Planning for Collaboration in Milwaukee, Wisconsin

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Milwaukee Metropolitan Sewerage District
The Greater Milwaukee River Watersheds

<table>
<thead>
<tr>
<th>Watershed</th>
<th>Area (square miles)</th>
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</thead>
<tbody>
<tr>
<td>Kinnickinnic River</td>
<td>24.7</td>
</tr>
<tr>
<td>Menomonee River</td>
<td>135.8</td>
</tr>
<tr>
<td>Milwaukee River</td>
<td>700.0</td>
</tr>
<tr>
<td>Oak Creek</td>
<td>28.2</td>
</tr>
<tr>
<td>Root River</td>
<td>197.6</td>
</tr>
<tr>
<td>Lake Michigan Direct</td>
<td>40.7</td>
</tr>
</tbody>
</table>

Drainage Area

Total 1,127.0

Number of Counties 9
Number of Local Municipalities 83
Milwaukee Metropolitan Sewerage District

We Serve:
• 1.1 Million Customers
• 28 Municipalities
• 411 Square Miles

We Protect the Public & Lake Michigan:
• Convey/Store/Reclaim Wastewater
• Manage Flooding

We Have:
• 300 Miles of Sewers (municipalities and individuals have 6,000 miles!)
• 521 MG Tunnel System
• 2 Water Reclamation Facilities
Deep Tunnels

300 Feet Below ground

521 Million Gallons of Storage

28.5 Miles Long

17- to 32-feet In Diameter

Designed to minimize basement backups and for 1-2 overflows per year.
98.3%
Capture & Clean
Since 1993
Nature had it Right!
but human development has interfered
We need to Integrate Natural Systems with our Built Environment
We established a Common Goal
MMSD’s 2035 Vision
(http://v3.mmsd.com/NewsDetails.aspx)

**Integrated Watershed Management Goals:**

- Zero sanitary sewer overflows
- Zero combined sewer overflows
- Zero homes in the 100 year floodplain
- Acquire an additional 10,000 acres of river buffers through Greenseams
- Use green infrastructure to capture the first 0.5 inch of rainfall
- Harvest the first 0.25 gallons per square foot of area of rainfall

**Energy Efficiency and Climate Mitigation & Adaptation Goals:**

- Meet 100% of MMSD's energy needs with renewable energy sources
- Meet 80% of MMSD's energy needs with internal, renewable sources
- Use the Greenseams℠ Program to provide for 30% sequestration of MMSD's carbon footprint
- Reduce MMSD's carbon footprint by 90% from its 2005 baseline
SEWRPC’s Regional Water Quality Management Plan Update

Pollution Sources Summary

1975

- Rural-Agricultural Runoff: 21%
- Urban-Non-Agricultural Runoff: 23%
- WWTP: 5%
- CSO's: 49%
- SSO's: 2%

2000

- Rural-Agricultural Runoff: 21%
- Urban-Non-Agricultural Runoff: 68%
- WWTP: 2%
- CSO's: 7%
- SSO's: 2%

CONCLUSION: Focus on abating stormwater runoff pollution

Greater Milwaukee Watersheds Fecal Coliform Loadings
Need Partnerships
Valley Park Project
County Grounds
Kinnickinnic Concrete Removal
Managing Water Where it Falls
MMSD’s Sustainability Plan and Regional Green Infrastructure Plan
Greenseams® More than 3,300 Acres
Green Roofs

Managing up to 468,000 Gal. Per Storm

Up to 54,900 Gal. Funded 2014
More than 20,400 sold since 2002

Total Storage = 1,100,000 Gallons
30th St. Corridor

FRESHCOAST 740
MILWAUKEE, WISCONSIN

90 Rain Barrels
8 Rain Gardens
Up to 8,593 gal. Captured per Storm
Brown Deer

100 Rain Barrels - 12 Rain Gardens

Up to 16,940 gal. per Storm
Questions

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