

# Cleveland Heights IOCMP Webinar

*Overview and Response to Feedback from April 21<sup>st</sup> Webinar*

April 29, 2021

IOCMP - Integrated Overflow Control Master Plan



McMahon  
DeGulis<sup>llp</sup>



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# Acronyms Used

- USEPA – United States Environmental Protection Agency
- CD – Consent Decree
- IOCMP – Integrated Overflow Control Master Plan
- CMOM - Capacity, Management, Operations and Maintenance
- SSES – Sewer System Evaluation Survey or Study
- SSO – Sanitary Sewer Overflow
- MCF – 1000 cubic feet (water use volume unit)
- NEORSD – Northeast Ohio Regional Sewer District
- CWA – Clean Water Act
- O&M – Operations and Maintenance
- ARP funding – American Rescue Plan (COVID relief)
- FCA – Financial Capability Assessment
- MHI – Median Household Income

# Key Messages

CH sewer systems, public and private, require updating for the city's second century, to meet standards of the Clean Water Act and improve local environment and public health.

Environmental sustainability in infrastructure through transforming century-old systems will require community focus for many decades.

The IOCMP is prioritizing work in tiers and phases to balance affordable cost with financial capability.

Submitting and implementing the IOCMP are **not optional** but required by federal consent decree and federal and state law.

CH community as ratepayers to Northeast Ohio Regional Sewer District (NEORS) contribute significantly to regional and Lake Erie water quality improvement.

Other communities developed in the same timeframe face similar CWA challenges.



# Overview– Response to Questions and Comments

- Financial Questions and Comments
  - Context of FCA and rate model
  - Illustrations explained
    - Typical “Annual Bill”
    - Impact to Homestead and low-income households depicted
    - Illustration of alternative scenario- no ARP funding
- Technical Questions and Comments
  - Listing of potential Tier 1 projects and potential ARP funding
  - Regionalization with neighboring communities
  - Investments to reduce O&M costs
- Private Property Improvements
- Next Steps



# Recommended IOCMP Approach

## 15-year Phase for Tier 1 projects

- Focus on SSO projects and at- risk basement backup for human health and environmental improvement
- Any shorter schedule risks City financial capability
- Phasing is consistent with CWA
- Allows capital work to integrate with other infrastructure work
- 15 years coincides with NEORSD CD length
- Affordability and technology paths forward will be clearer
- Using ARP funds **could** help advance this work (TBD)



# Context of Financial Capability and Modeling

- Consent Decree requires financial capability analysis to support the proposed schedule of the projects in the IOCMP
- Financial capability analysis includes use of rate model
  - Commonly used in the industry for utility capital planning
  - Consistent with EPA guidance and negotiation practice
  - Goal: prevent over-commitment to unaffordable plan
- Rate model does not set or raise any rates
  - City rates set by Cleveland Heights City Council periodically
  - NEORSD rates set by Board of Trustees for five-year periods
  - Models provide useful illustrations of scenarios to help select an affordable program



# Responses to Financial Questions and Comments



# Existing and Projected Revenue

- Most revenue is from the volumetric charge on water usage
- Minor miscellaneous revenue
- Projected revenue reflects:
  - Declining billed volume
    - Declining population
    - Declining water consumption
  - Impact of delinquencies on collected revenue





# Existing and Projected Expenses

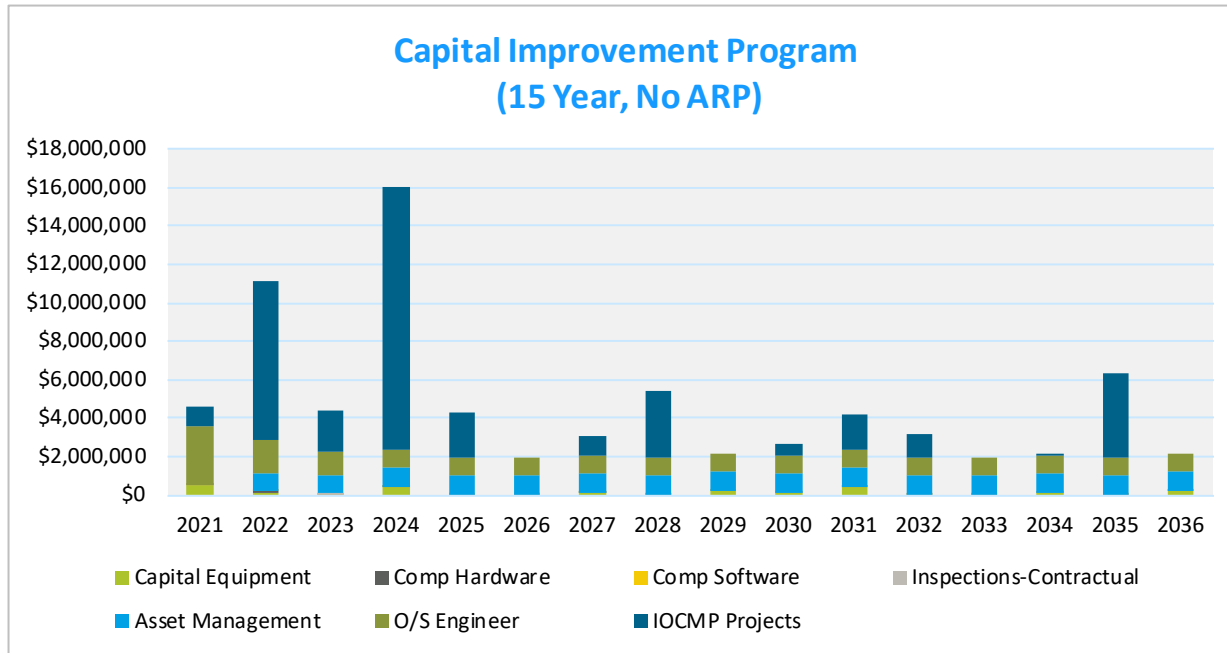
- Operating Expenses
  - Current costs of operating and maintaining the local sewer system
  - New additional costs for the CMOM program
- Capital Costs
  - Debt Service (Principal and Interest on existing and projected loans and revenue bonds)
  - Cash financed capital



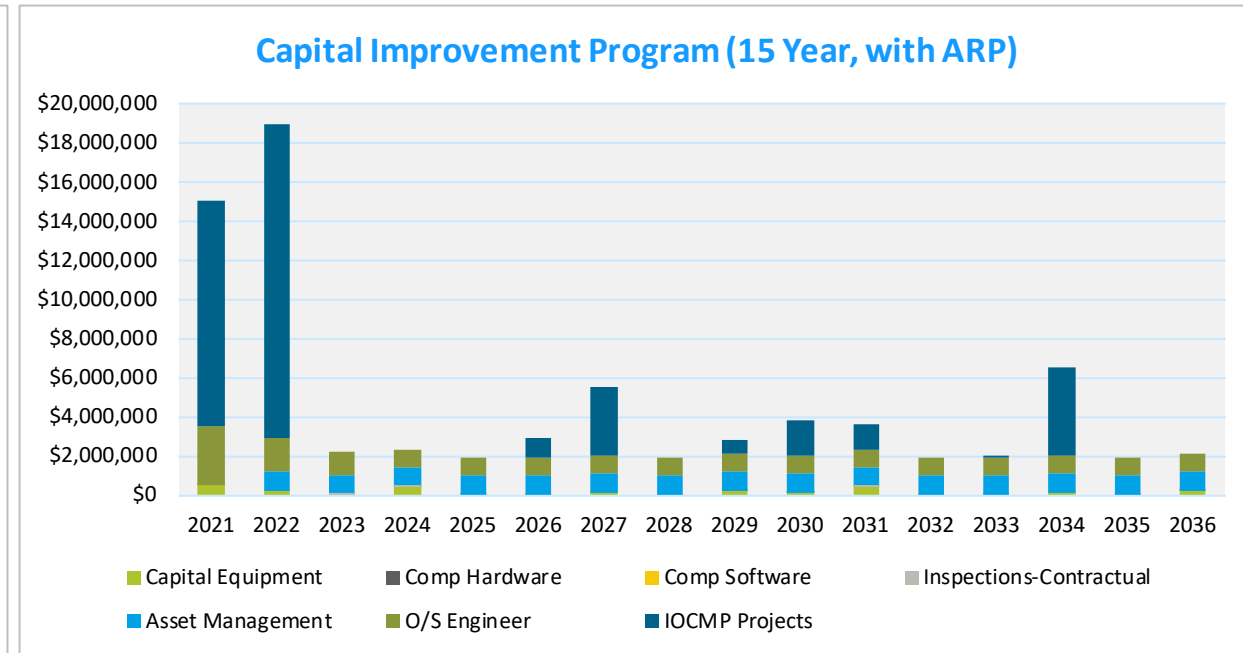
# Financial Results – 15-year Tier 1

*Cumulative IOCMP (Current \$) = \$40,266,000*

## No ARP Funding



## With \$28M ARP Funding (Illustration)



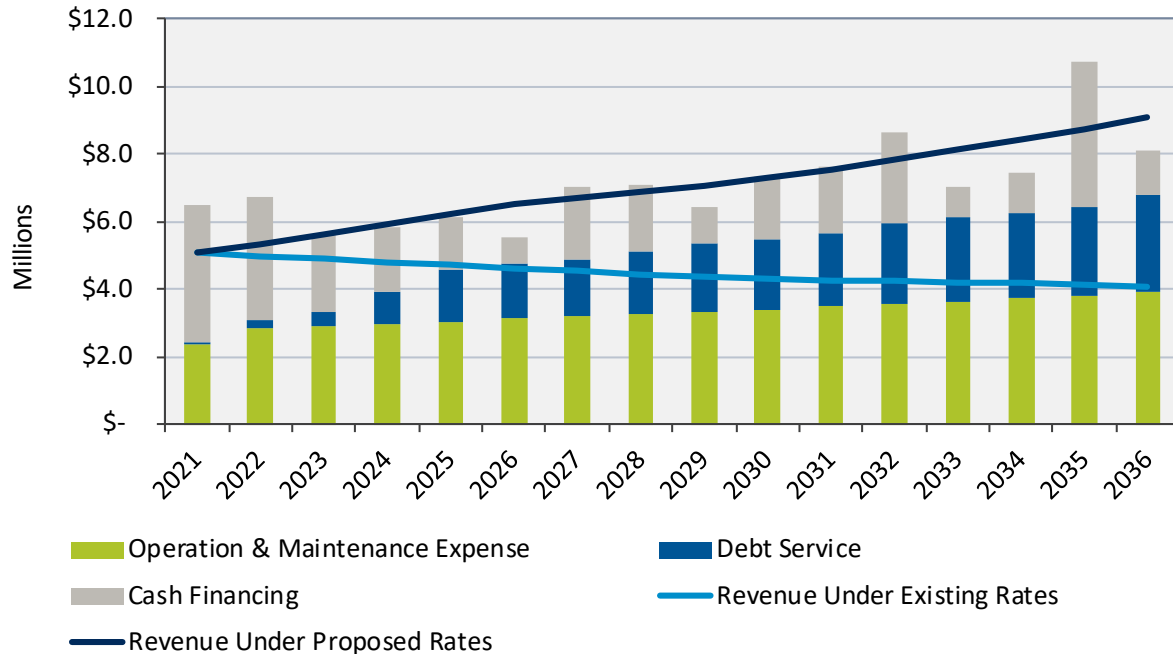
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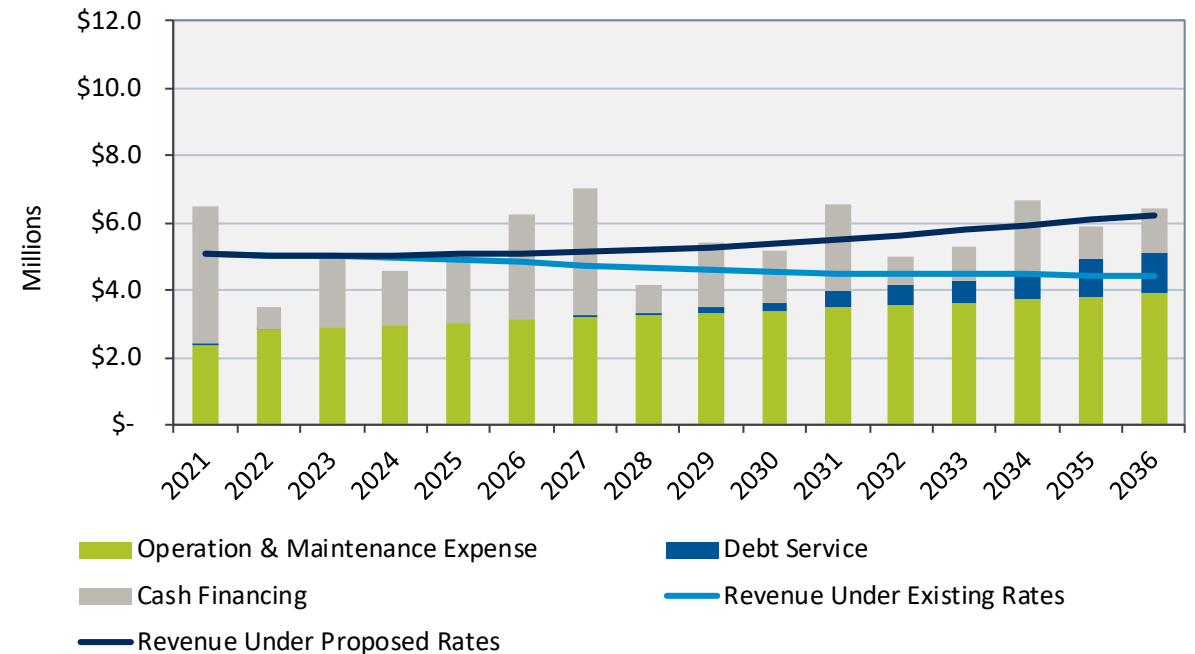
## No ARP Funding

## With \$28M ARP Funding (Illustration)

Financial Plan - Without ARP Funding



Financial Plan - With ARP Funding



# Assessing Impact on Residential Customers

*Include ALL Clean Water Act (CWA) Costs*

## Current (2021) Rates:

- Cleveland Heights Sewer Utility bill – based on water usage, billed quarterly
  - 2021 = \$43.45/MCF\*\*
- NEORSD Wastewater and Stormwater bill, billed monthly
  - Wastewater: Fixed charge (2021 = \$9.70/month) plus volume charge\* (2021 = \$106.80/MCF\*\*)
  - Stormwater: Tiered fee based on impervious area of property

\* *If enrolled in summer sprinkling program, NEORSD bill is based on winter quarter average volume*

\*\* *1 MCF = 1,000 cubic feet, or 7,480 gallons*



# Projected Annual Rate Increases (2022 – 2036)

- Cleveland Heights Sewer Utility

- Based on financial plan illustration including use of approx. \$28 million in Federal American Recovery Plan (ARP) funds in 2021 – 2024

## NO ARP FUNDING

- 2022 – 2026: 6.3%/yr
- 2027 – 2036: 3.8%/yr
- Cumulative: 97.1%

## WITH ARP FUNDING (Illustration Only)

- 2022 – 2023: 0.0%/yr
- 2024 – 2026: 1.5%/yr
- 2027 – 2036: 2.6%/yr
- Cumulative: 35.2%

- NEORSD \*

- 2022 – 2026: 4.7%/yr for both wastewater and stormwater charges, based on current NEORSD proposal
- 2027 – 2036: Assume continuation of 4.7% annual revenue increases

*\* NEORSD projected rates have been updated to reflect the projected increases released during recent public webinars*



# "Annual Bill" as % of Income – EPA Benchmark

Based on average billed volume per billing records

## – Residential:

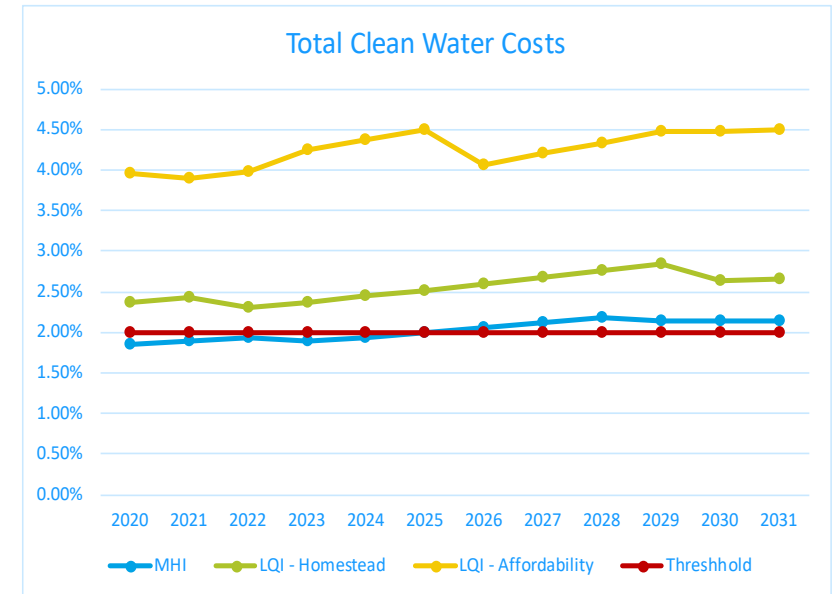
- Wastewater = 1.8 MCF\*\*/quarter
- Stormwater = Tier 2 (2,000-3,999 sq ft of impervious area – most common per NEORSD)
- Annual bill as a % of income based on Median Household Income of \$57,768\*\*\* (MHI)

## – Homestead: *(age, disability and income eligibility requirements)*

- Wastewater = 1.4 MCF\*\*/quarter
- Stormwater = Tier 2
- Annual bill as a % of income based on Upper Limit of Lowest Quintile (20%) Income of \$21,260\*\*\* (LQI)

## – Affordability: *(income eligibility requirements)*

- Wastewater = 2.4MCF\*\*/quarter
- Stormwater = Tier 2
- Annual bill as a % of income based on Upper Limit of Lowest Quintile (20%) Income of \$21,260\*\*\* (LQI)



\* *If enrolled in summer sprinkling program, bill is based on winter quarter average volume*

\*\* *1 MCF = 1,000 cubic feet, or 7,480 gallons*

\*\*\* *American Community Survey, 2019 5-year average, escalated at 2%/year*



# Calculated Quarterly Residential Bills

Includes all Clean Water Act (CWA) costs: City Sewer Utility and NEORSD

	2021 Average Residential Quarterly Bill (1.8 MCF)	% of Total
Cleveland Heights Sewer Utility	\$78.21	24.8%
NEORSD Wastewater	\$221.34	70.3%
NEORSD Stormwater	\$15.45	4.9%
Total CWA-related "Bill"	\$315.00	

City cost is less than 25% of total



# Calculated Quarterly Residential Bills – w/out ARP Funding

- Includes Cleveland Heights Sewer and NEORSD
- 6.3% annual rate increases required beginning in 2022
- Calculated Quarterly Residential Bill today and at end of Tier 1:

Without ARP Funding	Quarterly Bill (2021)	Quarterly Bill (2036)	Total Quarterly Increase	Average Annual Quarterly Increase
<u>Residential - Regular Rate</u>				
0.6 MCF/Qtr	\$ 134.70	\$ 267.38	\$ 132.68	\$ 8.85
1.8 MCF/Qtr	\$ 315.00	\$ 624.67	\$ 309.67	\$ 20.64
4.5 MCF/Qtr	\$ 720.68	\$ 1,428.57	\$ 707.89	\$ 47.19
<u>Residential - Homestead/Affordability</u>				
0.6 MCF/Qtr	\$ 77.71	\$ 154.16	\$ 76.45	\$ 5.10
1.8 MCF/Qtr	\$ 185.92	\$ 368.54	\$ 182.62	\$ 12.17
4.5 MCF/Qtr	\$ 429.38	\$ 850.89	\$ 421.51	\$ 28.10





# Calculated Quarterly Residential Bills – With ARP Funding

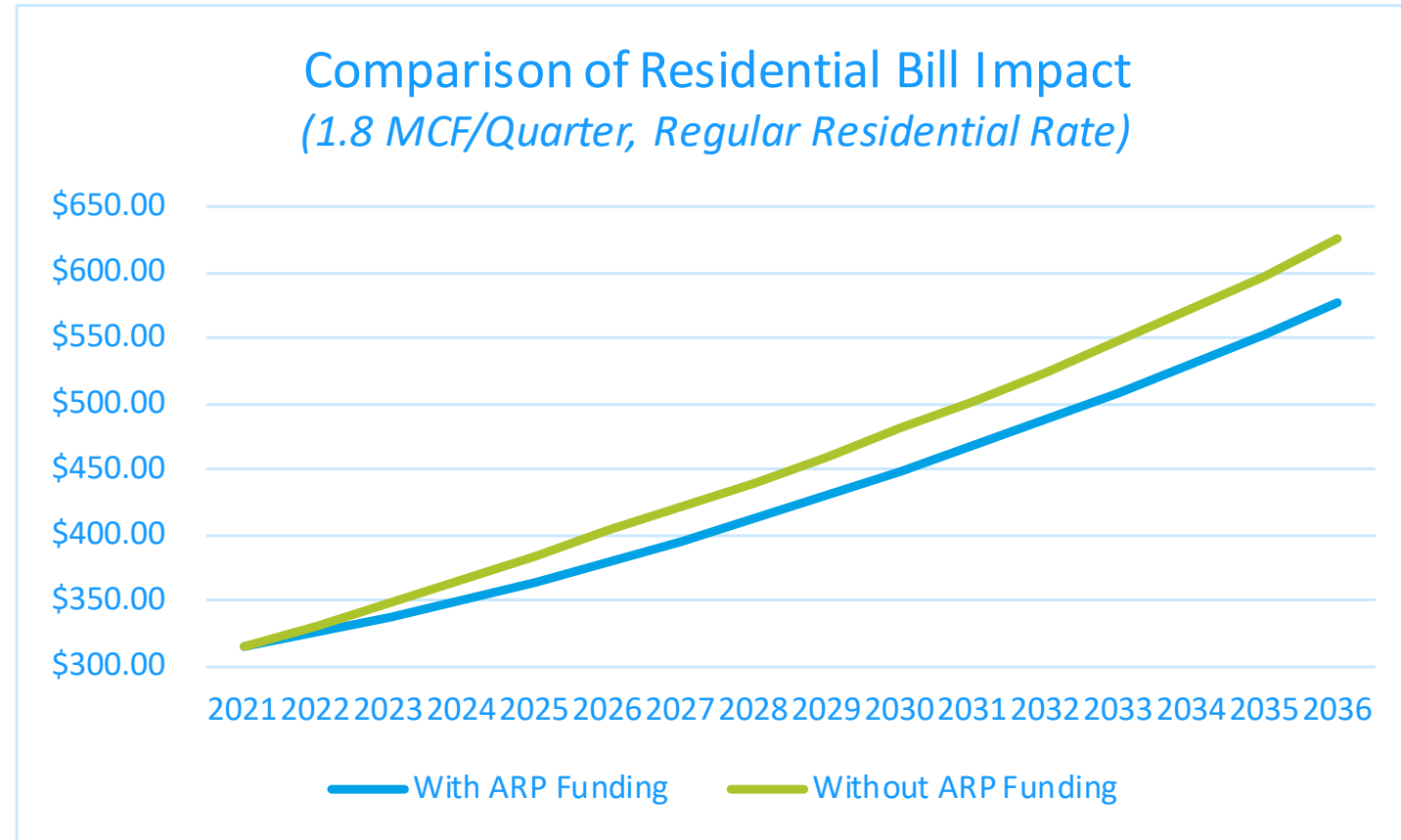
- Includes Cleveland Heights Sewer and NEORSD
- Using some ARP funds in 2021 – 2024 will help accelerate certain projects, while helping to defer and minimize City Sewer Utility rate increases
- Calculated Quarterly Residential Bill today and at end of Tier 1:

With ARP Funding		Quarterly Bill (2021)	Quarterly Bill (2036)	Total Quarterly Increase	Average Annual Quarterly Increase
<u>Residential - Regular Rate</u>					
0.6 MCF/Qtr	\$	134.70	\$ 251.24	\$ 116.54	\$ 7.77
1.8 MCF/Qtr	\$	315.00	\$ 576.24	\$ 261.24	\$ 17.42
4.5 MCF/Qtr	\$	720.68	\$ 1,307.52	\$ 586.84	\$ 39.12
<u>Residential - Homestead/Affordability</u>					
0.6 MCF/Qtr	\$	77.71	\$ 144.47	\$ 66.76	\$ 4.45
1.8 MCF/Qtr	\$	185.92	\$ 339.49	\$ 153.57	\$ 10.24
4.5 MCF/Qtr	\$	429.38	\$ 778.26	\$ 348.88	\$ 23.26



# Calculated Quarterly Residential Bill - Comparison

- Total CWA Cost
- Includes Cleveland Heights Sewer Utility bill and NEORSD wastewater and stormwater bill
- 1.8 MCF/Quarter
- Regular rates



# Responses to Technical Questions and Comments



# Integrating Work with Neighboring Communities

- Communities are responsible for their respective local sewer systems.
- In some cases, local sewers may cross community boundaries - if improvements are needed, we will coordinate when it makes sense financially and practically.
- NEORSD may be involved to solve significant intercommunity problems that involve larger flows and pipes.
- Continue to look for other applicable funding options



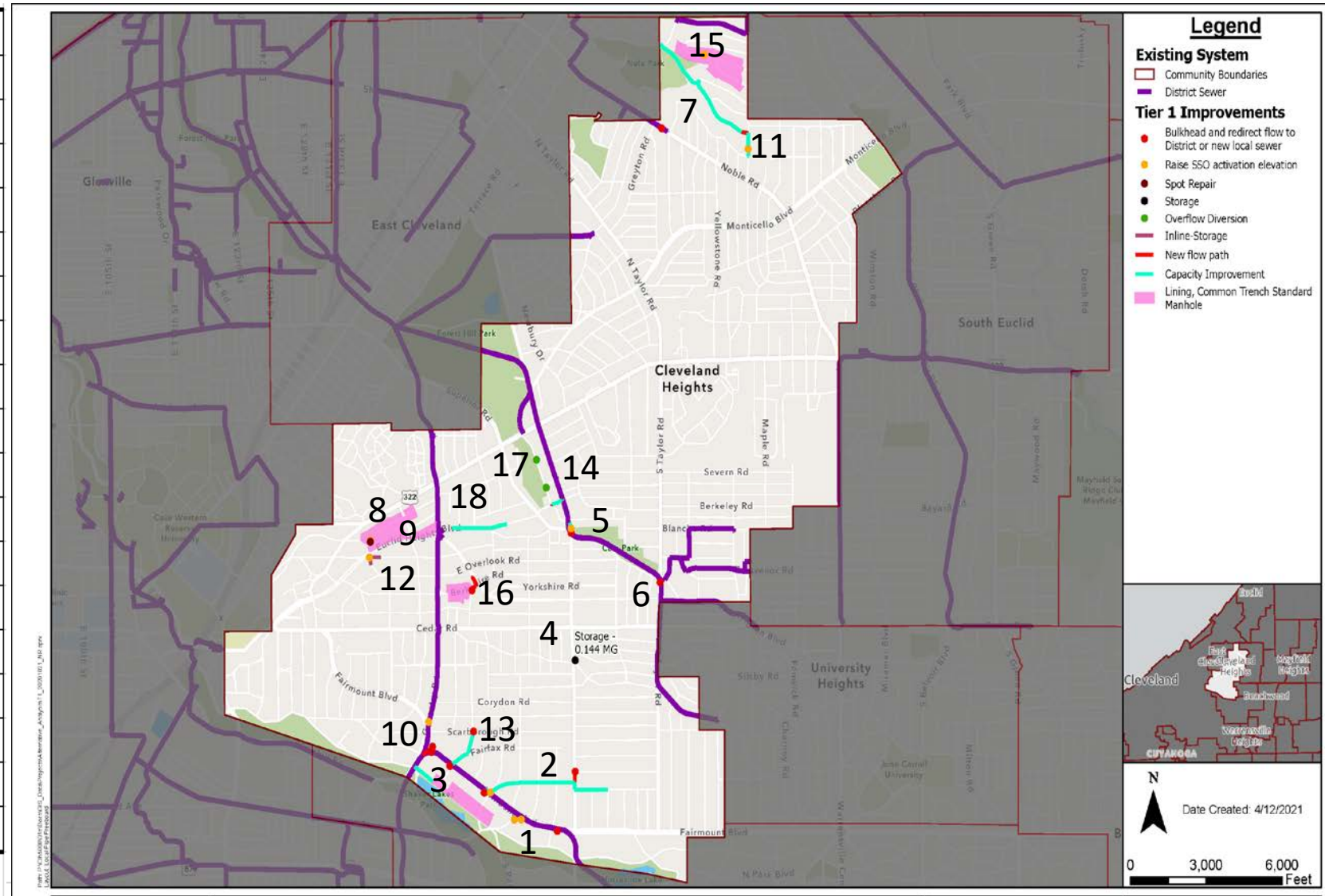
# Other Infrastructure Renewal Benefits

- Improved level of service and reduced risk of problems and structural failures
  - emergency repairs are very costly compared to planned renewal.
- Reduced future operations and maintenance costs
  - Fewer service calls
  - Reduced cleaning and root removal
  - Reduced risk of dry weather sanitary sewer overflows
- Reduced risk of property damages and related economic loss
- Improved property values based on system reliability
- Reduced flow volumes lower wastewater treatment costs for all rate payers



# Tier 1 - SSO Improvement Areas – Without ARP Funding

Project #	SSO ID	Project Cost
1	CH-2, CH-33, CH-39	\$370,000
2	CH-9, CH-32, CH-57, CH-58	\$8,868,000
3	CH-36, CH-37	\$2,159,000
4	CH-56	\$1,014,000
5	CH-12	\$732,000
6	CH-30	\$67,000
7	CH-51	\$3,663,000
8	CH-13	\$1,237,000
9	CH-61	\$997,000
10	CH-35, CH-45, CH-49	\$1,142,000
11	CH-27	\$7,302,000
12	CH-46	\$1,001,000
13	CH-50	\$3,454,000
14	CH-28	\$654,000
15	CH-55	\$1,851,000
16	CH-23	\$1,259,000
17	CH-17, CH-25, CH-26	\$50,000
18	CH-24	\$4,446,000
<b>Total</b>		<b>\$40,266,000</b>



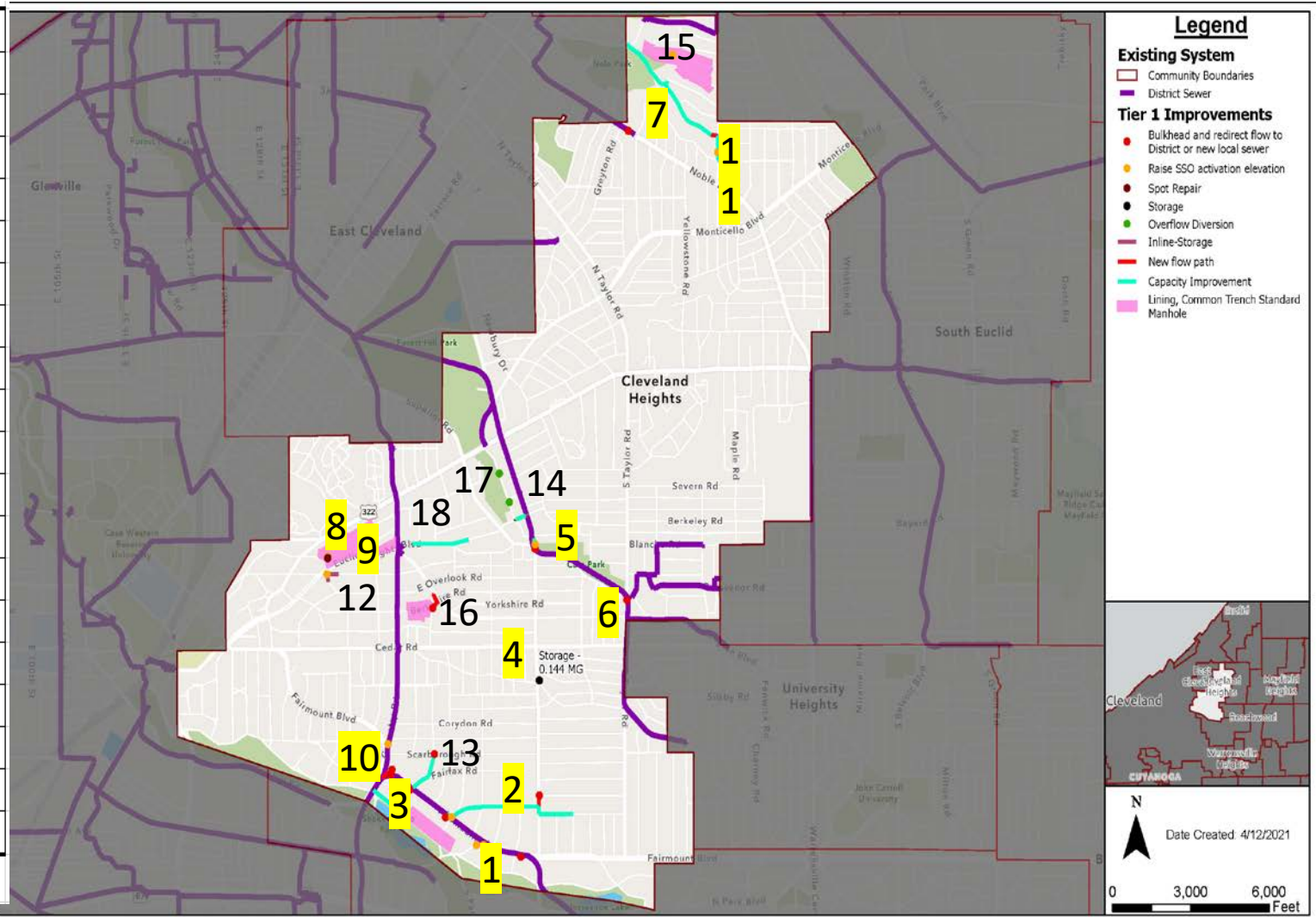
Northeast Ohio  
Regional Sewer District  
**CH-LSSSES**

**Cleveland Heights Tier 1 10-Year 1-Hr Level of Service**



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ARP  
Funded  
Projects

Non-ARP  
Funded  
Projects



Cleveland Heights Tier 1 10-Year 1-Hr Level of Service



# Private Property Improvements



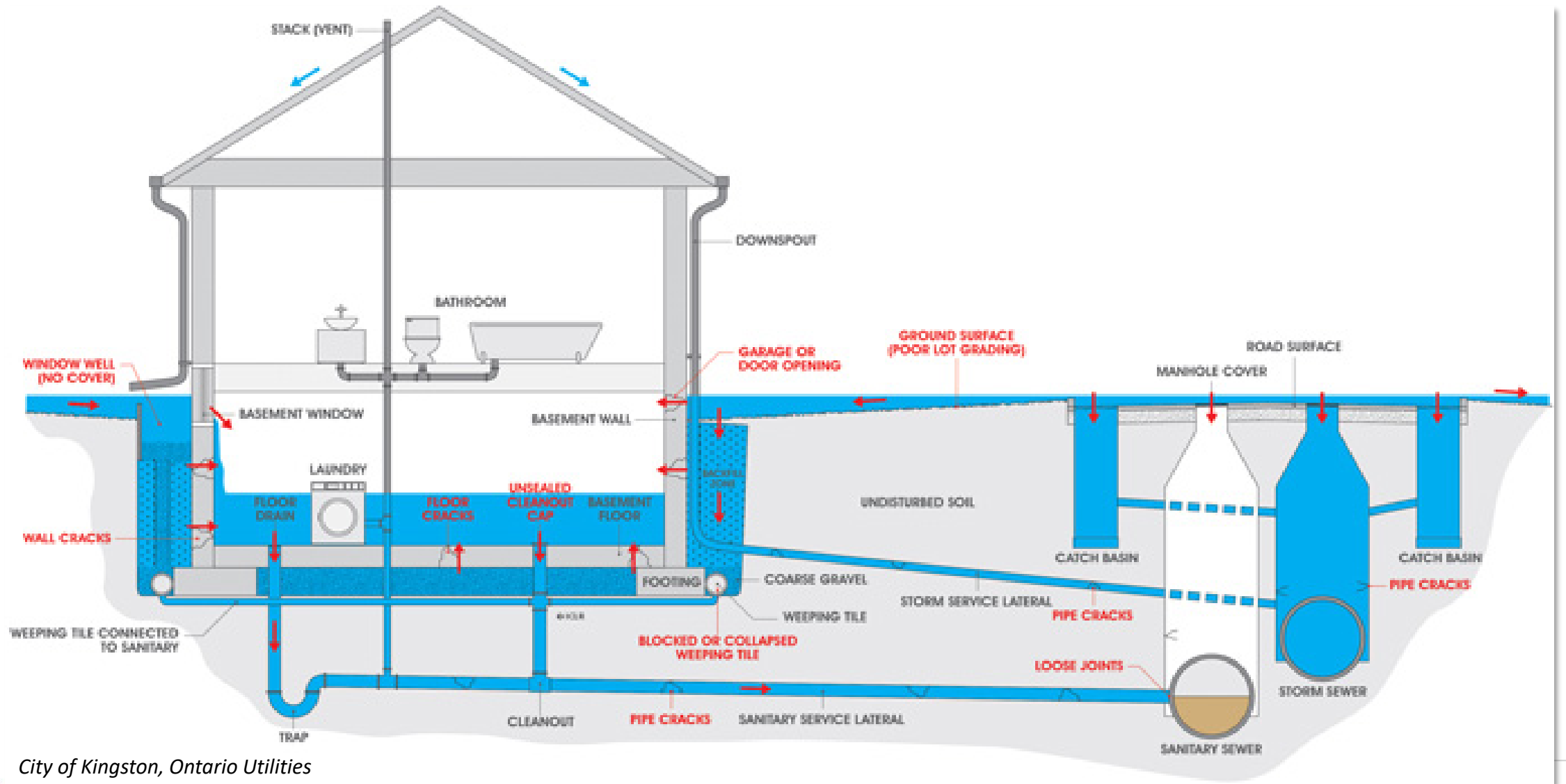


# Private Property Improvement is Part of the Solution

- Inflow and infiltration of stormwater into sanitary sewers occurs in large volumes on private property, before the flow reaches public sewers.
- Original construction laterals, footer drains and downspouts often become plugged with debris or develop cracks that can leak or allow tree roots to grow. Some are mis-connected.
- Reminder that property owners need to maintain their infrastructure
- *Note: any property improvements that involve or are over private outdoor infrastructure should ensure plumbing is updated and working properly*
  - *Front porch replacements*
  - *Basement Waterproofing*
  - *Building additions*
  - *New driveways*



# Private Property Improvements May Be Needed



# Next Steps

- Please continue to submit any comments  
[www.clevelandheights.com/Consent-Decree-Comments](http://www.clevelandheights.com/Consent-Decree-Comments)
- City Council approval of IOCMP – May 2021
- Submission of IOCMP and Report – June 1, 2021
- IOCMP implementation – TBD
- Discussions with EPA – TBD
- Potential new consent decree – TBD