



**City of the  
Village of  
Douglas**

February 20, 2024

# Water Capital Improvements Plan Presentation

# Drinking Water Asset Management Grant Program (DWAM)

- Douglas received a DWAM Grant which provides funding to assist community drinking water supplies with:
  - Asset Management Plan (AMP) development and updates
  - Distribution System Material Inventories (DSMI) and necessary verification (i.e. potholing/hydrovacing)
  - Capital Improvement Plan (CIP) to lay out projects, costs, and funding (rate study) needed for the water system



# Capital Improvements Plan

- Review of needed improvements to the water system
  - Kalamazoo Lake Sewer and Water Authority
    - Past Water Asset Management Plans
    - Past Water Reliability Studies
    - Known Issues (frequent breaks, old mains, etc.)
  - Douglas Master Project List
- Plan includes a timeline for accomplishing the infrastructure priorities and a financial strategy to implement the plan





GRAND RAPIDS

# Car falls into hole at Centerpoint in Grand Rapids



# Holland Board of Public Works dump truck searching for water main break falls into sinkhole



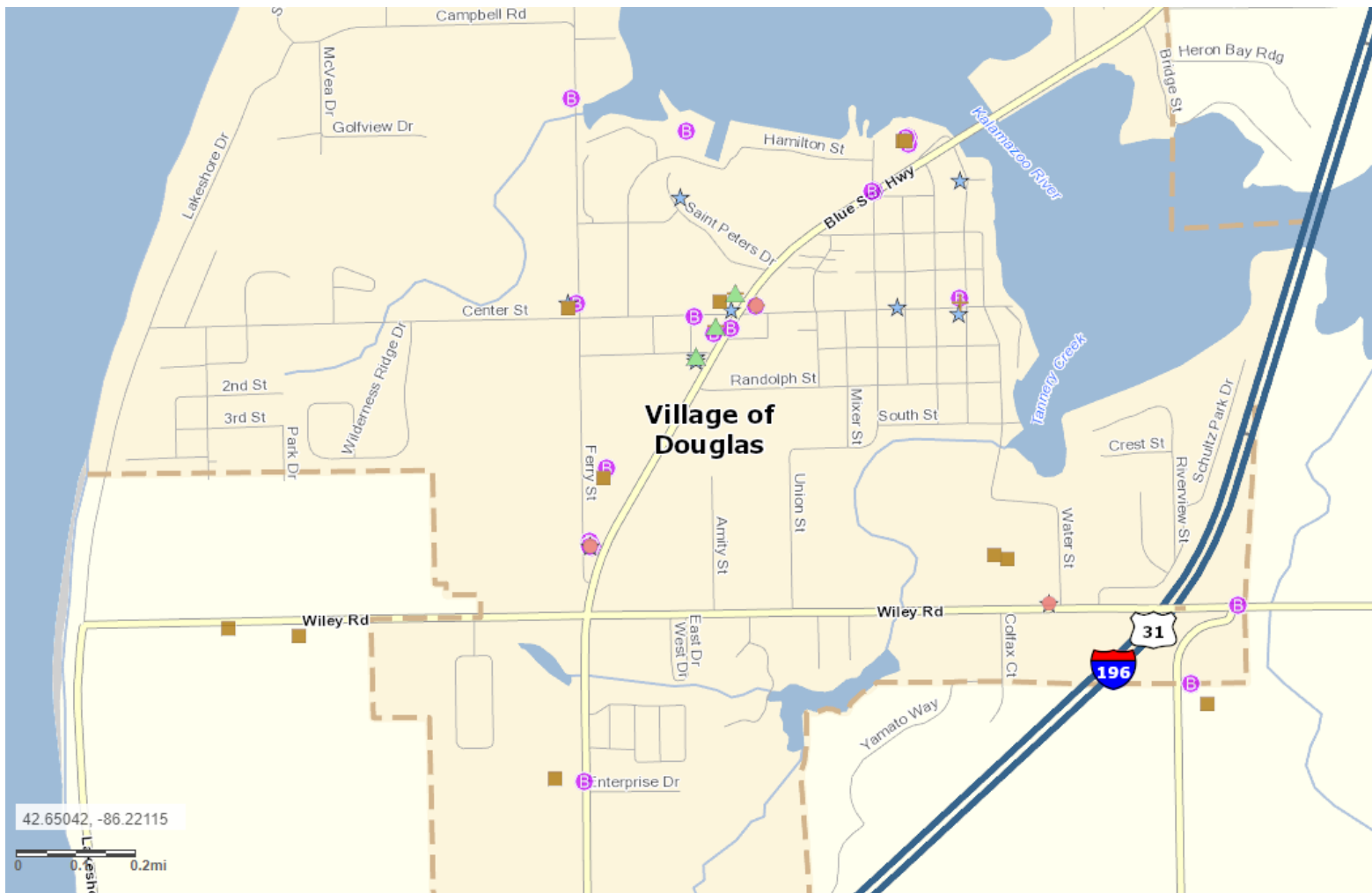
Grand Haven Department of Public Works employees work to fix a water main break on Howard Avenue in Grand Haven on Tuesday, March 2, 2021.



### Wall Street (Douglas) Water Leak March 2023



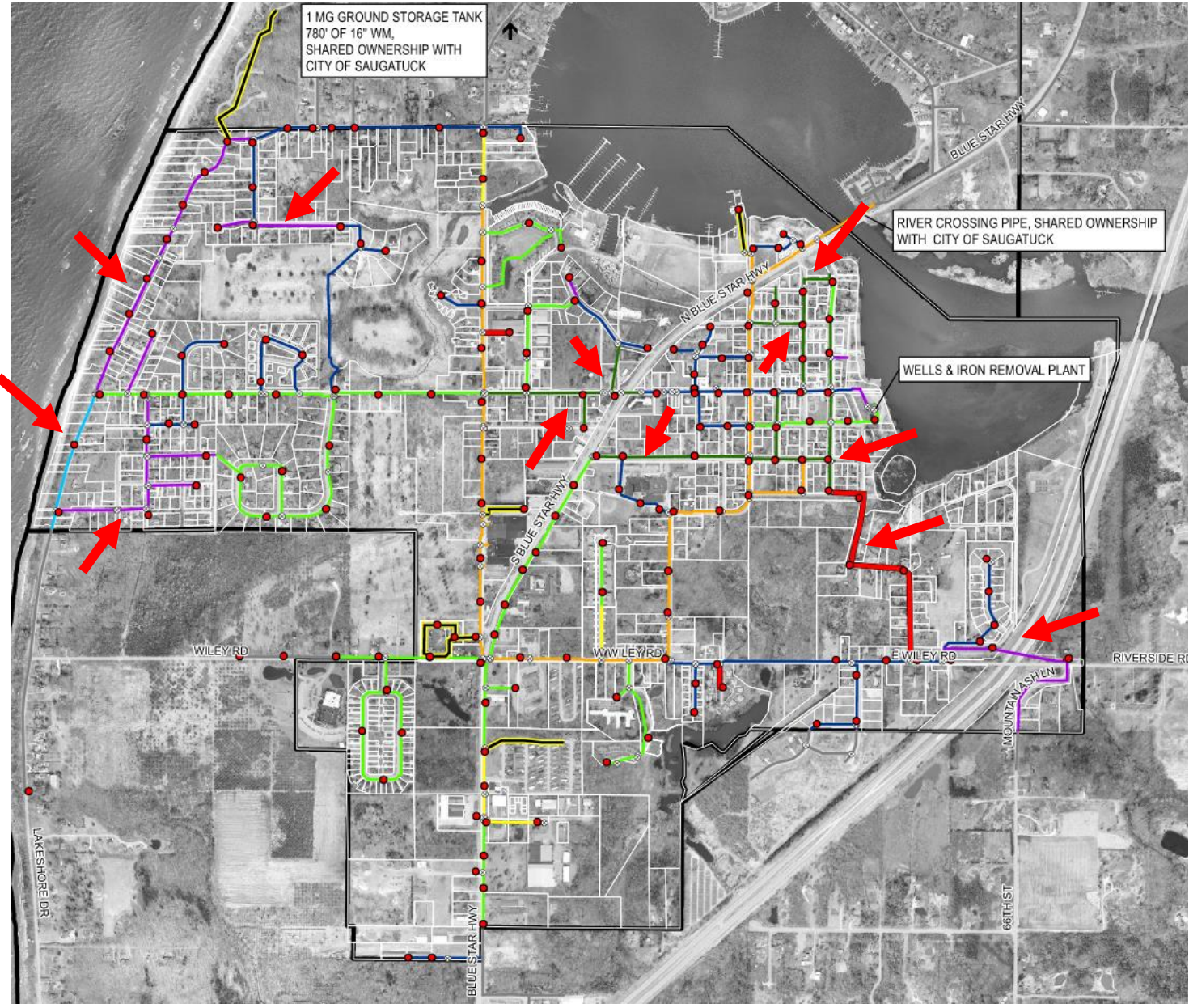
### Patch from 2022 Lakeside WM Break



**Environmental Management**

- ▲ Leaking Underground Storage Tanks (Part 213 Closed)
- Leaking Underground Storage Tanks (Part 213 Open)
- Sites of Environmental Contamination (Part 201)
- + Underground Storage Tanks (Part 211 Active)
- ★ Underground Storage Tanks (Part 211 Closed)
- Ⓟ Baseline Environmental Assessment





**CITY OF THE VILLAGE OF DOUGLAS**  
ALLEGAN COUNTY, MICHIGAN  
**WATER ASSET MANAGEMENT PLAN**  
**PIPE YEAR INSTALLED**

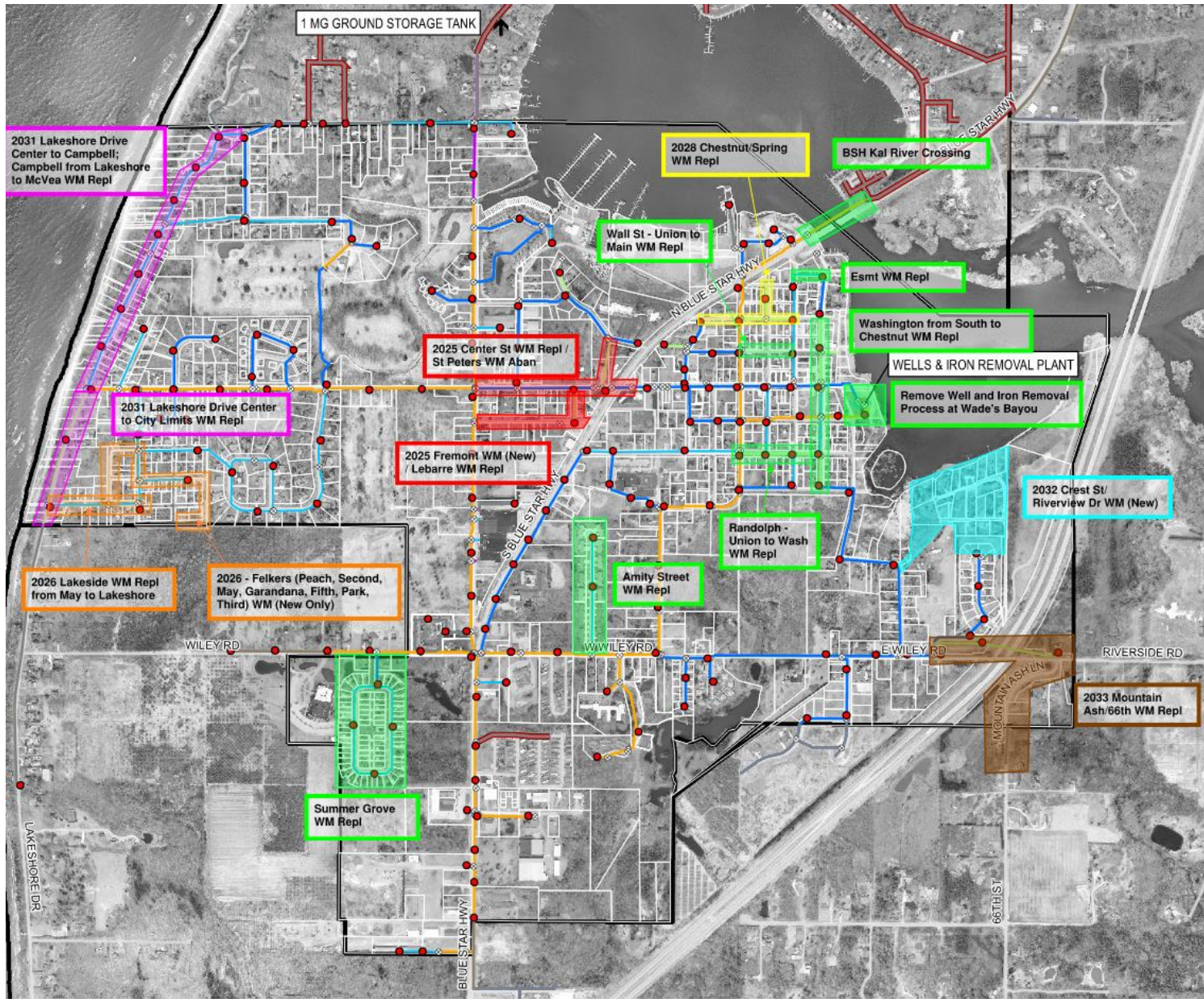
MAP 2  
6/14/2023

**LEGEND**

- Year Installed
- █ Null or 0
  - █ 1920s
  - █ 1950s
  - █ 1960s
  - █ 1978; 1970s
  - █ 1980s
  - █ 1990s
  - █ 2000s +
  - █ Other Jurisdiction
  - Private Owner
  - Hydrant
  - ⊗ Valve

Age of Douglas' Water Main System





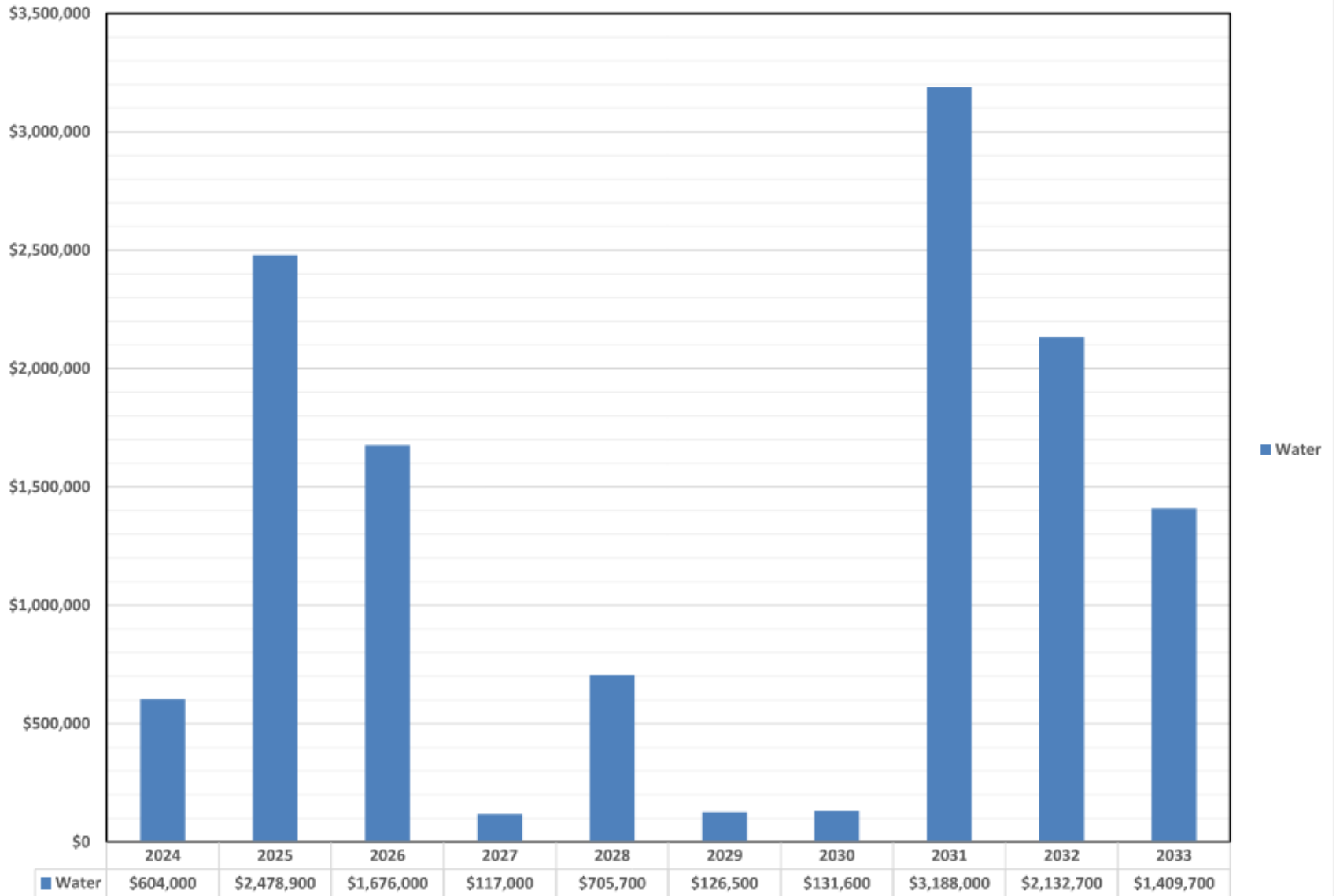
Capital Improvement Plan Project Locations

Prev Year	Project	Total Estimated Project Cost*	Source:	Comments
2024	Lead Water Service Inventory	\$ 500,000	2021 Master Proj List	
2024	Lead Water Service Replacement	\$ 104,000	2021 Master Proj List	All replacements need to be done within 20 years - 5% required per year. \$100k/yr per Douglas.
	<b>Subtotal 2024</b>	<b>\$ 604,000</b>		
2025	Lead Water Service Replacement	\$ 108,200	2021 Master Proj List	
2025	Fremont Water Main (New) from Ferry to Lebarre; Lebarre Water Main Replacement from Fremont to Center*	\$ 682,800	KLSWA 2018/20 WAMP	*Likely Special Assessment District.
2025	Center Water Main Replacement from Ferry to east of Blue Star and St Peters Water Main Abandonment from Center to St Peters	\$ 1,687,900	2021 Master Proj List, Known Issue	
	<b>Subtotal 2025</b>	<b>\$ 2,478,900</b>		
2026	Lead Water Service Replacement	\$ 112,500	2021 Master Proj List	
2026	Lakeside Water Main Replacement from May to Lakeshore	\$ 550,100	Known Issue	
2026	Felkers (Peach, Second, May, Garandana, Fifth, Park, Third) WM (New)*	\$ 1,013,400	2021 Master Proj List	*Likely Special Assessment District.
	<b>Subtotal 2026</b>	<b>\$ 1,676,000</b>		
2027	Lead Water Service Replacement	\$ 117,000	2021 Master Proj List	
	<b>Subtotal 2027</b>	<b>\$ 117,000</b>		
2028	Lead Water Service Replacement	\$ 121,700	2021 Master Proj List	
2028	Chestnut Water Main Replacement from Union to Main; Spring Water Main Replacement from Chestnut to Lawn	\$ 584,000	KLSWA 2018/20 WAMP	
	<b>Subtotal 2028</b>	<b>\$ 705,700</b>		



Prev Year	Project	Total Estimated Project Cost*	Source:	Comments
2029	Lead Water Service Replacement	\$ 126,500	2021 Master Proj List	
	<b>Subtotal 2029</b>	<b>\$ 126,500</b>		
2030	Lead Water Service Replacement	\$ 131,600	2021 Master Proj List	
	<b>Subtotal 2030</b>	<b>\$ 131,600</b>		
2031	Lead Water Service Replacement	\$ 136,900	2021 Master Proj List	
2031	Lakeshore Water Main Replacement from Center to South City Limits	\$ 831,400	KLSWA 2018/20 WAMP	
2031	Lakeshore Water Main Replacement from Center to Campbell; Campbell Water Main Replacement from Lakeshore to McVea	\$ 2,219,700	KLSWA 2018/20 WAMP	
	<b>Subtotal 2031</b>	<b>\$ 3,188,000</b>		
2032	Lead Water Service Replacement	\$ 142,300	2021 Master Proj List	
2032	Crest Street and Riverview Drive Water Main (New)*	\$ 1,990,400	Known Issue	*Likely Special Assessment District.
	<b>Subtotal 2032</b>	<b>\$ 2,132,700</b>		
2033	Lead Water Service Replacement	\$ 148,000	2021 Master Proj List	
2033	Mountain Ash Lane Water Main Replacement*	\$ 1,261,700	2012 WRS, Known Issue	*Likely Special Assessment District.
	<b>Subtotal 2033</b>	<b>\$ 1,409,700</b>		
	<b>SUBTOTAL 2024-2033</b>	<b>\$ 12,570,100</b>		
*Assumed inflation rate of 4% for all ten years				

## Capital Improvements Plan Project Costs by Year



# Funding for Capital Improvement Projects

- Capital improvement charge of \$15 per MEU added per month on December 4, 2023 meeting per Baker Tilly Rate Study to fund projects listed below.
- Special Assessment Districts

RESOLUTION NO. 35-2023  
CITY OF THE VILLAGE OF DOUGLAS  
ALLEGAN COUNTY, MICHIGAN

## RESOLUTION FOR IMPLEMENTAION OF WATER CAPITAL IMPROVEMENT CHARGE

WHEREAS, The Michigan Department of Environment, Great Lakes, and Energy (EGLE) required the City to submit a water system capital improvement plan (CIP).

WHEREAS, The City worked with Prein & Newhof and Baker Tilly in the development of this plan. Prein and Newhof developed the water infrastructure CIP by reviewing water asset age, condition, material size, break history, and other factors. With that review completed, a list of capital improvement priorities and target completion dates were developed.

WHEREAS, A key component of a properly developed CIP is a funding source to accomplish the objectives of the plan. Using the capital improvement list, Baker Tilly has developed a funding methodology to finance the capital improvements.

NOW, THEREFORE, BE IT RESOLVED that the City of the Village of Douglas City Council based upon the CIP developed and submitted to EGLE is implementing a water capital improvement charge of \$15 per MEU per month effective January 1, 2024.

Members Present:

Members Absent:

It was moved by Councilmember , and supported by Councilmember , to adopt the resolution.

Members Voting Yes:

Members Voting No:

Members Abstain:

Members Absent:

RESOLUTION DECLARED ADOPTED \_\_\_\_\_

Cathy North, Mayor  
City of the Village of Douglas, Michigan



# Future Capital Improvements Considerations

- Wastewater System
  - Sanitary Sewer/Manholes
  - Sanitary Force Main
  - Pump Stations
- Stormwater (Update from SAW Project)
  - Storm Sewer/Manholes/Catch Basins
  - Culverts
  - Ponds/Ditches
- Roadways
- Other Assets (Parks, Bike Paths/Sidewalks, etc.)

