

# OPEN CHANNEL NEWS

MCES Industrial Waste & Pollution Prevention

Issue #26/ August 2007

## Metropolitan Council Environmental Services

Metropolitan Council Environmental Services (MCES) is one of three divisions of the Metropolitan Council, a regional public agency working for the seven-county metropolitan area. The mission of MCES is to provide wastewater services that protect the public health and environment while supporting regional growth.

Services provided by MCES ensure that:

- (1) sufficient sewer capacity exists to serve planned development, and sufficient capital investments are made to preserve the region's water quality;
- (2) wastewater collection and treatment services are provided in a cost- and quality-competitive manner for 103 communities and nearly 800 industrial clients; and
- (3) local plans provide for adequate water supply and nonpoint source pollution prevention in the region.

## What's Inside?

Council Relieved After High Court Rules on Treatment Plants

Dental Amalgam Separators Reduce Mercury Loading to the Metro Plant

New MPCA Fact Sheet – Managing Floor Drains and Flammable Waste Traps

2007 Industrial Waste Customer Forum Review

2008 Rates and Fees

## Important Dates

**October 15, 2007**

Liquid Waste Hauler Reports due at MCES office.

**October 30, 2007**

All Regular and Special Discharge quarterly reports due at MCES office.



## Recycled Wastewater Could Provide Water for Industry

A new Metropolitan Council report calls recycled wastewater an emerging non-potable water supply in Minnesota, with significant potential for some industries in some locations. This is being reported after an extensive statewide study was conducted and revealed that water reuse is indeed viable and can be done in ways that protect the public health.

The study, “*Recycling Treated Municipal Wastewater for Industrial Water Use*,” identified the 10 largest categories of water users in Minnesota. Power generation, water utilities and crop irrigation are just a few on the list. Researchers created a sequence of state maps to show the location of major users and the location of large wastewater treatment plants that could supply treated effluent for industrial reuse. The maps revealed a number of good matches in terms of location and water demand. Proximity to a wastewater treatment plant and the quality of the water an industry requires are key factors in determining economic feasibility. Other areas of inquiry in the study included regulatory requirements, reliability, liability, and risks.

Stakeholder meetings with representatives of industries such as Xcel Energy, CertainTeed, Great River Energy and ethanol plant designers indicated support for water reuse as a way to protect the state's water resources while supporting its industrial sector. Although the meetings were not intended to identify potential projects, several industries indicated interest in such projects if concerns about liability were resolved and if the economics were favorable. Economics favor larger industrial water users or clusters of users. Water reuse is already occurring on a limited basis in a few places in Minnesota. In Mankato, for example, a new power plant was built near an existing wastewater treatment plant. By recycling treated wastewater from the plant, no additional water was needed for cooling and the power plant needed to obtain fewer permits.

In the metro area, 255 million gallons of treated wastewater are discharged into area rivers every day, while industrial water demand is about 75 million gallons. Statewide, 425 million gallons a day of treated wastewater flow into surface waters compared to an industrial demand of about 442 million gallons. As communities around the region grow, they construct new water supply systems, which create an increased demand on groundwater supplies. Recycling water for industrial use could help conserve groundwater.

Funding for the study was recommended by the Legislative Commission on Minnesota Resources (LCMR) from the Environment and Natural Resources Trust Fund in 2005. Metropolitan Council Environmental Services as well as industries and local, regional and state agencies and organizations provided in-kind contributions of staff time and expertise.

## Council Relieved After High Court Rules on Treatment Plants



*Crow River in Wright County*

A Minnesota Supreme Court ruling means we've come full circle on the matter of building or expanding wastewater treatment plants.

In 2005, the state Court of Appeals denied a wastewater permit, which had been approved by the Minnesota Pollution Control Agency (MPCA), for two fast-growing communities in Wright County: Annandale and Maple Lake. The court ruled that federal regulations pertaining to the Clean Water Act prevent any new wastewater discharges into an "impaired" lake or river, in this case, the Crow River.

The ruling had potential implications for the Twin Cities because rivers that the Met Council's regional treatment plants discharge into – the Mississippi, Minnesota and St. Croix – all flow into Lake Pepin, about 70 miles south of the Twin Cities.

The ruling would have affected anyone considering construction of a new, or expansion of existing, wastewater treatment plant to accommodate growth. This includes MCES, with plans in the works to replace an existing plant in Hastings.

The MPCA appealed, and in May the state Supreme Court reversed the Court of Appeals ruling.

"We are pleased with the outcome," said MPCA Commissioner Brad Moore. "The decision gives us the flexibility to improve water quality while still allowing our communities to grow. Updated wastewater treatment facilities, built in a responsible way, are necessary for cleaning up impaired waters. We intend to move forward in a thoughtful manner, in keeping with the court's guidance."

The Metropolitan Council had filed a friend of the court brief in support of the MPCA.

"Commissioner Moore is absolutely right," said Environmental Services General Manager Bill Moore (no relation). "We're in the water quality business. It's a priority, plain and simple. But we also need to be able to accommodate projected growth in this area. This ruling will help us accomplish both."

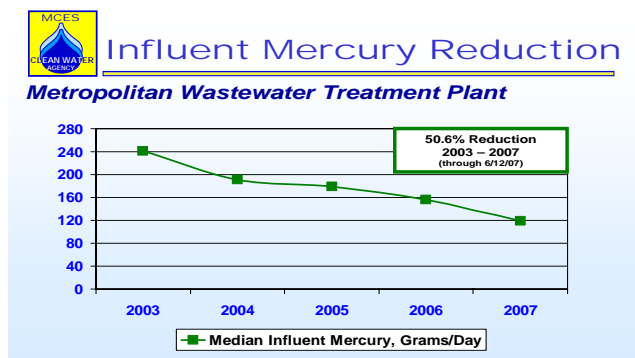
## Dental Amalgam Separators Reduce Mercury Loading to the Metro Plant

Mercury loadings at the Metro Plant have been declining significantly as amalgam separators are installed in metro-area dental clinics. MCES has been working with the Minnesota Dental Association and local dental clinics since 2003 to have amalgam separators installed, after two earlier MCES/MDA studies demonstrated that the separators significantly reduce the mercury loadings to the sewer system.

Dental amalgam, a composite of approximately 50 percent mercury and the rest silver, tin, and copper, is used as a filling for cavities in teeth. Small particles of amalgam get rinsed away at the dentist chair as fillings are placed or removed. An amalgam separator installed within the clinic vacuum system will remove 99 percent of the particles from the clinic wastewater, thus reducing the mercury load to the wastewater treatment plant.

MCES and the MDA implemented a dental clinic amalgam recovery program whereby dental clinics within the MCES service area that place or remove amalgam fillings are encouraged to install an amalgam separator from a list of approved models. The clinic must report annually that the separator is operating and managed properly. To date, 724 clinics (approximately 99 percent of program-eligible clinics) have installed a separator. Clinics that do not install a separator would need to apply for an MCES industrial discharge permit.

Since this program began, mercury loadings at the Metro Plant have dropped by just over 50 percent. MCES recognizes that there are other sources of mercury besides amalgam entering the wastewater treatment system and has been working since 1994 to identify and minimize all mercury sources. However, given the timing of the significant decline in influent loadings at the Metro Plant and that of the amalgam separator installations, MCES feels confident that the reductions are largely due to the separator installations.



Graph shows mercury loadings at MCES Metro Plant from 2003 when the amalgam recovery program began.

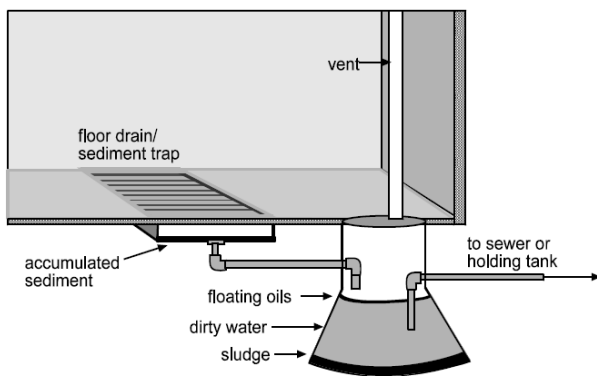
## New MPCA Fact Sheet

### Managing Floor Drains and Flammable Waste Traps

MPCA has a new fact sheet available that provides information on proper maintenance of floor drains and waste traps. Many businesses have drains and waste traps in place, but often overlook them assuming they are self-maintaining. However, ignoring drains and traps can lead to expensive cleanup and permit violations.

All businesses need to understand what materials can potentially enter the floor drains, and if the materials have discharge limitations placed on them. Waste traps must be installed if the material contains excessive amounts of sand, oil, grease or flammable liquids. Waste traps are designed to hold this type of material back by allowing it to either float or settle, thus trapping it, and draining only the water layer (see diagram). Yet, if the top oil and bottom solids layer are not regularly cleaned they could make their way into the middle water layer and be discharged.

Diagram of a waste trap – taken from MPCA fact sheet



Best management practices and preventive maintenance are key to a properly operating drain system, and the MPCA fact sheet provides detailed information for this. In addition to preventive maintenance techniques, the fact sheet also explains necessary routine maintenance steps, and details waste management options for the three layers of materials collected in the traps. MCES encourages all businesses with floor drains and waste traps to review the fact sheet. It can be found at the MPCA website at <http://www.pca.state.mn.us/publications/w-hw4-18.pdf>

Refer to the MCES Waste Discharge Rules found at <http://www.metrocouncil.org/environment/IndustrialWaste/> for limitations on wastewater discharged to the sanitary sewer system. In particular, Section 405 (Trap and Separator Installations) and Section 406 (Prohibited Waste Discharges) are related to trap maintenance and allowable waste discharges.



Leo Hermes speaking at the forum

## 2007 Industrial Waste Customer Forum Review

On June 21, thirty-nine industrial representatives attended the annual MCES Industrial Waste Customer Forum.

Council member Russ Susag spoke briefly on the role of the Metropolitan Council and its members, and encouraged industrial users to contact the Council with questions or concerns.

Keith Buttleman, assistant general manager, Environmental Quality Assurance Department, followed with a brief presentation on the region's wastewater collection and treatment system.

Jason Willett, director of Financial Management and Planning, presented several topics. He briefly discussed the results of a trade association survey which showed the region's wastewater treatment costs to be in the lowest 25 percent of similar-sized agencies across the country. He presented a detailed overview of the proposed 2008 budget and rates, including a discussion about increasing "pay-as-you-go" funding for capital expenses in current and future budgets. He also discussed the Service Availability Charge (SAC) program and efforts to reduce inflow and infiltration (I&I) in the sewer system.

Leo Hermes, IWPP Section manager, gave the last presentation, which included discussions on: proposed 2008 industry specific rates; regulatory updates affecting permittees; and mercury reductions due to the installation of amalgam separators by the dental profession.

The forum concluded with a question-and-answer session. Several questions pertained to the changes in the Septage Management Program regarding disposal site closures. One northern disposal site closed permanently in June and three other northern sites are scheduled to close by 2009 or sooner. The private treatment facility that was expected to open in June, causing an earlier closure date for MCES northern sites, is on hold due to financial difficulties. Additional questions or comments were related to annual permit fees for the haulers.

## Reporting Reminder

All permittees must use the updated reporting forms and mail them to **390 North Robert Street, St. Paul, MN 55101-1805**. Mail sent to the old address is no longer being forwarded. The new forms are available at <http://www.metrocouncil.org/environment/IndustrialWaste/forms.htm>

## Open Channel News

is published by  
MCES,

Industrial Waste &  
Pollution Prevention Section  
230 East 5<sup>th</sup> Street  
St. Paul, MN 55101-1626

Leo H. Hermes  
Industrial Waste &  
Pollution Prevention Section  
Manager

For further information on  
Open Channel News  
contact:  
Maggie Lundell / 651-602-4769

For general information on  
the Industrial Waste &  
Pollution Prevention Section contact:  
Pat Fonseth / 651-602-4703

## 2008 Rates and Fees

Rates and fees affecting industrial users for 2008 were approved at the July 11 Metropolitan Council meeting. The approved rates are:

Strength Charge Rates for wastewater generated within the Council's region and discharged on site will be \$0.148 per excess pound of total suspended solids (TSS), and \$0.074 per excess pound of chemical oxygen demand (COD).

Full-cost recovery rates for treatment of industrial wastewater hauled to approved MCES disposal sites will be \$0.295 per excess pound of TSS and \$0.1475 per excess pound of COD. There is an additional \$10 per 1,000 gallon service fee for out-of-region loads.

Liquid waste haulers' standard load charges will be \$37.61 per 1,000 gallons. Holding tank wastes will be charged \$1.93 per 1,000 gallons. The Portable Toilet Waste rate will be \$49.91 per 1,000 gallons. Collar county domestic waste load charges will be \$47.61 per 1,000 gallons. Beginning in 2007, a facilities component charge will be added to each load charge type (this charge is included in the rates shown above and will be adjusted each year). The 2008 facilities component charge will be \$0.27 per 1,000 gallons.

The Service Availability Charge will be \$1,825 per unit, and the associated Add-on Service Charge rates will be \$0.91 per 1,000 gallons.

For all permittees, permit fees will range from \$525 to \$4,875, depending on permit status.

For more information regarding rates and fees, please contact your MCES engineer or visit: [www.metrocouncil.org/environment/IndustrialWaste/news\\_rates.htm](http://www.metrocouncil.org/environment/IndustrialWaste/news_rates.htm). The 2008 rates will be posted on this site following final 2007 billings in February 2008.