area (i.e., Forest Lake, Hugo, Centerville, Lino Lakes, and White Bear Township) outpace the capacity of the Northeast Interceptor System. The capacity issues are influenced by growth as well as significant inflow and infiltration. Construction will be done in phases beginning in St. Paul and proceeding northward. Planning is under way with completion scheduled in 2012.
- **Northwest Interceptor Improvements–CAB Diversion Tunnel and Lift Station:** Preliminary engineering was initiated for improvements needed to serve planned growth in the northwest portion of the metropolitan area. This phase of the project is scheduled for completion in 2013.

Rehabilitation projects repair aging infrastructure and equipment

Following are examples of rehabilitation projects currently under way.

- **South St. Paul Lift Station/Forcemain Improvements:** The South St. Paul Treatment Plant was converted into a lift station in 1986. A major rehabilitation of the lift station was completed in June and forcemain construction will be initiated in 2007 to meet the scheduled completion date of 2010.
- **Hopkins System Improvements:** Planning was completed for the modifications to the 30-year old forcemain and lift station to correct operational problems and provide long-term service to Hopkins.
- **Meter Improvements:** Improvements will be made to approximately 30 MCES flow meters in accordance with the Master Plan and to support the Council's inflow/infiltration reduction program. Planning was completed in 2006 and construction is scheduled for completion in 2009.
- **Brooklyn Park Interceptor and Lift Station Rehabilitation:** Facility inspection revealed moderate to severe hydrogen sulfide corrosion damage in portions of the lift station and interceptor systems. The first phase of repairing the interceptor was completed in June. Additional interceptor work as well as the lift station repair, will be initiated in 2007.

CUSTOMER SERVICE

Working with and for the citizens of the region

Twin Cities Children's Water Festival wins national award

MCES provides service to customers in a number of ways. The following examples illustrate MCES's focus on customer service.

The Council received a national water quality education award from the Water Environment Federation (WEF) for the "Children's Water Festival" that MCES helped plan and fund almost 10 years ago.

Over the years this event has taught thousands of elementary school students what they can do to help keep our waters clean. Staff continues to play an active role in the planning committee and dozens of staff participate each year as volunteers working with other partners on this regional event.



Customers involved in 2007 budget planning

Budget meetings for all MCES customer communities were held in June 2006 in Golden Valley, Bloomington, St. Paul and Woodbury. The Industrial Waste Customer Forum was held on June 15th at the Metro 94 facility. At each of these meetings, information was provided by MCES staff and customer input was received to help plan for the 2007 budget.

Assisted communities with inflow/infiltration (I/I) reduction programs

Staff provided communities with I/I data following heavy rain events. Technical information, data and support was given to nearly all communities with identified I/I problems and staff responded to all appeals regarding the I/I Surcharge Program. MCES staff is working with city staff from Lakeville and Golden Valley to identify, quantify and eliminate I/I in the interceptor and city systems.

High level of participation in Voluntary Dental Office Amalgam Separator Program

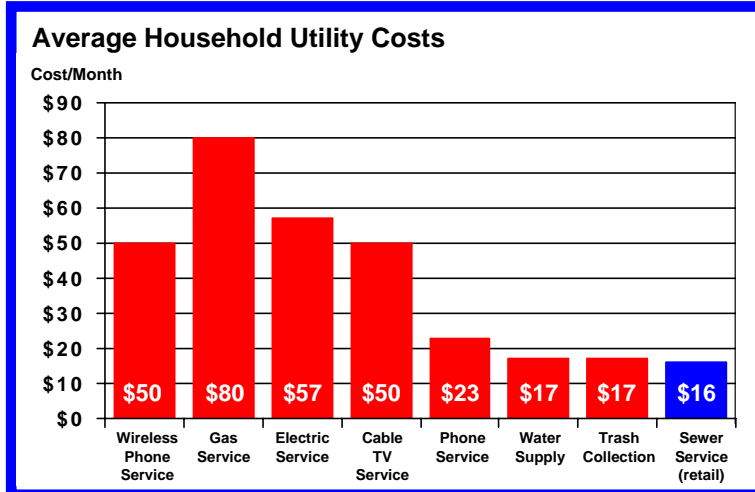
Currently, more than 680 dental offices have installed amalgam separators, representing more than 90 percent of those projected to do so. Staff contacted most of the 48 dental offices that have not installed and found that many had installed, would install soon, or were closed.

Special monitoring of plant influent flow for mercury at the Metropolitan, Blue Lake and Hastings Plants showed reductions of 35 percent for Metropolitan and 42 percent for Blue Lake. An unexpected variability in data for Hastings is being investigated.

FINANCE

Financial management that maintains MCES as a competitive utility within the marketplace

MCES has an ongoing goal of providing financial management that maintains MCES as a competitive utility within the marketplace. MCES staff successfully completed 2006 operations, maintenance and expansion, while coming in under the Annual Operating Budget.



When compared to other household service costs, the Twin Cities average retail cost for wastewater service is a bargain. The graph above compares average monthly utility costs, with wastewater service being the lowest.

Management and Accountability for the 2006 Annual Operating Budget

The MCES budget position is positive. Council action in July 2006 redirected an anticipated \$2 million surplus in the budget to the retirement health fund. Nevertheless, because some labor vacancies were not filled, preliminary results indicate that the 2006 expenses will be below the \$190 million that was budgeted.

Budget management and accountability savings and plans during 2006 include the following:

- **Assets Inventory:** The Hirron & Associates Consulting Group completed a physical inventory of MCES and Regional Administration assets. No significant issues were uncovered and a work instruction is being developed to better track movement and disposal of assets.
- **Biennial Studies:** The following biennial reports were completed and are available in the Council's Data Center: 2005–2006 Service Availability Charge Biennial Report (released July 2006), 2005–2006 Industrial Rate System Biennial Report (released September 2006), and Survey of 2006 Municipal Residential Wastewater Rates (released August 2006).

Cost reduction actions and planning

- Cost reduction planning for future budgets included an evaluation by staff of the best method of improving performance through automation within the Division. It was concluded that to understand the gap between current services and needed services, a master plan approach will be pursued in the first half of 2007.
- The reconveyance of interceptors continued in 2007 and six agreements have been signed, which will result in reduced maintenance costs.
- A plan to reduce vehicle fleet costs by better tracking mileage and usage was developed. GPS monitoring will be implemented in 2007. Data will be reviewed and used to plan fleet purchases, disposals and overall usage.

Rates and revenue changes in 2006

Changes made in 2006 that will have an impact on rates and revenue include the following:

- **I/I Surcharge:** A plan was adopted to address the overflow problems that occur during heavy rainfalls in communities with excess inflow and infiltration in their systems. The surcharge will be implemented in January 2007. In July, 49 communities were notified of preliminary surcharges. All will avoid the charge in 2007 by committing to I/I reduction work plans.
- **Load Charges:** A special facilities component will be added to the adopted load charges for 2007 to pay for disposal site costs.
- **Service Availability Charge (SAC):** The SAC credit system was redesigned to improve equity and broaden rate basis. The revised proposal was adopted by the Council in August and the new rules will be effective January 1, 2010.

Management and accountability for the 2006 Capital Budget

Management and accountability in the 2006 Capital Budget included the following:

- **Cash Flow Projections:** The Project Delivery Analysis template was revised and implemented to include more guidance on project scheduling. Additionally, cash flow projections are presented quarterly.
- **Training and Work Instructions:** Capital project work instructions were completed or are scheduled for completion by the end of the year. An energy workshop was held in February.
- **Process Improvement Strategies:** A Councilwide committee worked to improve the system and implement changes that streamline the process. In addition, the land acquisition process has been streamlined.

EMPLOYEES IN THE WORKPLACE

Improved workplace environment

The MCES workplace environment continues to improve with the implementation of new programs, the leadership and support of management, and the commitment from employees and

stakeholders. The MCES workplace is extremely diverse, offering a variety of employment opportunities and a challenge to the planning and safety/security of the facilities.



Open design of lab facilitates air flow.

Safety and security enhancements

Work continues on the MCES portion of the ***Pandemic Response Plan***. MCES has implemented a continuing educational effort, stepped up communications to address pandemic specific needs and procured and stored respiratory protection and peripheral supplies for emergency use.

Workforce planning efforts

The MCES Workforce Plan serves as a starting point to proactively handle change in the workforce. The planning process is critical in achieving MCES's goals and objectives.

■ **Phase II Implementation:** Recruitment tactics have been reviewed and work continues with the Council Diversity Department to increase outreach and attract more minorities and women to our workforce. Also, a post-retirement option was implemented to re-hire recent retirees part time, aiding in knowledge retention and transition.

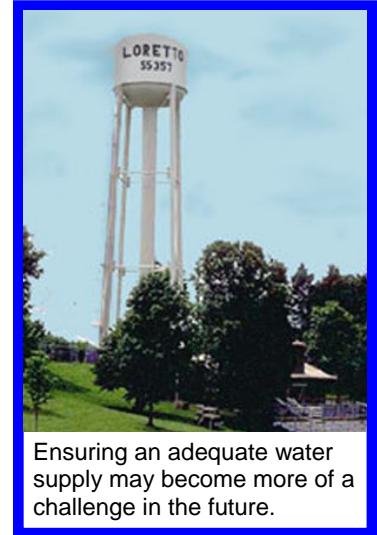
Succession planning and resource allocation was addressed by realigning the structures of some departments and adding assistant managers.

■ **Employee Orientation and Review:** Employee orientation was improved by focusing on policy and procedure review and responsibility. In addition, all current MCES employees signed off on a policy/procedure/work instruction review form, which is filed in Human Resources.

WATER RESOURCES MANAGEMENT

Water Resources Management Policy Plan

The Council's *Water Resources Management Policy Plan* integrates water resources management and protection with planning for the region's growth. The *Policy Plan* contains guidelines for developing and maintaining service systems that support development and for which the Council has some statutory responsibility, including wastewater service, surface water management and regional water supply.



Water Resources Management Policy Plan initiatives implemented

Included in the policies that were addressed in 2006 are the following.

- **The I/I Surcharge Program Policy:** The I/I Surcharge Program was developed and implemented. An external Procedure Manual was completed in May and preliminary surcharge letters were sent to 49 communities in July. All communities responded with acceptable plans to begin I/I programs, eliminating the need for 2007 surcharges to be levied by MCES. A work plan to resolve special I/I circumstances outside one unit of government's control was completed in December. In addition, the Interceptor System I/I reduction program work plan was completed in December.
- **The Rural Growth Center Policy:** Staff has worked with East Bethel to develop a preliminary wastewater treatment and groundwater recharge plan. An engineering study is under way and amendment of the *Regional Development Framework* and *Water Resources Management Policy Plan* was completed. Interceptor extensions were planned for Carver and Elko-New Market and wastewater service discussions were begun with Cologne, Hampton, and New Germany.
- **The Rural Area Policy:** Work has begun in Anoka, Carver, Dakota, Scott and Washington Counties to delineate long-term wastewater service areas for future wastewater treatment plants using a county-by-county planning approach in conjunction with the Community Development Division. Long-term wastewater service staging plans and identification of interceptor corridors

**Water Resource Management
Policy Plan initiatives
implemented (continued)**

and wastewater treatment sites has begun in Carver, Dakota and Scott Counties.

- **Memorandum of Agreement with the Minnesota Pollution Control Agency (MPCA):** A memorandum of agreement was signed in May to re-direct Council efforts on Target Pollution Loads to development of Total Maximum Daily Loads (TMDL) for the metro area. Objectives, protocols and training on TMDL requirements have been established. Meetings to negotiate the extent of the Council's involvement in the TMDL studies have been held with watershed districts, watershed management organizations and the MPCA. Agreements have been drafted with Carver County describing the Council's role for a TMDL for Bevens and Carver Creeks; with Scott County for TMDL studies for Sand Creek or Credit River; and with the Shingle Creek Watershed Management Organization to begin a TMDL study for Shingle Creek.

**Water supply planning services
provided for the region**

MCES has played an active role in the Water Supply Advisory Committee (approved by the 2005 Legislature). Accomplishments of the committee in 2006 include the following.

- **Report to the Legislature:** A draft report was endorsed by the committee in November and the final report was approved by the Council in December for submittal to the Legislature by January 3, 2007.
- **Water Supply Master Plan:** Several data collection and analysis efforts are under way with the goal of completing the Master Plan in 2008.
- **Provide Support to Advisory Committee:** The advisory committee met on a monthly basis to discuss the Council's effort and make recommendations, and will continue to meet regularly in 2007 and 2008.

Metropolitan Council Members

Chair:
Peter Bell

Council Members:

Roger Scherer*	District 1	Natalie Steffen	District 9
Tony Pistilli	District 2	Kris Sanda	District 10
Mary Hill Smith	District 3	Georgeanne Hilker	District 11
Julius C. (Jules) Smith*	District 4	Chris Georgacas	District 12
Russ Susag*	District 5	Richard Aguilar	District 13
Peggy Leppik*	District 6	Vacant	District 14
Annette Meeks	District 7	Daniel Wolter*	District 15
Lynette Wittsack*	District 8	Brian McDaniel	District 16

Council Regional Administrator:

Thomas Weaver

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is available to answer your questions and address your needs.

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Visit our Web site to learn more about the Metropolitan Council and MCES.

Assess the MCES Website through the Council site at www.metrocouncil.org

Click on the "Environmental Services" icon at the top of the page to access to the MCES Website.