WHAT IS NOCWA?

- Regional water authority comprised of Auburn Hills, Rochester Hills, Orion Township, Pontiac and the Oakland County Water Resources Commissioner's Office
- Created out of concern regarding water system reliability, decreased water pressure, rising Detroit Water and Sewerage Department (DWSD) water supplier rates and overall operating expenses
- Instead of each community entering into a water contract with DWSD individually, the four communities share a single contract which allows them to optimize the use of their infrastructure and negotiate a better water rate
PROJECT BACKGROUND

• DWSD charges customers a Revenue Requirement for the purchase of water. This includes two components: a fixed cost and a commodity cost (based on usage)

• The NOCWA communities will realize increased water pressure during high use periods through effective management of the region’s peak hour water demand

• DWSD provides an incentive to customers in the form of a reduced Revenue Requirement if the peak hour water demand can be reduced
NOCWA ORGANIZATIONAL STRUCTURE

- Simple organizational structure
- Infrastructure ownership and operations/maintenance reside with the individual communities
- NOCWA has no direct employees
- NOCWA’s authority to enter into contracts is limited to contracts with DWSD for water supply and for consulting services such as legal, financial and engineering
HOW NOCWA WORKS

• Existing storage facilities are used to reduce the peak hour water demand draw from DWSD
• A collaborative NOCWA Operations Plan is put into action during hot, high water use days
• NOCWA members monitor overall system demand and coordinate with each other to effectively reduce their community’s peak water demand during the critical morning period
• Communication, collaboration and trust form the foundation of NOCWA
NOCWA WATER DEMAND

Higher water demand from midnight to 6 AM to fill storage tanks

Storage tanks utilized from 6 AM to midnight to reduce demand below 56 MGD

Lower demand from 6 AM to midnight → Lower water cost
ADVANTAGES OF NOCWA

• Community Collaboration
  – Sharing of best management practices
  – Enhances communication

• Economic Benefit
  – Approximately $3,800,000 annual savings to NOCWA members, enabling sustainable water rates and enhancing community economic development and growth

• Enhanced Level of Service
  – Better management of peak hour demands resulting in an approximately 5 to 7 PSI pressure increase during high water demand periods

• Sustainable Construction
  – Maximizes the effectiveness of existing infrastructure
  – Reduces future capital expenditures

• System Reliability
  – Emergency connection mapping with system pressures aid in emergency operations
### ECONOMIC BENEFIT

<table>
<thead>
<tr>
<th></th>
<th>RR as Individual Community</th>
<th>RR as NOCWA Member</th>
<th>Savings</th>
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</thead>
<tbody>
<tr>
<td>Auburn Hills</td>
<td>$5,163,916</td>
<td>$4,660,350</td>
<td>$503,566</td>
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<tr>
<td>Orion Township</td>
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<td>$3,568,590</td>
<td>$385,598</td>
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<td><strong>Total</strong></td>
<td><strong>$26,461,109</strong></td>
<td><strong>$22,587,700</strong></td>
<td><strong>$3,873,409</strong></td>
</tr>
</tbody>
</table>

*RR = Revenue Requirement

- Cost of creating NOCWA: $80,000
- With savings of more than $3.8M, the return on investment is less than 10 days!
HOW TO REPLICATE

- Communities interested in working together to achieve cost savings and improved service levels, much like NOCWA, must have contiguous borders
- Communities must trust each other and communicate extensively
- Each community must focus on the win-win for all involved
  - Fairness is critical
- NOCWA adopted a simple governance approach concerning organizational structure, infrastructure ownership, revenue requirement allocation, etc.