

OPEN CHANNEL NEWS

MCES Industrial Waste & Pollution Prevention

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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 almost 800 industrial clients; and
- (3) local plans provide for adequate water supply and nonpoint source pollution prevention in the region.



Heavy equipment pushes segments of the outfall pipe into the tunnel.

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Empire Wastewater Treatment Plant to Double Capacity

The Empire Wastewater Treatment Plant is in the final stages of construction that will double that plant's capacity. The treatment plant is located in Dakota County and serves 5 communities that are expected to grow by 60-75 percent by 2020. The new plant design will have the capacity to treat up to 24 million gallons a day and serve the area through 2030.

The treatment plant is the only one of eight MCES plants that discharges to the environmentally sensitive Vermillion River. Included in the plant expansion design is the construction of a new outfall pipe that will allow the plant effluent to be discharged directly into the Mississippi River. The new pipe will run 13 miles through Rosemount and the riverbluff area. Construction of the outfall pipe is expected to be complete early in 2007.

When the Empire Plant expansion project is finished, MCES can proceed with plans to close its Rosemount Treatment Plant. It is the smallest plant in the regional system and expected to reach capacity in the next couple of years. Wastewater will still be collected at the plant site, and then pumped to the Empire Plant through a new interceptor sewer that will flow in the opposite direction of the outfall and will be installed in the same pipe trench.

Important Dates:

January 15, 2007 – Liquid Waste Hauler reports due at MCES offices for LWH permittees.

January 30, 2007 – All Regular and Special Discharge quarterly, semi-annual, and annual reports due.

Dental Amalgam Recovery Program

Clinics Install Separators

When you get a "silver filling" you are having amalgam placed in your mouth. Amalgam is half mercury. The remaining half is composed of silver, tin and copper. When old amalgam is drilled out of or new amalgam is placed in a patient's teeth, amalgam particles are discharged to the sewer through the dental vacuum system. At wastewater treatment plants, amalgam ends up in the residual solids. The solids from most MCES treatment plants are incinerated. When amalgam is incinerated, mercury can be released into the air. The mercury then settles on land and water. Although coal-fired power plants are the main source of atmospheric mercury pollution, incinerated wastewater treatment solids can contribute to the problem. The mercury bioaccumulates in the environment and can cause health problems throughout the food chain.

In 2001, MCES completed two studies with the Minnesota Dental Association (MDA) that looked at the effect of installing amalgam separators in the vacuum lines of dental clinics. MCES/MDA-approved amalgam separators capture 99% of the amalgam generated at the patient chair. The studies showed that amalgam separators can reduce the amount of mercury present in wastewater treatment plant solids by 29 - 44%.

MCES and the MDA have been focusing their attention on promoting the installation of amalgam separators in dental clinics within the Minneapolis-Saint Paul metropolitan area for the past three years. To date, 90% of clinics that place or remove amalgam have installed amalgam separators. If the remaining clinics do not install a separator in the near future, they will be required to obtain an Industrial Discharge Permit. This will include annual payment of permit fees and wastewater monitoring.



One of several approved amalgam separators in use at a dental clinic.

New Industrial Waste Discharge Report Form

Due to a change in the way Metropolitan Council Environmental Services (MCES) applies discharge limits, MCES updated the Industrial Waste Discharge Report form used by permittees to report discharge information on a quarterly, semi-annual or annual basis. Previously, MCES applied limits to the total facility discharge, except in the case of EPA categorical dischargers where the limits were applied at the monitoring point. Now MCES applies all discharge limits at the monitoring point for all Industrial Users. The revised form reflects this change. Other modifications have been made to the form so users can more efficiently enter their discharge information. Permittees should start using the new form with the first-quarter reports due in April 2007. The new form will be available by the end of January on our Web site at www.metrocouncil.org/environment/IndustrialWaste/.

2007 Liquid Waste Disposal Site Closures

Brooklyn Park

The Brooklyn Park disposal site was scheduled to close permanently on March 12, 2007, due to a Mn/DOT interchange project in the area. It now appears the project and, thus, site closure may be delayed 60 days. MCES will inform Liquid Waste Haulers 30 days in advance of the site closure.

Coon Rapids, Plymouth and Forest Lake

The Coon Rapids, Plymouth and Forest Lake disposal sites are expected to close in June 2007. A private company, Star Environmental, is in the process of constructing a hauled waste treatment and disposal facility in Fridley. The facility will be located within 30 minutes non-peak travel time of the mentioned MCES disposal sites. Based on MCES's amended disposal site criteria, the opening of this facility will result in the closure of all northern MCES disposal sites. The Star Environmental facility is expected to open May 1, 2007, and will accept septage, holding tank waste, portable toilet waste, and restaurant grease trap waste. The wastewater discharge from this facility will be subject to MCES limits and fees, and will be regulated under an MCES Industrial Discharge Permit.

MCES will keep Liquid Waste Hauler permittees updated as necessary on the progress of the Star Environmental facility and will provide a 30-day notice for closure of the Coon Rapids, Plymouth and Forest Lake disposal sites once start-up operations at Star Environmental are completed.

MCES disposal sites at 3rd & Commercial, Empire and Blue Lake Plants, and Chanhassen will remain open.

Local Limits Evaluation

In September of this year, the MCES Industrial Waste & Pollution Prevention Section completed its evaluation of the local limits for discharge to the sanitary sewer and submitted it to the MPCA. The study was subsequently approved by the MPCA.

The recommendation of this study was to not change any of the local limits. The study, however, indicated that the selenium, which is currently unregulated, was present in the influent of the Seneca Wastewater Treatment Plant at elevated levels. While no violations of any effluent or sludge limits were found, the selenium loadings are at a level where EPA guidance suggests that action be taken. One industrial user was found to be contributing a clear majority of the industrial selenium loading. Instead of setting a system wide limit for selenium, MCES is working with the one industrial user in a cooperative effort to reduce selenium levels in that user's wastewater discharge.

MCES is required by its NPDES permits and by EPA to conduct this evaluation every five years. The study consists of comparing the limiting factors of each MCES treatment plant's effluent discharge limits, sludge land spreading or incineration limits, process inhibition limits and worker health and safety concerns, with the plant's loadings and removal rates. From these considerations, a Maximum Allowable Headworks Loading (MAHL) is calculated. Known domestic/commercial loadings and a safety factor are subtracted from the MAHL. This leaves an allowable industrial loading, which is then divided by the cumulative flows of the industrial users to determine the local limit.

The metals scans that are required in all standard Industrial Discharge Permits every three years are used in this study. The next study will be conducted by September 2011. The 1996 study resulted in lower limits for five of the eight regulated parameters. Subsequent studies in 2001 and now in 2006 have indicated that the limits established in 1996 are sufficient to protect the wastewater treatment plants and receiving waters.

The MCES local limits are found in the Waste Discharge Rules, Section 401, "Local Pretreatment Standards." Companies also subject to EPA Categorical Limits are required to meet the most stringent of the two limits for each parameter.

State Tax Identification Number

MCES is now requiring permittees to provide their Minnesota State Tax Identification Numbers. This is being done through the Industrial Discharge Permit Applications and Renewal Applications submitted to MCES. The purpose of collecting this number is to facilitate a state procedure for collection of receivables.

General Mills Moves to Dry Ice Cleaning

Article provided by General Mills, Inc.

General Mills Bakeries and Food Service plant in Chanhassen recently acquired a high pressure, single-hose, dry-ice blast system for cleaning equipment. The blaster uses high-velocity dry ice pellets to clean difficult areas such as electrical motors, bottom panels, belts, bearings, roof vents, oven doors, and depositors. The purpose of purchasing this equipment is to effectively and efficiently return equipment to basic conditions. Prior to purchasing, the plant performed trials with different versions of the unit. The selected unit only required one person to operate. The equipment has proved to be reliable and easy for the operators to handle. Through the use of the dry ice blaster, the Chanhassen plant has experienced multiple benefits including:

- a reduction in water use and wastewater generation;
- a decrease in the use of caustic sanitation chemicals;
- improved product quality from better sanitation of difficult-to-clean areas;
- utilization of the equipment as a tool in our continuous improvement process;
- increase in sanitation labor efficiency; and
- additional assistance in maintaining dry clean areas.

Through the use of the dry ice system, General Mills has been able to cut equipment down time in half, reduce water usage, and save money. The equipment will pay for itself within one year.



Monitoring Reminder for CIUs

Categorical Industrial Users (CIUs) who did not apply for a categorical parameter sampling waiver will be required to monitor for all categorical parameters beginning January 1, 2007. These parameters can be found in Attachment A of the CIUs' Industrial Discharge Permit. CIUs will receive a revised permit with the additional parameters early next year; however, the requirement is effective on January 1, 2007, even if the CIU has not yet received their revised permit. CIUs are also reminded that if they did not apply for the waiver by the October 2, 2006, deadline, their next chance to apply is at the time of permit renewal.

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2007 Rates and Fees

Rates and fees affecting industrial users for 2007 were approved at the August 23, 2006, Metropolitan Council meeting. The approved rates are:

Strength Charge Rates for wastewater generated within the Council's region and discharged on site will be \$0.140 per excess pound of total suspended solids (TSS), and \$0.070 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 \$0.276 per excess pound of TSS and \$0.138 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 \$35.18 per 1,000 gallons. Holding tank wastes will be charged \$1.81 per 1,000 gallons. The Portable Toilet Waste rate will be \$46.69 per 1,000 gallons. Collar county domestic waste load charges will be \$45.18 per 1,000 gallons. Beginning in 2007, a Facilities Component charge of \$0.28 per 1,000 gallons will be added to each load charge type (this charge is included in the rates shown above and will be adjusted each year).

The Service Availability Charge will be \$1,675 per unit, and the associated Add-on Service Charge rates will be \$0.84 per 1,000 gallons.

For all permittees, permit fees will range from \$475 to \$4,500, 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. The 2007 rates will be posted on this site following end-of-year billing in February 2007.