

# Utility Rates and Master Plans

*“The Public Works Advisory Commission supports a pay-as-you-go funding model whenever possible. Bonding should only be considered to pay for large projects that are urgent and need a large sum of money up front, such as water tanks, water reuse, meter replacements, wells, or other similar projects.”*

- Tai Riser, Public Works Advisory Commission Chairman

# Pay-As-You-Go: Pros and Cons

## Pros

- Pay No Interest
- Accumulate No Debt

## Cons

- Must Save Over Extended Period for Large, Urgent Projects
- Accomplish Less Immediately
- Current Users Pay
- Future Users Enjoy the Benefit without Paying

# Bonding: Pros and Cons

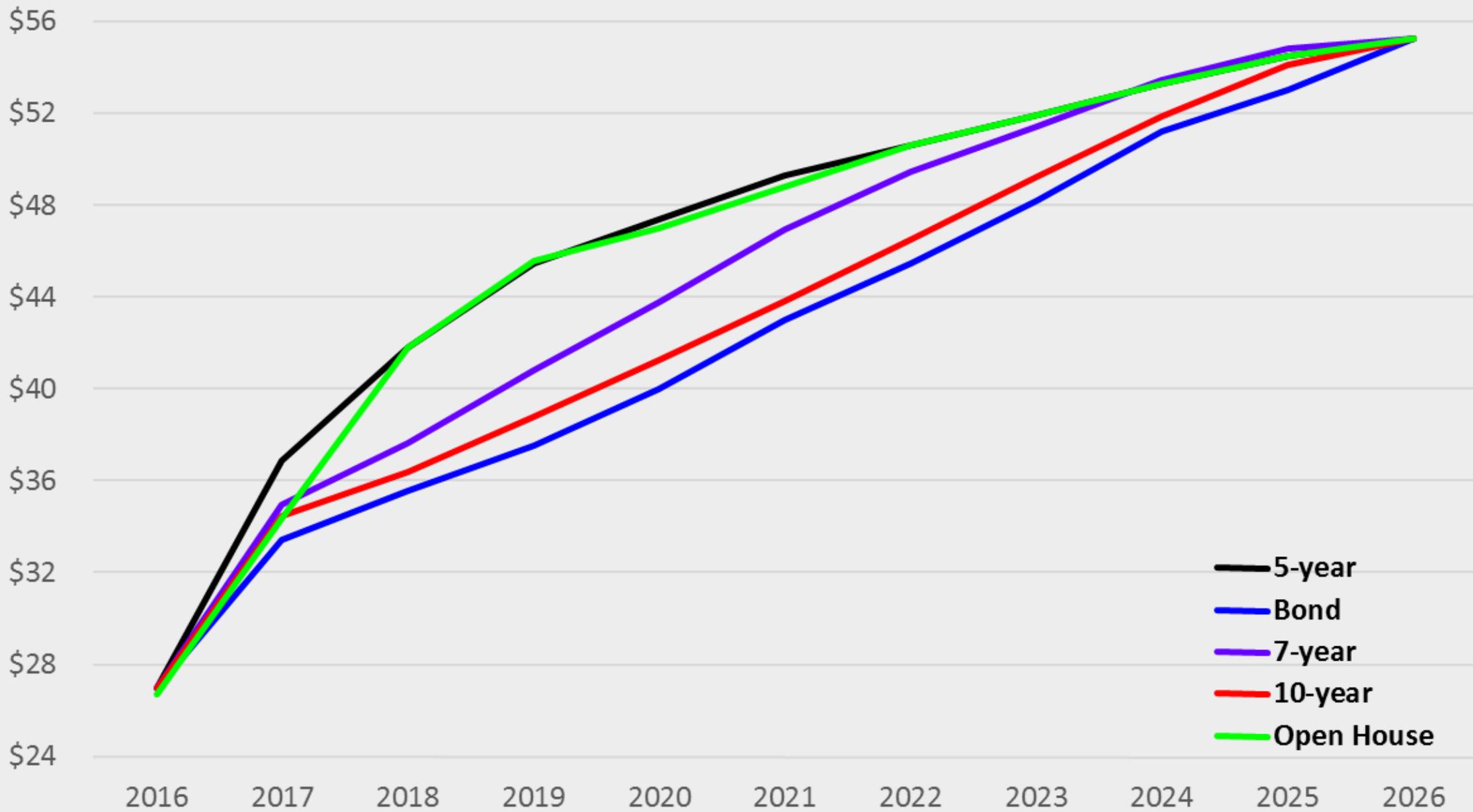
## Pros

- Accomplish More Immediately
- Spread Cost Over Time
- All Users Pay
- Large, Urgent Projects Can Be Accomplished Now

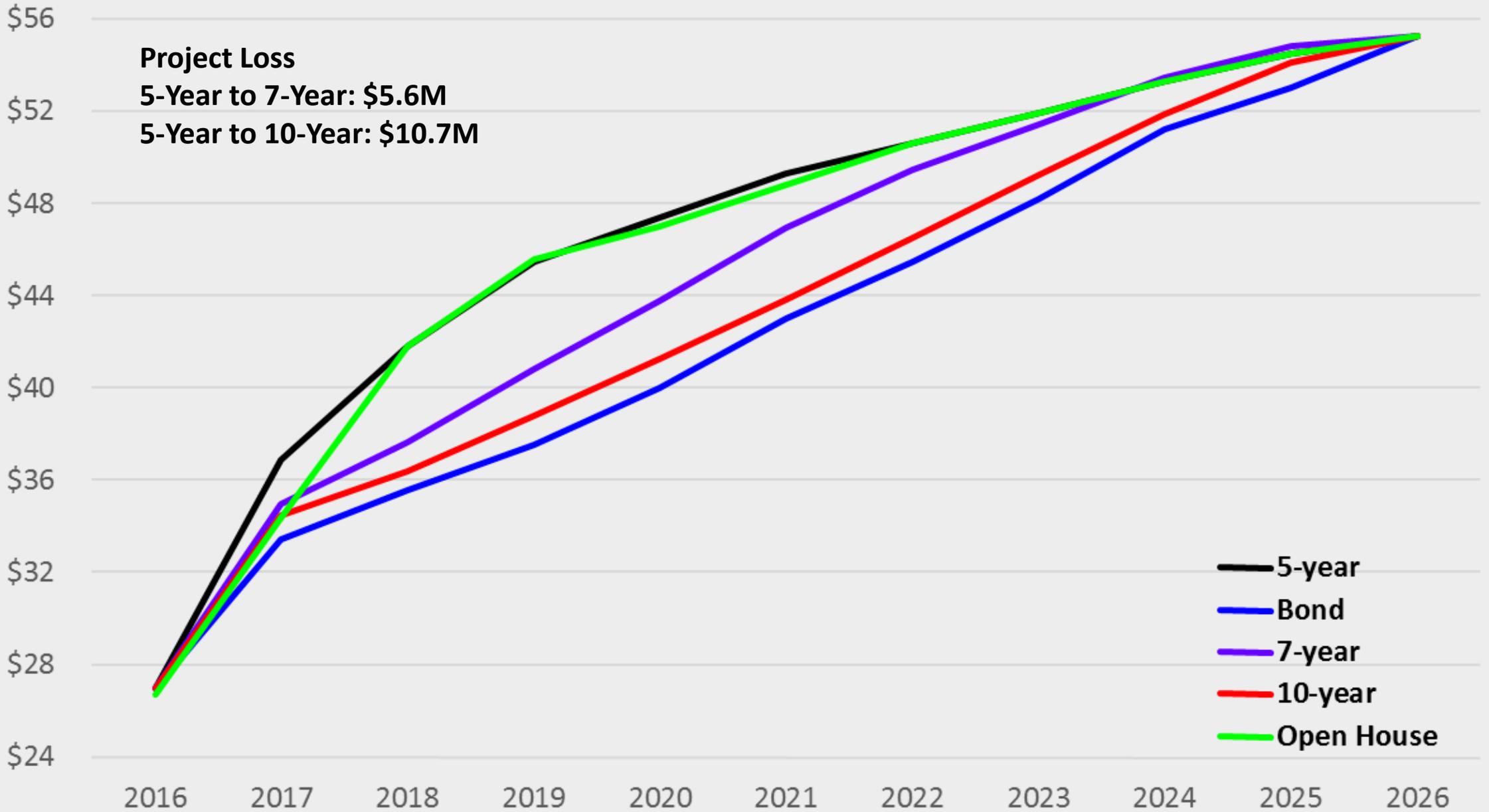
## Cons

- Pay More In Interest
- Extended Period Pay-off
- Extended Debt

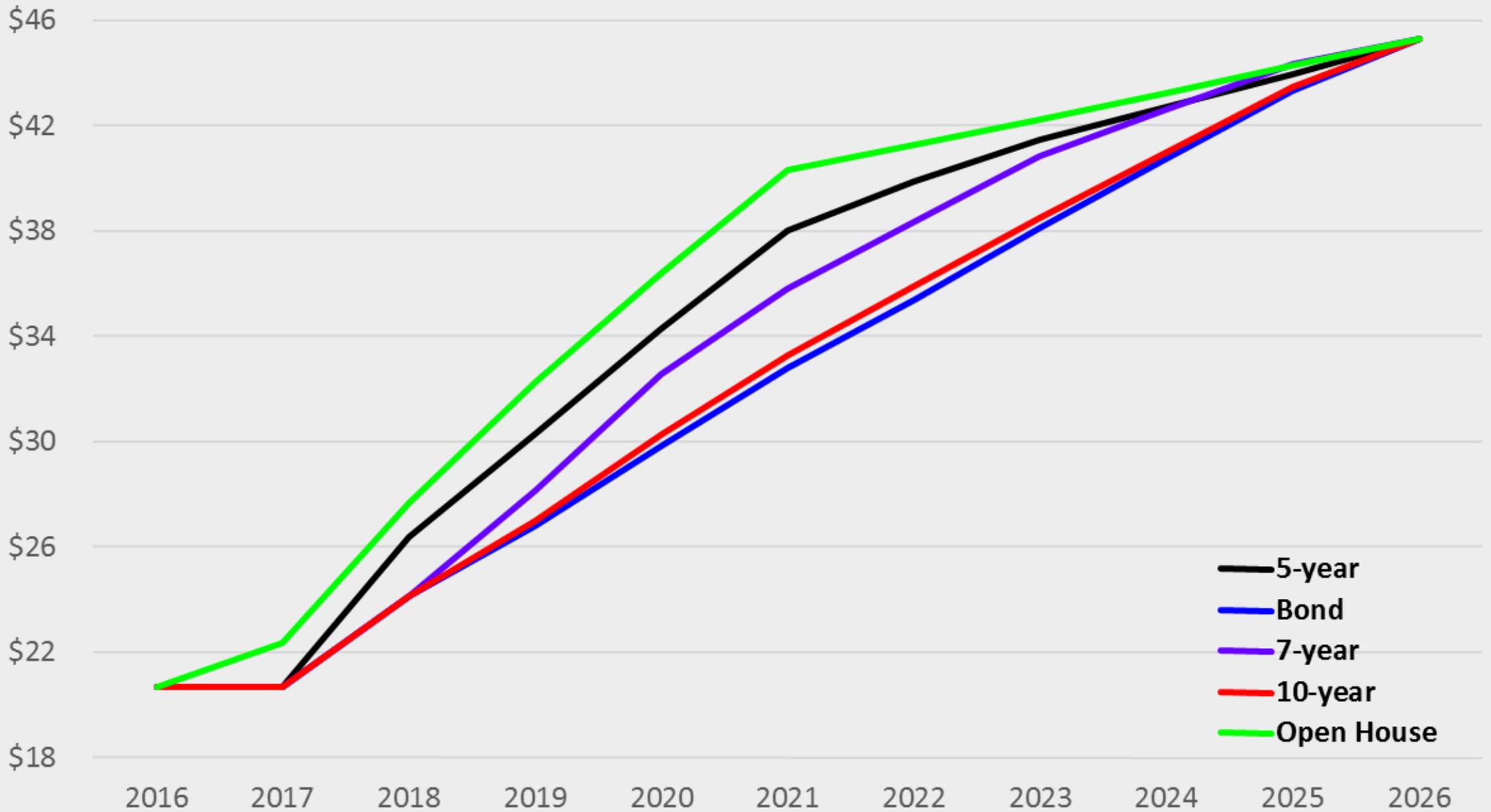
# Monthly Water Bill



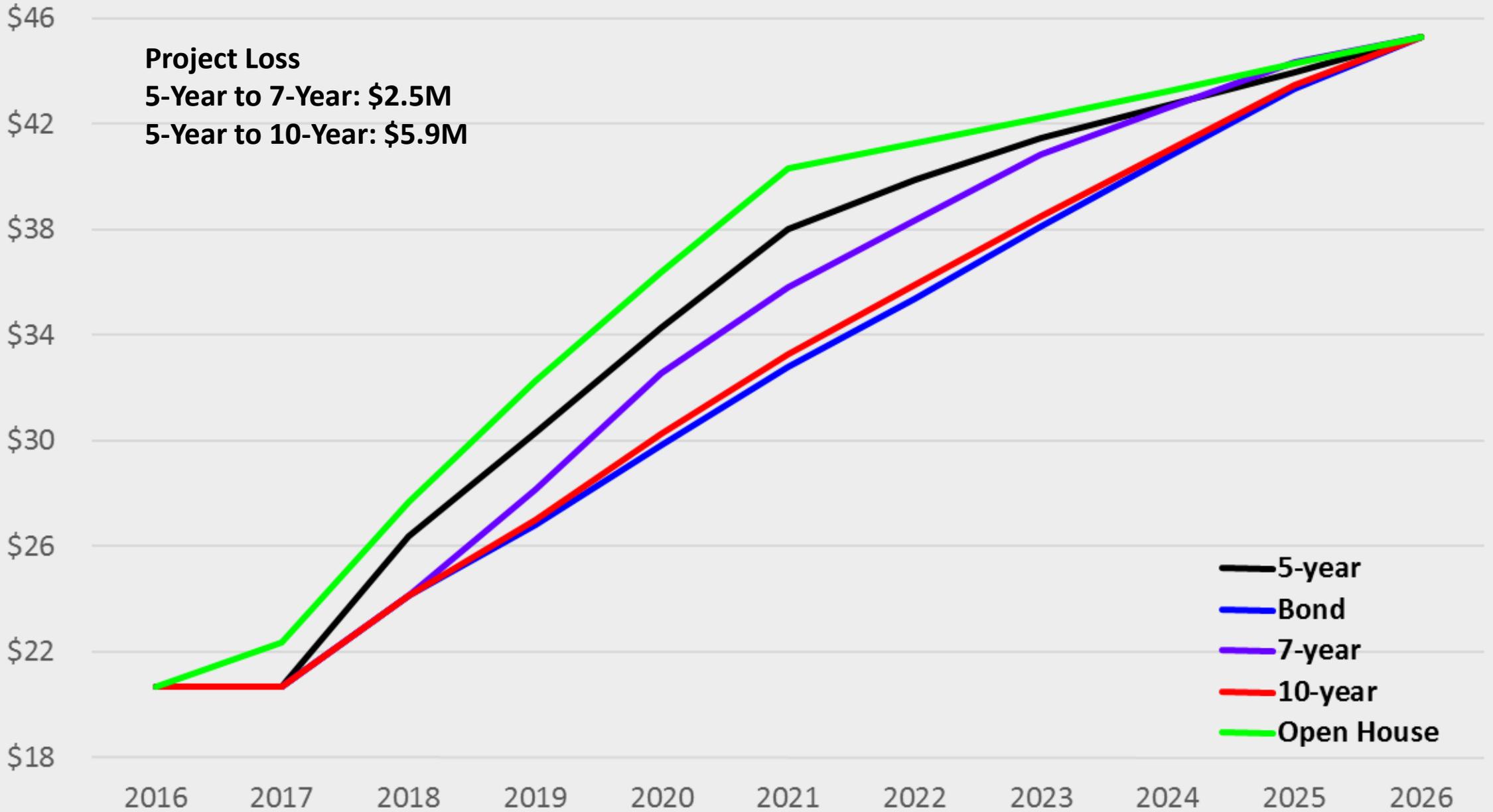
# Monthly Water Bill



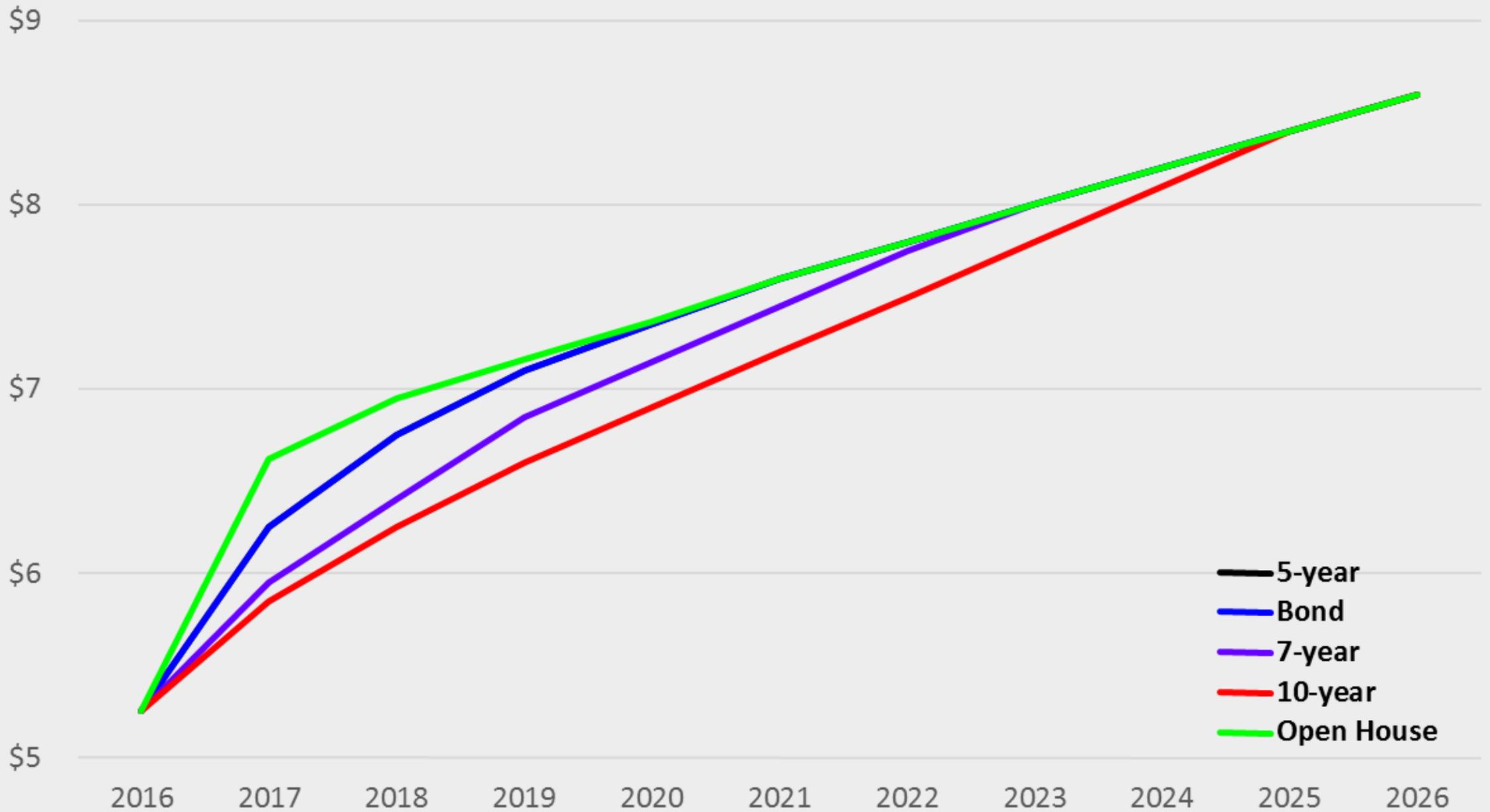
# Monthly Sewer Bill



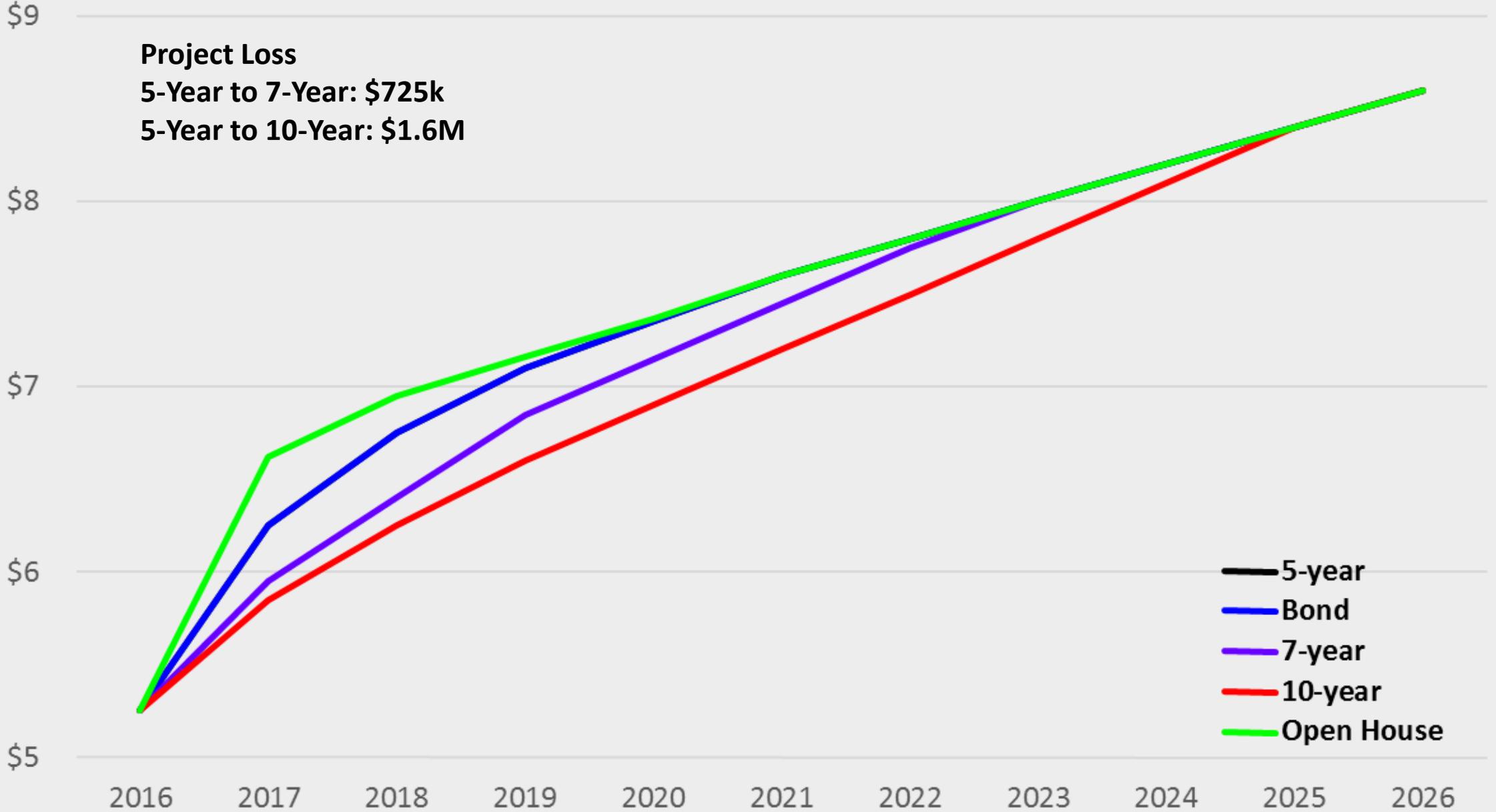
# Monthly Sewer Bill



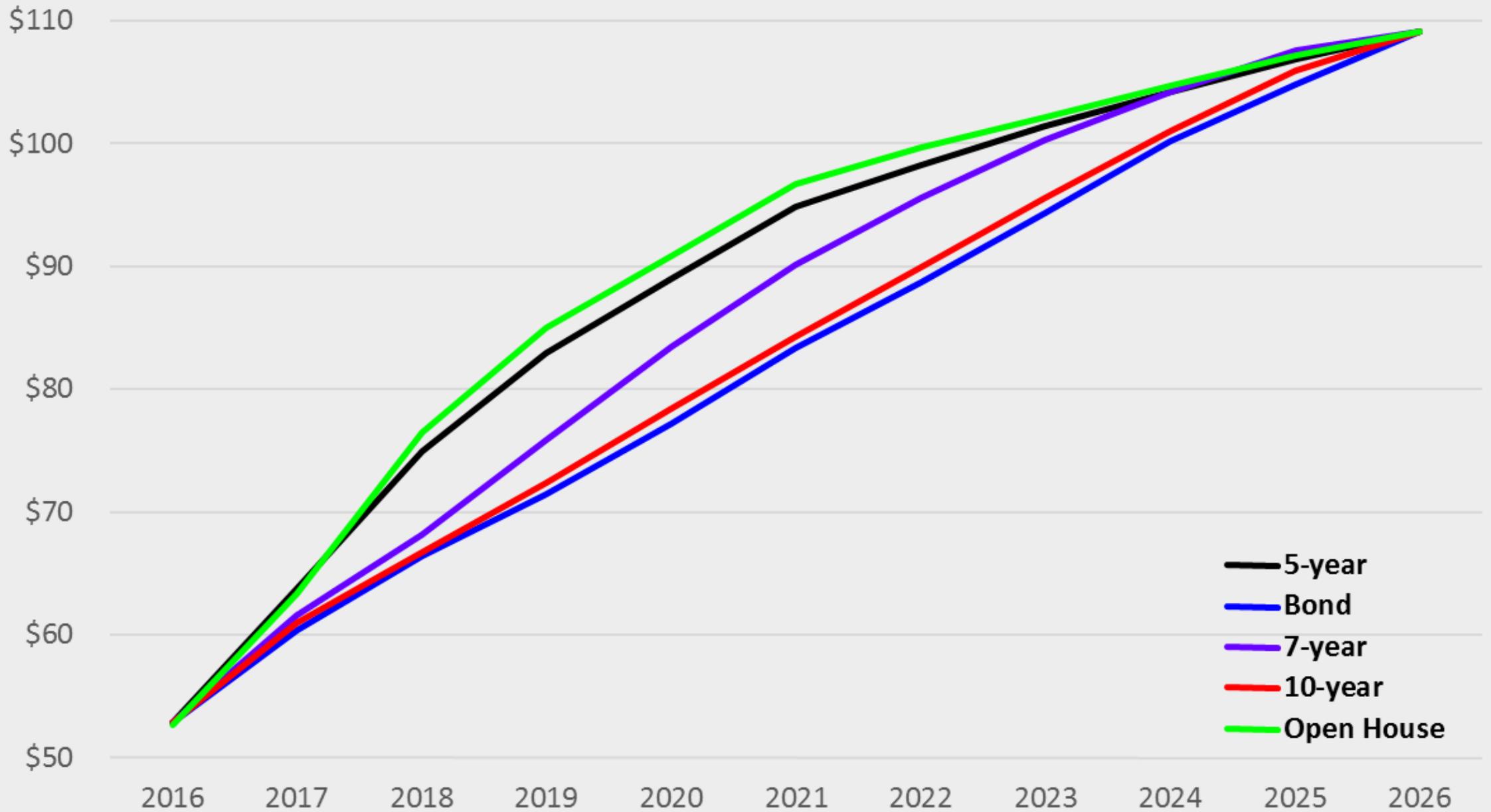
# Monthly Storm Water Bill



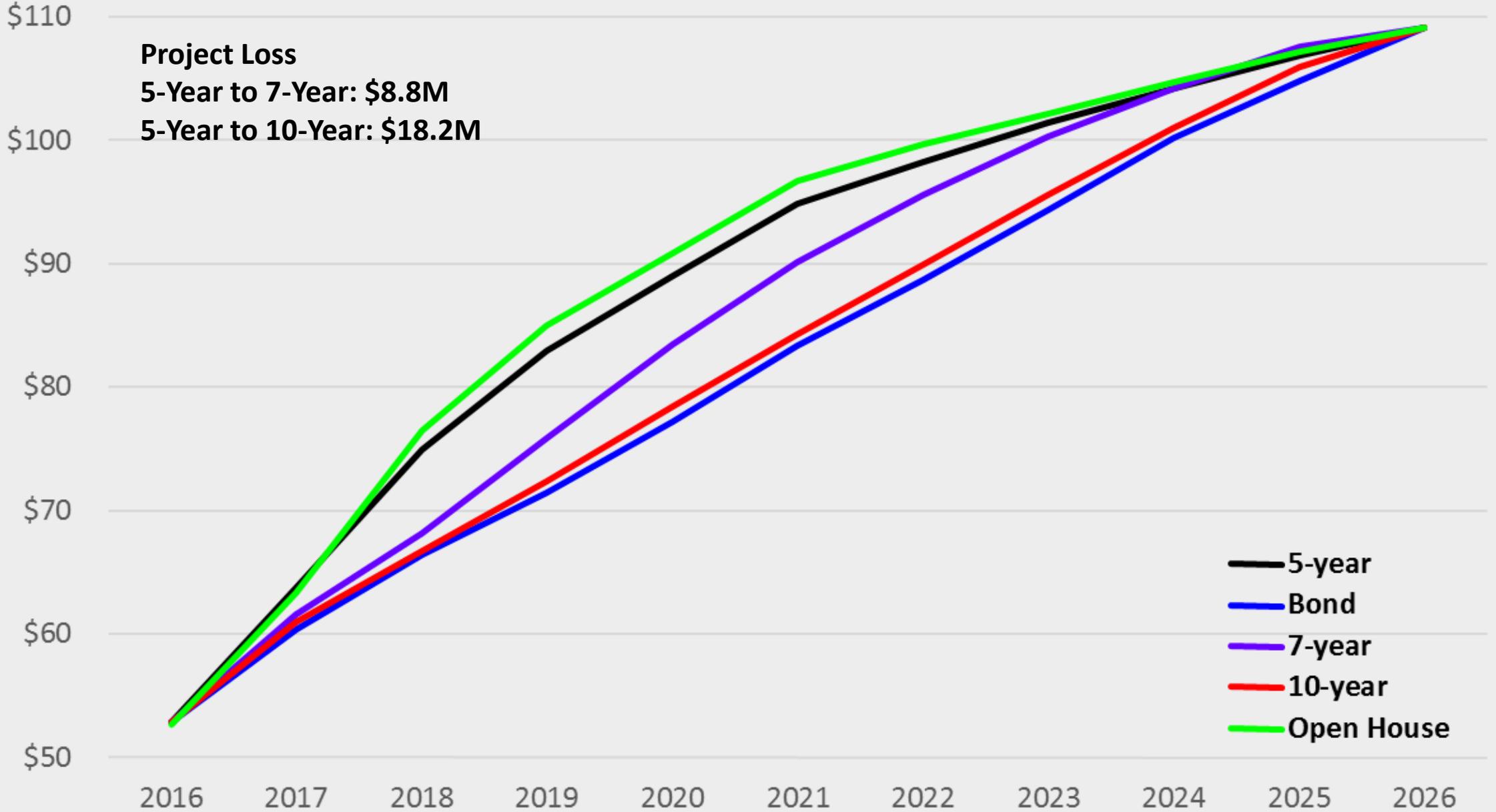
# Monthly Storm Water Bill



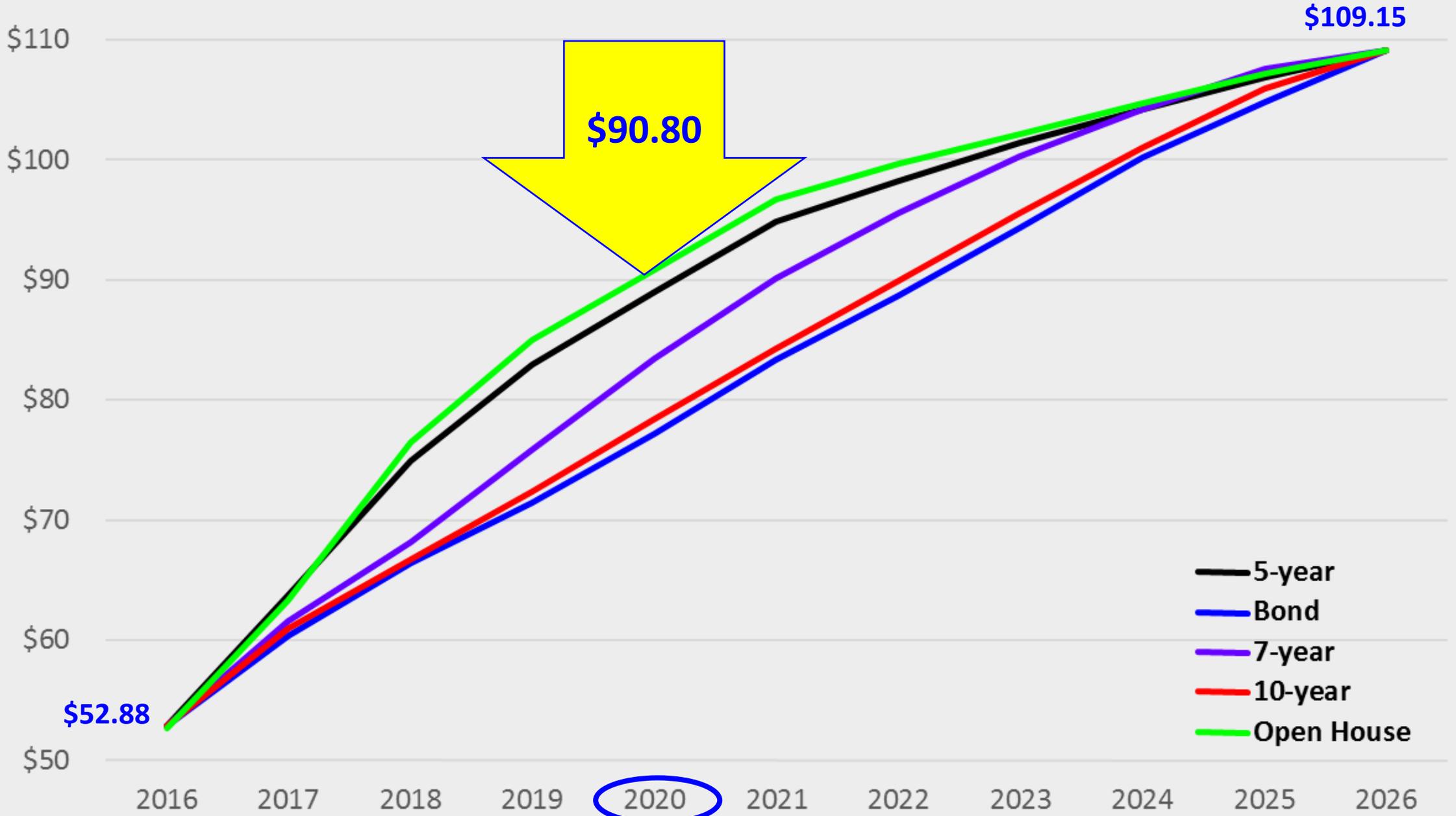
# Total Monthly Bill



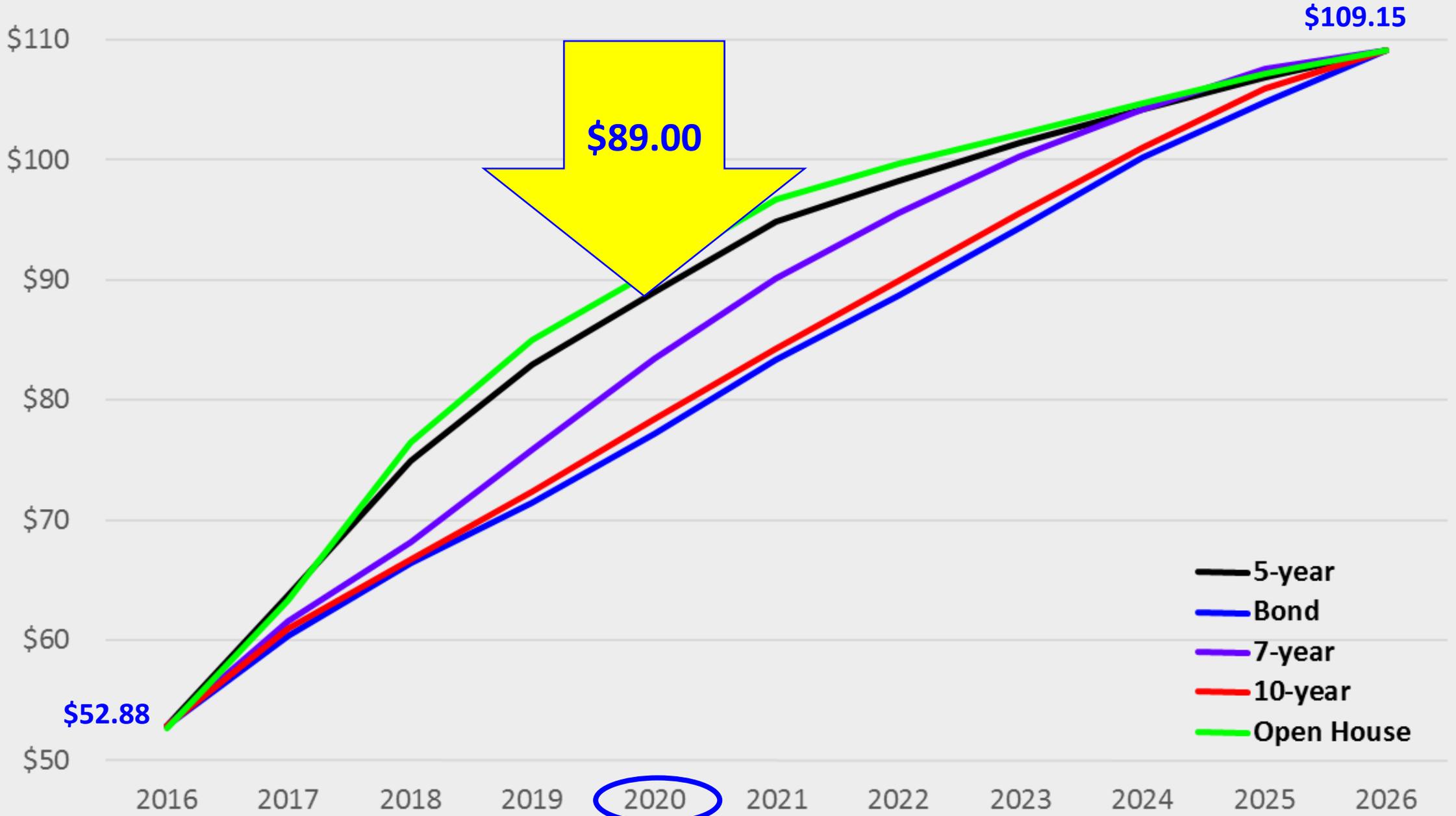
# Total Monthly Bill



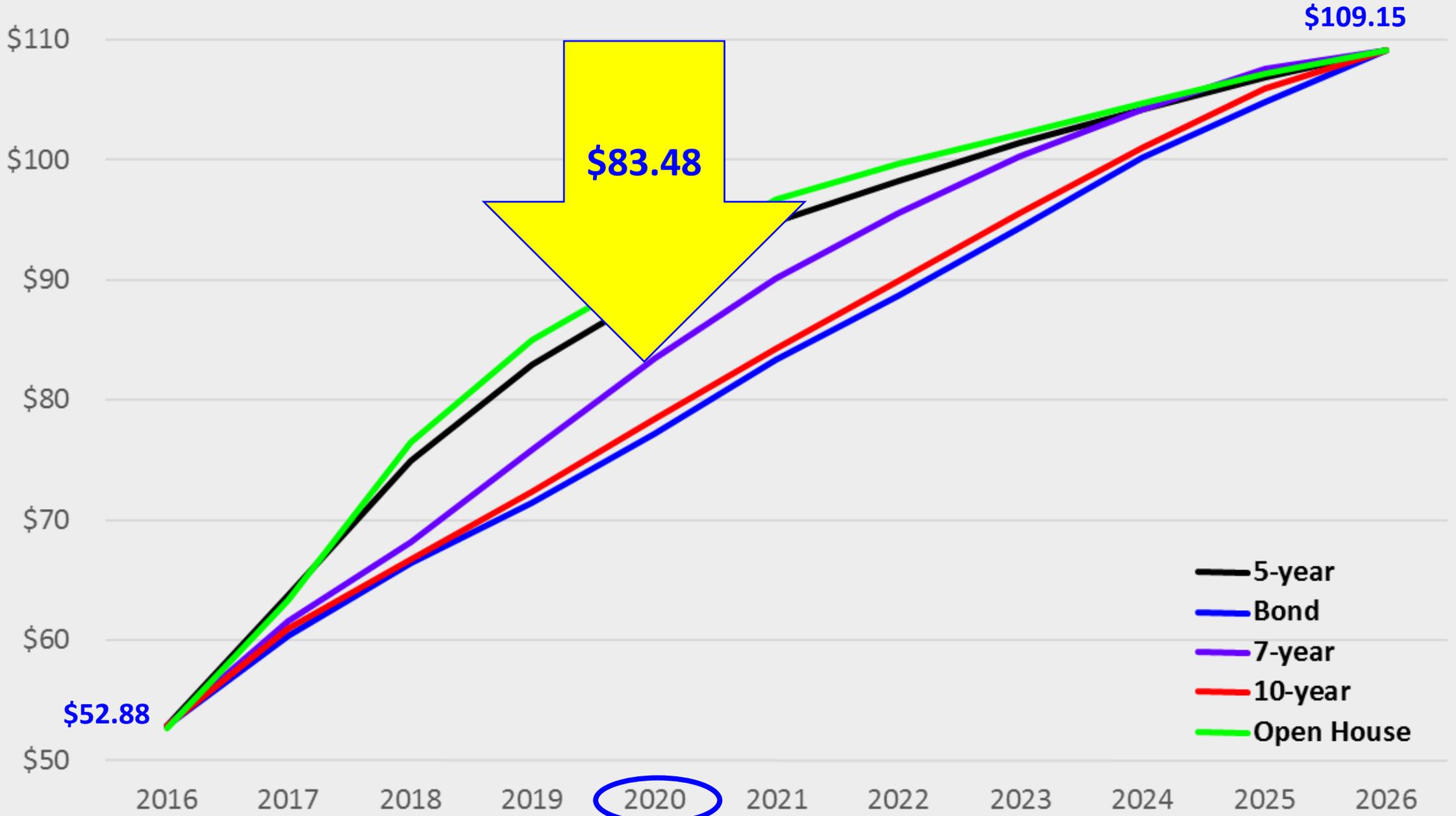
# Total Monthly Bill



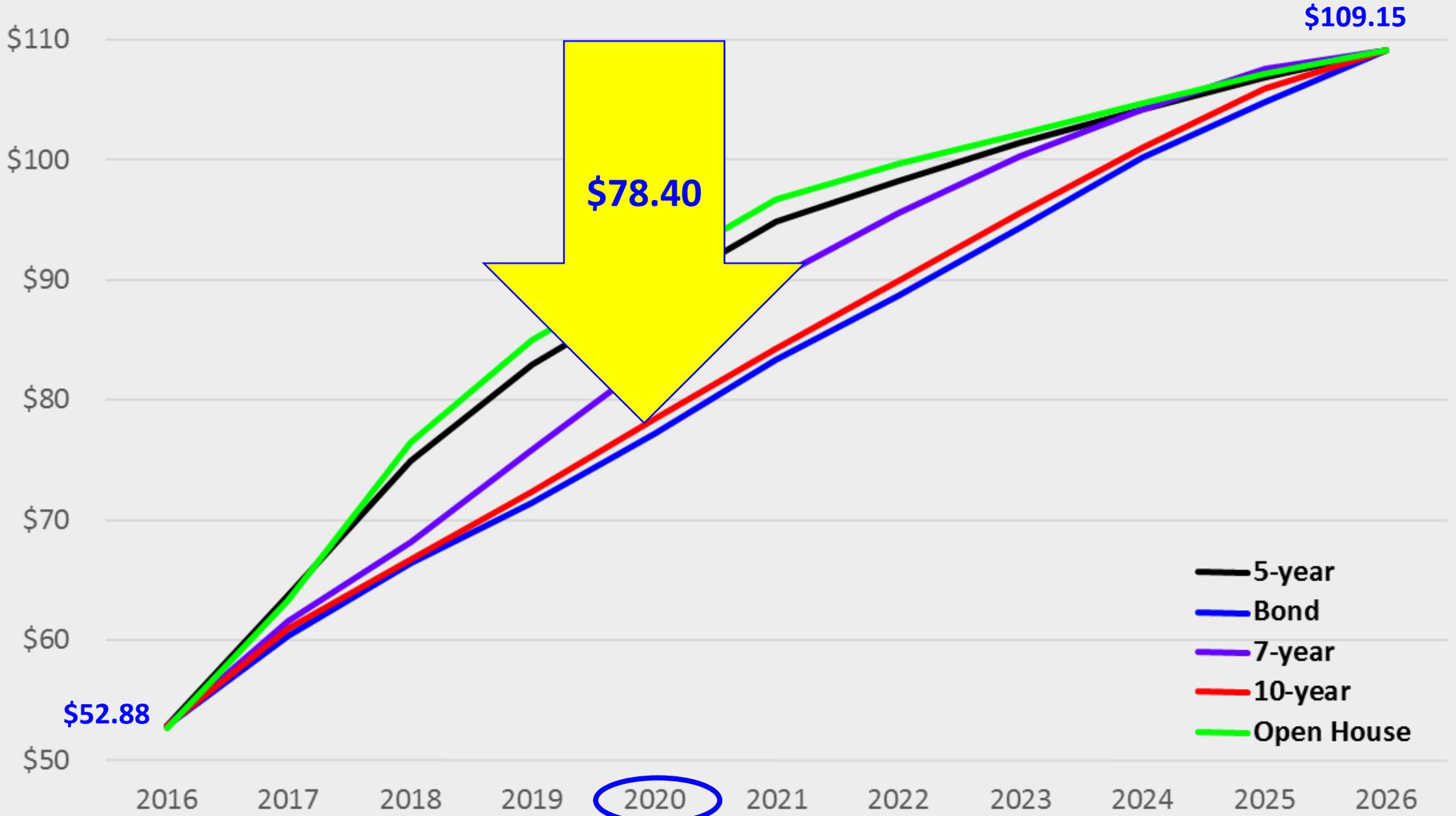
# Total Monthly Bill



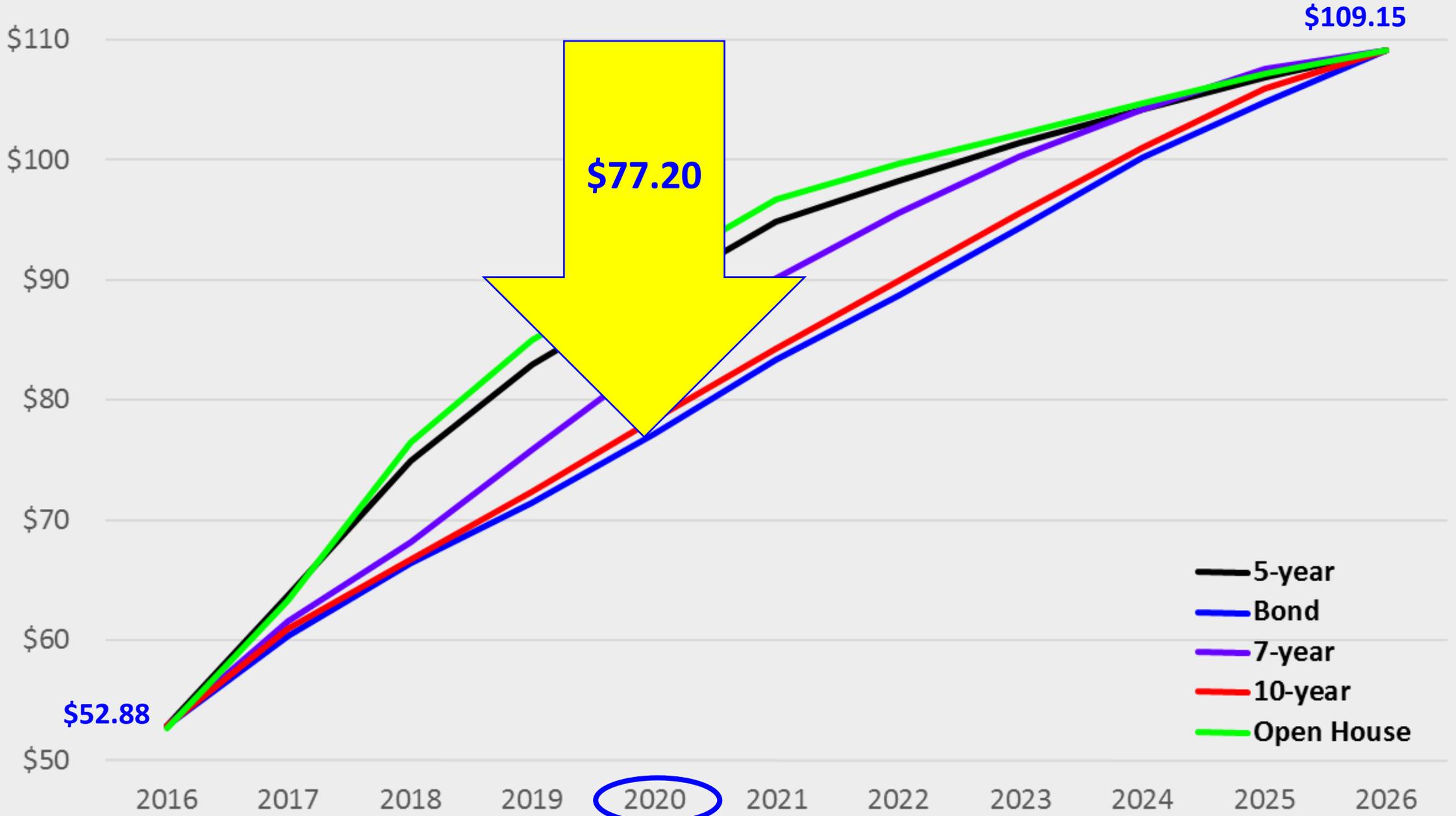
# Total Monthly Bill



# Total Monthly Bill



# Total Monthly Bill



# Water

## Increase In Monthly Bill From Prior Year (Bond)

- **\$2.83 Average**
- **2018 Water Bond**
  - P = \$12.5M
  - Costs = \$6.3M
  - AP = \$943k
- **2021 Water Bond**
  - P = \$12.5M
  - Costs = \$6.3M
  - AP = \$943k

	5-year	Bond	7-year	10-year	Open House
	-	-	-	-	-
	\$9.90	\$6.48	\$8.01	\$7.50	\$7.63
	\$4.97	\$2.10	\$2.66	\$1.92	\$7.49
	\$3.67	\$2.00	\$3.18	\$2.40	\$3.75
	\$1.89	\$2.48	\$2.96	\$2.48	\$1.45
	\$1.90	\$2.97	\$3.16	\$2.57	\$1.78
	\$1.31	\$2.46	\$2.54	\$2.66	\$1.79
	\$1.33	\$2.75	\$1.99	\$2.76	\$1.33
	\$1.35	\$3.01	\$1.99	\$2.63	\$1.35
	\$1.24	\$1.81	\$1.37	\$2.22	\$1.24
	\$0.73	\$2.23	\$0.43	\$1.15	\$0.73

# OREM UTILITY RATE STUDY CULINARY WATER



## DEBT ASSUMPTIONS

	Series 2018	Series 2021
Proceeds	\$12,500,000	\$12,500,000
COI	2.50%	2.50%
Bond Insurance	0.00%	0.00%
DSRF	0.00%	0.00%
DSRF Earnings	0.00%	0.00%
Coupon	4.00%	4.00%

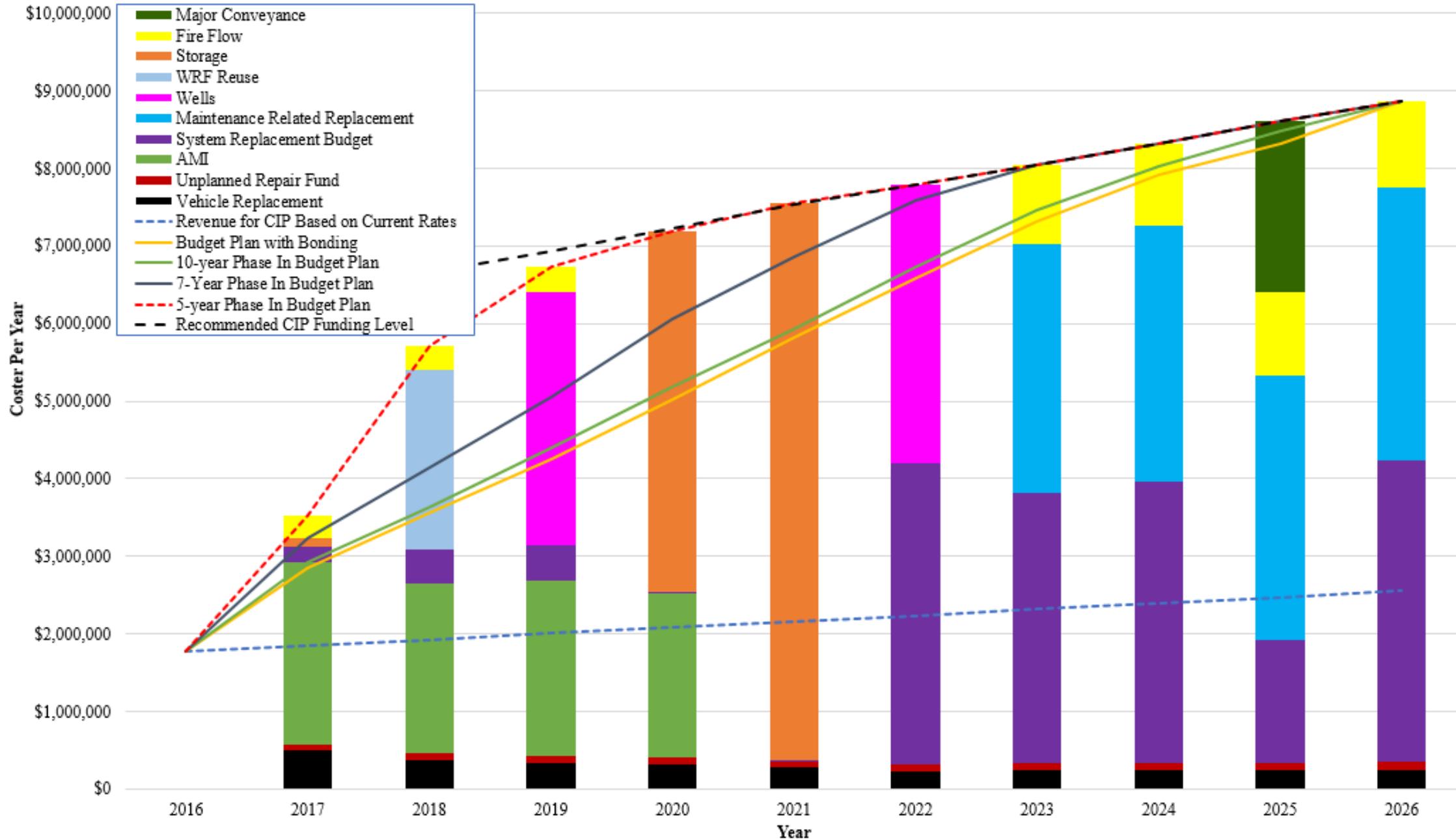
**Proposed Series 2018 Annual Payment = \$942,766**  
**Proposed Series 2021 Annual Payment = \$942,766**

The proposed bonds are based on level debt over 20 years. The proposed Series 2018 would mature in 2037 and the proposed Series 2021 would mature in 2040.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Debt Service</b>										
1994	-	-	-	-	-	-	-	-	-	-
2005A	-	-	-	-	-	-	-	-	-	-
2005B	(174,828)	(174,593)	(174,329)	(174,035)	(174,711)	(174,343)	(173,946)	(174,518)	(174,047)	(174,546)
2008	(338,438)	(335,344)	(258,750)	(307,500)	(329,375)	(330,500)	(331,375)	(332,000)	(332,375)	(332,500)
2010	-	-	-	-	-	-	-	-	-	-
2013 Refunding of 2005A	(901,285)	(902,439)	(951,219)	(918,341)	(901,579)	(900,583)	(900,540)	(902,078)	(901,866)	(902,564)
Proposed: Series 2018	-	(942,766)	(942,766)	(942,766)	(942,766)	(942,766)	(942,766)	(942,766)	(942,766)	(942,766)
Proposed: Series 2021	-	-	-	-	(942,766)	(942,766)	(942,766)	(942,766)	(942,766)	(942,766)
<b>Total DS</b>	<b>(\$1,414,550)</b>	<b>(\$2,355,142)</b>	<b>(\$2,327,064)</b>	<b>(\$2,342,642)</b>	<b>(\$3,291,197)</b>	<b>(\$3,290,958)</b>	<b>(\$3,291,393)</b>	<b>(\$3,294,129)</b>	<b>(\$3,293,821)</b>	<b>(\$3,295,142)</b>

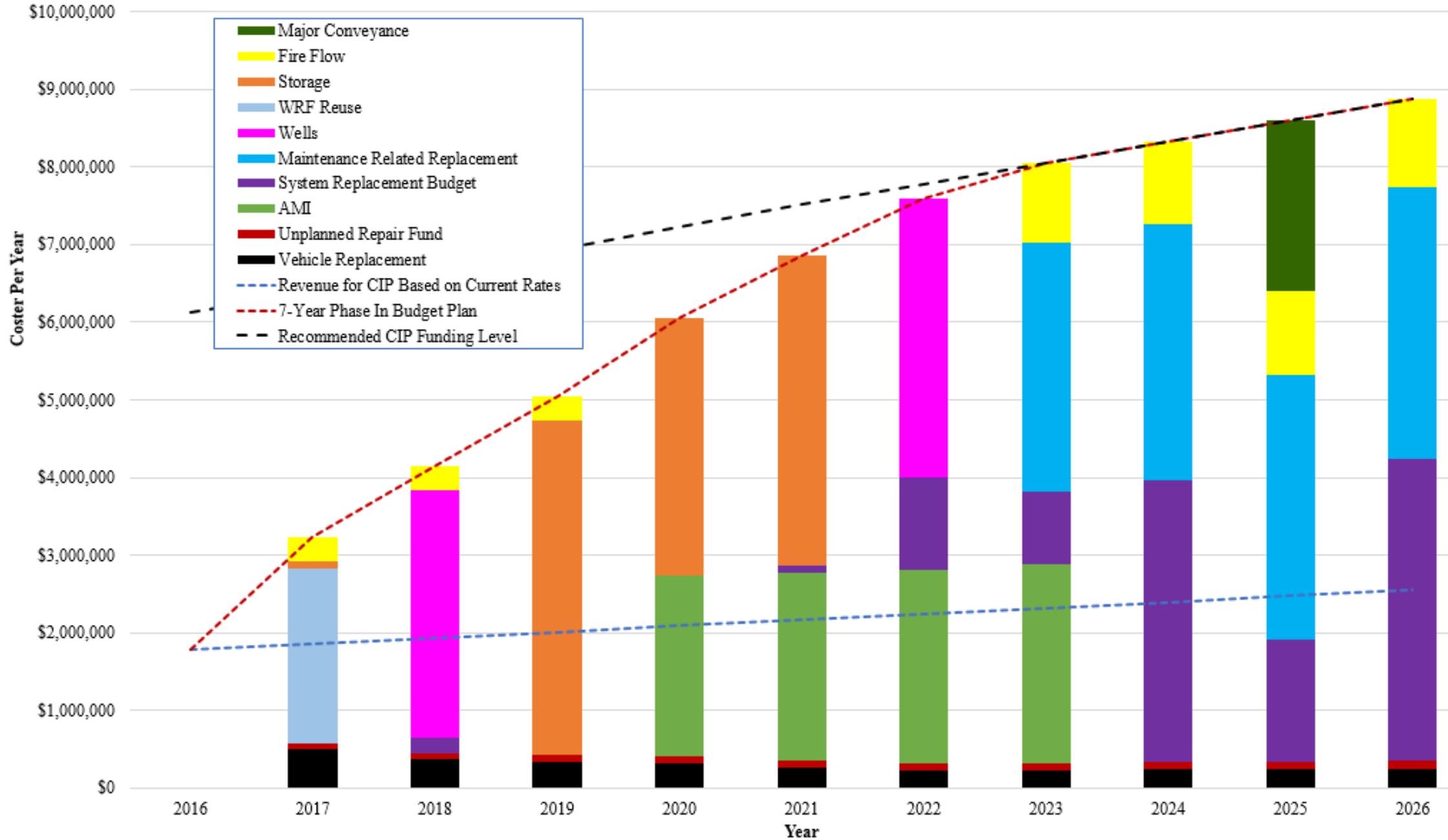
# Water CIP with 5-Year Funding

**Figure 8-1**  
**Recommended Water Fund Expenditures, Scenario 1 - 5-Year Phase In**



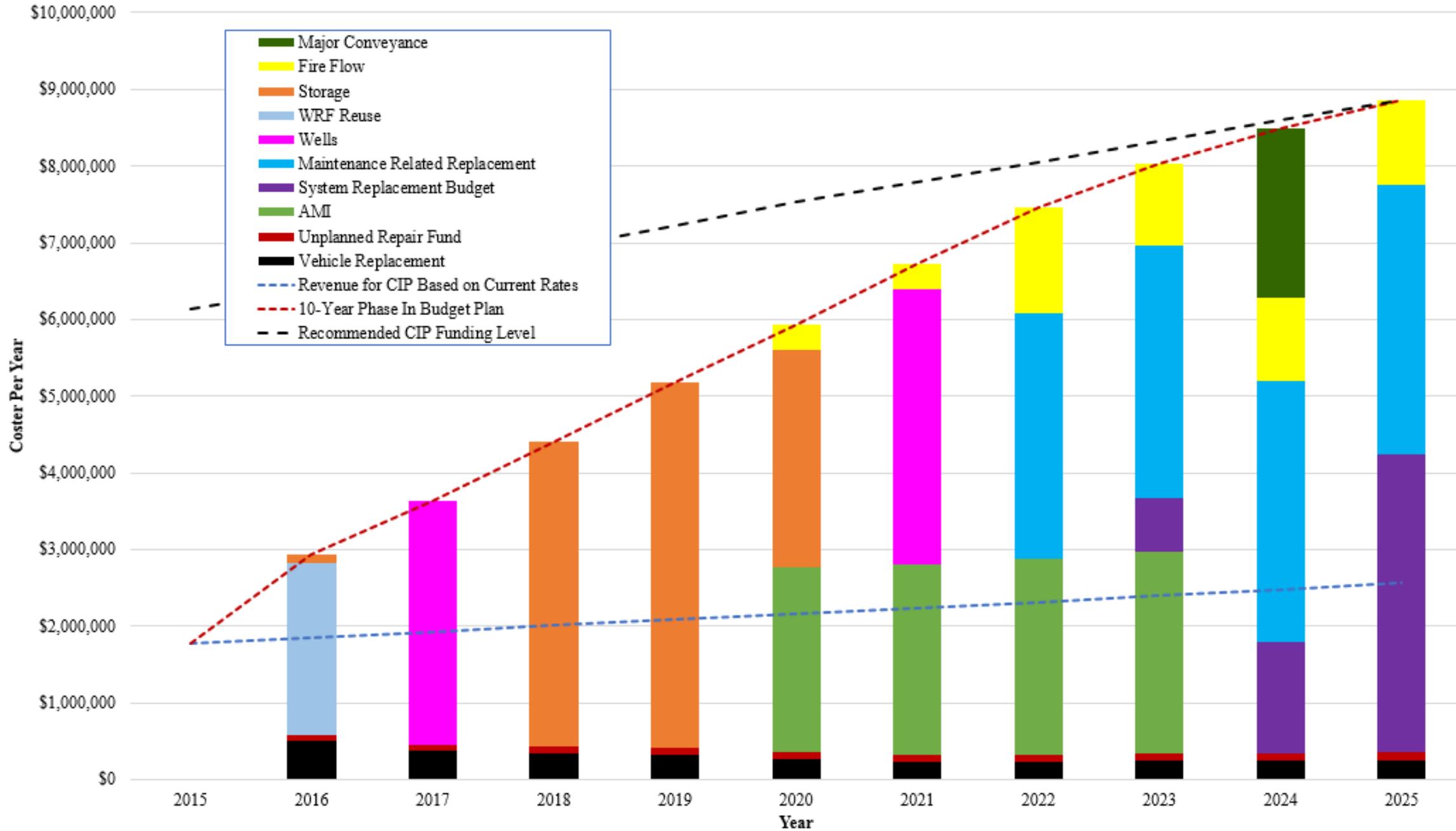
# Water CIP with 7-Year Funding

**Figure 8-2**  
**Recommended Water Fund Expenditures, Scenario 2 - 7-Year Phase In**



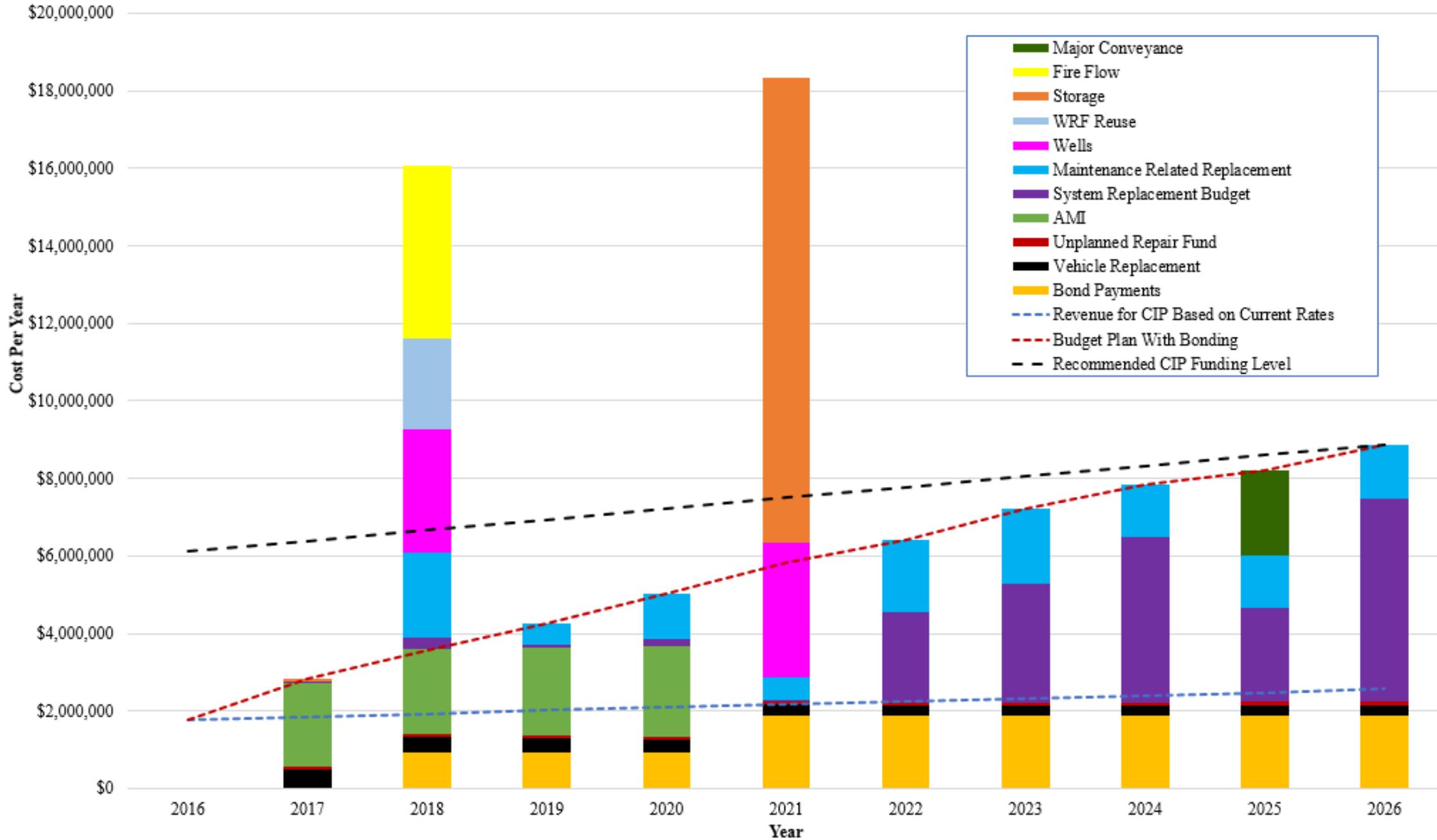
# Water CIP with 10-Year Funding

**Figure 8-3**  
**Recommended Water Fund Expenditures, Scenario 3 - 10-Year Phase In**



# Water CIP with Bonding

**Figure 8-4**  
**Recommended Water Fund Expenditures, Scenario 4 - With Bonding**



# Water Bond Projects

- 2018
  - Fire Flow Deficiencies
  - Water Reuse at Orem Water Reclamation Facility
  - Well #10
  - Maintenance Related System Replacement
- 2021
  - Storage Reservoir
  - Small portion of Well #11

# Sewer

## Increase In Monthly Bill From Prior Year (Bond)

- \$2.46 Average
- 2018 Sewer Bond
  - P = \$4.5M
  - I = \$2.3M
  - AP = \$339K
- 2021 Sewer Bond
  - P = \$7.5M
  - Costs = \$3.8M
  - AP = \$566k

	5-year	Bond	7-year	10-year	Open House
	-	-	-	-	-
	\$0.00	\$0.00	\$0.00	\$0.00	\$1.68
	\$5.68	\$3.44	\$3.44	\$3.44	\$5.29
	\$3.96	\$2.69	\$4.04	\$2.88	\$4.64
	\$3.95	\$3.03	\$4.41	\$3.25	\$4.12
	\$3.73	\$2.97	\$3.23	\$3.01	\$3.92
	\$1.87	\$2.59	\$2.57	\$2.63	\$0.95
	\$1.60	\$2.70	\$2.49	\$2.59	\$0.97
	\$1.24	\$2.64	\$1.73	\$2.51	\$1.00
	\$1.25	\$2.61	\$1.74	\$2.49	\$1.02
	\$1.35	\$1.96	\$0.98	\$1.83	\$1.04

# OREM UTILITY RATE STUDY SANITARY SEWER



## DEBT ASSUMPTIONS

	Series 2018	Series 2021
Proceeds	\$4,500,000	\$7,500,000
COI	2.50%	2.50%
Bond Insurance	0.00%	0.00%
DSRF	0.00%	0.00%
DSRF Earnings	0.00%	0.00%
Coupon	4.00%	4.00%

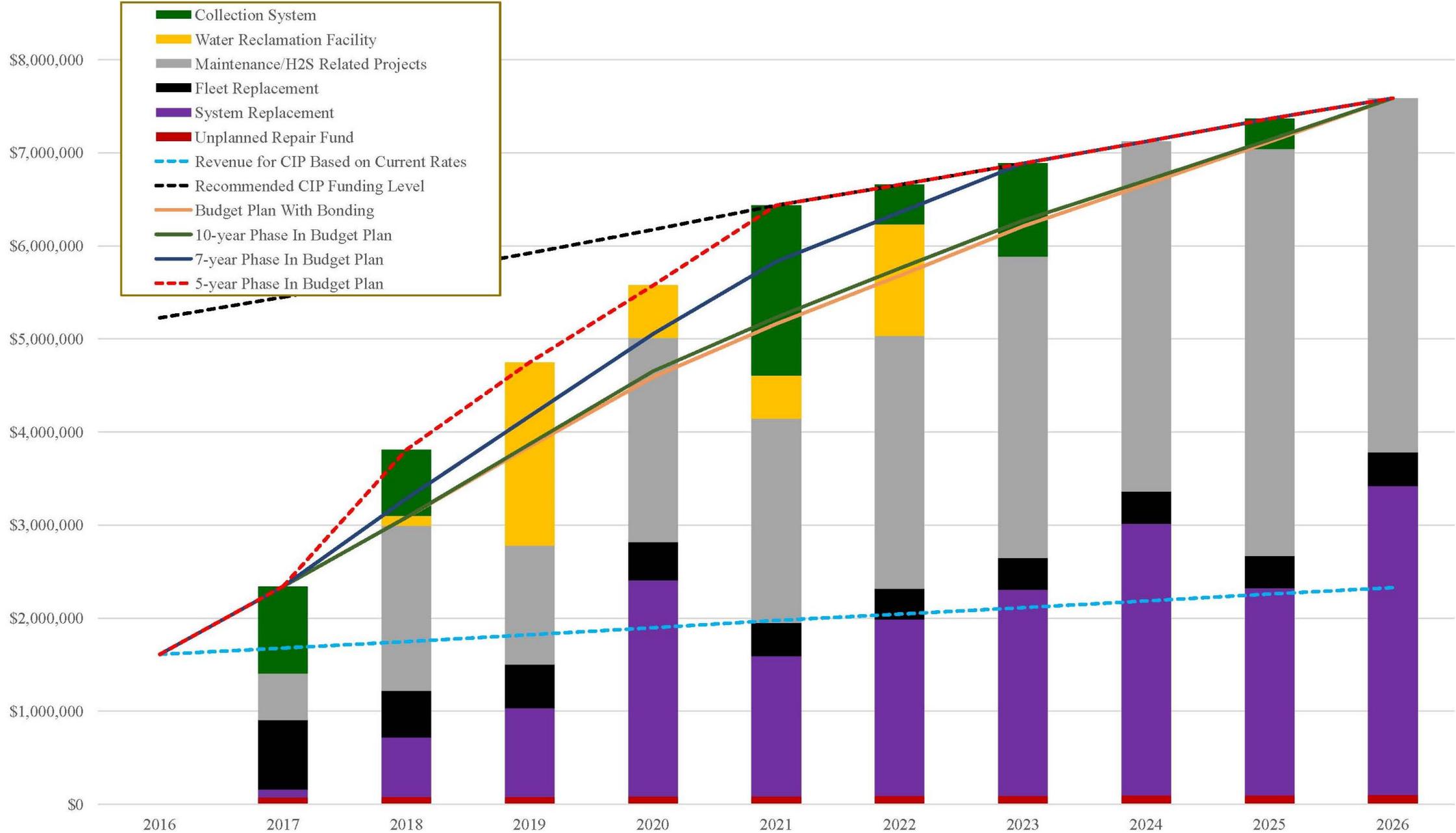
**Proposed Series 2018 Annual Payment = \$339,396**  
**Proposed Series 2021 Annual Payment = \$565,660**

The proposed bonds are based on level debt over 20 years. The proposed Series 2018 would mature in 2037 and the proposed Series 2021 would mature in 2040.

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>Debt Service</b>										
1994	-	-	-	-	-	-	-	-	-	-
2005A	-	-	-	-	-	-	-	-	-	-
2005B	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-
2010	(594,000)	(594,000)	(594,000)	(594,000)	(594,000)	(594,000)	(594,000)	(595,000)	(595,000)	(595,000)
2013 Refunding of 2005A	-	-	-	-	-	-	-	-	-	-
Proposed: Series 2018	-	(339,396)	(339,396)	(339,396)	(339,396)	(339,396)	(339,396)	(339,396)	(339,396)	(339,396)
Proposed: Series 2021	-	-	-	-	(565,660)	(565,660)	(565,660)	(565,660)	(565,660)	(565,660)
<b>Total DS</b>	<b>(\$594,000)</b>	<b>(\$933,396)</b>	<b>(\$933,396)</b>	<b>(\$933,396)</b>	<b>(\$1,499,056)</b>	<b>(\$1,499,056)</b>	<b>(\$1,499,056)</b>	<b>(\$1,500,056)</b>	<b>(\$1,500,056)</b>	<b>(\$1,500,056)</b>

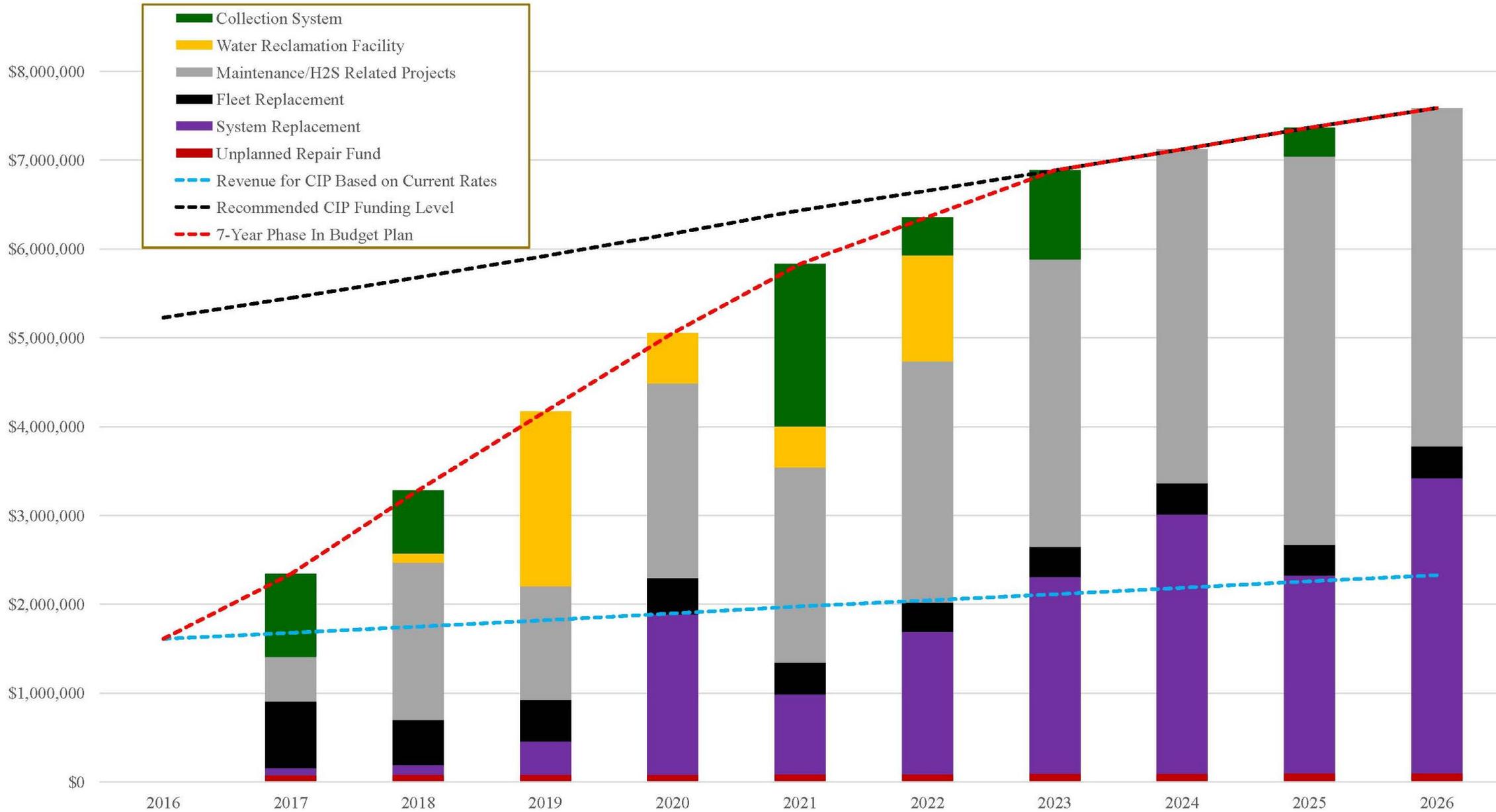
# Sewer CIP with 5-Year Funding

Figure 7-4  
Recommended Sewer Fund Expenditures, Scenario 1 - 5-year Phase In Plan



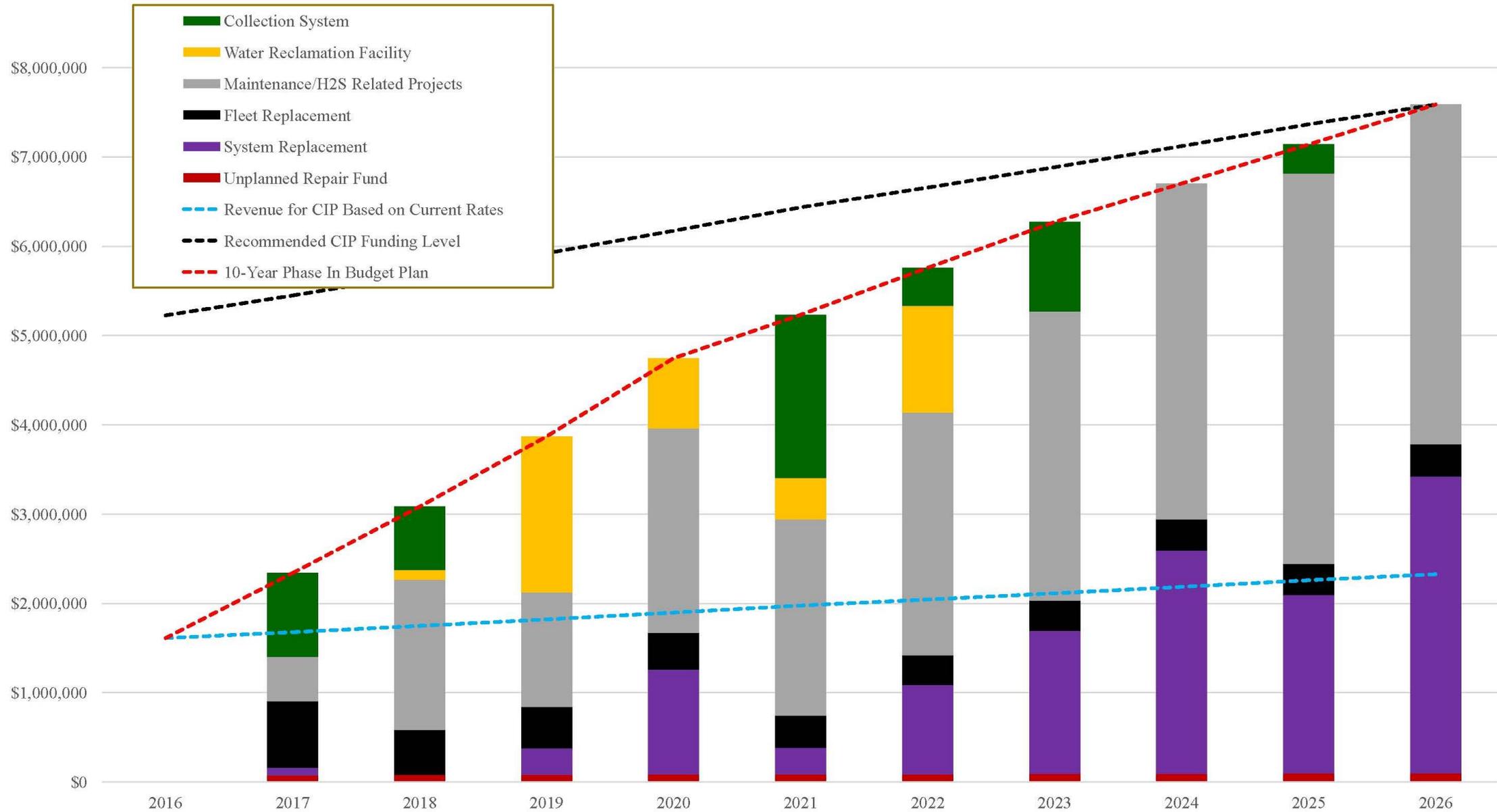
# Sewer CIP with 7-Year Funding

Figure 7-5  
Recommended Sewer Fund Expenditures, Scenario 2 - 7-year Phase In Plan



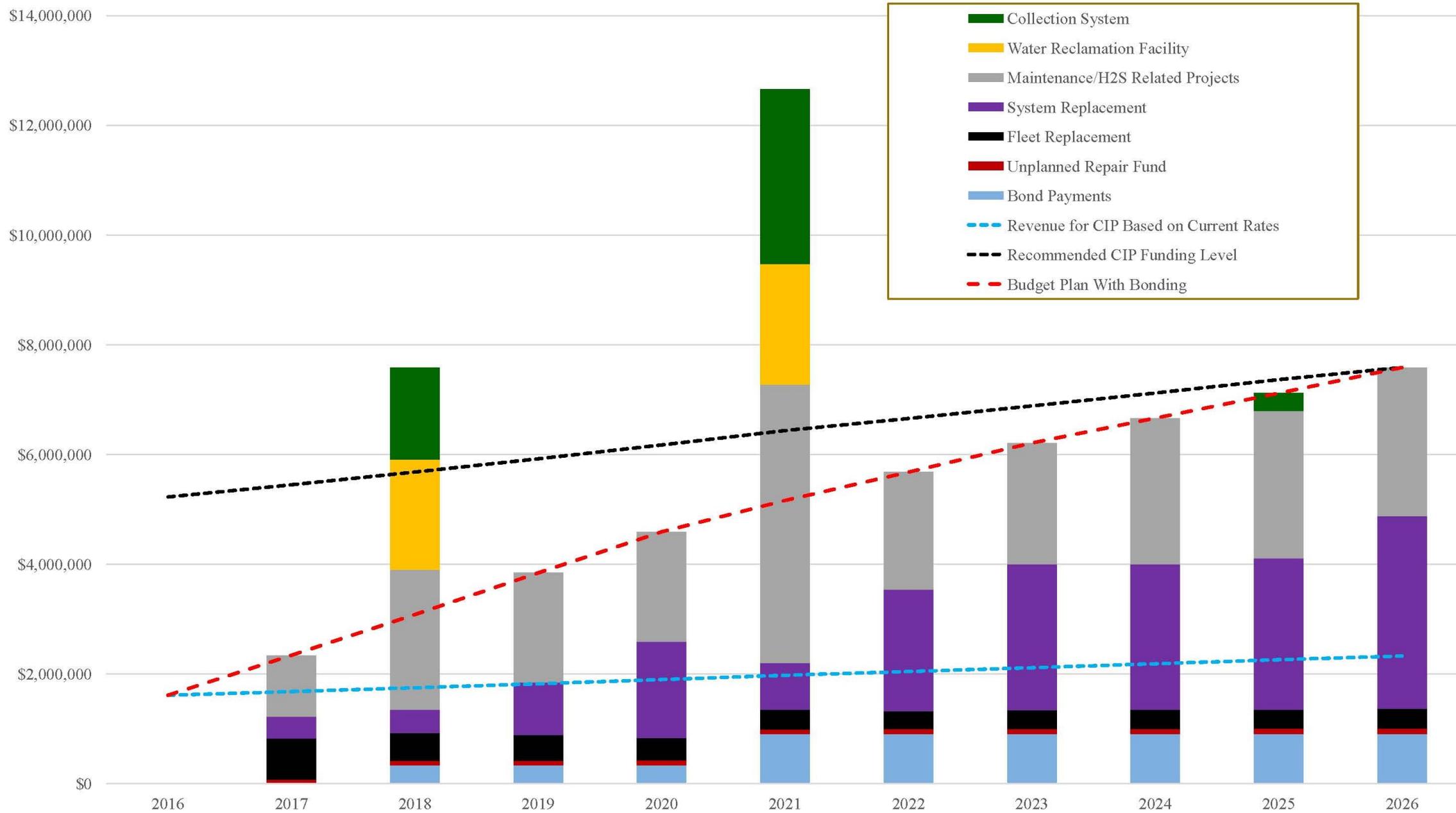
# Sewer CIP with 10-Year Funding

Figure 7-6  
Recommended Sewer Fund Expenditures, Scenario 3 - 10-year Phase In Plan



# Sewer CIP Bonding

Figure 7-7  
Recommended Sewer Fund Expenditures, Scenario 4 - With Bonding



# Sewer Bond Projects

- 2018
  - Collection System - Routine Maintenance Elimination
  - Water Reclamation Facility - Struvite
  - System Replacement/H<sub>2</sub>S Related Projects
- 2021
  - Collection System - Routine Maintenance Elimination
  - Water Reclamation Facility - Aeration Basin Expansion/Belt Press
  - System Replacement/H<sub>2</sub>S Related Projects

# Storm Water

Increase In Monthly Bill  
From Prior Year (5-year)

- \$0.34 Average
- No Bonding Required

5-year	Bond	7-year	10-year	Open House
-	-	-	-	-
\$1.00	\$1.00	\$0.70	\$0.60	\$1.37
\$0.50	\$0.50	\$0.45	\$0.40	\$0.33
\$0.35	\$0.35	\$0.45	\$0.35	\$0.21
\$0.25	\$0.25	\$0.30	\$0.30	\$0.21
\$0.25	\$0.25	\$0.30	\$0.30	\$0.23
\$0.20	\$0.20	\$0.30	\$0.30	\$0.20
\$0.20	\$0.20	\$0.25	\$0.30	\$0.20
\$0.20	\$0.20	\$0.20	\$0.30	\$0.20
\$0.20	\$0.20	\$0.20	\$0.30	\$0.20
\$0.20	\$0.20	\$0.20	\$0.20	\$0.20

# All Three

## Increase In Monthly Bill From Prior Year

- \$5.63 Average
- 2018 Bond
  - P = \$17.0M
  - Costs = \$8.6M
  - AP = 1.3M
- 2021 Bond
  - P = \$20.0M
  - Costs = \$10.1M
  - AP = 1.5M

5-year	Bond	7-year	10-year	Open House
-	-	-	-	-
\$10.90	\$7.48	\$8.71	\$8.10	\$10.68
\$11.15	\$6.04	\$6.55	\$5.76	\$13.11
\$7.98	\$5.04	\$7.67	\$5.63	\$8.60
\$6.09	\$5.76	\$7.67	\$6.03	\$5.78
\$5.88	\$6.19	\$6.69	\$5.88	\$5.93
\$3.38	\$5.25	\$5.41	\$5.59	\$2.94
\$3.13	\$5.65	\$4.73	\$5.65	\$2.50
\$2.79	\$5.85	\$3.92	\$5.44	\$2.55
\$2.69	\$4.62	\$3.31	\$5.01	\$2.46
\$2.28	\$4.39	\$1.61	\$3.18	\$1.97

# Upcoming Master Plan Meetings

- February 23 City Council
  - Work Session
    - Draft Sewer Master Plan
  - Regular Meeting
    - Quarterly Budget Amendment
    - Storm Water Fee Adoption of Preferred Rate Plan
      - (Currently at \$5.25/ESU; Proposed at \$6.25/ESU)
- March 8 City Council
  - Adopt Sewer Master Plan and Express Support for Preferred Rate Plan
- April 12 City Council
  - Draft Water Master Plan
- April 26 City Council
  - Adopt Water Master Plan, New Rates, and Express Preferred Rate Plan

Thoughts?