

Water System Infrastructure Town Hall Meeting

April 20, 2021

7:00 pm

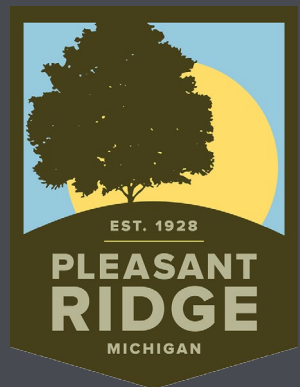
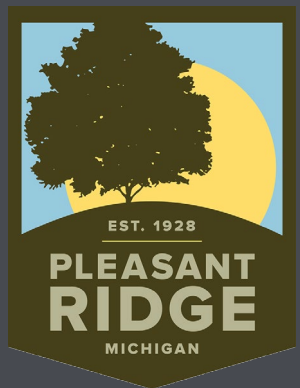


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- Overview and Background Information
- Project Details
- Project Cost and Funding

Please hold questions until the end of each section

Overview and Background Information



Online Resources

cityofpleasantridge.org/departments/water-and-sewer/

(or go to cityofpleasantridge.org and choose “water infrastructure information” from the quick links menu)

- *Water System Asset Management Plan*
- *Lead water quality testing results*
- *Detailed engineer’s project cost estimates*
- *Preliminary lead service line inventory by address*
- *This presentation*

Why Are We Doing This?

- State of Michigan mandate to replace all lead service lines
 - *Adopted 2018*
 - *Replacements required to start this year (2021)*
 - *Administrative Code R 325.10604f*
- 100-year-old water mains
 - *End of life cycle*
- Externally motivated timeline

Lead and Copper Rule Updates

- Requires replacement of all lead service lines over 20 years
 - *City proposing 30-year process*
- City must replace public and private lead service lines at “water supply’s expense”
- Reduces lead action level from 15 to 12 ppb starting January 1, 2025

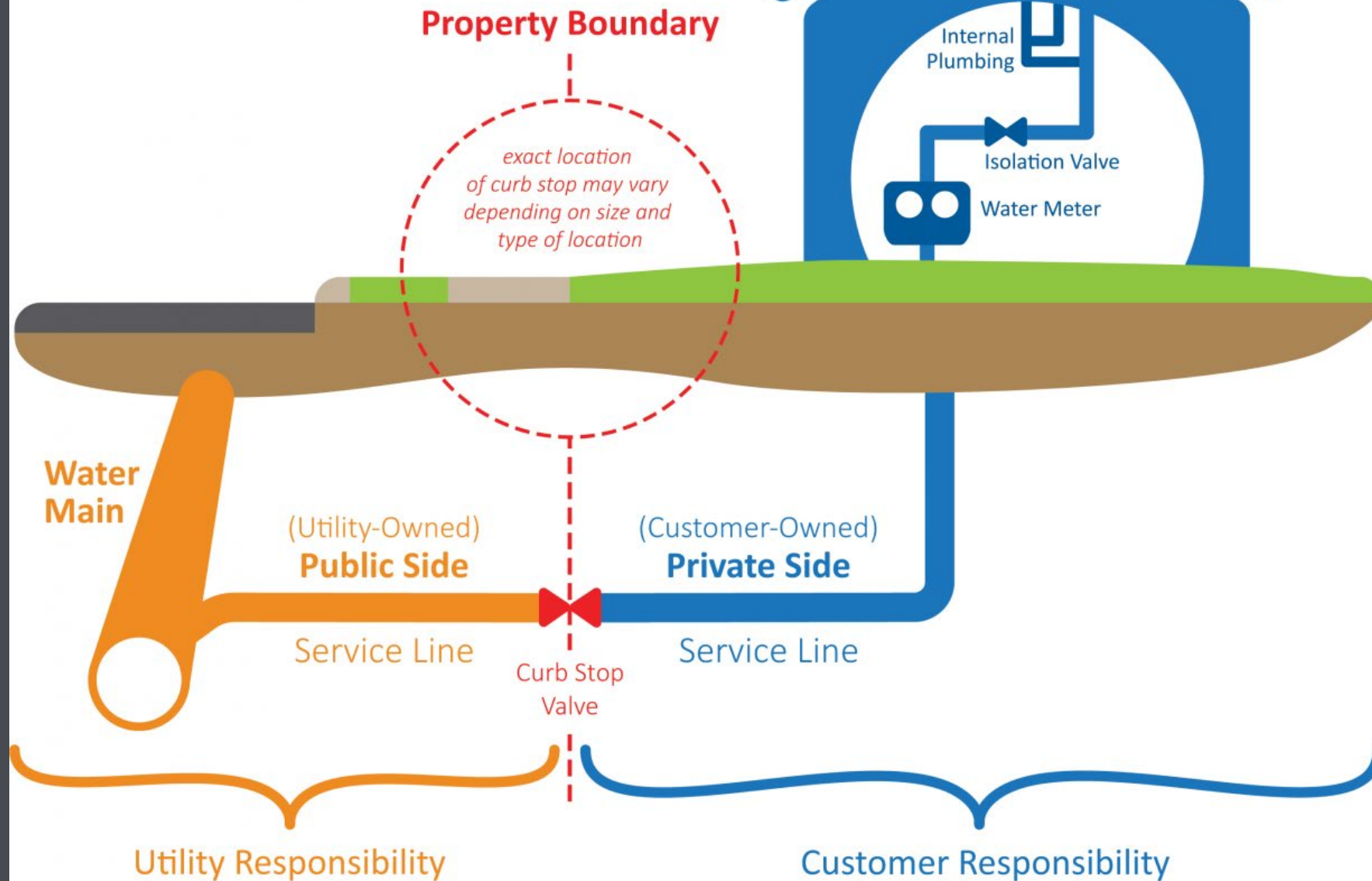
Water Quality Results

- 2020 PR Test Results: 4 ppb
- Statewide lead testing results available at:

michigan.gov/mileadsafe

Click on “Drinking Water”, and then click on “Water Supply Lead Results”

Water System



Lead Service Lines

- State lead and copper rules updated after Flint
- City must replace all lead service lines at public cost
 - *State mandate is within 20 years*
 - *City is proposing to replace 77% within 20 years, 90% within 25 years, and 100% within 30 years*

LSL Replacement Cost

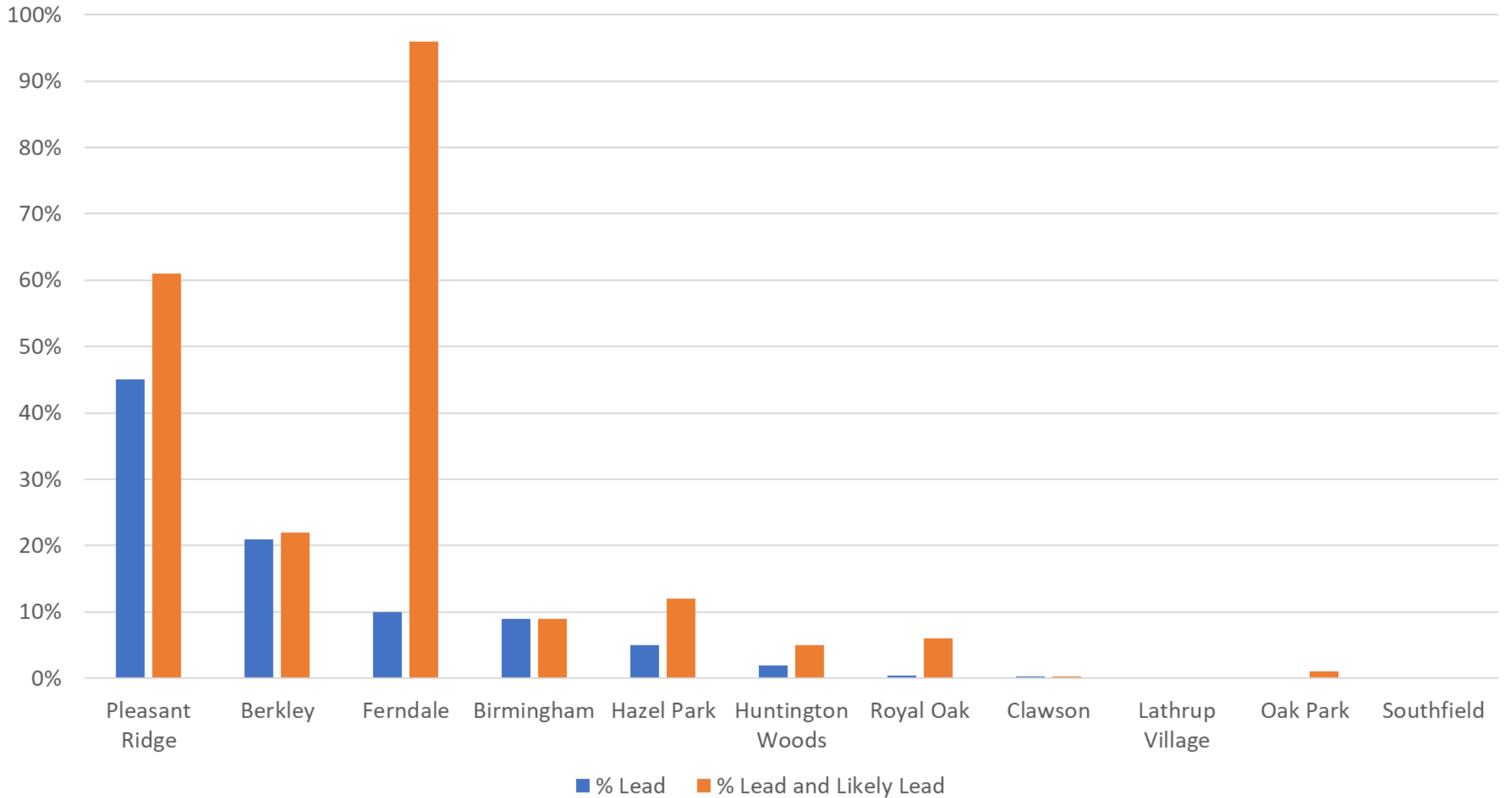
- Replace private service line: \$2,600
- Replace public service line: \$7,000 - \$10,000
 - *Public replacement includes new service line, stop box, water main tap, street & sidewalk restoration, etc.*
 - *Cost depends on where the water main is (long or short side)*

Lead Service Lines

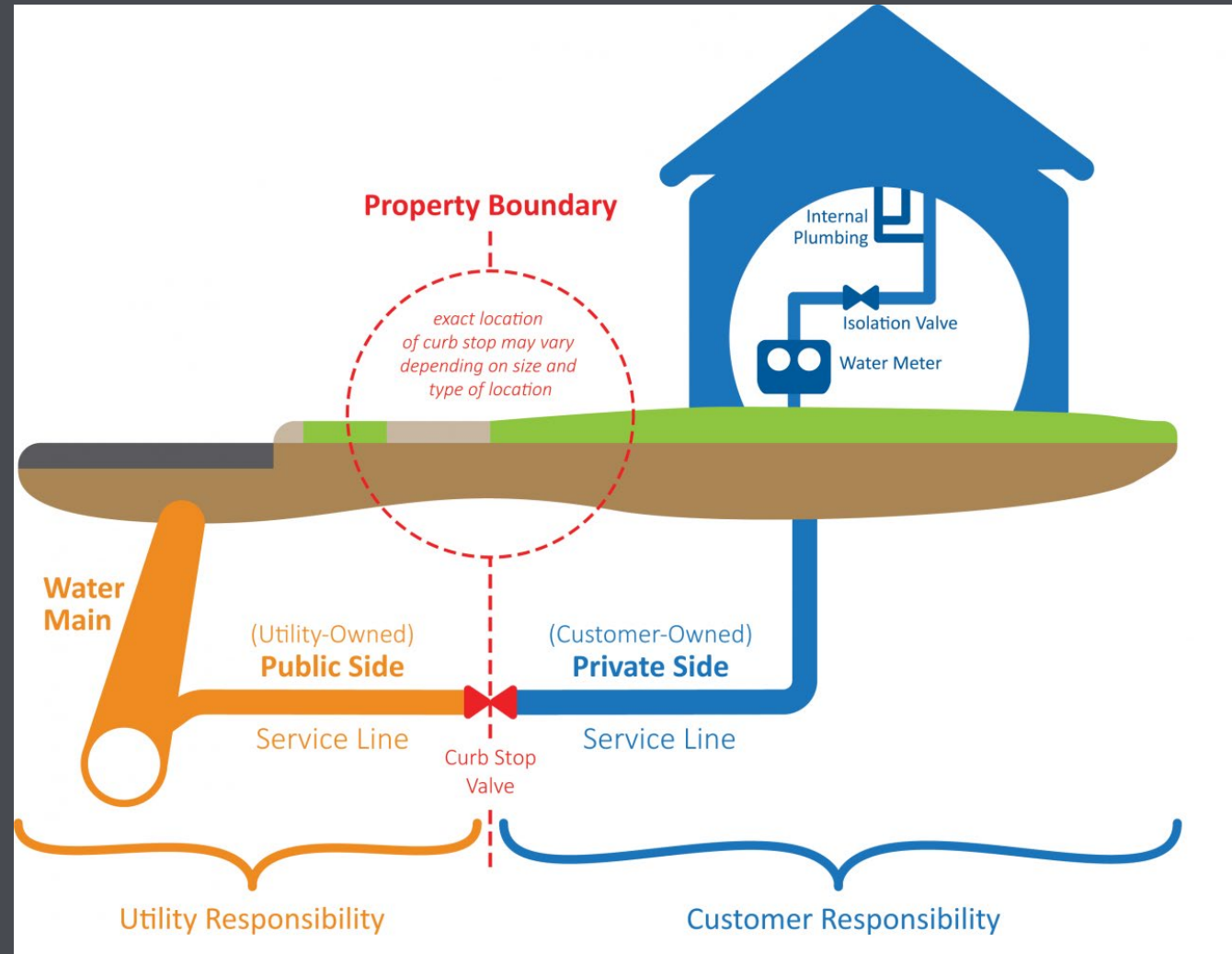
- Preliminary Inventory:
 - *699 known or suspected lead service lines*
 - *451 known or suspected copper service lines*
- 60.7% of all service lines are suspected lead
- Cost to replace a service line: \$10,000 - \$12,000
- Total cost: \$8.4 million

Community	% Known Lead	% Lead & Likely Lead
Pleasant Ridge	45%	61%
Berkley	21%	22%
Ferndale	10%	96%
Birmingham	9%	9%
Hazel Park	5%	12%
Huntington Woods	2%	5%
Royal Oak	0.4%	6%
Clawson	0.3%	0.3%
Lathrup Village	0.2%	0.2%
Oak Park	0.2%	1%
Southfield	0.1%	0.1%

% Lead Service Lines



How Disruptive Is It?





Water Mains

- PR water mains are nearly 100 years old (1924)
 - *At expected life span*
- Most PR mains are 6" – current minimum design standard is 8"
- Cast iron mains corrode & become brittle over time
 - *Effective diameter decreases*
 - *Pressure and reliability drops*

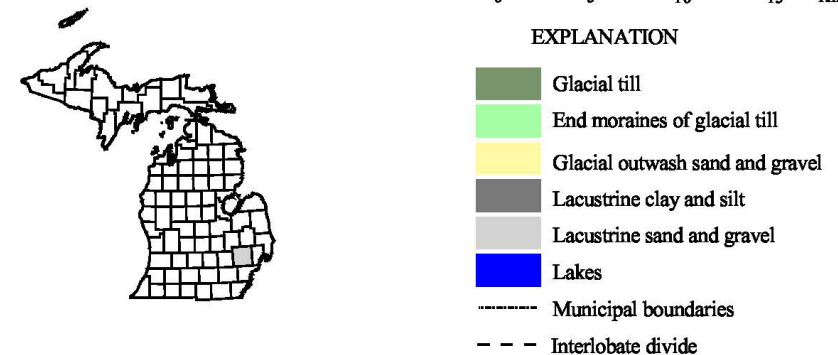
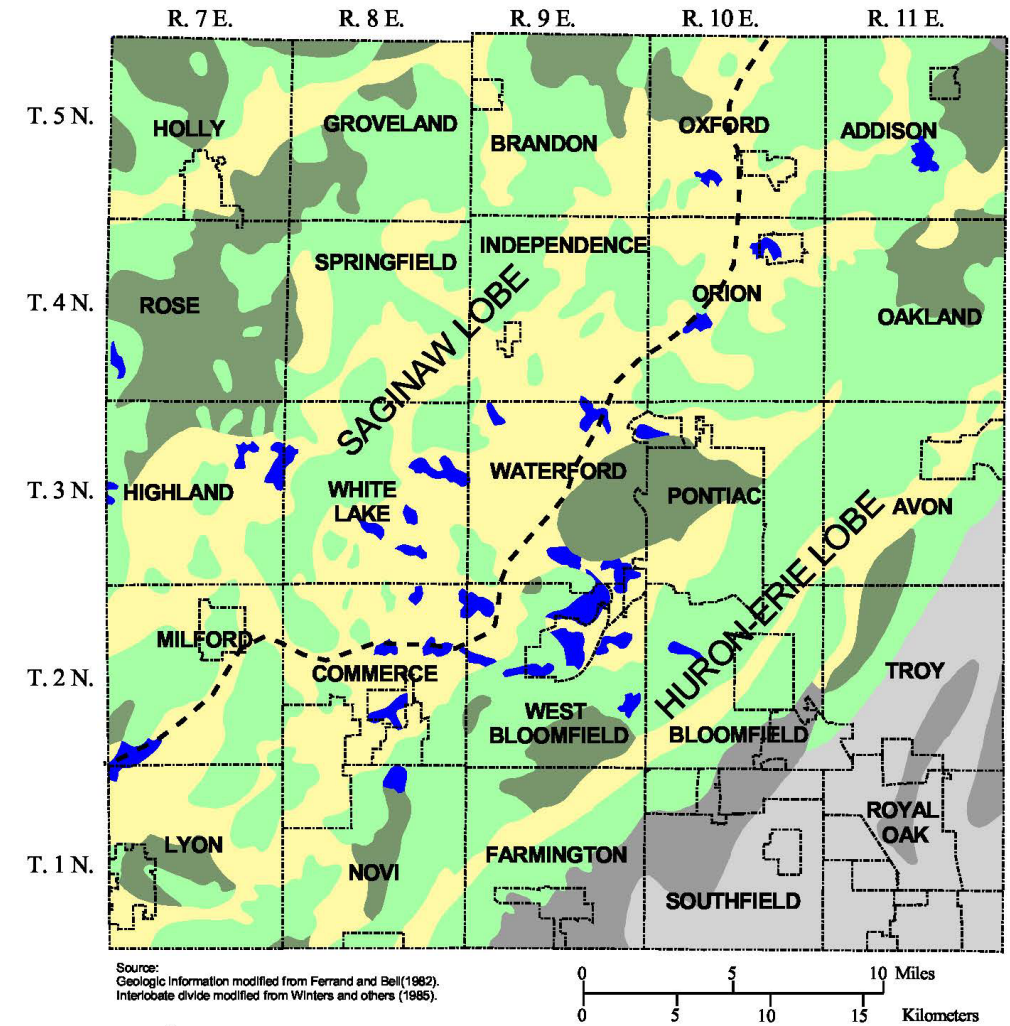
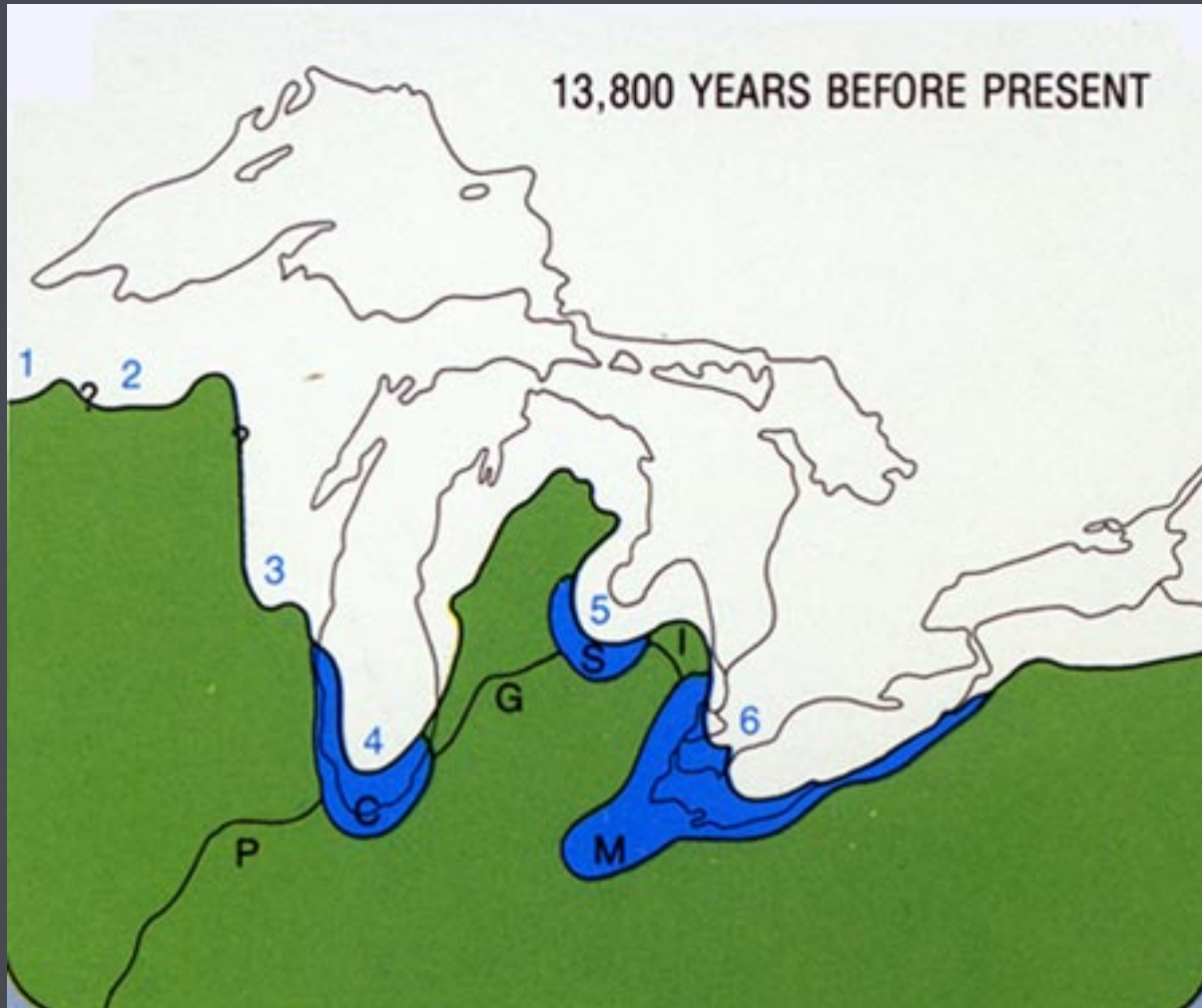


Cast iron water mains with interior corrosion – ours will look like these

Water Mains

- Brown water due to corrosion & iron buildup
- Risk of failure when tapping old mains 60+ times for LSL replacement
- Why weren't they replaced before now?
 - *Had useful life when last street reconstruction began in mid-90s*
 - *Sandy soil = no water main breaks*

Lake Maumee



Water Mains

- Wait on street reconstruction for main replacement?
 - *Concrete streets can last 50 years*
 - *Some mains could be 150 years old when street redone, well past expected life*
 - *We will combine street maintenance with water main replacement*
- Must dig into the street for every lead service line
 - *Already a good portion of the way towards replacing the entire main at that point*

Project Costs

Total Project Cost: \$25 million

\$850,000 annual cost

- LSL replacement: \$8.4 million (33%)
 - \$1.8 million for private service lines (7%)
 - \$6.6 million for public service lines (26%)
- Water main replacement: \$16.5 million (67%)

Annual Water Fund Impact

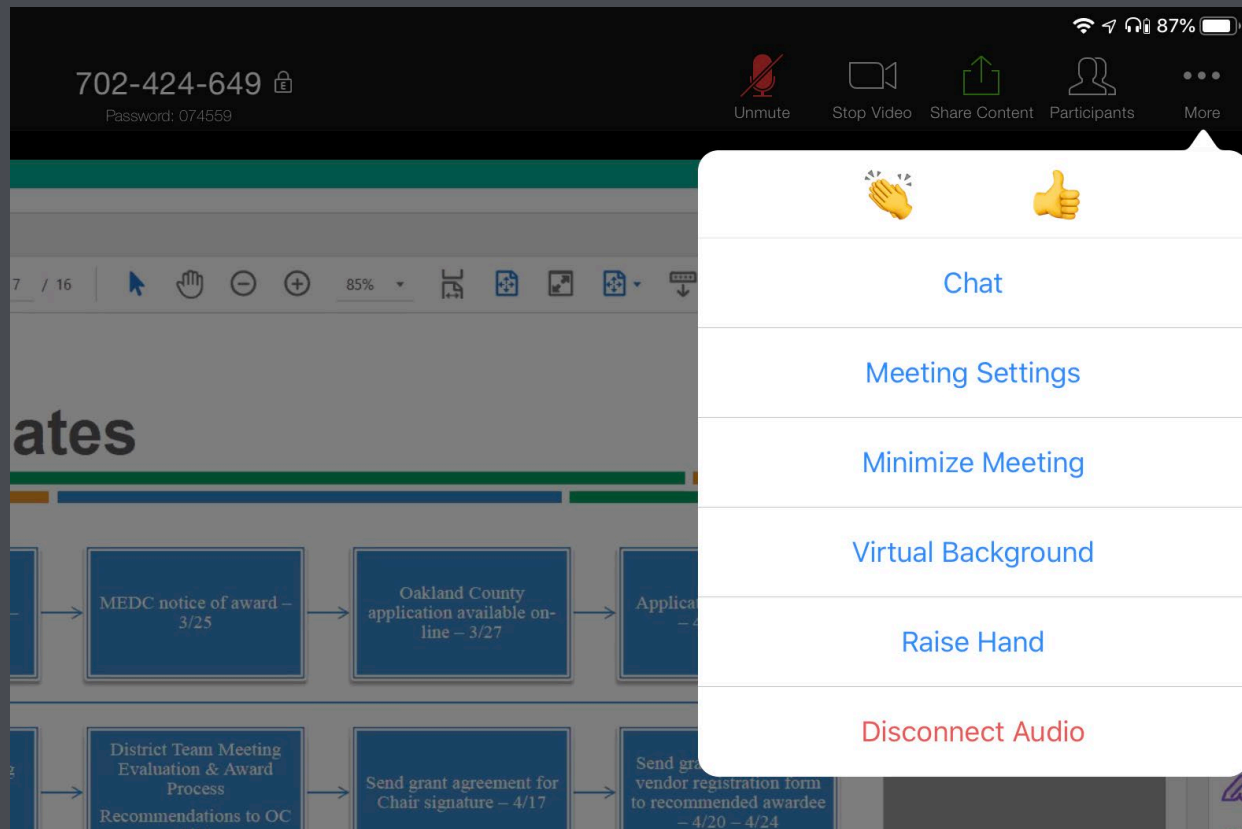
- Typical Water Fund Expenses: \$1,250,000
- NEW LSL/Main Infrastructure Costs: \$850,000

Questions?

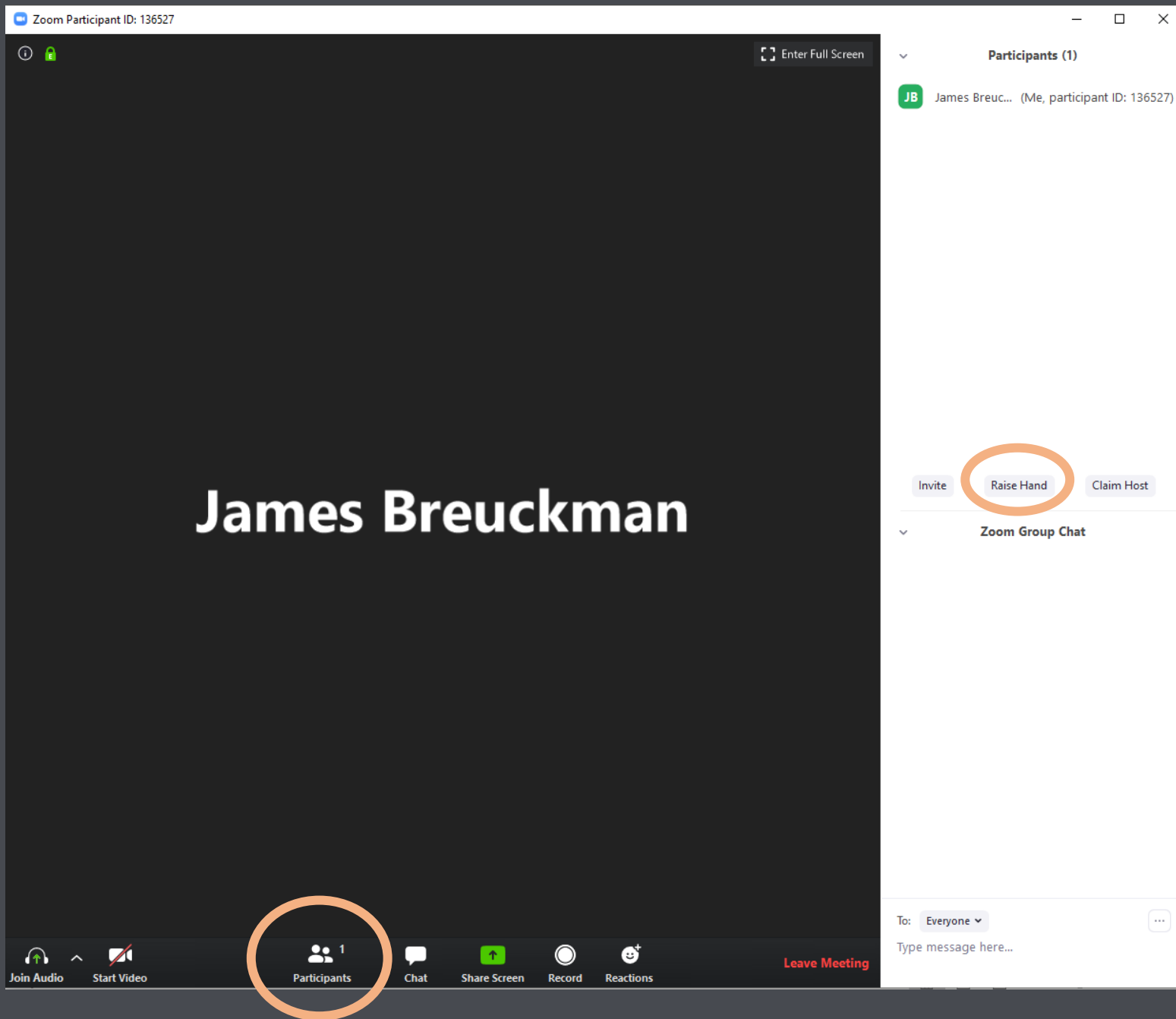
- Type question in chat
- Raise hand in Zoom & we'll call on you
- Email question to cityclerk@cityofpleasantridge.org

Questions

- Raising hand in Zoom:

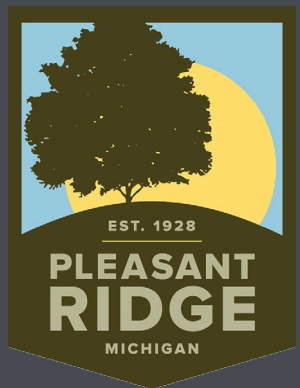


Apple: Click on the “more” menu button and click on raise hand. We will unmute you and call on you when it is your turn to offer comment.



PC: Click on the “participants” menu button on the bottom of the screen and click on raise hand on the right side of the screen

Project Details





Current Water System



Legend

- 6" Main
- 8" Main
- 10" Main
- 12" Main



City of Pleasant Ridge

Water Main Diameter Summary

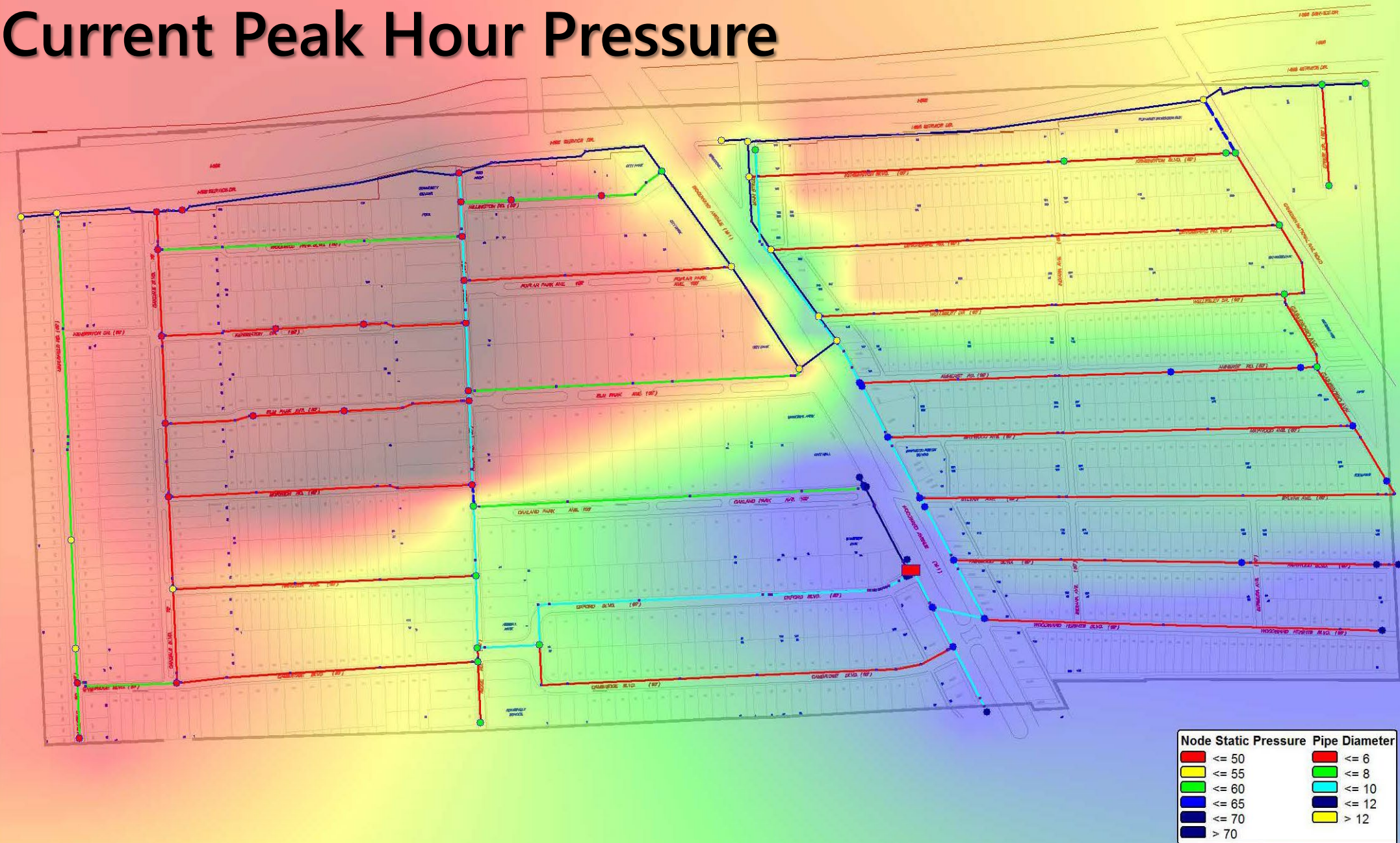
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	CHECKED BY	BM/AM/EL	

REFERENCE SHEET NUMBER BASEMAP

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Current Peak Hour Pressure





Water System Improvements



Legend

- 6" Main
- 8" Main



City of Pleasant Ridge

Water Main Diameter Summary

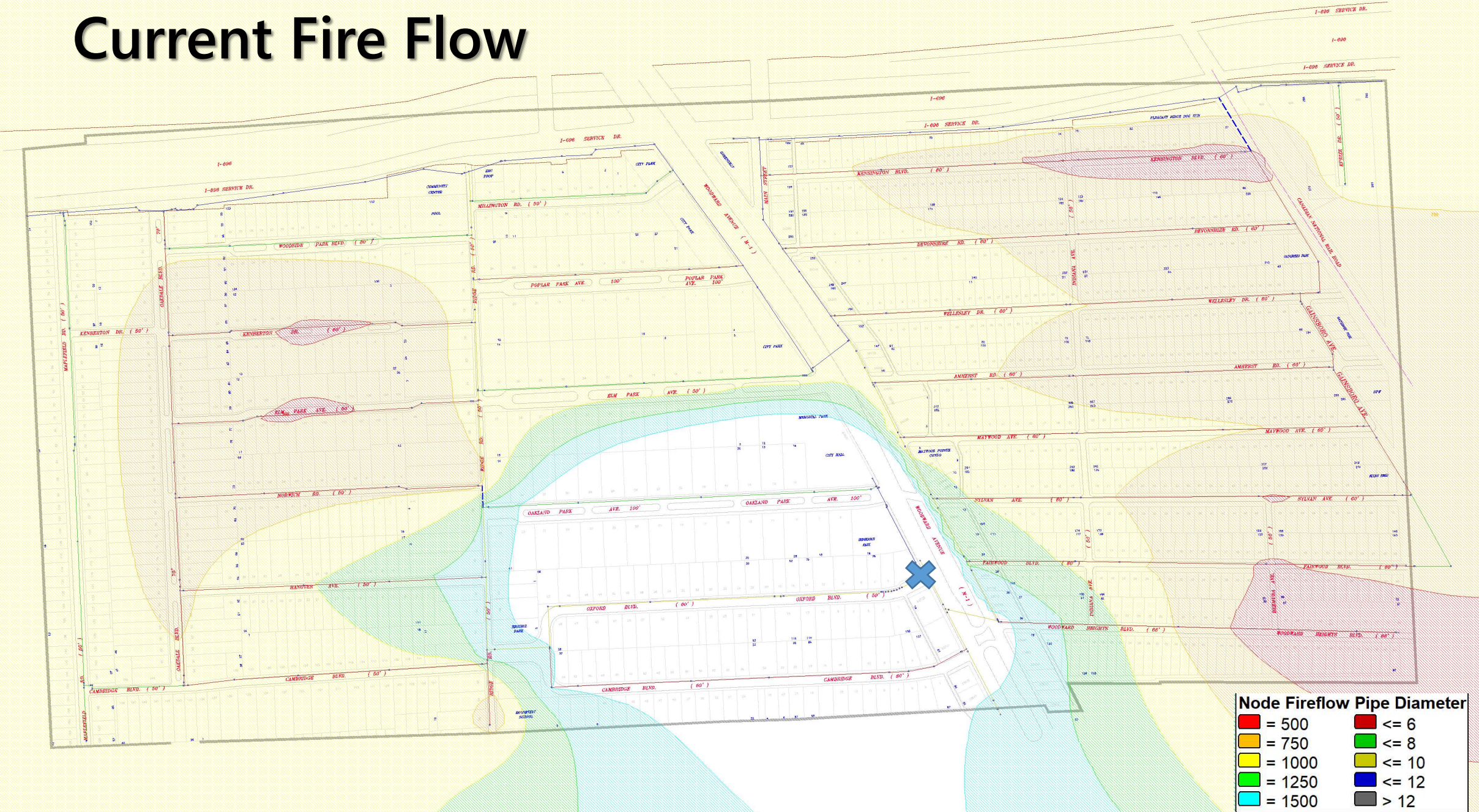
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REFERENCE SHEET NUMBER BASEMAP

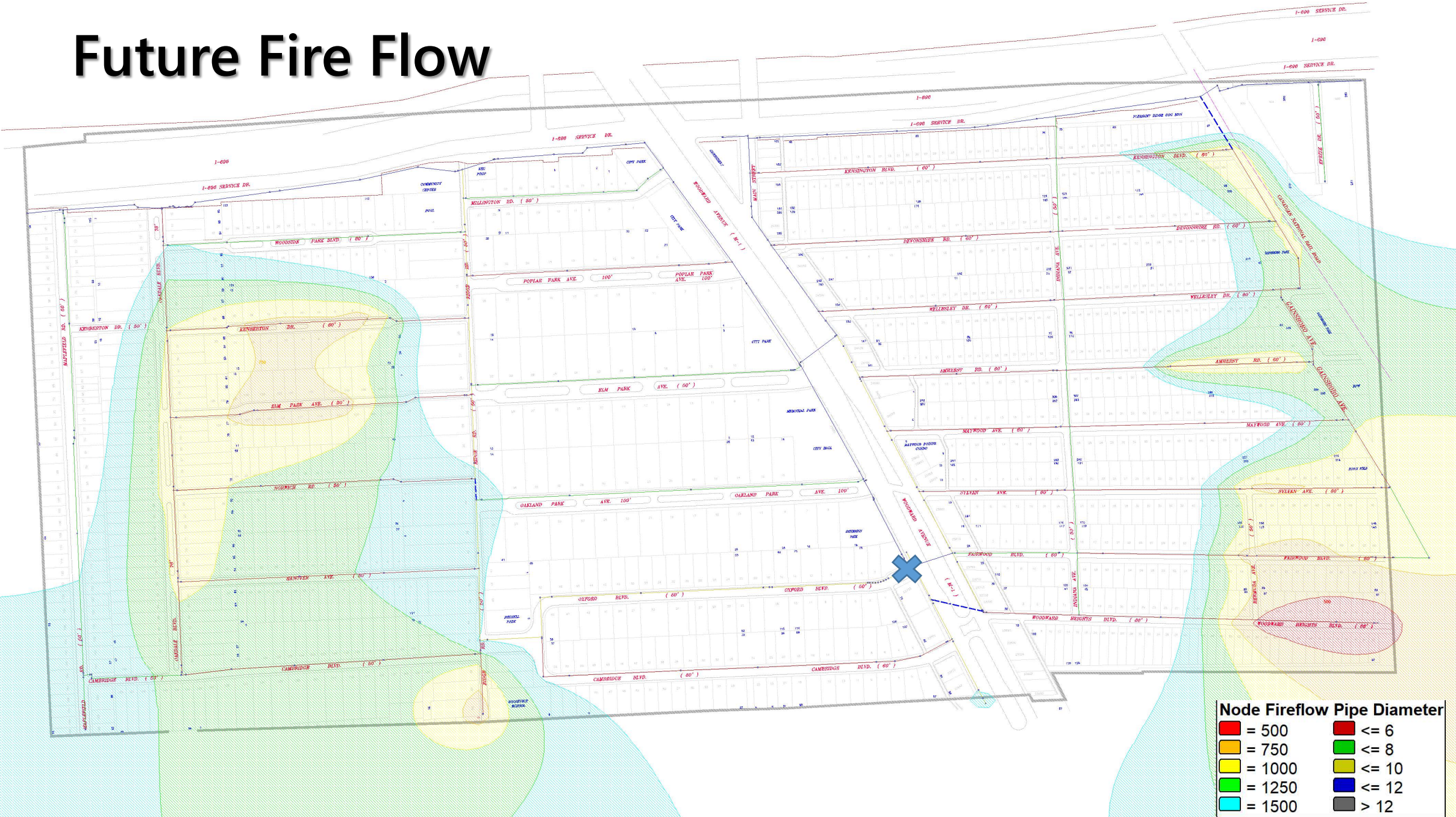
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Current Fire Flow



Future Fire Flow



Water Main Replacement

- All mains will be replaced
 - *Except Millington, Maplefield, Elm Park Blvd*
- Construct new main along Indiana, and on west side of Woodward between Oakland Park and Elm Park

Water main replacement cost: \$16.5 million

30-Year Water System Update

- Replace 20 of 23 existing water mains by 2051
- Add two new water mains to improve system pressure & reliability
- Lead Service Lines Replaced:
 - 77% by 2041 (year 20)
 - 90% by 2046 (year 25)
 - 100% by 2051 (year 30)

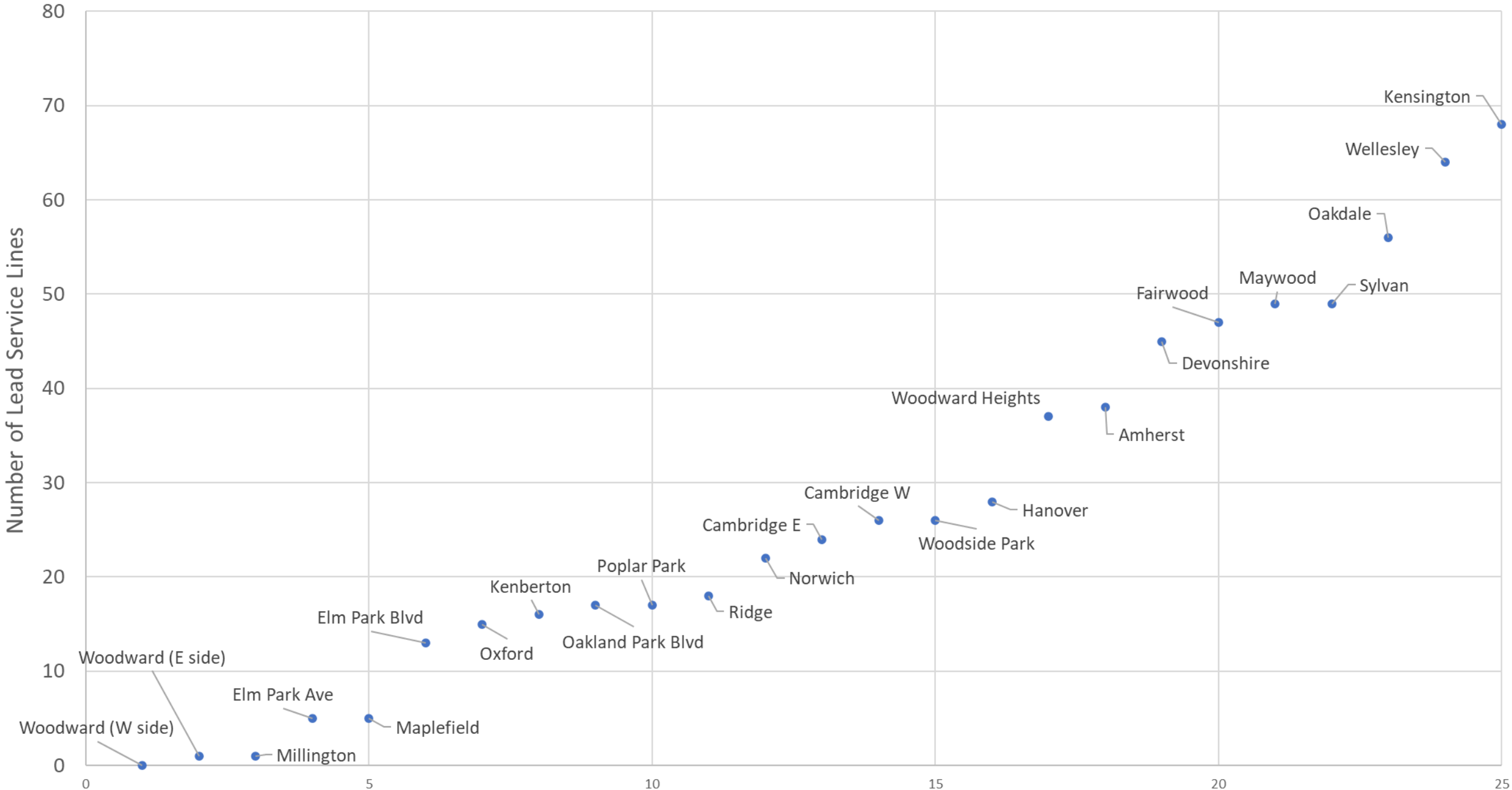
Project Benefits

- Lead service lines replaced at public cost
 - *60% of customers*
- Increased system pressure and reliability
 - *All customers benefit*
- Replace end of life-cycle water mains
 - *Unavoidable maintenance & replacement*

Project Prioritization

- Number of lead service lines
- System pressure benefit
- Age/condition of street

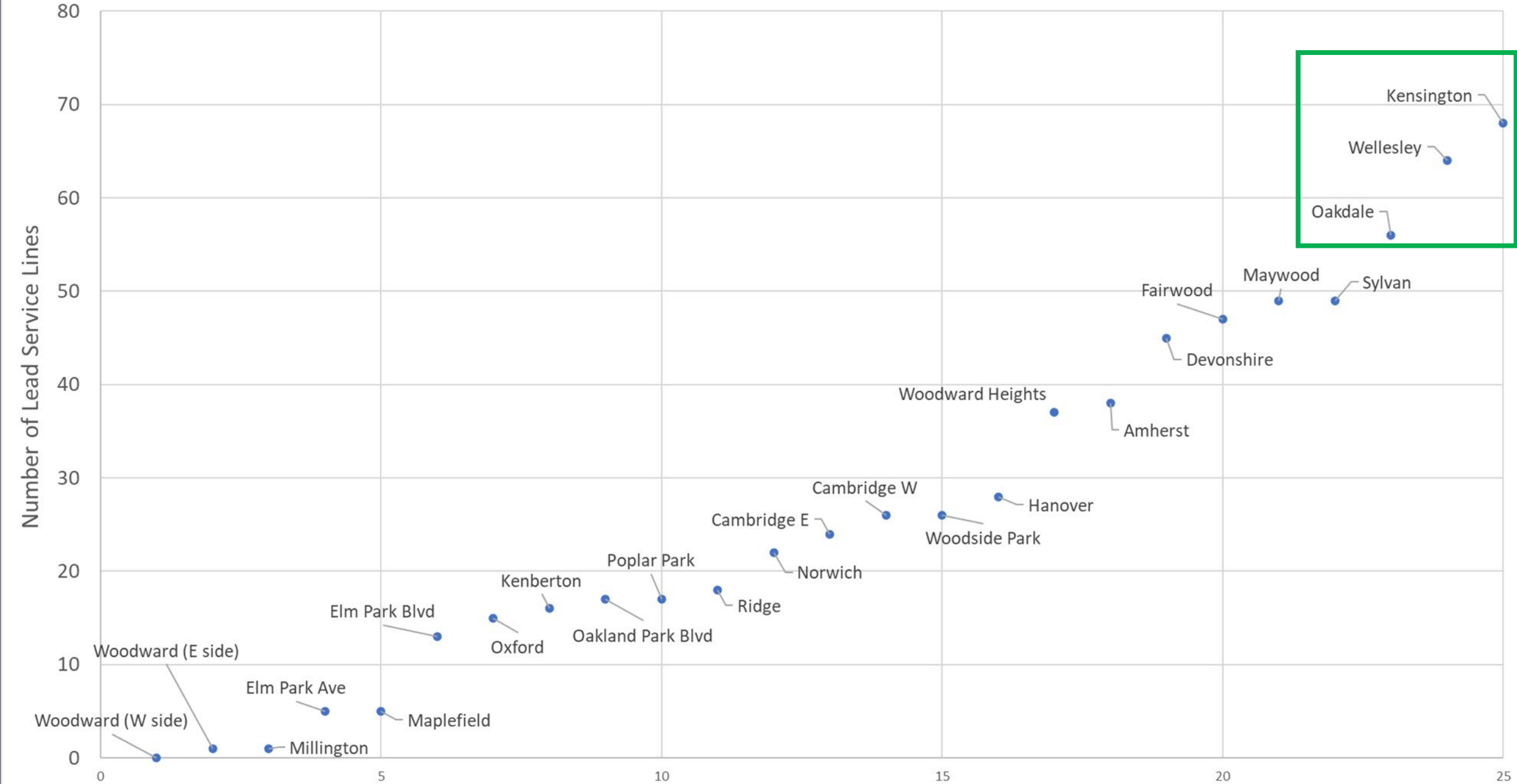
Lead Service Lines by Street



Project Plan

- FY22: Elm Park Blvd, Maplefield, Millington LSL ONLY (\$75,000)
- FY23: Kensington (\$1.6 million)
- FY24: No Project
- FY25: Oakdale (\$1.6 million)
- FY26: No Project
- FY27: Wellesley (\$1.6 million)
- FY28: No project
- FY29: New Indiana & Woodward (Oakland to Elm) water mains (\$1.4 million)

Lead Service Lines by Street



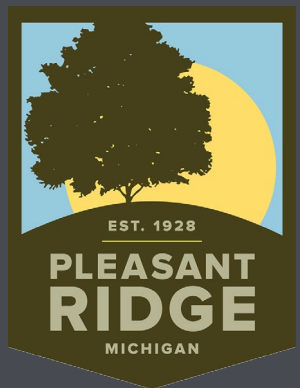
Project Plan

- Order after FY29 will be determined based on prioritization factors
- Cannot commit to a set order for all 30 years
 - *Infrastructure issues may arise, street conditions may change*
 - *Asset management plan includes 30-year plan, but is subject to change over time*

Questions?

- Type question in chat
- Raise hand in Zoom & we'll call on you
- Email question to cityclerk@cityofpleasantridge.org

Project Cost & Funding



Cost Impact

Total Project Cost: \$25 million

\$850,000 annual cost

\$440 annual cost increase/household

Federal Infrastructure Bill?

- Uncertain if/when it will pass
- Uncertain what it will fund
- Uncertain when and how funding will be available to local communities for LSL replacement
- Required to replace LSLs by the State this year
- Adjust rates down if Federal funding comes through

Cost Breakdown

- LSL replacement: \$8.4 million (33%)
 - *\$1.8 million for private service lines (7%)*
 - *\$6.6 million for public service lines (26%)*
- Water main replacement: \$16.5 million (67%)

Water Fund Cost Impact

- Current Annual Expenses: \$1.25 million
- NEW LSL/Main Infrastructure Costs: \$800,000
- \$50,000 annual contribution from existing Infrastructure millage

Water Fund Expenses Comparison



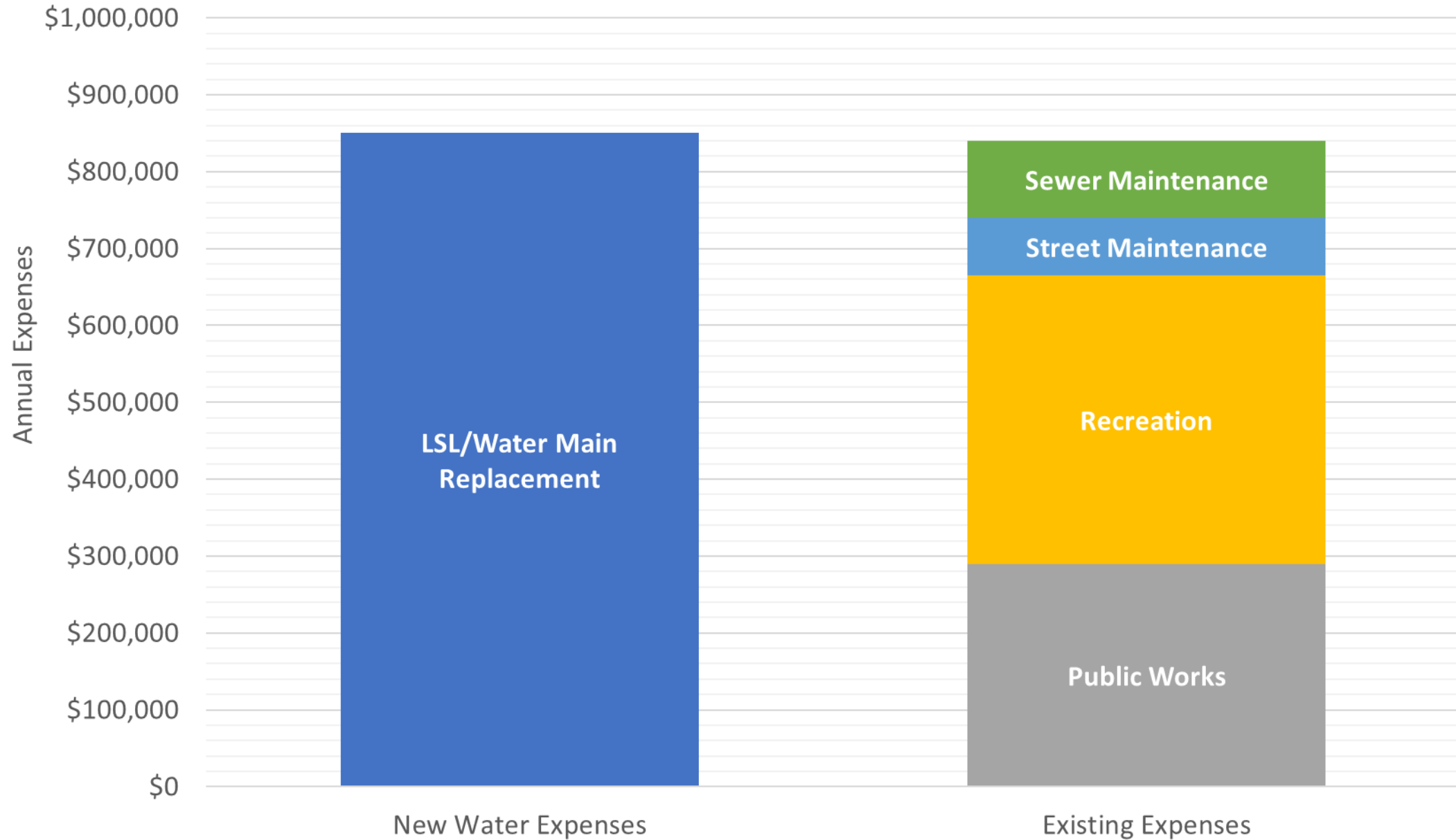
Water Fund Expenses Comparison



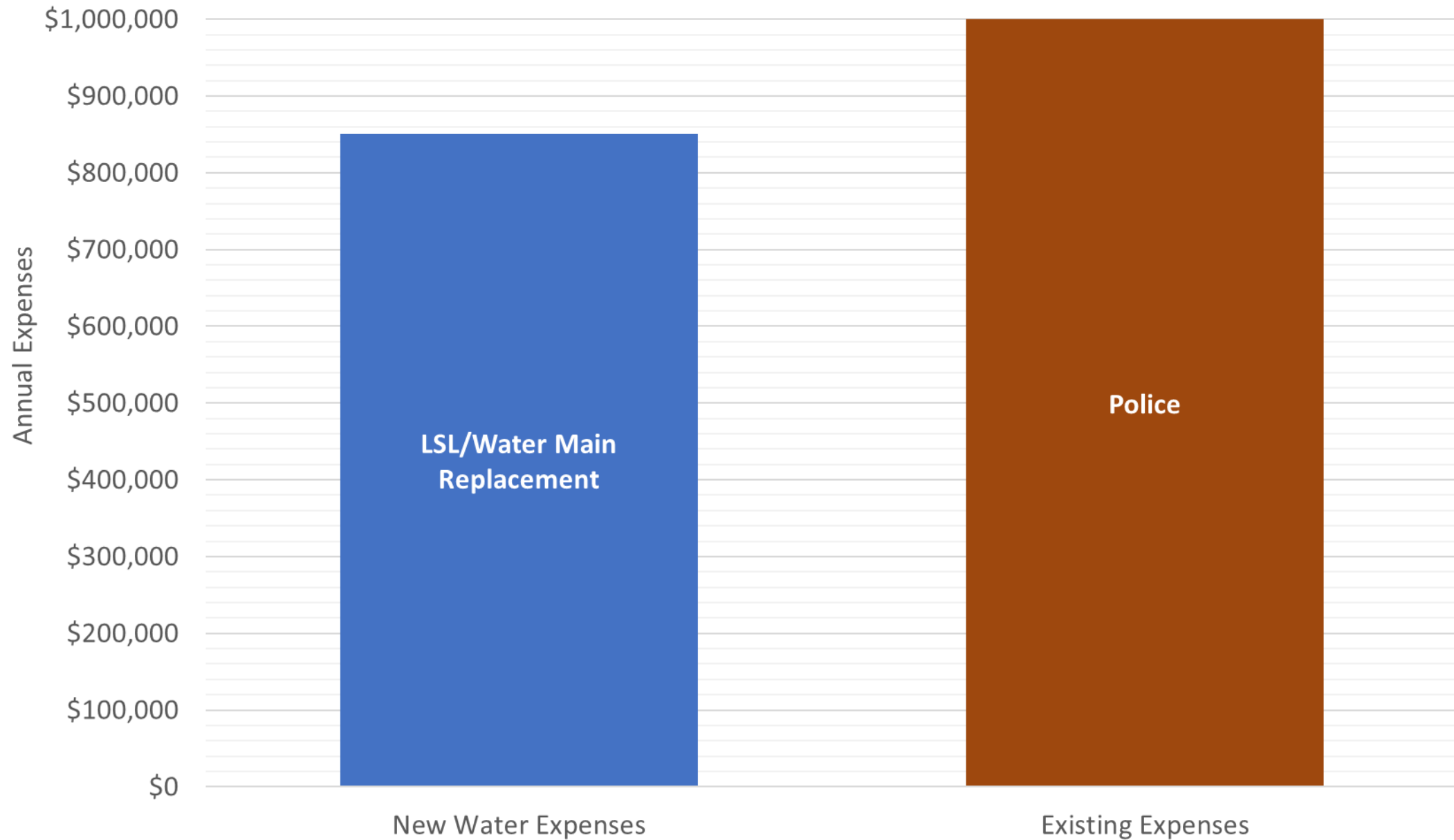
Water Fund Expenses Comparison



Can We Cut Expenses?



Can We Cut Expenses?



What About SCAF?

- Segregated Capital Asset Fund (SCAF) created with 696 settlement money
 - *Current SCAF balance.....\$3.8 million*
 - *Water infrastructure project.....\$25 million*
- SCAF pays for recreation projects and allows City to self-finance other, smaller projects
 - *Avoids interest costs*
 - *Both park pavilions paid for by SCAF returns*

What About Other Projects?

- Woodward bike lanes, parks projects, etc.
 - *funded with money that can only be used for those purposes*
- Woodward Streetscape
 - *\$1 million in grants*
 - *\$500,000 in local match (DDA and street funds)*
- Funding buckets
 - *Streets, recreation, water, DDA*

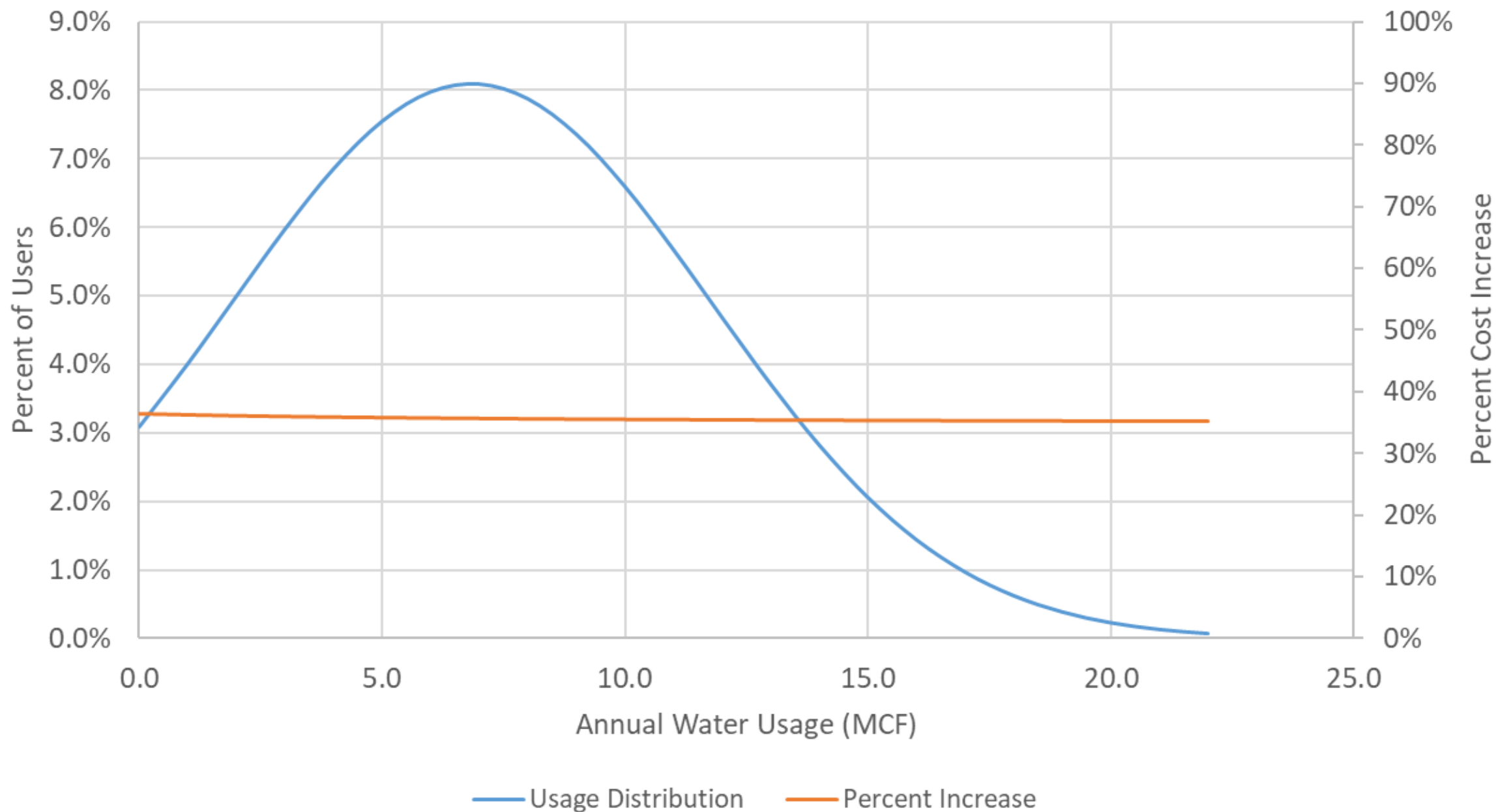
Payment Options

- Option 1: Increase water rates 35% to cover all costs
- Option 2: New 3.5 mill property tax millage + small 3%-5% water rate increase

Rate Impact

	<i>Current</i>	Option 1 (All Rate)	Option 2 (Millage + Rate)
Water & Sewer Rate	\$77.25	\$106.15	\$88.50
Ready-to-Serve	\$42.50	\$82.50	\$28.75
Garbage Pickup	\$23.19	\$23.75	\$23.75
ERU (stormwater)	\$48.45	\$49.50	\$49.50
New 3.5 Mill Property Tax	\$0	\$0	\$438 (avg. annual)
Avg. Annual Cost	\$1,210	\$1,652	\$1,652
Utility Bill Cost Increase	--	35.5%	4.2%

Utility Bill Cost Increase by Water Usage



Millage Impact

- Increase summer tax bill by about 8%
- Exact increase will vary based on taxable property value
- Total City millage rate: 21.31 → 24.81 mills

Water Cost Comparison (Current)

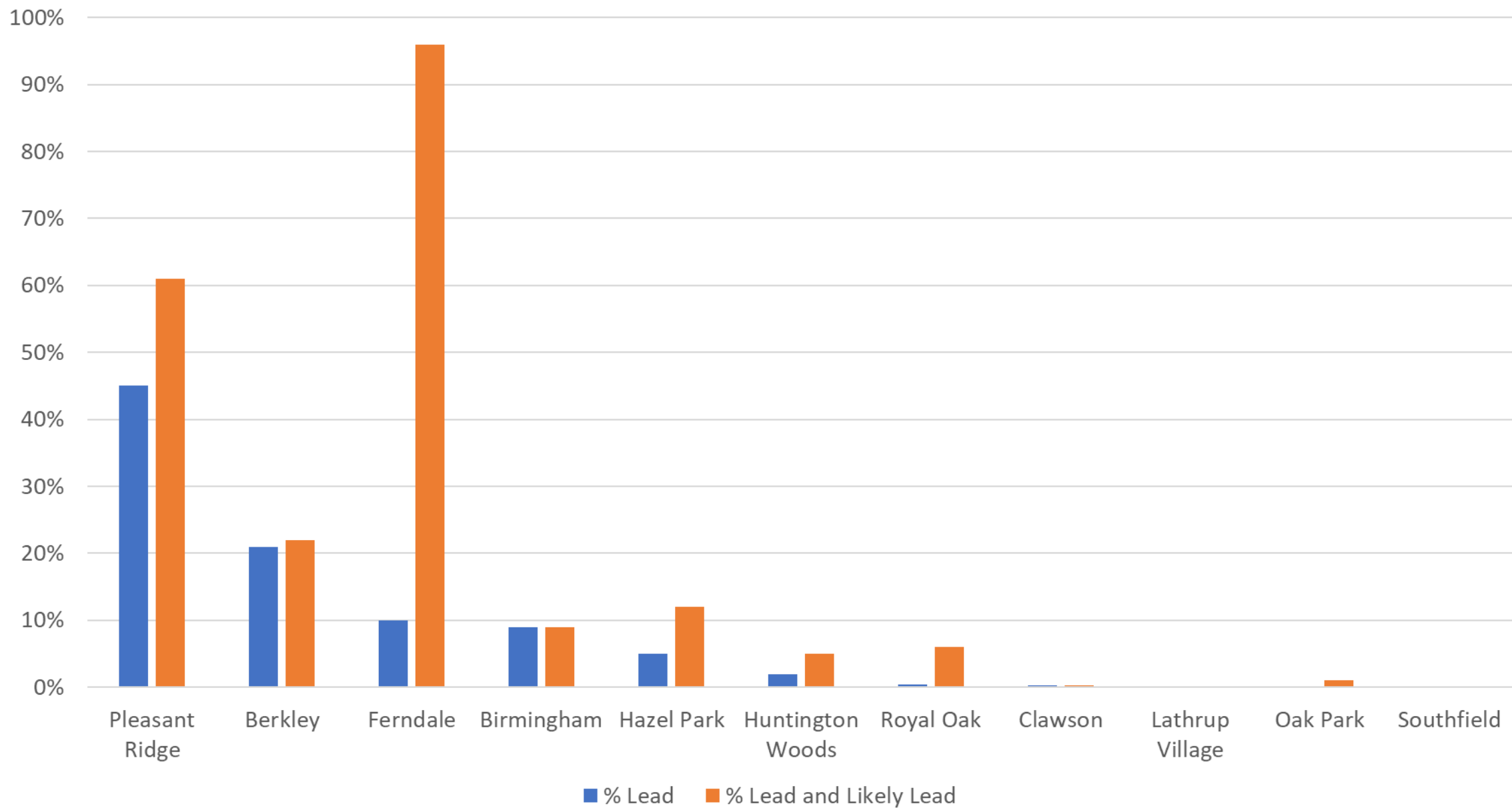
Community	2020 Water Rate	Fixed Charges (Annual)	Avg Water/Drain Millage Cost	Total Average Annual Cost
Huntington Woods	\$156.00	\$68	\$284	\$1,413
Birmingham	\$98.41	\$219	\$239	\$1,128
Pleasant Ridge	\$77.25	\$546	\$0	\$1,071
Ferndale	\$112.74	\$116	\$169	\$1,052
Clawson	\$103.84	\$198	\$107	\$1,011
Oak Park	\$93.70	\$368	\$0	\$1,005
Berkley	\$87.50	\$371	\$0	\$966
Southfield	\$128.85	\$30	\$10	\$916
Royal Oak	\$110.90	\$52	\$95	\$901
Lathrup Village	\$126.07	\$32	\$0	\$889
Hazel Park	\$126.69	\$0	\$0	\$861

Water Cost Comparison (New PR Rates)

Community	2021 Water Rate	Fixed Charges (Annual)	Avg Water/Drain Millage Cost	Total Average Annual Cost
Pleasant Ridge (opt 1)	\$112.65	\$792	\$0	\$1,510
Pleasant Ridge (opt 2)	\$88.25	\$470	\$453	\$1,510
Huntington Woods	\$156.00	\$68	\$284	\$1,413
Birmingham	\$98.41	\$219	\$239	\$1,128
Ferndale	\$112.74	\$116	\$169	\$1,052
Clawson	\$103.84	\$198	\$107	\$1,011
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% Lead Service Lines



Peer Community Comparison

Total Annual Utility Bill + Average Local Residential
Tax Bill

Huntington Woods:	\$5,072
Pleasant Ridge (new rate):	\$4,298
Pleasant Ridge (current):	\$3,845

Can I Get Credit/Pay A Different Rate?

- I have a copper service line
- I already replaced my private lead service line
- The water main was already replaced on my street

**No, we must charge
all users the same rate**

Attorney Opinion

MDEQ/EGLE rules (R 325.10604f) require replacement of lead service lines (whether publicly or privately owned) over the next roughly 20 years.

The rules provide that this replacement (even for the privately owned portion) is to be done at the expense of “the City.”

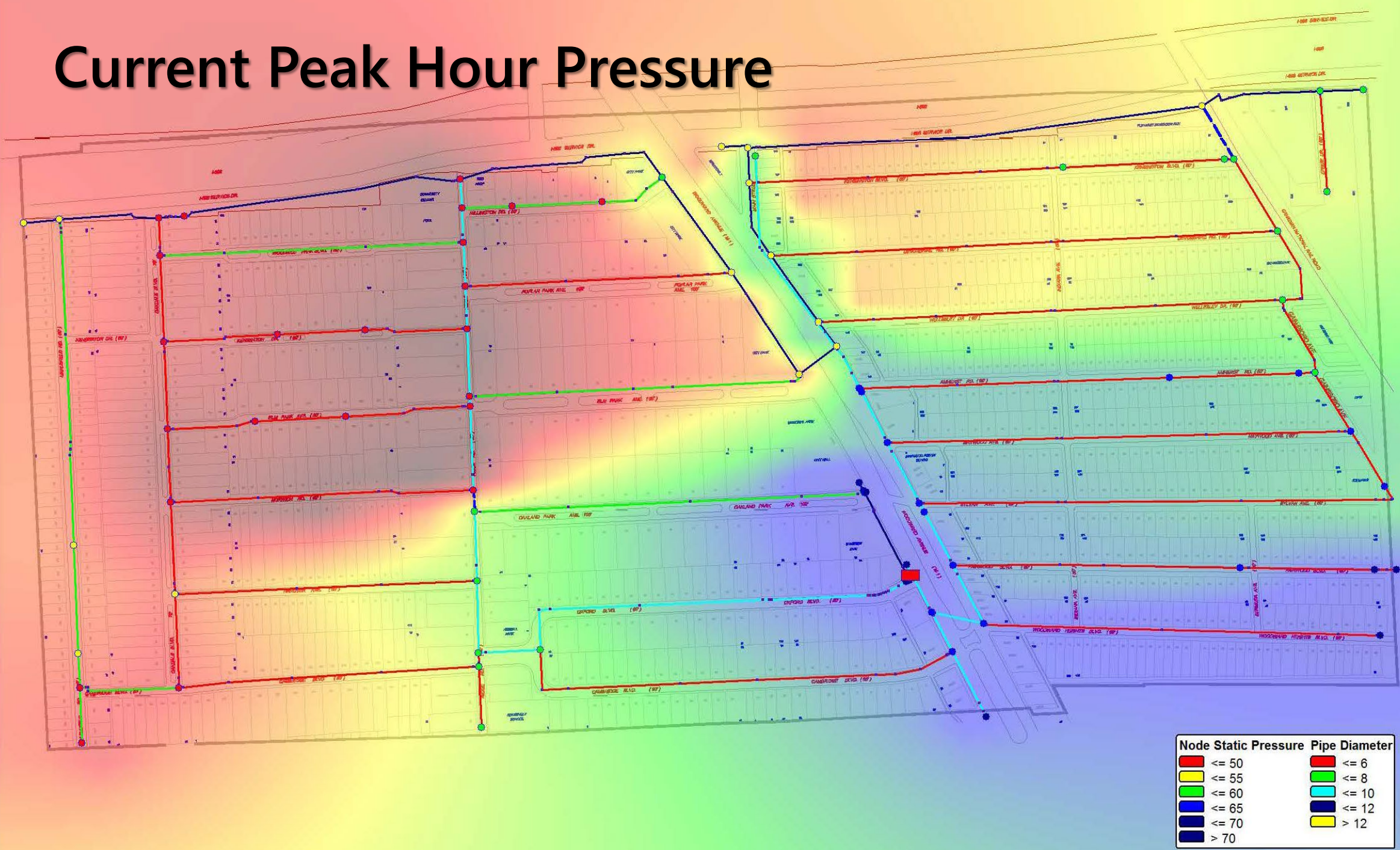
There is no authority in the rules to charge this expense, directly or indirectly, to the individual property owner. Thus, those costs should be considered general expenses of the water system, paid through rates charged to all users.

Establishing different rates for users with lead vs. copper represents an indirect way of charging the cost of lead service line replacements to a particular class of user, in this case, those users who have a lead service line.

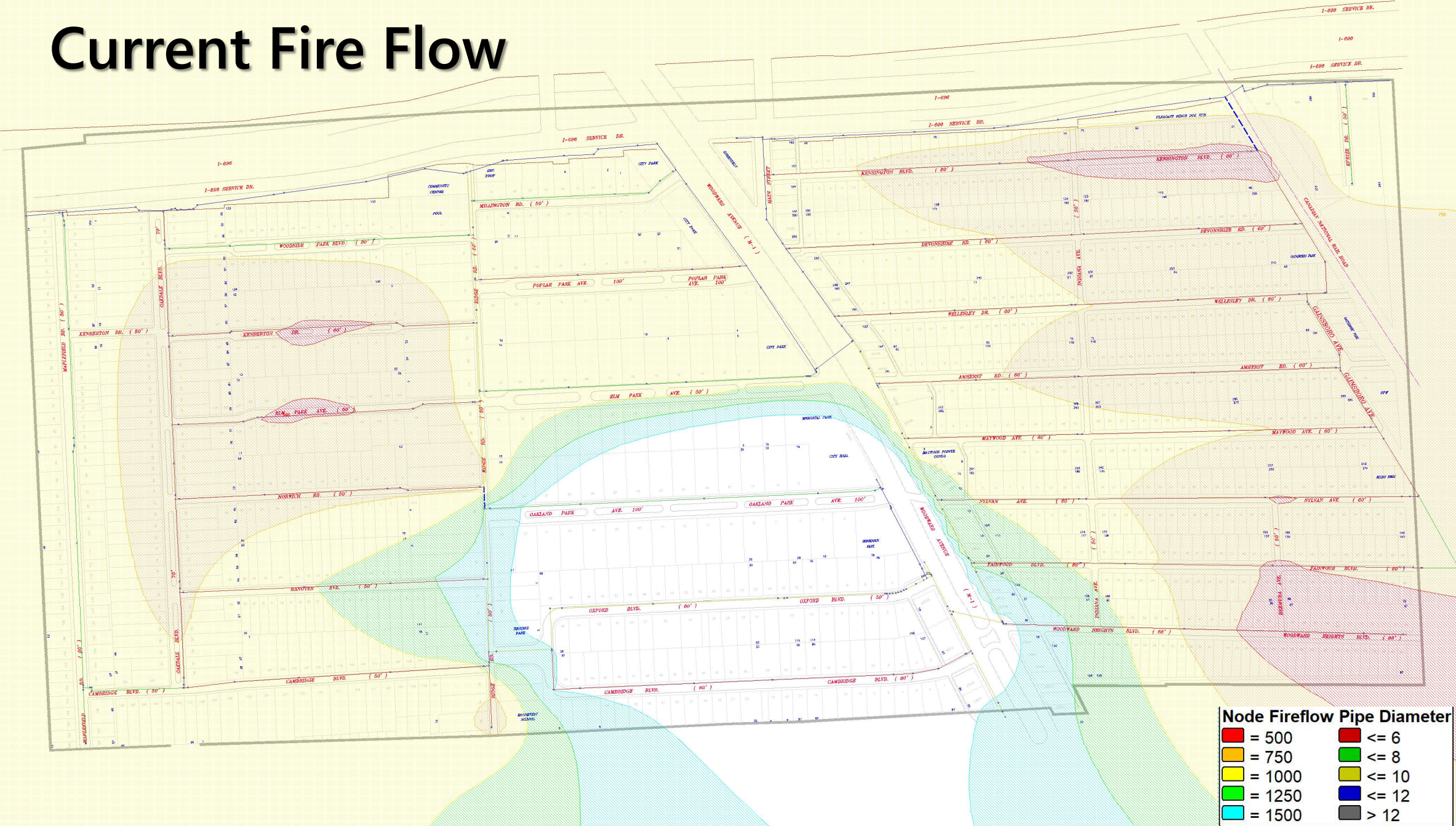
Who Benefits?

- 7% of cost: private lead service lines
- 93% of cost: water mains & publicly owned lead service lines
- Increased system pressure and reliability

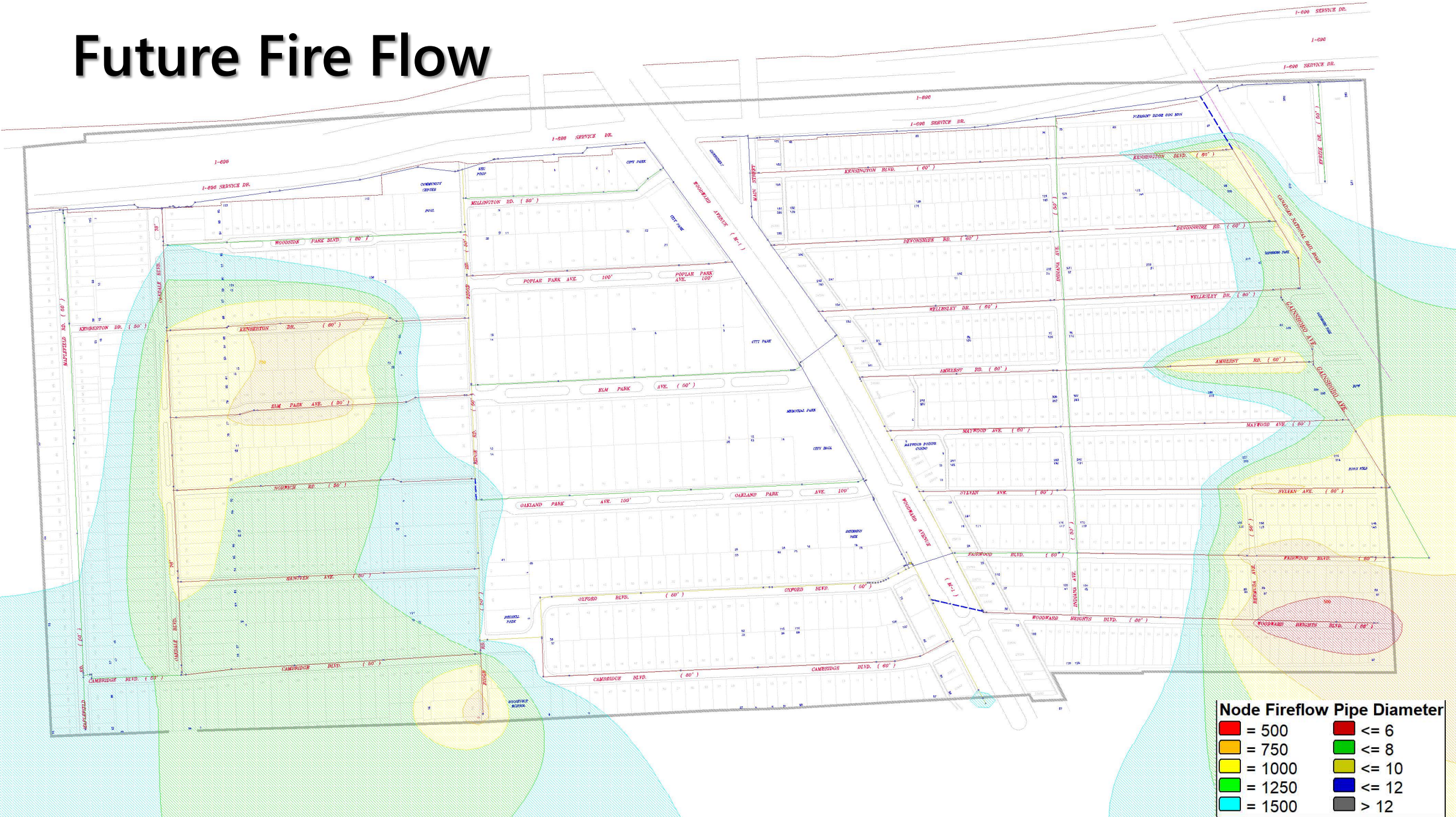
Current Peak Hour Pressure



Current Fire Flow



Future Fire Flow



Questions?

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