Welcome

Peter Lindstrom
Metropolitan Council Member – District 10
Environment Committee Chair
Project Update Objectives

Share information on the status of the Metro Plant Solids Management Improvements Project and opportunities for future public engagement.
Topics

Overview

How it Works

Air Permitting & Environmental Review

Summary
Overview

Jeannine Clancy
Assistant General Manager
Environmental Services

WHO WE SERVE
7-county Twin Cities Metro Area
110 communities
2,600,000 people

OUR FACILITIES
9 wastewater treatment plants
640 miles of interceptors
250 million gallons per day (avg)

OUR ORGANIZATION
600+ employees
$7 billion in valued assets
$150 million / yr capital program
The Metro Plant is located southeast of downtown Saint Paul.

**Metro Plant**

- Processes 850 wet tons of wastewater solids every day for 73 communities.

**The Metro Plant processes 75% of the region’s wastewater solids including solids from four other treatment plants.**
Adding Solids Processing Capacity at the Metro Plant is Important for the Region.
Program Overview

MCES will spend roughly $200 Million on Metro Solids projects over the next eight years.
The fourth incinerator will include a 21,000 square foot building addition and the stack will be located in the same location and height as the existing stacks.
After public outreach and public hearing, the Metropolitan Council approved the Facility Plan in October of 2018.
Project Schedule

**Planning**
- Facility Plan was approved by the Council in October of 2018.

**Permitting**
- The Metro Plant’s air permit will be amended, and voluntary environmental assessment worksheet completed.

**Construction**
- Design build construction of the fourth incinerator is expected to take 3 years.

The existing incinerators will be 20 years old in 2025 and in need of renewal following construction of the fourth incinerator.
How it Works

Stephen Norton
Principal Engineer
Solids Collection

Preliminary Treatment → Primary Settling → Secondary Treatment → Final Settling → Disinfection → Return to Environment

Solids Collected

Settling: 99% water, 1% solids
Thickening: 95% water, 5% solids
Dewatering: 70% water, 30% solids

Waste Water → Bio-solids
Renewable Fuel

Dewatered wastewater solids have the same heating value as wood or low grade coal.

Wastewater solids have enough energy that the incinerators normally operate without the need for supplemental fuel.
How Incineration Works

Fluid bed incineration, paired with energy recovery and state-of-the-art air pollution control, is a sustainable solution for treating wastewater solids.
Air Permitting & Environmental Review

Rene Heflin
Plant Engineering Manager
MCES recognizes there are environmental justice areas surrounding the Metro Plant.

The fourth incinerator will have no significant impacts to surrounding communities.
The National Ambient Air Quality Standards (NAAQS) for six criteria pollutants were developed by the EPA and are part of the Clean Air Act.

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<td>Carbon Monoxide</td>
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<td>Lead</td>
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<td>Nitrogen Dioxide</td>
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<td>Sulfur Dioxide</td>
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<td>PM$_{2.5}$</td>
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<td>PM$_{10}$</td>
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*The Metro Plant will continue to meet all the NAAQS at the facility boundary.*
Air Quality

The Metro Plant is located in a PM$_{10}$ Maintenance Area

HUMAN HAIR
50-70 µm (microns) in diameter

PM$_{2.5}$
Combustion particles, organic compounds, metals, etc.
< 2.5 µm (microns) in diameter

PM$_{10}$
Dust, pollen, mold, etc.
< 10 µm (microns) in diameter

FINE BEACH SAND
90 µm (microns) in diameter

The project will reduce the Metro Plant’s PM$_{10}$ potential to emit emissions by almost 2.5 tons/year from what was previously permitted.
Technology Specific Emission Standards

Metro Plant Incinerator Performance Compared to EPA Emission Standards for New Fluidized Bed Incinerators

The existing incinerators meet federal emission standards for existing and new fluidized bed incinerators.
MCES completed an air emissions risk analysis for the Metro Plant including eight different risk scenarios.

The results indicate that the Metro Plant meets the risk threshold for all eight risk scenarios evaluated.
Greenhouse gas emissions from the fourth incinerator are partially offset by energy recovery and are similar to other alternatives evaluated.

The impact of wastewater treatment GHG emissions is very small accounting for 0.23% of total GHG emissions in Minnesota in 2018.
Incineration technology at the Metro Plant has been a key factor in reducing odors from the Metro Plant.

Adding a fourth incinerator will not create any additional odors and will help MCES continue to be a good neighbor to surrounding communities.
Water Quality

The Metro Plant is located next to the Mississippi River and Pigs Eye Lake.

Nearby water resources will not be impacted by the construction or operation of the fourth incinerator.
MCES has submitted a major air permit amendment and will submit a voluntary environmental assessment worksheet (EAW) to the Minnesota Pollution Control Agency (MPCA).

MCES will work with the MPCA to complete the air permitting and environmental review for the Fourth Incinerator project.
Fourth Incinerator Benefits

The fourth incinerator is the most cost-effective and sustainable alternative to meet the region’s wastewater needs. It will have the lowest community impact and will improve the reliability of the wastewater treatment system.
# Learn More & Provide Feedback

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<th>Web</th>
<th><a href="http://www.metrocouncil.org/metrosolids">www.metrocouncil.org/metrosolids</a></th>
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<tr>
<td>Email</td>
<td><a href="mailto:info@metrosolids.com">info@metrosolids.com</a></td>
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<td>Voice</td>
<td>651-691-9124</td>
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| Mail      | Stephen Norton - MCES Project Manager  
|           | 390 Robert St. North         
|           | Saint Paul, MN 55101                |
| MCPA      | Air Permit Amendment               
|           | Environmental Assessment Worksheet |
|           | Public Notices                      |
Questions & Comments