Engaging the Organization and Region in the Transformation to Utility of the Future

Leisa Thompson
General Manager
Environmental Services
Topics

• Getting to Now
• Transforming How We Do Our Work
• Transformation in the Works
10,000 REASONS WHY

Because we live in the best of all environments.

Choose to help the environment. It adds up.
www.mnenvirofund.org
Minneapolis-St Paul Sanitary District

Environmental Services

Chicken or Egg?

Metropolitan Waste Control Commission

Metropolitan Sewer Board

1935
Minneapolis Milling District: Early 1900s
Lock & Dam No. 1: April 5, 1917
Sewage Mats on the Mississippi: June 1933
1935
Minneapolis-St Paul Sanitary District

1969
Metropolitan Sewer Board

1994
Environmental Services

Chicken or Egg?

Metropolitan Waste Control Commission
Mission of the Metropolitan Council: To foster efficient and economic growth for a prosperous metropolitan region

100% Fee for Service
MCES Service Area and Facilities

$6 - $7 billion in existing assets
Compliance Performance

National NACWA Platinum Level Compliance

<table>
<thead>
<tr>
<th>Location</th>
<th>Years</th>
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</thead>
<tbody>
<tr>
<td>Hastings</td>
<td>24</td>
</tr>
<tr>
<td>St. Croix Valley</td>
<td>23</td>
</tr>
<tr>
<td>Seneca</td>
<td>14</td>
</tr>
<tr>
<td>Blue Lake</td>
<td>9</td>
</tr>
<tr>
<td>Eagles Point</td>
<td>9</td>
</tr>
<tr>
<td>Empire</td>
<td>7</td>
</tr>
</tbody>
</table>

# of Years with Greater than 5 Years Continuous Compliance
Regional Guide: Thrive MSP 2040

Outcomes

- Stewardship
- Prosperity
- **Sustainability**
- Livability
- Equity

Operating Principles

- **Integration**
- Collaboration
- Accountability

2040 Thrive MSP

Metropolitan Council
Strategic Vision Drivers

• Regional Growth – Thrive 2040
• Climate Change Impacts – Groundwater recharge uncertain
• Raised Public Expectations and Resource Constraints
• Going Beyond Traditional Regulation
  – Flexibility on Permitting Approaches
  – Instead of a “one size fits all” approach
• Water Resources Utility of the Future
  – EPA Reports Municipal wastewater accounts for <10% of remaining water quality impairments
Creating our Vision
A Collaborative Strategic Planning Process

Visual Leaders by David Sibbet
High Visual and Engaging
Transforming How We Work

The Whole is the Sum of the Parts

“The Whole is the Sum of the Parts Plus the Product of the Inter-actions”
Connecting Silos of Excellence
Serving the Region Since 1938

<table>
<thead>
<tr>
<th>Mission</th>
<th>Provide wastewater services and integrated planning to ensure sustainable water quality and water supply for the region.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>Be a valued leader and partner in water sustainability.</td>
</tr>
<tr>
<td>Values</td>
<td>Excellence  Commitment  Inclusiveness  Integrity  Respect</td>
</tr>
</tbody>
</table>

**Old Mission** - Provide wastewater services that protect public health and the environment while supporting regional growth.
Regulatory Flexibility-Phosphorus Umbrella

• Provides operational flexibility
• Optimize current investments (estimate $400M saved)
• Anticipates growth
• Prepare for potentially major investments in future years

Size of the “pie” is fixed, “slices” are not
Inflow and Infiltration Program

- 2016 new community task force
- Address private property I/I
Collaborative Solar

• 31 participating governments
• Competitive procurement process
Industrial Pretreatment Incentive Program

- A public/private partnership
- MCES Financed & Leased Back
- Design-Build-Operate
- Industry responsible for all costs
- Takes ownership after 10 years
Future “What-if” Scenarios: Increased Reliance on Groundwater to Meet Demand

Drawdown in the Prairie du Chien-Jordan Aquifer under Projected 2040 pumping
Master Water Supply Plan

- Technical Work
  - Cities
  - Agencies
  - Private Business

- Local Planning
  - Cities
  - Agencies

- Industrial Partnerships
  - Cities
  - Agencies
  - Private Business

- Grants
  - Agencies
  - Cities
## Water Conservation by Industrial Water Users

<table>
<thead>
<tr>
<th></th>
<th>Gedney Pickles</th>
<th>Federal Cartridge</th>
<th>Northern Star Foods</th>
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</thead>
<tbody>
<tr>
<td>2012 water use (gal)</td>
<td>94,666,800</td>
<td>87,156,500</td>
<td>121,656,000</td>
</tr>
<tr>
<td>MnTAP-identified</td>
<td>6,400,000</td>
<td>30,600,000</td>
<td>7,000,000</td>
</tr>
<tr>
<td>annual water savings (gal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual water savings as % of total use</td>
<td>6.8%</td>
<td>35.1%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Annual $ savings</td>
<td>$94,800</td>
<td>$57,480</td>
<td>$166,300</td>
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</table>
Water Efficiency Grants

$500,000
($167,000 by Communities)

85 Million Gallons Saved

Water for 2,500 People
East Bethel – 1st MCES
Groundwater Recharge Facility
SE Metro Potential Wastewater Reuse

2040 Residential & Commercial Growth Areas:
Toilet flushing & irrigation

Flint Hills Resources Pine Bend Refinery:
Cooling water

Empire WWTP Discharge Pipe

Agricultural Areas North & East of Empire WWTP:
Irrigation
Nutrients & Solids from the Minnesota River

- Minnesota River:
  - Largest source of sediment to Lake Pepin
  - Largest source of P load in Metro area

- River treatment:
  - Proven, measurable treatment technology for P & TSS reduction
  - Estimated 40 - 50 tons/year total P reduction
  - Estimated 30,000 – 40,000 tons/year solids reduction

A Different Approach: Treat the Minnesota River

Water Stakeholders

- Federal
- Residents
- Local Community Government
- State Agencies
- Watersheds
- Academia
- Industrial Business
- NPO's
Environmental Complexity