City of Waukesha
Diversion Application

Wisconsin Association of Floodplain, Stormwater and Coastal Managers
November 5, 2015

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DNR Water Use Section
Bureau of Drinking Water and Groundwater
Presentation Outline

- Introduction
- Waukesha diversion proposal overview
- Key technical review criteria and decision overview
- Environmental review process overview
WDNR Decision Milestones

PUBLIC NOTICE OF APPLICATION (July 8, 2011)

PUBLIC HEARINGS I:
• Application process
• July 2011

WDNR REVIEW PERIOD
Consider comments
Draft EIS, Technical Review

PUBLIC HEARINGS II:
• Draft EIS, Technical Review
• 2 month comment period

WDNR prepares Final EIS
including detailed response
to comments, WDNR makes
revisions to Technical Review

WDNR determines if application is approvable
Waukesha is eligible to apply for a Great Lakes diversion.

- Community in a straddling county
- For public water supply purposes
WDNR Decisions

- Does the application meet the Great Lakes Compact diversion criteria?
  - water supply/demand criteria
  - water conservation criteria
  - wastewater return criteria

- Draft conclusion - yes
City of Waukesha Diversion Application Overview

Volume:
- Annual average of 10.1 million gallons per day
- 16.7 million gallons per day (peak day)

Source: Lake Michigan via Oak Creek Water Utility

Return: Lake Michigan via Root River near 60th/Oakwood in City of Franklin
Proposed intake and outfall
Water Supply Sources
Without adequate supplies of potable water

- **2014 – Water demand - 6.6 MGD**
  - 5.1 MGD treated for radium or blended before entering water system
  - 1.5 MGD not treated for radium
  - Current water system does not meet state drinking water standards
Water Supply Service Area
Demand Projections

Alternative demand projections including estimated water conservation savings.
No reasonable water supply alternative at 8.5 MGD demand

- Cost
- Public Health
- Environmental Impacts

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Resource of concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Deep and Shallow Aquifers</td>
<td>Wetland impacts (910 - 1036 ac)</td>
</tr>
<tr>
<td>1a – Deep and Shallow Aquifers (Fox River wells only)</td>
<td>Wetland impacts (804 – 1069 ac)</td>
</tr>
<tr>
<td>2 – Shallow Aquifers</td>
<td>Wetland impacts (1939 - 2326 ac)</td>
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<td>3- Unconfined deep aquifer, western Waukesha Co.</td>
<td>Lake impacts (6-12” drawdown, &gt; 10% decrease in baseflow)</td>
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<td>4 – Multiple Sources</td>
<td>Wetland impacts (713 - 893 ac)</td>
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<tr>
<td>5 – Lake Michigan and Shallow Aquifers</td>
<td>Wetland impacts (910 - 1036 ac)</td>
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<tr>
<td>6 – Lake Michigan</td>
<td>Proposed Diversion</td>
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</tbody>
</table>
Water Conservation Findings

- The proposed diversion cannot be reasonably avoided through conservation measures
  - Projected 1.0 MGD savings through implementing water conservation measures

- Will implement water conservation measures that are environmentally sound and economically feasible
  - Applicant meets requirements in NR 852 – Water Conservation Wisconsin Administrative Rule
Wastewater Return: Root River

- Shares the water supply from Oak Creek pipeline route
- Volume: return previous year’s average day withdrawal to the Root River, a tributary of Lake Michigan
  - Excess wastewater discharged to Fox River
- Returned wastewater will need to meet all applicable permit requirements
Environmental Impacts

Water Quantity Impacts

<table>
<thead>
<tr>
<th></th>
<th>Total volume (Million Gallons)</th>
<th>Maximum annual withdrawal (MG)</th>
<th>Maximum annual withdrawal (% of total volume)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Michigan</td>
<td>1,299,318,237</td>
<td>3,687</td>
<td>0.000284%</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>6,056,144,311</td>
<td>3,687</td>
<td>0.000061%</td>
</tr>
</tbody>
</table>

Water Quality

- Expect minimal to no impacts to the Lake Michigan Basin
Environmental Impact Statement

What is an EIS?

- Relevant environmental information to inform a WDNR decision

Outline

1) Introduction and Project Summary
2) Project Alternatives
3) Affected Environment
4) Environmental Effects
5) Comparison of Alternatives
Wisconsin determines if application is approvable

If yes… forwarded to Great Lakes States and Provinces

Great Lakes States Decision
- Approval
- Approval with conditions
- Denial

If yes… returned to Wisconsin for permits and FINAL DECISION

If no… Application ends.

If no… Application ends.
Public Comments

- Hearings were held in August 2015
- Comments were accepted until August 28, 2015
Thank you!

DNR – Water Use Program
Drinking Water and Groundwater Bureau
http://dnr.wi.gov/org/water/dwg/wateruse.html