The City of Waukesha Application for Lake Michigan Diversion with Return Flow

Dan Duchniak, General Manager, Waukesha Water Utility

August 20, 2015
City of Waukesha

- 2010 population 70,718
- Urban hub of Waukesha County
- House county services
- Own/operate transit system

<table>
<thead>
<tr>
<th>Statistic</th>
<th>2000</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>64,825</td>
<td>70,718</td>
</tr>
<tr>
<td>Demographics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>91%</td>
<td>88%</td>
</tr>
<tr>
<td>Non-white</td>
<td>9%</td>
<td>12%</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$50,085</td>
<td>$57,001</td>
</tr>
<tr>
<td>Population below poverty level</td>
<td>5.9%</td>
<td>10.6%</td>
</tr>
</tbody>
</table>
Legislative and legal considerations

  - Established Groundwater Management Areas (GMA)
  - Drawdown greater than 150’ qualifies you as a GMA
  - Waukesha County and Brown County in GMA

- Great Lakes Compact
  - Wisconsin Implementation Legislation
    - Water Supply Service Area Plans
  - Ban on Diversions with limited exceptions

- Lake Beulah Management District
  - State Supreme Court Decision
    - DNR must consider impacts when issuing high capacity well permits
    - Groundwater use impacts surface waters

- All New Water Supply Alternatives are Outside the Current City Limits
Waukesha location

- City of Waukesha is 1.5 miles west of Great Lakes surface water divide in straddling county

Great Lakes Compact – Exceptions to the Diversion Ban

- Straddling community
- Community in a straddling county
- “Extra Credit” if you can show the groundwater is hydrologically connected to the Great Lakes
Of people who reside in communities outside of the Basin:

Straddling County Eligible if have Need and with Return Flow = 0.9%
Ineligible US Population = 99.1%

Only a small number of eligible communities are likely to apply or qualify for a diversion!
Waukesha’s groundwater supply is connected to the Great Lakes Basin water resources.
Waukesha in within the Great Lakes groundwater divide
Waukesha Water Supply Service Area
Requesting a reasonable amount of water

No other reasonable water supply for Waukesha

Wisconsin Compact Implementation Statute defines reasonable water supply:

“Reasonable water supply alternative” – “a water supply alternative that is similar in cost to, and as environmentally sustainable and protective of public health as, the proposed new or increased diversion and that does not have greater adverse environmental impacts than the proposed new or increased diversion.”


None of the other water supply alternatives are reasonable for Waukesha
Alternatives to a Lake Michigan water supply:

- Greater adverse environmental impacts
- Are not sustainable
- Increase risk to public health
- Outside the city limits
- Greater impact to other water users

DNR Analysis:

- 8.5 MGD instead of 10.1 mgd
- Conclusions remained the same
CIC Alternative is unreasonable

- Water projections are unreasonable
- Unrealistic well production
- Water quality not considered – won’t meet radium regulations
- Existing environmental impacts not considered
- Additional wells will be necessary resulting in greater environmental impacts
- Rebound in aquifer overstated
- Costs not complete
A Lake Michigan water supply does not harm the environment. ALL the groundwater alternatives have significant adverse impacts.

Return Flow

• Wisconsin has more than 500 municipal wastewater treatment plants
  – 22 flow to Great Lakes
  – 8 flow to inland lakes
  – 473 flow to rivers

• Return flow water quality will meet all WDNR and EPA requirements
  – WDNR permit limits include strict phosphorus standards

• Return Flow Volume will ensure no impact Great Lakes Water Levels
  – Returning approximately 100% of the water
Waukesha meets exception standard criteria

• Need for water cannot be reasonably avoided through efficient use of water and conservation.
• No other reasonable supply is available.
• Reasonable amount of water requested.
• All water, less consumptive use, is returned.
• Restorative of hydrologic conditions of Basin.
• No significant individual or cumulative adverse environmental impacts to Basin waters and water dependent resources.
Benefits – Waukesha diversion with return flow

- Help restore natural groundwater flow towards Great Lakes basin
- No Impact on lake levels
- Enhance habitat and fisheries in Great Lakes tributary
- Reduce radium and salt released to environment
Thank You

Dan Duchniak, P.E.
General Manager, Waukesha Water Utility
(262) 409-4440
dduchniak@waukesha-water.com