City of Grosse Pointe Park

Draft Project Plan Update
Drinking Water State Revolving Fund
June 28, 2021
Meeting Agenda

1. **Meeting Introductions**
2. **Grosse Pointe Park Statement of Need**
   1. State of City Water Infrastructure
   2. EGLE requirements for Lead Water Services
   3. Overview of Asset Management Principals
3. **Drinking Water Revolving Plan Overview**
4. **Recommended Improvements**
   1. Citywide needs
   2. Focus areas
5. **Anticipated Water Rates**
6. **DWSRF Plan Review Process (Public Hearing and next steps)**
7. **Questions**
City of Grosse Pointe Park

STATEMENT OF NEED
Drivers of Water Supply System Work

- Aging Infrastructure
  - Original Water Main
  - Water Meters
- Lead and Copper Rule Changes (2018)
- Managing Improvements with Asset Management
Aging Infrastructure

- The City has a relatively old distribution system, with most water mains 80 to 100 years old.
- Effective useful life of cast iron mains are on the order of 75 to 100 years.
- Indication that water main is reaching the end of useful life is the number of breaks that occur.
- Service meters are reaching the end of useful life (resulting in readings lower than actual consumption).

![Average Water Main Breaks Per Year](chart)

- 2005-2009: 6.4 breaks per year
- 2010-2014: 7.6 breaks per year
- 2015-2020: 13 breaks per year
EGLE Revised Lead and Copper Rule (2018)

- Reduced lead action level to 12 µg/L in January 2025 (from 15 µg/L)
  - 90th Percentile Value 9 µg/L (below action level)
- Revised lead and copper sampling guidelines
- Required submittal of Distribution System Materials Inventory
  - Preliminary due January 1, 2020 (Completed)
    - Grosse Pointe Park – 2,032 lead service lines of 4,225 total
  - Final due January 1, 2025
- EGLE Requires 5% of lead service lines be replaced annually
  - All lead service lines to be replaced within 20 years
Use of Asset Management in Grosse Pointe Park

- **Pavement Surface Evaluation and Rating (PASER)**
  - Completed bi-annually
  - Required by State of Michigan since 2008 for ACT 51 funding
  - Prioritize maintenance activities to maximize life cycles of pavements.
  - Develop a program of crack sealing, spot repair and mill and overlay activities.

- **Drinking Water Asset Management Plan**
  - Required as of 2018

- **Wastewater Asset Management Plan**
  - Required for GLWA (City not an NPDES permittee)

Example: 2020 City PASER Map
Example: Preventative Maintenance

By using a combination of preventative maintenance and rehabilitation, the City extends the life cycle of roads well beyond their initial 20 year service life and spend less in the process.
Pavement Life Cycle – No Maintenance vs. Asset Management

- $3.30/syd/year over life of pavement – 36 years
- Average condition rating = 6

- $2.70/syd/year over life of pavement – 36 years
- Average condition rating = 7
Water Asset Management Plan

• Asset Management Plan developed in 2020
• Create inventory of assets in the water system
• Identify age, material, size, location
• Calculate Business Risk Exposure (BRE)
  – Probability of Failure – Age, size, break history, material
  – Consequence of Failure – Size, customer type and number, location
• Develop Capital Improvement Plan informed by BRE
• Water rate review
• Proactive rather than reactive management of system
Business Risk Evaluation

- Review Condition
- Age
- Break History
- Location
- Customers Served
City of Grosse Pointe Park

DRINKING WATER REVOLVING FUND
DWSRF Loan Program

- Drinking Water State Revolving Fund Program is a federally funded program that is operated by State Regulatory Agencies (with a 20% State match)
- Offers low interest loans (1.875 to 2.125%) for water infrastructure projects with a 20 to 30-year repayment schedule
- ~$250 million available for FY 2022
- Requires preparation of a Project Plan and Public Hearing.
- Eligible Project Plans are scored and the fundable range identified
DWSRF Loan Program (cont.)

- EGLE has preliminary scored projects based on information from the Intent to Apply Form and Meetings.
- Scoring depends on:
  - Correcting compliance
  - Improvements to (1) treatment, (2) distribution system, and (3) storage/pumping facilities. Each of three categories receives points
  - Population
  - Disadvantaged community, wellhead protection, and "consolidation"
- GLWA member communities often score lower because they may only be responsible for the distribution system.
- Additional funding may be available through American Rescue Plan, Future Infrastructure Bills or Earmarks.
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RECOMMENDED IMPROVEMENTS
City-wide needs

- Few water main replacements have been performed
- Approximately 50% of water mains (by length) are rated at a Condition of 4 or 5.
- Water meters are nearing end of useful life.
- Due to age of system, ~50% of service lines contain lead

Focus Area

- Four project areas/phases were identified in the Asset Management Plan

6” cast iron water main with tuberculation
Recommended Water System Improvements

- 2-inch and 6-inch water mains to be replaced by 8-inch water main
- New looping segments
- Associated hydrants and valves will be replaced with water main
- Water meter and lead service lines replaced in project areas
Phase 1

- Water Main Replacement
  - Wayburn and Maryland (Jefferson to Mack)
  - Mack Avenue (West City Limit to Wayburn)
- Trenchless Installation where feasible with open cut at intersections
- Lead Service Line Investigation/Replacement and Meter Replacement
- 15,000’ of Water Main
- ~300 Lead Services
- 16 Breaks Since 2005
Phase 1
Phase 2

• Water Main Replacement
  • Lakepointe, Beaconsfield and Nottingham (Jefferson to Mack)
  • Somerset and Balfour (Kercheval to Mack)
• Trenchless Installation where feasible under sidewalk/greenbelt
• Lead Service Line Investigation/Replacement and Meter Replacement
• 21,400’ of Water Main
• ~400 Lead Services
• 10 Breaks Since 2005
Phase 2
Phase 3

- Water Main Replacement
  - Bishop, Grayton, Harvard, Cadieux (Jefferson to Mack)
  - Yorkshire (Kercheval to Mack)
- Trenchless Installation where feasible under sidewalk/greenbelt
- Lead Service Line Investigation/Replacement and Meter Replacement
- 20,000' of Water Main
- ~250 Lead Services
- 26 Breaks since 2005
Phase 3
Phase 4

- Water Main Replacement
  - Lakepointe, Beaconsfield and Nottingham (Forte to Jefferson)
  - Balfour (Windmill Pte to Essex)
  - Trombley and Harcourt (Windmill Pte to Jefferson)
  - Bedford (Essex to Jefferson)
- Trenchless Installation where feasible under sidewalk/greenbelt
- Lead Service Line Investigation/Replacement and Meter Replacement
  - 22,600' of Water Main
  - ~125 Lead Water Services
  - 34 Breaks since 2005

Fairfax at Beaconsfield Street
# DWSRF Cost Opinion and User Cost

<table>
<thead>
<tr>
<th>Area</th>
<th>Capital Cost</th>
<th>DWRF Loan $</th>
<th>20-year Est. Bi-monthly Resident Payment $</th>
<th>30-year Est. Bi-monthly Resident Payment $</th>
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<tbody>
<tr>
<td>Area 1</td>
<td>$5,800,000</td>
<td>$13.81</td>
<td>$10.37</td>
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<td>Area 2</td>
<td>$7,400,000</td>
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<td>Area 3</td>
<td>$8,100,000</td>
<td>$19.29</td>
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<td>Area 4</td>
<td>$6,400,000</td>
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<td>Total Loan Value</td>
<td>$27,700,000</td>
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<td>Total Bimonthly Increases over 5 years</td>
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<td>$66.00</td>
<td>$49.63</td>
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WATER RATE IMPACTS
Water Rates

- Component of Bill (W/S only)
  - Water Consumption (Variable)
    - $3.80/Ccf
  - Sewer Charge (Fixed)
    - $33.45/Month
  - GLWA Water Charge (Fixed)
    - $30.67/month
  - Capital Cost (Fixed)
    - $3.75/Month

Typical Monthly Bill (10 units): $105.87

Note: City water/sewer bills are bimonthly
Water Rates

- Significant investment in water system, but also a notable cost increase for rate payers.
- Additional ~$33 monthly charge if full program adopted.
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DWSRF PUBLIC HEARING AND NEXT STEPS
DWSRF Next Steps

• Public Notice of Public Hearing was published in Grosse Pointe News on May 27, 2021
  • Affidavit of publishing is required (City to provide to OHM)
• Public Hearing is scheduled for June 28, 2021
  • Recording of public hearing (through Zoom) is required (City to provide to OHM)
• EGLE to publish revised Project Priority List in mid-August with a public hearing scheduled in September or October
## DWSRF Next Steps

### (Design and Construction)

<table>
<thead>
<tr>
<th>Task</th>
<th>Submittal Date</th>
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<tbody>
<tr>
<td>Draft Documents Submittal to EGLE</td>
<td>November 30, 2021</td>
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<tr>
<td>Final Design Water Main Replacement and Identify Lead Service Line Replacement Locations</td>
<td>January 15, 2022</td>
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<tr>
<td>Rate Methodology Approved</td>
<td>January 31, 2022</td>
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<tr>
<td>Environmental Assessments Published No Later Than</td>
<td>February 7, 2022</td>
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<tr>
<td>Part I and Part II Application</td>
<td>February 15, 2022</td>
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<tr>
<td>Final Documents Submittal to EGLE</td>
<td>February 18, 2022</td>
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<tr>
<td>Finding of No Significant Impacts Clearance; Plans &amp; Specs Approved</td>
<td>March 9, 2022</td>
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<tr>
<td>Bid Ad Published No Later Than</td>
<td>March 9, 2022</td>
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<tr>
<td>Part III of Application; Bid Data Submittal (With Tentative Contract Award)</td>
<td>April 15, 2022</td>
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<td>EGLE Order of Approval Issued</td>
<td>May 16, 2022</td>
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<td>Borrower’s Pre-Closing with the MFA</td>
<td>May 27, 2022</td>
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<td>MFA Closing</td>
<td>June 6, 2022</td>
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<td>Notice to Proceed Issued</td>
<td>August 5, 2022</td>
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<tr>
<td>Water Main Construction Completed</td>
<td>December 20, 2026</td>
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Questions?
Share your vision with us, and together, we’ll create great places for people.