EAST BETHEL WATER RECLAMATION FACILITY

WATER RECLAMATION FACILITY (WRF) INFORMATION:

• **Location:** 18460 Buchanan St. NE
  East Bethel, Minnesota, 55011
  651.602.8929

• **Type:** Membrane bioreactor with ultraviolet and hypochlorite disinfection

• **Design Capacity:** 410,000 gallons per day

• **Discharges to:** Land application basin

• **Current Communities Served:** 1 (East Bethel)

• **2040 Projected Population Served:** 7,380

• **Began Operations:** August 2014

### Treatment Process

**Current Flow:** 50,000 gallons per day

- Influent Wet Well
- Influent Pumping
- Inclined Rotary Screen
- Grit Removal
- 5 Stage Biological System* (Not currently in operation)
- MBR Feed Channel
- MBR Basin
- Effluent Storage Tank
- Discharge to Subsurface Application

### Abbreviations:

- MBR: membrane bioreactor
- UV: ultraviolet light disinfection
- WAS: waste activated sludge
- RAS: return activated sludge
## 2019 Average Reclaimed Water Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2019 Average Value</th>
<th>Permit Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Material (mg/l CBOD5)</td>
<td>1.4</td>
<td>25 (monthly)</td>
</tr>
<tr>
<td>Turbidity (NTU)</td>
<td>0.09</td>
<td>2 (daily)</td>
</tr>
<tr>
<td>Total Nitrogen (mg/l N)</td>
<td>5.5</td>
<td>10 (monthly)</td>
</tr>
<tr>
<td>Total Phosphorus (mg/l P)</td>
<td>0.26</td>
<td>1.0 (monthly)</td>
</tr>
<tr>
<td>Disinfection Criteria</td>
<td>&lt;1.1</td>
<td>200 (monthly)</td>
</tr>
<tr>
<td>(fecal coliform, most probable number per 100 ml)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Wastewater Collection and Reclaimed Water Distribution Process

### Treatment Processes
- Membrane bioreactors
- UV and hypochlorite disinfection

### Potential Future Use
- Irrigation

### Wastewater source
Wastewater from homes, businesses, and industries in East Bethel.

### Reclaimed Water Amount
0.045 mgd average daily flow (current flow)

### Subsurface Infiltration
Land application basins

### Crooked Brook

### Water Table

### SURFICIAL SAND AQUIFER

### AQUIFARD

### MAZOMANIE AQUIFER

## Learn more
For more information please contact Karla Eggink:

**Phone:** 651.602.8763

## MCES Mission
Provide wastewater services and integrated planning to ensure sustainable water quality and water supply for the region.