Madison Water Utility - Update on Water Rate Case

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Rate Case Process

- *Rate Application*
  - Information is used to determine Revenue Requirements – how much can the Utility collect for various costs?
- Cost of Service Study
- Rate Design

Cash Flow Analysis

- Long-term look at cash flow:
  - 5 years of historical data – 2013-2017
  - 25 years of forecasts – 2018-2043
  - Incorporated the Utility's CIP and estimated ongoing capital investment needs beyond the CIP
  - Evaluated alternative financing plans
- Objectives:
  - Evaluate recent trends in Utility financial status
  - Evaluate the 2018 rate increase and capital financing plan
  - Forecast future cash flow needs
  - Forecast future rate increases

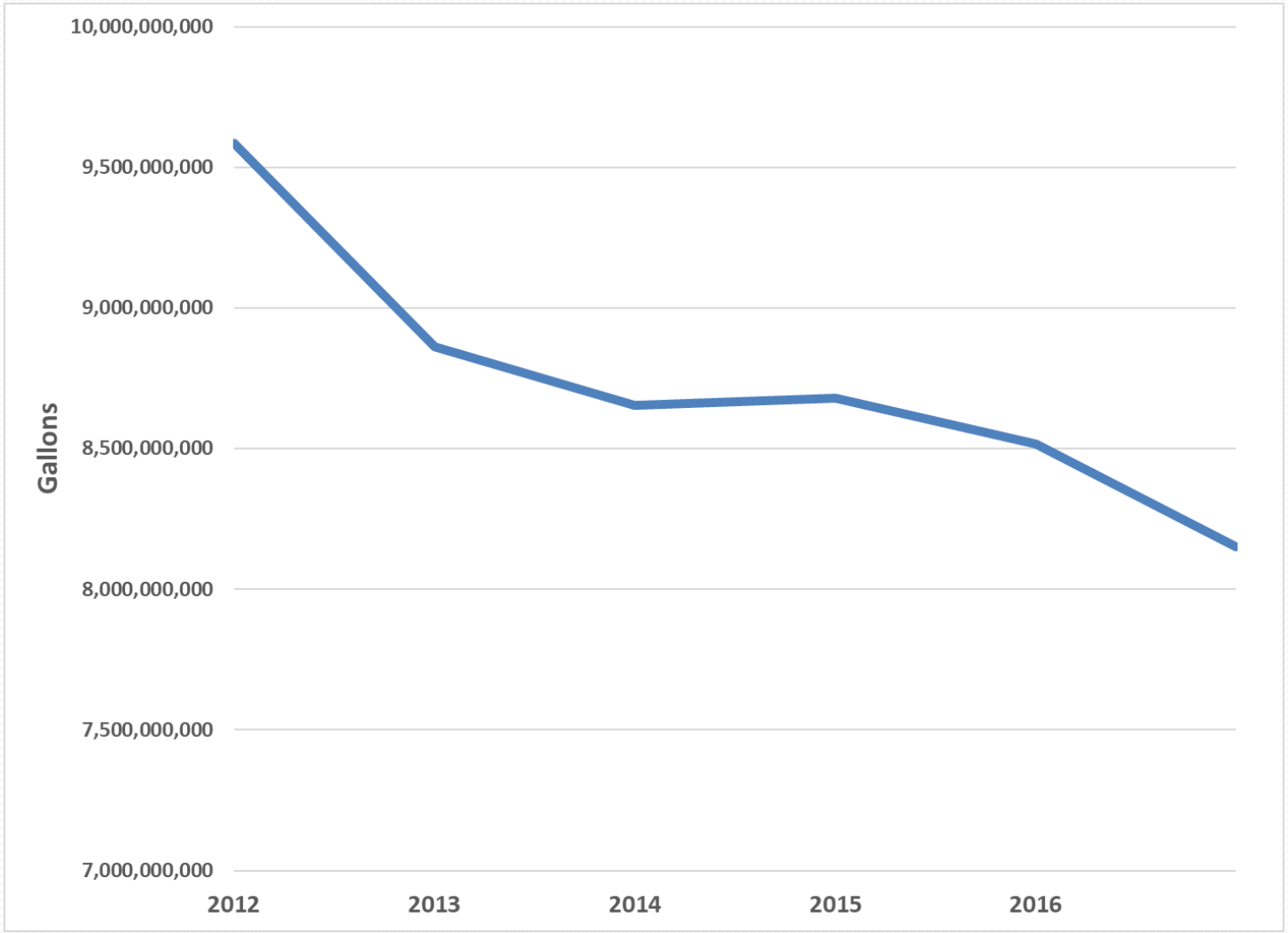
Financial Indicators

- Cash flow – positive or negative?
- Reserve levels – does the Utility have required debt reserves, operating reserves to cover fluctuations in revenues or expenses, and capital reserves to cover unexpected repairs or replacements?
- Return on Net Investment Rate Base – what rate of return is the Utility projected to generate?
- Debt coverage – is the Utility generating sufficient cash to cover O&M expenses, taxes, debt service, and an additional 25% coverage for revenue debt?
- Debt to equity ratio – what is the Utility's outstanding debt as a percentage of utility assets?

Recent Trends in Financial Status

- Cash flow has been decreasing; expected to be substantially negative in 2017 and 2018 (even with a rate increase)
- Reserve levels have been decreasing
- Return on net investment rate base has fluctuated between 1.26% and 5.77% in recent years
- Debt coverage has been less than 125% at times
- Debt as a percentage of utility plant has decreased but is still high at almost 88%

Water Sales


10,000,000,000
9,500,000,000
9,000,000,000
8,500,000,000
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7,500,000,000
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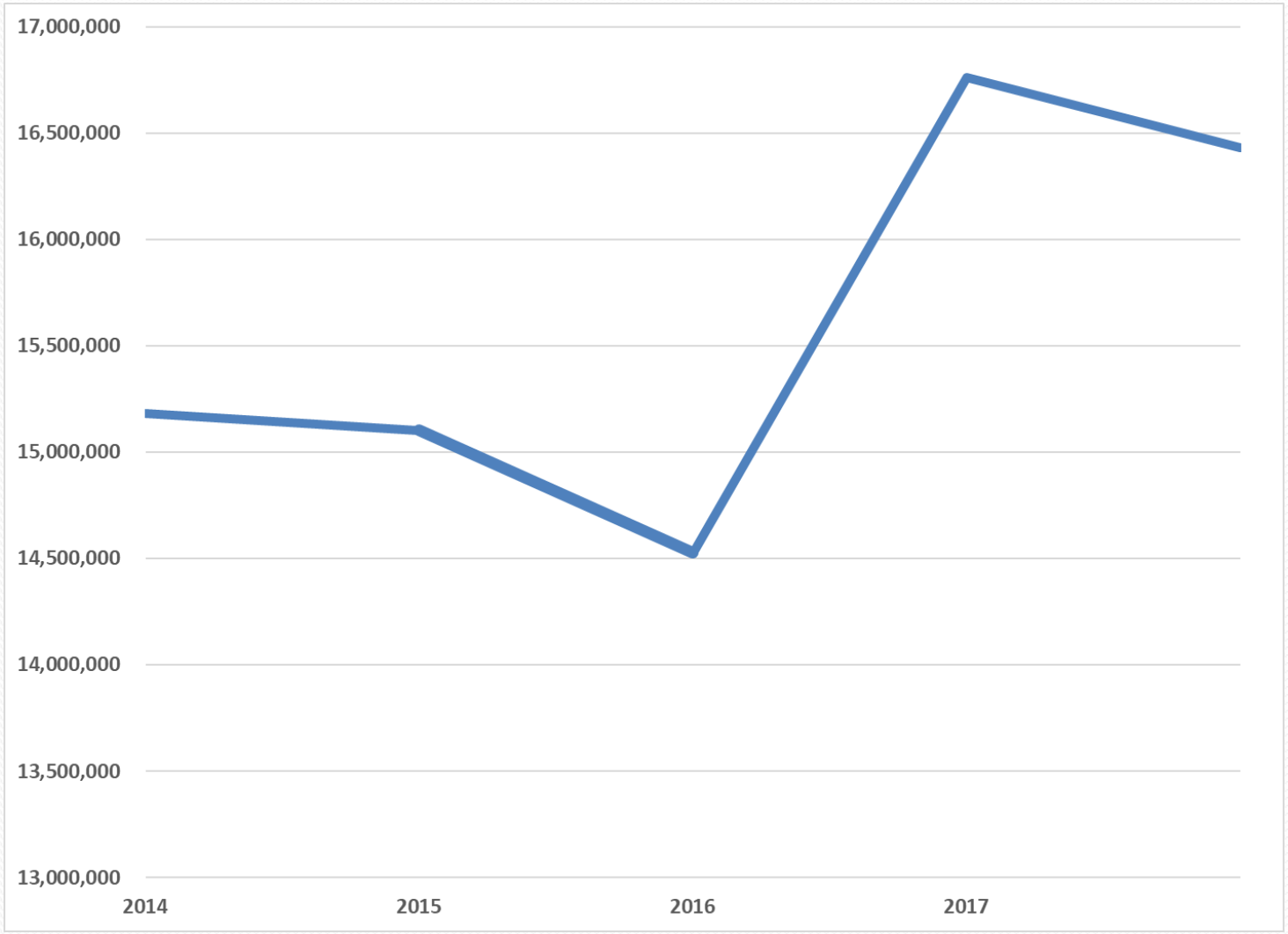
Gallons
2012
2013
2014
2015
2016

O&M Expenses


17,000,000
16,500,000
16,000,000
15,500,000
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14,500,000
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13,500,000
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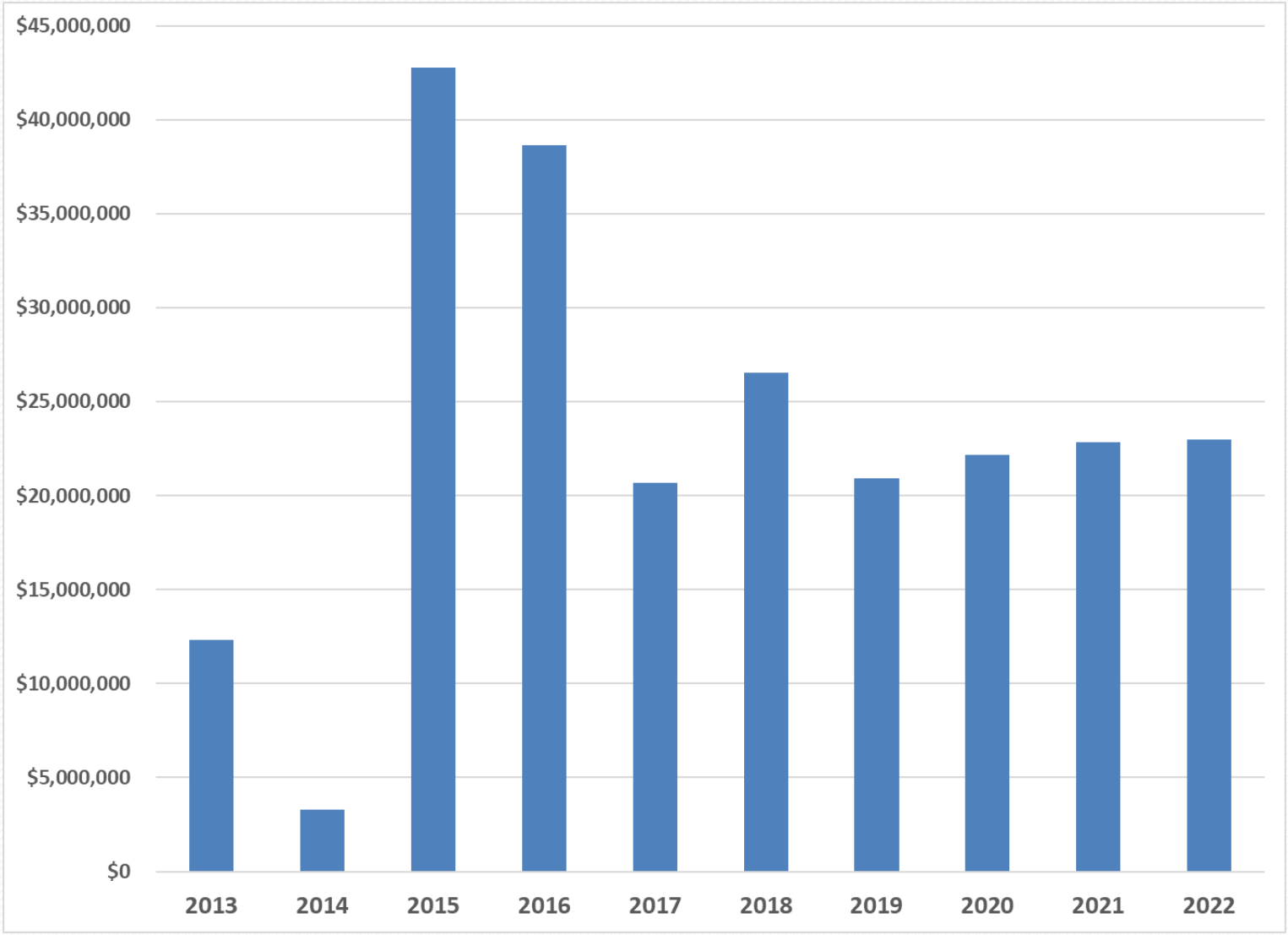
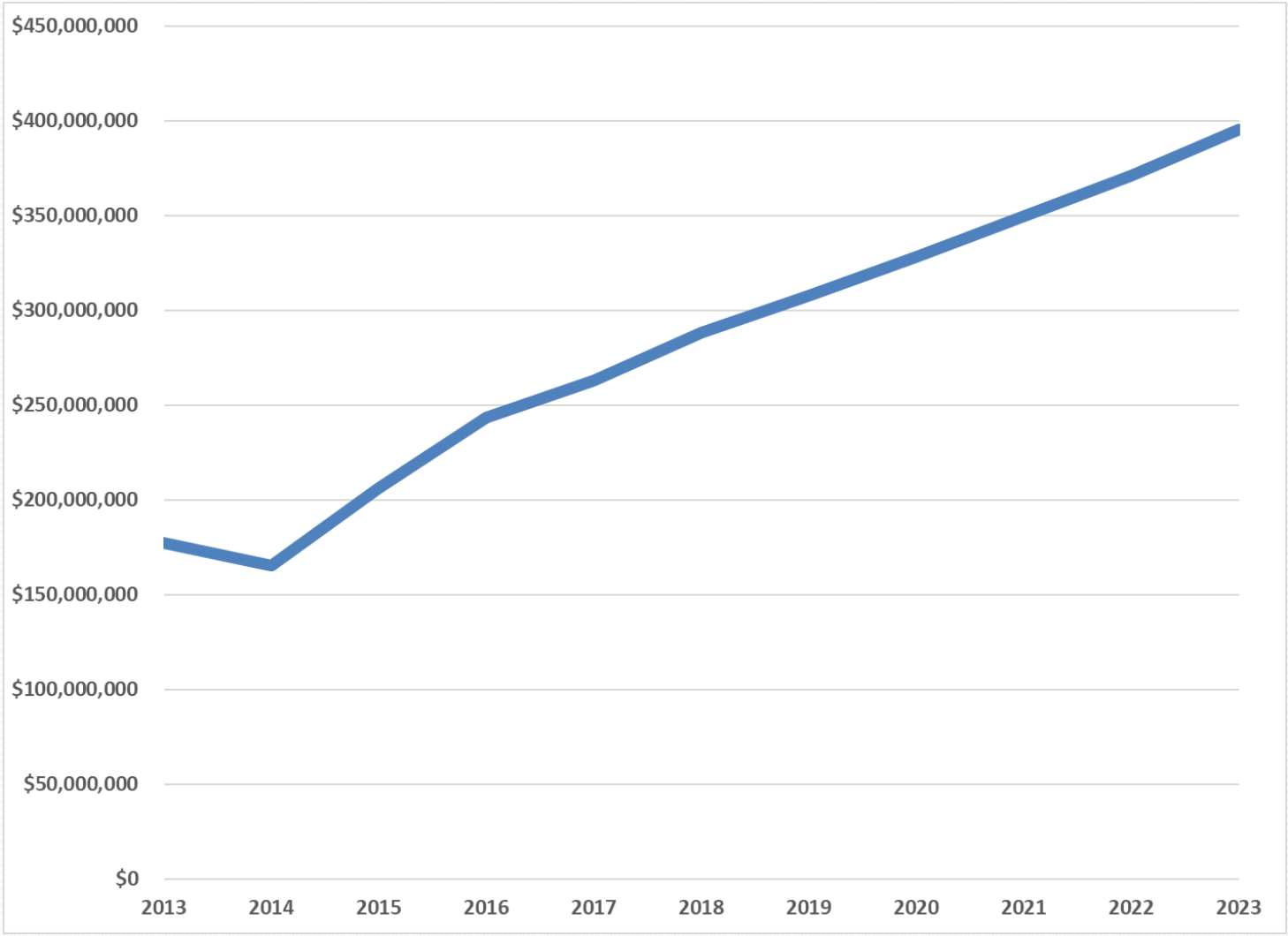
2014
2015
2016
2017

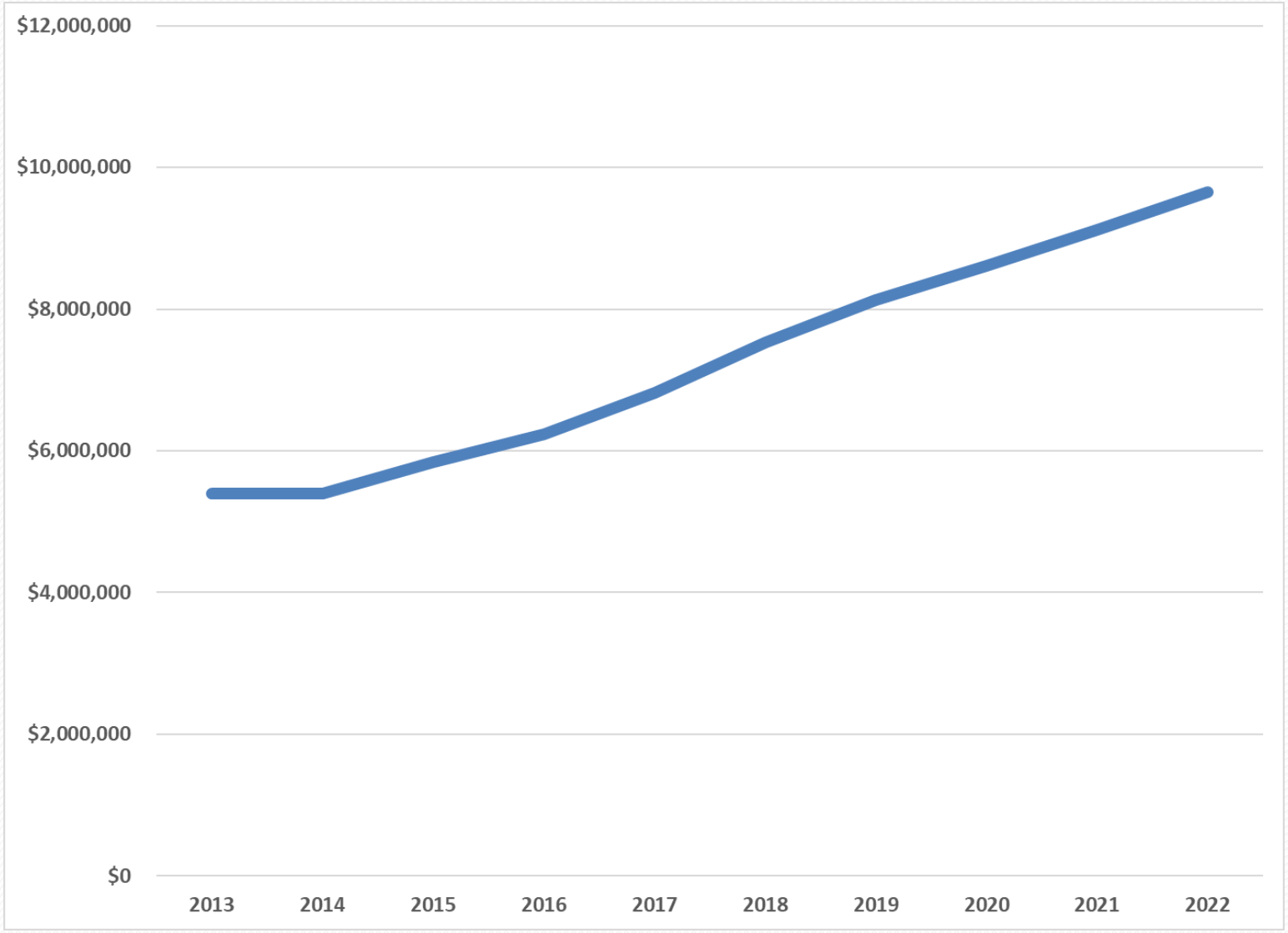
Capital Investment per Year



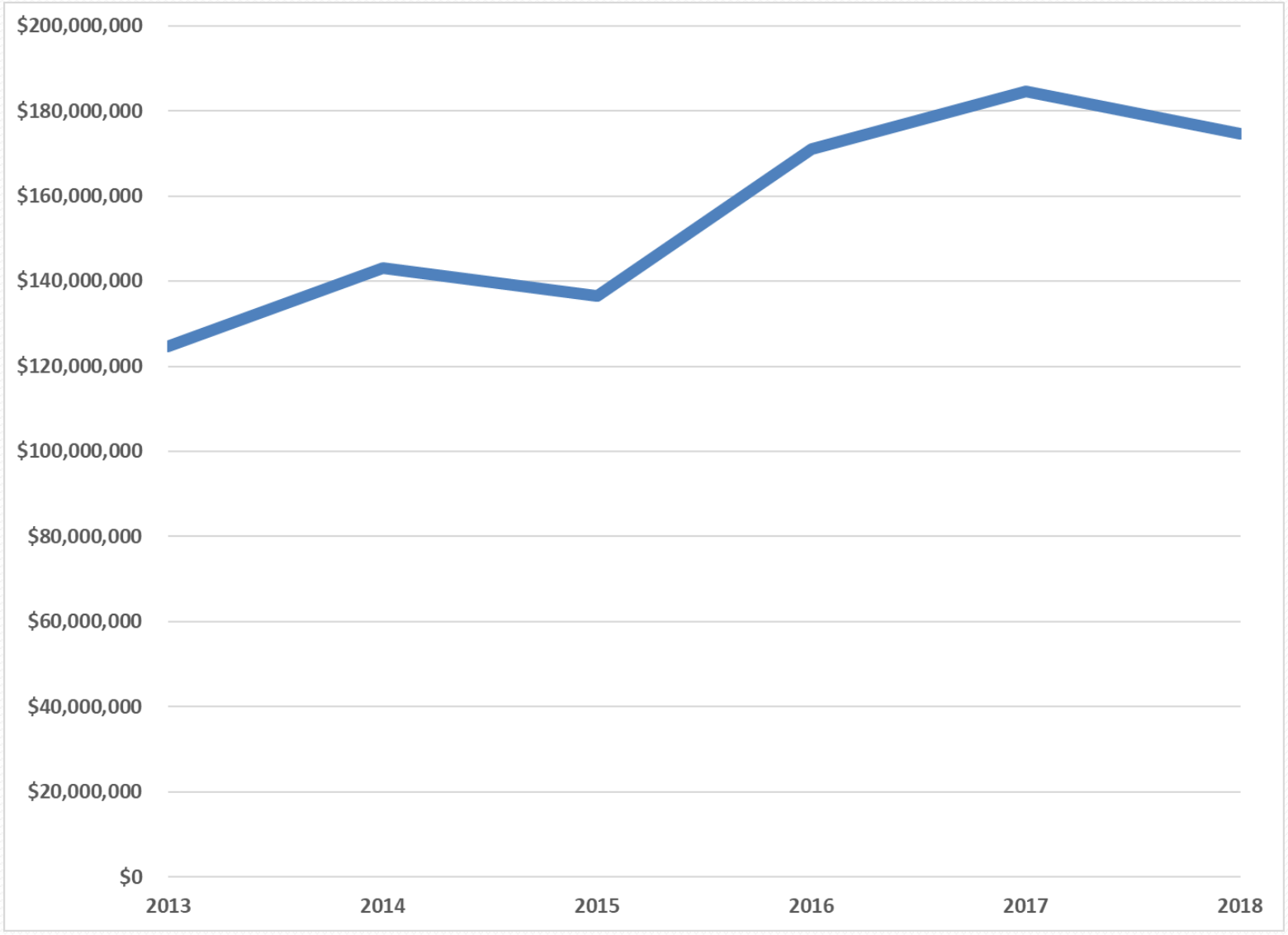
Utility Plant in Service



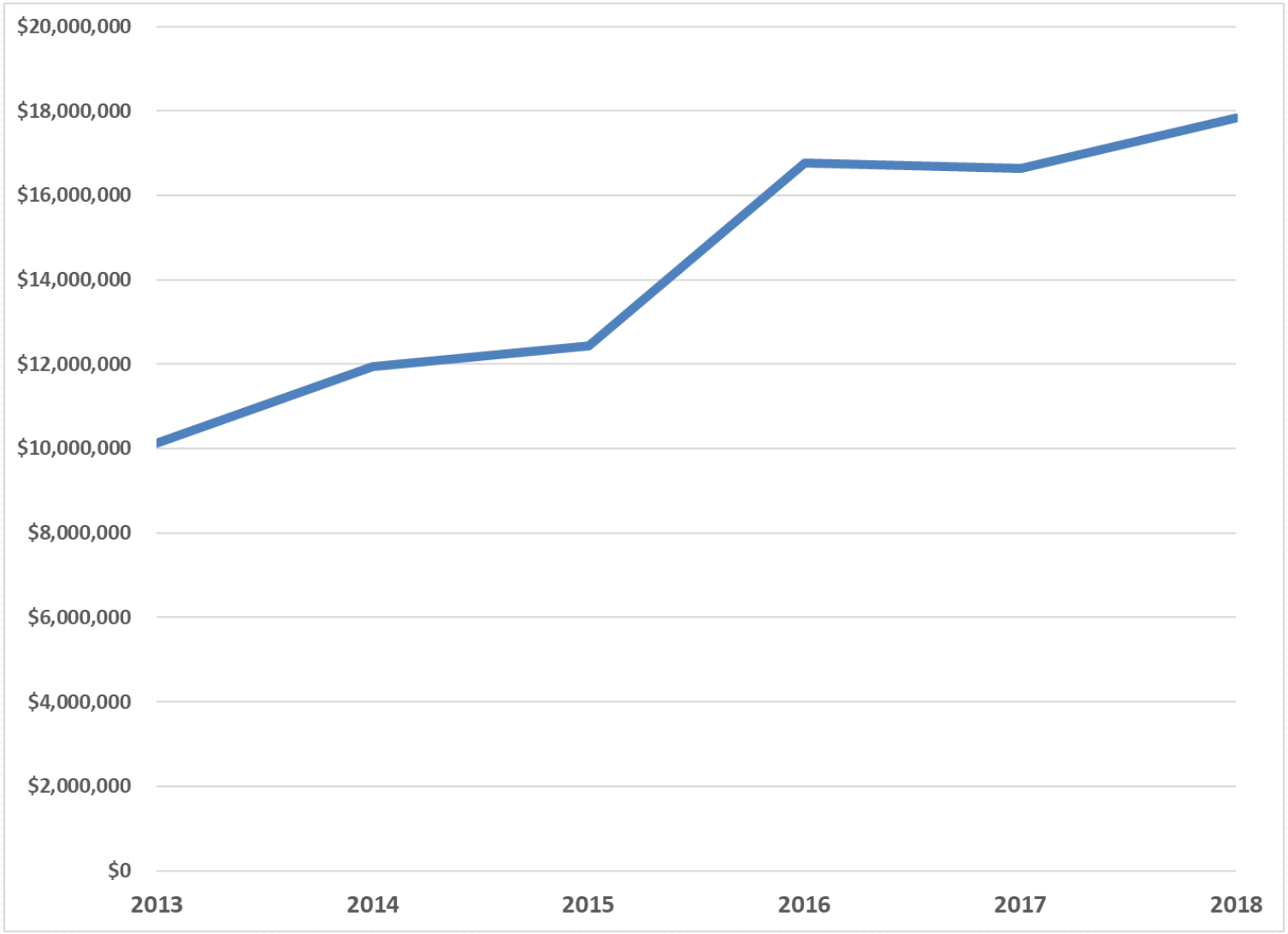
PILOT Payments



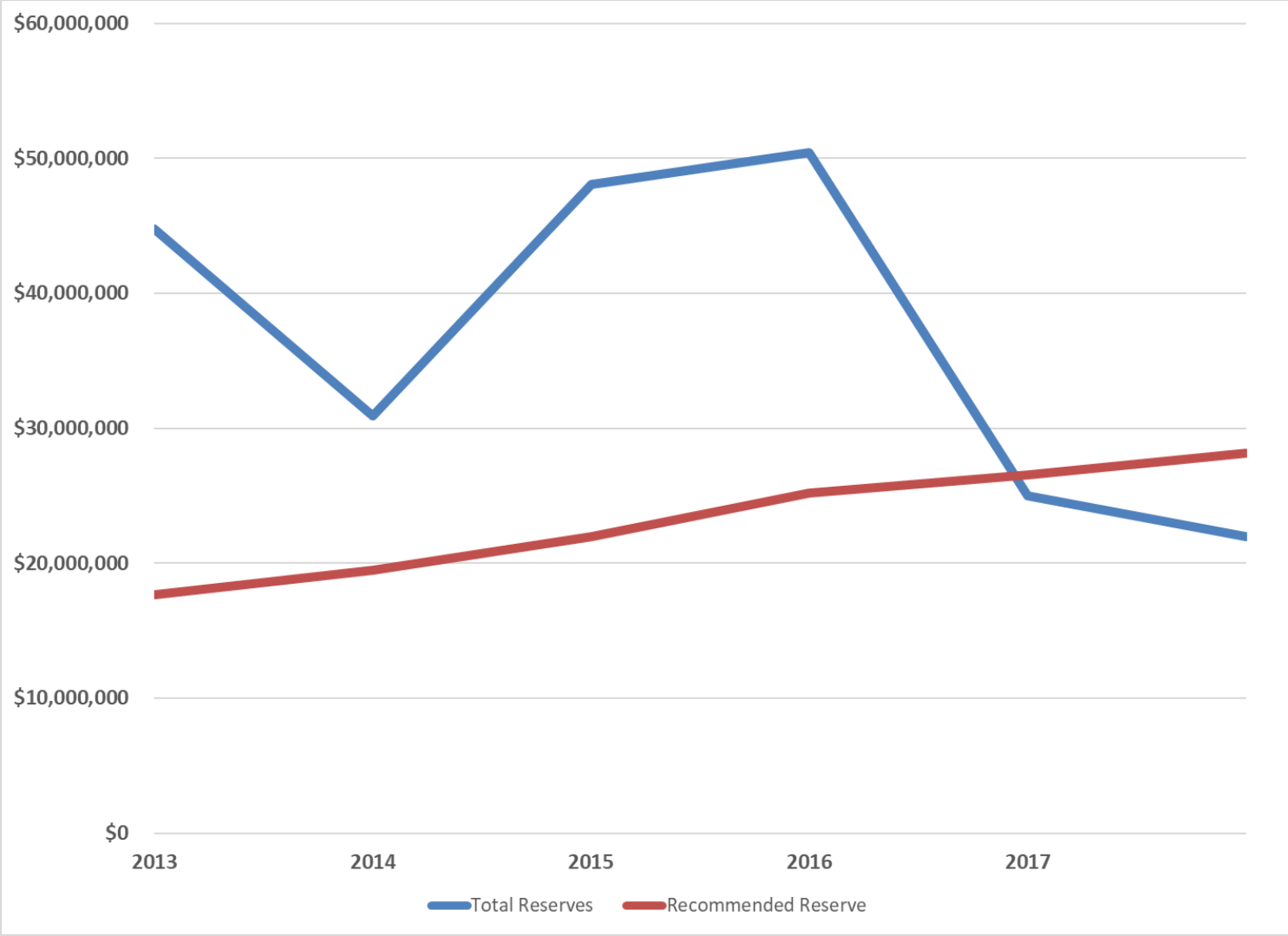
Outstanding Debt, Beginning of Year



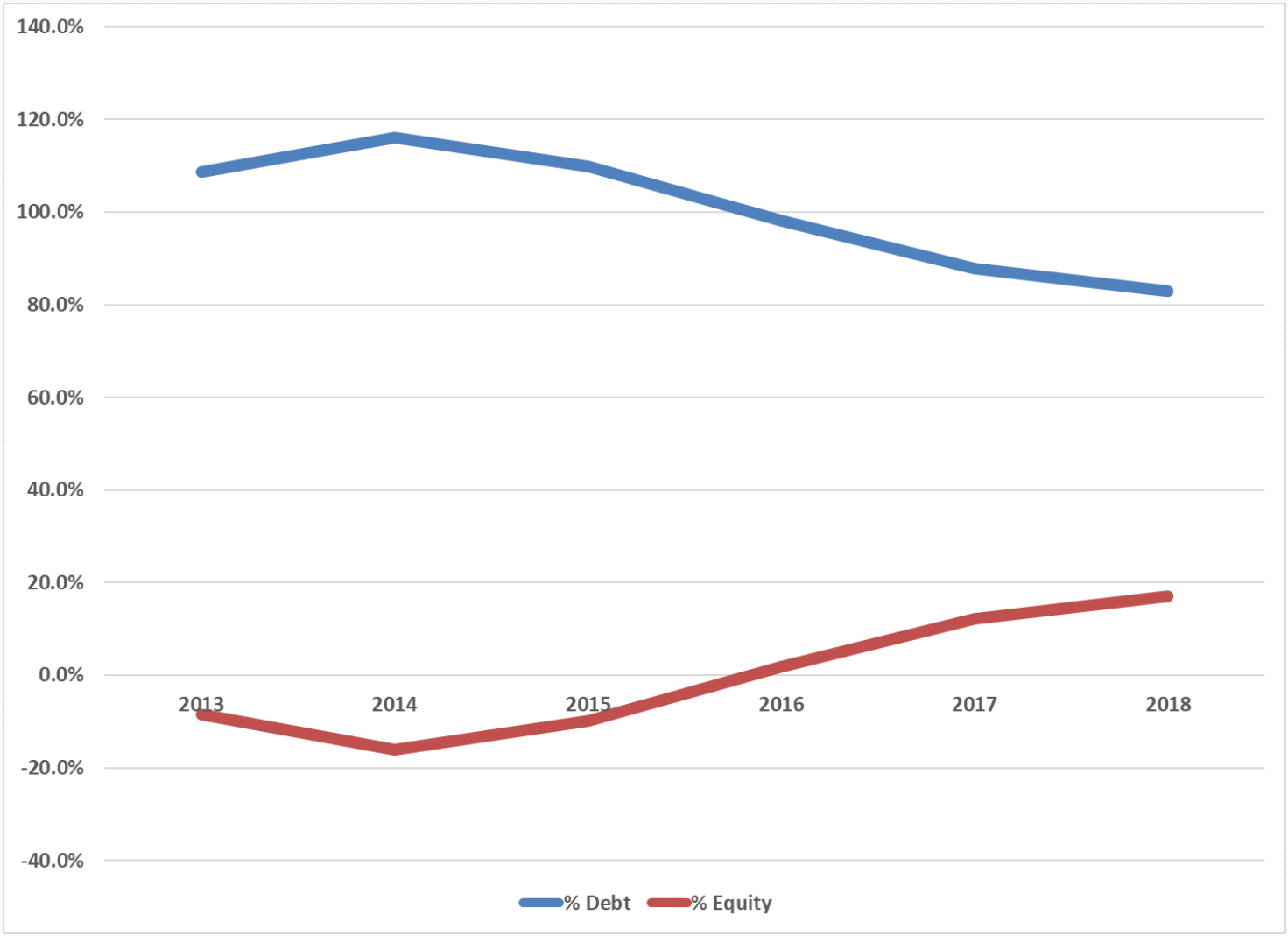
Annual Debt Service



Actual and Recommended Reserves



Debt and Equity as a Percentage of Utility Plant in Service



2018 Forecast

- 2018 Cash flow needs:
  - O&M and Taxes: $24,130,000
  - Debt service: $17,800,000
  - Capital improvements: $23,000,000
  - Less Borrowing: -$18,000,000
  - Net: $46,930,000

Revenue Requirements - Public Service Commission Rules

- Costs that can be recovered through rates:
  - Operation & Maintenance Expenses
  - Taxes and PILOT
  - Depreciation Expense
  - Return on Net Investment Rate Base
    - NIRB = Utility-financed asset book value, less accumulated depreciation
    - The current benchmark rate of return is 5.00%
- Based on a single 'Test Year'
- Estimated at $41,541,000 total for the 2018 Test Year
  - $24,130,000 for O&M and taxes
  - $17,411,000 for depreciation and return on investment

Key Issues and Recommendations

- The Utility has been financing most of its substantial capital improvement program with debt
- Increasing debt service payments require higher user charge rates:
  - Higher revenues required to meet debt coverage
  - Higher minimum reserve levels are required
  - Interest payments consume more utility revenues
- The Utility has limited cash reserves to use for financing improvements
- With Standard PSC revenue requirements the Utility would have to continue to borrow for its entire CIP

Key Issues and Recommendations

- The PSC recently allowed the Marshfield Water Utility to use accelerated depreciation on mains as an additional revenue source to cash finance main replacements
  - Up to the cost of replacing 1% of water mains per year
  - Must be used to cash finance main replacements
- Recommend that Madison Water Utility request a similar allowance
  - Start at $2.0 million per year
  - Gradually increase to $10.0 million per year
  - Rate increases of 25.5% in 2018, 18% in 2020, 13.5% in 2022 would allow the Utility to increase cash financing and keep annual rate increases <10%
  - Rate increases may change due to other factors such as increased expenses or decreased sales

Forecast Cash Flows and Reserves: 2018-2023