

Expense Depreciation: An Option for Funding Water Main Replacements

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Challenge: The Infrastructure Replacement Era is Upon Us

Key Facts about Wisconsin's Infrastructure



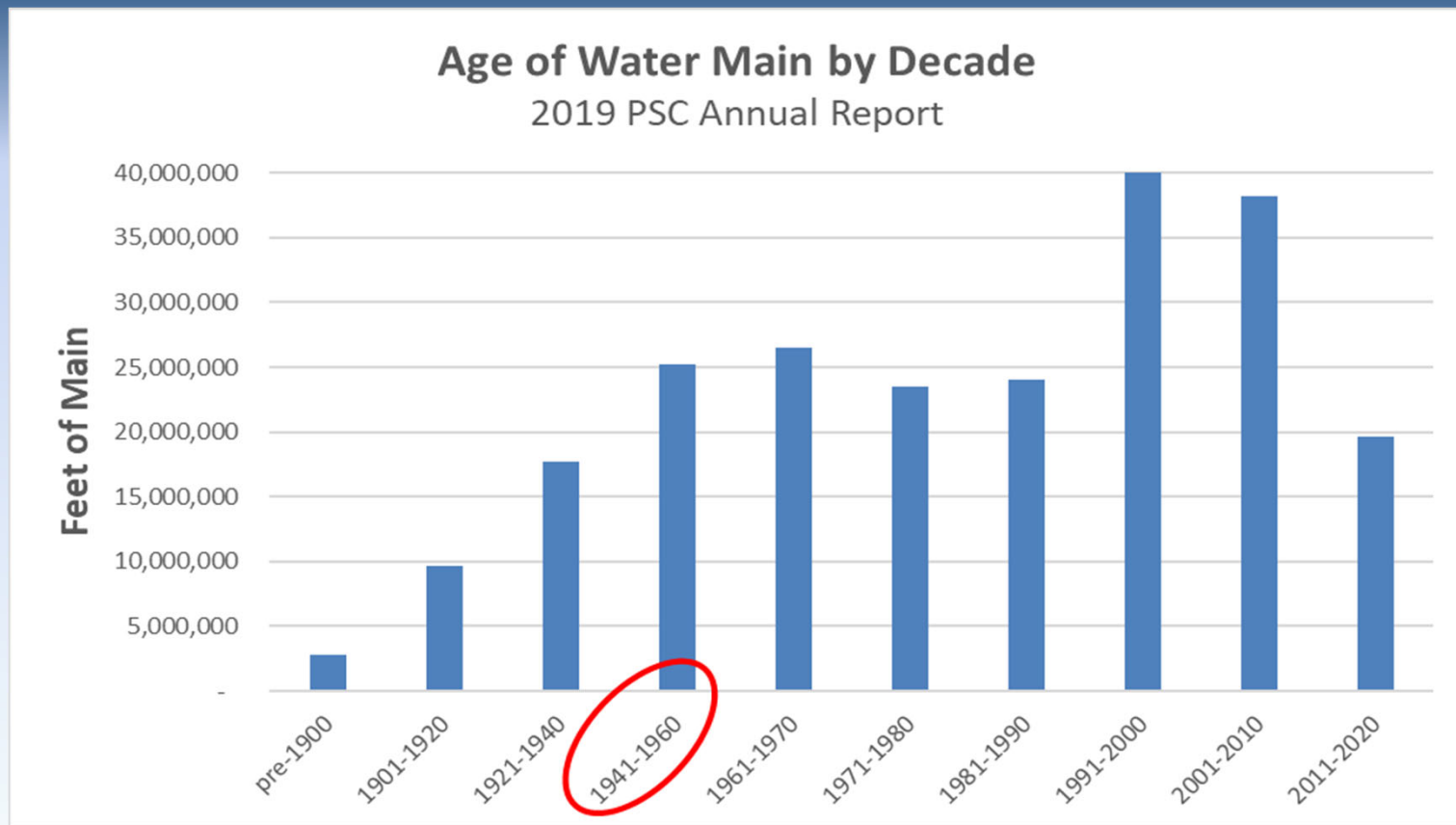
Wisconsin 2020 Report

\$8.57 billion in drinking water infrastructure needs over the next 20 years

<https://infrastructurereportcard.org/state-item/wisconsin/>



Challenge: Infrastructure Replacement Era is Upon Us



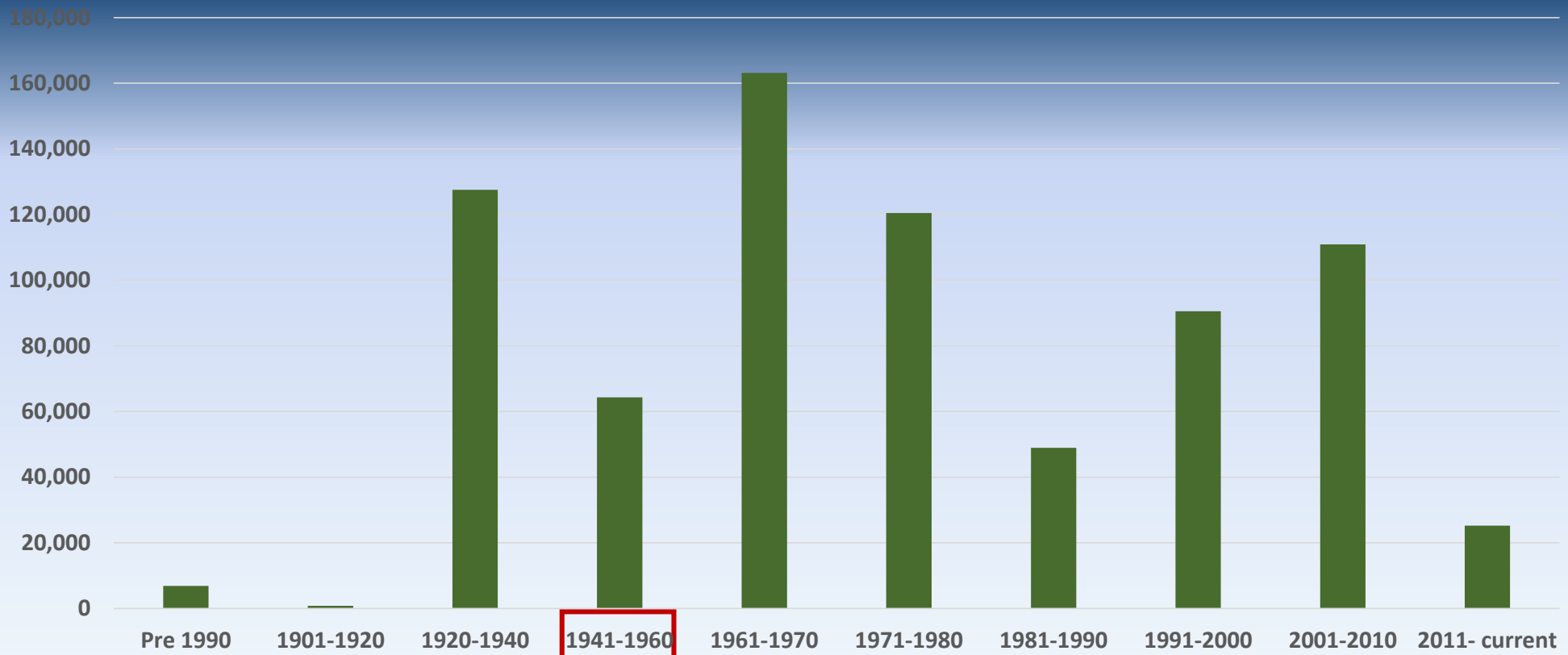
How to fund more main replacements?

- Other states have authorized “Adders”
 - Provides rate recovery for main replacement projects between rate cases
 - Costs allowed in the Adder based on traditional rate making
 - Benefit is a small increase without the time and cost of a full rate case
- Discussions in Wisconsin in past years
 - An adder might be beneficial but limited interest in this
 - More interest in increased cash flow to fund main replacements
 - Request that more cash flow added into customer rates, not more debt financing

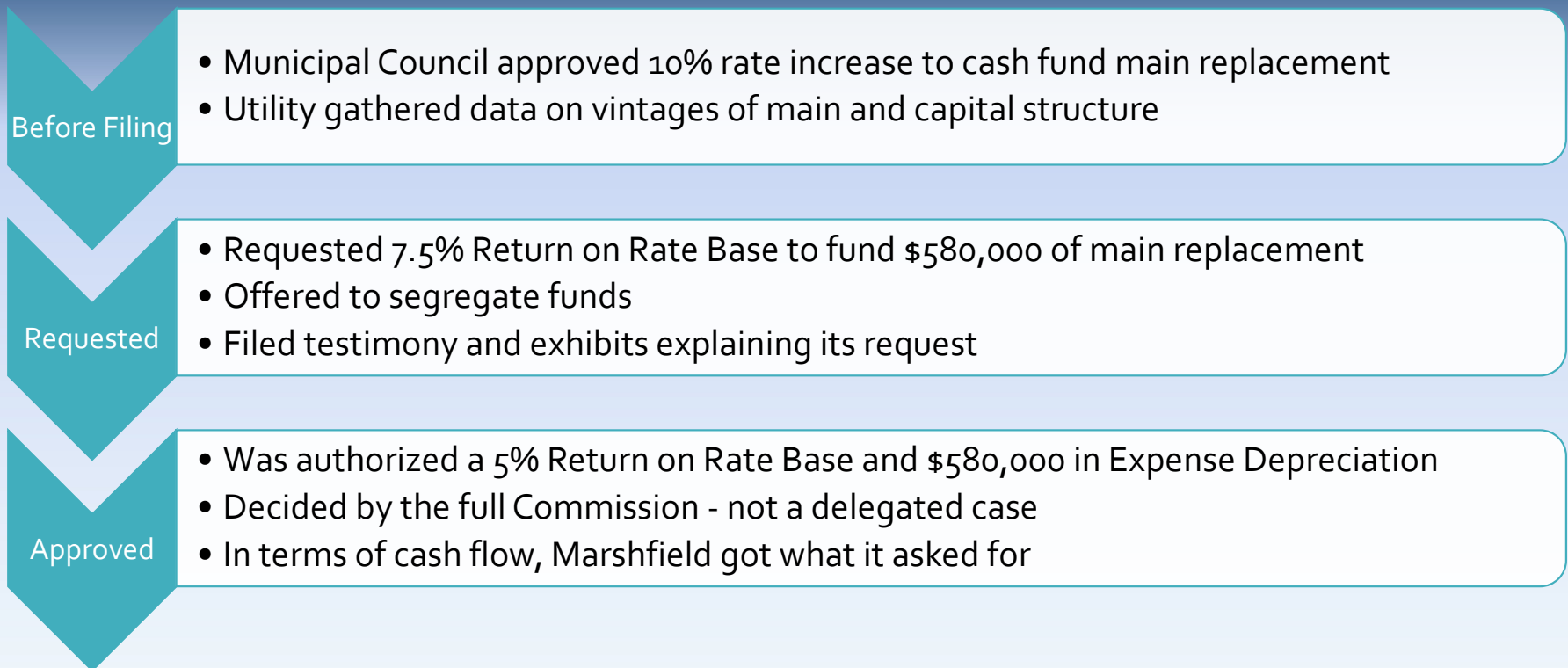
Alternative Mechanisms for Funding Main Replacement

Mechanism	Availability
<ul style="list-style-type: none">• Funding Annual Water Infrastructure Replacement Programs (FIRM)• Two Step rate increase• Expense Depreciation	<ul style="list-style-type: none">• Available since 1997; not used• Available on a limited basis since 2013; very few utilities used• Approved in Docket 3420-WR-106 May 26, 2017

2015: Marshfield Feet of Main by Vintage



Process of Marshfield Case



Commission Concerns Raised in Past Cases

- **Double Recovery**

Utility is requesting additional dollars to pay for construction. After construction, it adds the new plant to rate base - customers are charged twice for same plant.

- **Intergenerational Equity**

One group of customers should not bear full cost of plant that is long-lived and benefits multiple generations of customers.

Expense Depreciation Alternative

- **Existing Statutory Framework**
 - Wis. Stat 196.09 states that the Commission may establish depreciation rates and practices that are reasonable and proper
- **Double Recovery Avoided**
 - Main is depreciated fully in year it's installed
- **Intergenerational Equity**
 - Consistency: 0.5% of total feet replaced each year in Marshfield
 - All customers contribute to cost of main over time

Utility Revenue Requirement – Quick Review

- Operation and maintenance expenses
- Depreciation expense as a recovery of capital investment
- Taxes and tax equivalent (PILOT)
- Reasonable return on net investment rate base (ROR on NIRB)

Expense Depreciation - Rate Impact Estimates

Cost	Utility Financed Plant	Expense Depreciation Plant	Impact of Expense Depreciation on Rates
O & M expenses	1-2%	0%	Lower?
Depreciation expense	3-4%	100%	Higher
Taxes (PILOT)	2%	0% or 2%	Local Decision
ROR on rate base	5-7%	0%	Lower
TOTAL	13%	102%	Higher

Example of Expense Depreciation Impact - \$1,000,000 project

	Utility Financed \$1,000,000	Expense Depreciation \$1,000,000	Impact of Expense Depreciation
O&M	\$0	\$0	Same
Depreciation	\$13,000	\$1,000,000	Higher
Taxes (PILOT)	\$20,000	\$20,000	Same
ROR	\$50,000	\$0	Lower
Total	\$83,000	\$1,020,000	Higher

Example of Expense Depreciation Rate Impact: Current average bill/qtr. \$100

	Borrow	Expense Depreciation
Current Revenues	\$2,000,000	\$2,000,000
\$ Increase	\$83,000	\$1,020,000
% Increase	4%	51%
Average bill/qtr. (current)	\$100	\$100
Average bill/qtr. (new)	\$104	\$151

Rate Design Options

- Standard Rate Design
 - Used in Marshfield rate case
- Main Replacement Fixed Charge
 - Used in Janesville rate case
 - Used in Fort Atkinson rate case

Rate Design Options - Standard

- Typical Service Charge, Volume Charge, and Public Fire Protection Charge
 - Schedule Mg-1
 - Schedule F-1
- Based on AWWA's M1 Principles of Water Rates, Fees, and Charges Manual
- Goal is to ensure that the utility recovers the appropriate amount of revenue from each customer class
- Often reflects other policy preferences such as promoting water conservation, simplifying billing practices, or maintaining equity among customer classes

Rate Design – Main Replacement Fixed Charge

- Schedule Mg-1S1, General Service – Metered – Main Replacement Charge
- Fixed charge on water bill based on equivalent meter ratios
- Dedicated source of revenue to be used solely for a portion of main replacement projects funded through expense depreciation
- Can result in a fixed charge that is a high portion of the total water bill
- To limit the fixed portion of the water bill, utilities included only a portion of the depreciation expense in the Main Replacement Charge
- The remaining dollars are collected through general service volumetric rates and direct charges for public fire protection (if applicable)

Summary of Three Rate Cases

Marshfield

- Docket 3420-WR-106
- Issued May 26, 2017
- Replace 1% per year
- 0.5% of cost using expense depreciation
- Full PILOT expense
- Standard rate design
- 10% rate increase
 - All due to mains

Janesville

- Docket 2740-WR-110
- Issued October 16, 2019
- Replace 1% per year
- 1% of cost using expense depreciation
- Full PILOT expense
- Special rate design
 - Main replacement charge to recover a portion of program costs
- 53% rate increase
 - 42% due to mains

Fort Atkinson

- Docket 2060-WR-106
- Issued July 28, 2021
- Replace 1% per year
- 1% of cost using expense depreciation
- No PILOT on project mains
- Special rate design
 - Main replacement charge to recover a portion of program costs
- 55% rate increase
 - 42% due to mains

Special Order Points Approved in Past Dockets

- Funds must be kept in segregated account
- Plant and depreciation must be kept in sub-accounts
- Funds may only be used for program
 - If needed for debt, must notify Commission and apply for a rate increase within 45 days
- Utility must file additional information in its Annual Reports
- Utility must work with health department and WDNR if LSL replacement concerns
- SRC clarification
- Construction authorization required for program replacing more than 3 miles of main with diameter of 8 inches or greater

Expense Depreciation

TRANSMISSION AND DISTRIBUTION PLANT		
342	Distribution Reservoirs and Standpipes	2.2%
343.1	Transmission and Distribution Mains	1.3%
343.2	Transmission and Distribution Mains Relined Mains	2.0%
343.3	Annual Amount Main Replacement Depreciation	\$580,000
345	Services	2.9%
346	Meters	6.3%
348	Hydrants	2.2%

Docket 3420-WR-106

Appendix E

MARSHFIELD UTILITIES

Schedule of Water Depreciation Rates Effective January 1, 2016

Acct. No.	Account Title	Depr. Rate
SOURCE OF SUPPLY PLANT		
314	Wells and Springs	2.9%
316	Supply Mains	1.8%
PUMPING PLANT		
321	Structures and Improvements	3.2%
325	Electric Pumping Equipment	4.4%
328	Other Pumping Equipment	4.4%
WATER TREATMENT PLANT		
331	Structures and Improvements	3.2%
332	Sand and Other Media Filtration Equipment	3.3%
333	Membrane Filtration Equipment	6.0%
334	Other Water Treatment Equipment	6.0%
TRANSMISSION AND DISTRIBUTION PLANT		
342	Distribution Reservoirs and Standpipes	2.2%
343.1	Transmission and Distribution Mains	1.3%
343.2	Transmission and Distribution Mains-Relined	2.0%
343.3	Annual Amount Main Replacement Depreciation	\$580,000
345	Services	2.9%
346	Meters	5.5%
348	Hydrants	2.2%
GENERAL PLANT		
391	Office Furniture and Equipment	5.8%
392	Transportation Equipment	20.0% Unit
394	Tools, Shop and Garage Equipment	5.8%
395	Laboratory Equipment	5.8%
396	Power Operated Equipment	10.0% Unit
397	Communication Equipment	15.0%

Follow-up After Order is Issued

- Follow all the order points
- Use funds only for program, otherwise notify Commission
- Notify Commission of any changes in spending
 - Utility should plan to spend authorized amount each year
 - Minor fluctuations are acceptable
 - Notify Commission and get approval for larger fluctuations

Benefits

- Encourage investment in water infrastructure
- Reduce non-revenue water
- Reduce maintenance costs
- Minimize future borrowing costs
- Help maintain a balanced capital structure
- Can be done in existing statutory framework

Could Expense Depreciation be a good fit for your utility?

Maybe

- Utility built out over many decades
- Long-term plan to replace mains
- Consistent work per year
- Understanding and support from municipal decision makers

Maybe not

- Utility is fairly new
- Most infrastructure installed in a short span of years
- No detailed plan to replace mains in an on-going and consistent manner

Useful Information for the Record

- Still a new process so could refine over time
- Every utility is a little different so each filing will be a little different!
- Contact PSC water staff to discuss what should be included in your utility's application
- A pre-application meeting is a good idea
- Process still new and decided by full Commission

Useful Information for the Record

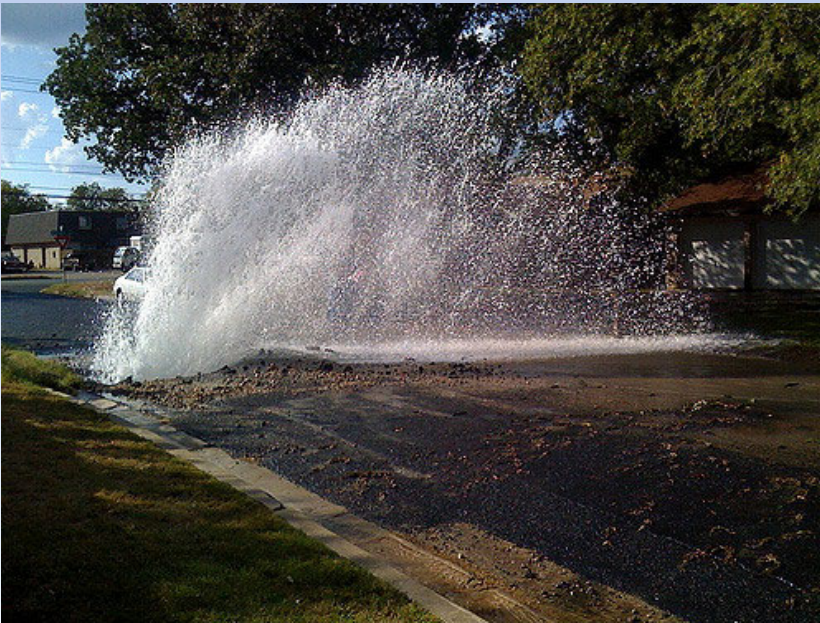
- Analysis of water main materials, ages, and main breaks
- Method for prioritizing mains to replace
 - Specific list of projects for the first few years
 - Possible projects for future years
 - Description of how future projects will be selected
- Information supporting why this funding method is reasonable
- Documentation of local support
 - Support for size of rate increase
 - Support for ongoing program for many years
 - Coordination with sewer and street work

Process – Full Commission Decision

- File a complete application package
 - Information on prior slides
 - COSS and Rate Design if non-standard rates proposed
 - Testimony and exhibits
- Rounds of written testimony prior to hearing
- Decision Matrix after hearing
- Commissioners discuss and decide case at an open meeting
- Written Final Decision issued

Goals

Less of This



More of This

