# King County Wastewater Treatment Division's 2022 Sewer Rate Proposal and 10-Year Sewer Rate Plan (2022-2031)

## Background

- The 2021-2030 adopted sewer rate plan included a one-year 4.5% rate increase in 2021 and as a placeholder, no rate increase in 2022.

| Adopted ORD 19106 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|
| Rate Increase % | 4.50% | 0.00% | 10.25% | 0.00% | 10.25% | 0.00% | 14.00% | 0.00% | 14.00% | 0.00% |
| Rate | $47.37 | $47.37 | $52.23 | $52.23 | $57.58 | $57.58 | $65.64 | $65.64 | $74.83 | $74.83 |
| Rate Increase $ | $2.04 | $0.00 | $4.86 | $0.00 | $5.35 | $0.00 | $8.06 | $0.00 | $9.19 | $0.00 |
| All-In Debt Service Coverage | 1.52x | 1.45x | 1.57x | 1.48x | 1.51x | 1.53x | 1.69x | 1.63x | 1.76x | 1.62x |

- The placeholder was to allow for (1) engagement with stakeholders on a recent approach to addressing an inventory of unfunded priority asset management projects and (2) better understand COVID-19 financial impacts before evaluating the 2022 rate increase in the first quarter of 2021.
- The **Clean Water Plan** is currently developing and evaluating comprehensive approaches for meeting King County environmental priorities and regulatory requirements while maintaining an affordable sewer rate. The preferred strategy is **targeted for delivery to Council year-end 2021**.
- **The proposed sewer rate plan includes no rate increase for 2022**, maintaining the monthly sewer rate of $47.37. The proposal to defer a 2022 rate increase to future years is based on unprecedented economic challenges to our region due to the pandemic. Outer year rate increases are significant to address the challenges summarized in the Rate-Drivers Summary.

**Proposed 2022-2031 Sewer Rate Plan**

| 2022-2031 Rate Plan | Adopted 2020 | Set in 2021 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Proposed** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **Rate Increase %** | 4.50% | **0.00%** | 10.50% | 0.00% | 10.50% | 0.00% | 10.50% | 0.00% | 10.50% | 0.00% | 12.00% |
| **Monthly Sewer Rate** | $47.37 | $47.37 | $52.35 | $52.35 | $57.85 | $57.85 | $63.93 | $63.93 | $70.65 | $70.65 | **$79.13** |
| **Rate Increase $** | $2.04 | $0.00 | $4.98 | $0.00 | $5.50 | $0.00 | $6.08 | $0.00 | $6.72 | $0.00 | $8.48 |
| **All-In Debt Service Coverage** | 1.54x | 1.35x | 1.50x | 1.42x | 1.51x | 1.43x | 1.52x | 1.45x | 1.55x | 1.40x | 1.52x |
| **Projected CIP Spend ($m)** | $254 | $308 | $335 | $313 | $299 | $345 | $467 | $466 | $469 | $557 | $556 |
| **Est. Jobs Supported (Annual)** | 3,000 - 5,100 | 3,600 - 6,000 | 3,800 - 6,300 | 3,400 - 5,700 | 3,200 - 5,300 | 3,600 - 5,900 | 4,700 - 7,800 | 4,500 - 7,500 | 4,400 - 7,300 | 5,100 - 8,500 | 4,900 - 8,200 |

## Rate-Drivers Summary

For the purposes of evaluating the 2022 sewer rate and 10-year sewer rate plan, five critical rate-drivers are highlighted:

**1. COVID-19 impacts are delayed due to WTD billing structure and offset by record low interest rates in the bond market.**

Estimated reductions to sewer rate and capacity charge revenue are offset by savings from record low interest rates in the bond market, realized through the 2020 bond issuance to support the capital program and refinance outstanding debt. Additional detail is included in Appendix A – COVID-19 Impacts.

**2. West Point Treatment Plant power reliability investments begin in 2021.**

The Administrative Order #19477 issued by the Washington State Department of Ecology requires King County to address power reliability issues at West Point treatment plant. WTD project delivery staff resources have been reallocated to prioritize initiation of progress on this coordinated effort with Seattle

City Light. The 2022 sewer rate proposal includes the recommended suite of investments to address power reliability. Sensitivity to alternative approaches are included in Appendix B – West Point Power Reliability.

**3. Consent Decree Combined Sewage Overflow (CSO) cost updates available to include in the forecast; schedule considerations evaluated.**

At the time of the 2021 sewer rate proposal, the CSO costs were not updated and so the forecast did not fully reflect the cost of those investments and will not until Clean Water Plan completion. Early CSO strategies are slated to be shared by in the Clean Water Plan in 2021. while the 2022 sewer rate proposal will be in progress and the Consent Decree negotiations will be ongoing. In a 2019 letter to the U.S. Environmental Protection Agency, WTD requested schedule relief and opened negotiations on the CSO Consent Decree. *The example timeline of 2040 completion used in the forecast anticipates CSO Consent Decree modifications. Actual timeline and project sequencing will be determined following completion of the Clean Water Plan and Consent Decree negotiations.* The first decade includes 11% of the total CSO costs ($486 million), with the remaining 89% included in the second decade ($3.75 billion). This placeholder schedule results in a reduction of $697 million through 2030 from the $1.18 billion that was in the rate plan adopted in 2020.

**4. Critical asset management catch-up plan initiated in 2022 and completion timeline extended three years (2033).**

The 2021 sewer rate plan included catching up on an inventory of critical risk asset management projects by 2030. The current 2022 sewer rate proposal reflects an extended timeline and additional resources to maintain the intent to initiate those projects in 2022, while delivering the prioritized West Point power reliability investments and accelerated Sammamish Plateau Diversion conveyance project. The target completion date for catching up on the asset management projects has been extended by three years to 2033. Additional details on the asset management catch-up strategy and description of the project prioritization can be found in Appendix C – Asset Management Inventory.

**5. Ecology nutrient permit impacts to be included in the next sewer rate plan. No costs included in this 2022-2031 sewer rate plan.**

The 2021 sewer rate proposal did not include system improvements related to nutrient removal. The preliminary draft permit was issued in January 2021 and the conditions. Conditions of the permit are not well defined and are subject to feedback and revision. Any nutrient cost impacts are speculative and, therefore, not included in the 2022 sewer rate proposal.

**Additional Key Assumptions:**

- The proposed **Jameson ArcWweld** Building Replacement was included in the Adopted 2021-2030 rate forecast. It was subsequently excluded from the 2021-2022 budget as new alternatives were in development. **A lower cost building lease option is under consideration and in negotiation.** The initial quote for leasehold improvements and annual lease cost is utilized in this forecast.
- Phase 1 of the **Sammamish Plateau Diversion** project has been **accelerated** to resume work in 2021 and 2022.
- As **project delivery staff resources** are currently shifting to meet the very near-term **accelerated priorities** [West Point Power Reliability, Sammamish Plateau Diversion], it is noteworthy that **doubling the capital program by 2027** will require additional staff resources to deliver. The Planning and Project Delivery Section will conduct a series of strategic workforce and resource management workshops in March that will identify staffing plans with recommendations for performing work already identified in the sewer rate plan.
    - Resource analysis indicates that additional full-time equivalents (FTEs) will be required and are included in the 2022 sewer rate proposal to deliver the critical asset management project delivery increase. The addition of 13 new FTEs is phased in through 2024 to support delivery of these projects. This would be in addition to the projects recently added to 2021-2022. Staff resources have been delivering at capacity, leaving no excess available to absorb near-term project adds or for leave coverages. Lower priority projects that will potentially experience delays will be identified as project assignments shift to meet near-term prioritization changes. This limited capacity for additional projects with existing staff is

forecasted to extend into at least 2023. **The proposed rate plan assumes 6 FTEs are added in 2021 to support catching up on the Asset Management inventory. No new projects can realistically progress in 2022 unless resources are added, or existing projects are deferred.**

## List of Appendices

## APPENDIX A – COVID-19 Updated Projections

Due to COVID-19, commercial activity has been significantly reduced in the King County service area. Commercial water use is the basis for billing the sewer rate to commercial and multifamily customers. Single family residential billings are fixed per residential unit and are not subject to changes in water demand. As people stayed home and likely increased water demand per household, there was no expected reduction to residential classes. **Reduced commercial sewer rate revenue is estimated to total $47 million through 2022** per the Sewer Rate Revenue line in the table below.

Other revenue reductions identified in the table are based on potential reductions to capacity charge prepayments and lower interest rate earnings.

**The key takeaway is that the estimated revenue loss is almost fully offset by debt service savings from record low bond market interest rates and operating expenditure savings.**

Estimated impacts were shared with MWPAAC and RWQC in 2020 and are shown in the Fall Forecast column for comparative purposes. Details of the updated assumptions follow the table. Total projected net shortfall through 2022 has been reduced from $27.8m to $0.5m.

| Net Operating Forecast ($'000s) | 2020 | 2021 | 2022 | '20-'22 Total | Fall Forecast |
|---|---|---|---|---|---|
| **Variances Post Rate Adoption** | | | | | |
| Operating Expenditures | 7,541 | (572) | 7,632 | 14,601 | 6,989 |
| Debt Service | 10,048 | 25,673 | 9,682 | 45,403 | 28,290 |
| Total | 17,589 | 25,101 | 17,314 | **60,004** | **35,279** |
| **Estimated COVID19 Impact** | | | | | |
| Sewer Rate Revenue | (649) | (21,682) | (24,340) | (46,672) | (43,538) |
| Capacity Charge Revenue | (761) | (2,922) | (3,087) | (6,769) | (11,747) |
| Other Revenue | 21 | (2,577) | (4,521) | (7,076) | (7,823) |
| Total | (1,389) | (27,181) | (31,948) | **(60,517)** | **(63,109)** |
| Net impact through 2022 | | | | **(513)** | **(27,830)** |

### Summary of Updated Estimated COVID19 Net Revenue Impacts

*Fall 2020 estimated impacts from COVID19:*

- Reduced revenue forecast:
  - Sewer rate - lower projected flow-based Residential Customer Equivalent (RCE)
  - Capacity charge - lower projected prepayments and reduced growth assumptions
  - Investment income - lower interest rates
- Shortfall offset by:
  - Savings from operating expenditures in 2020 (2021-2022 budget was not finalized so no change included)
  - Savings from record low interest rates on the 2020 bond issuance and refundings

*February 2021 revised estimated impacts:*

- Slowed the projected recovery of flow-based RCEs
- Higher than estimated 2020 capacity charge revenue
- Lower operating expenditures in the 2021-2022 adopted budget

- Early redemption of near-term higher interest rate debt

### *Summary of commercial flow/RCE actuals and projection assumptions:*

The fall 2020 COVID-19 revenue impact estimates assumed Commercial/Multifamily consumption reductions that would recover to 2019 levels (preCOVID-19) by the end of 2021. Due to limitations of vaccine supply and distribution, and the lingering economic impact of mandated restrictions, the recovery of reported flow-based Residential Customer Equivalents (RCEs) to preCOVID-19 levels has been extended to the end of 2022.

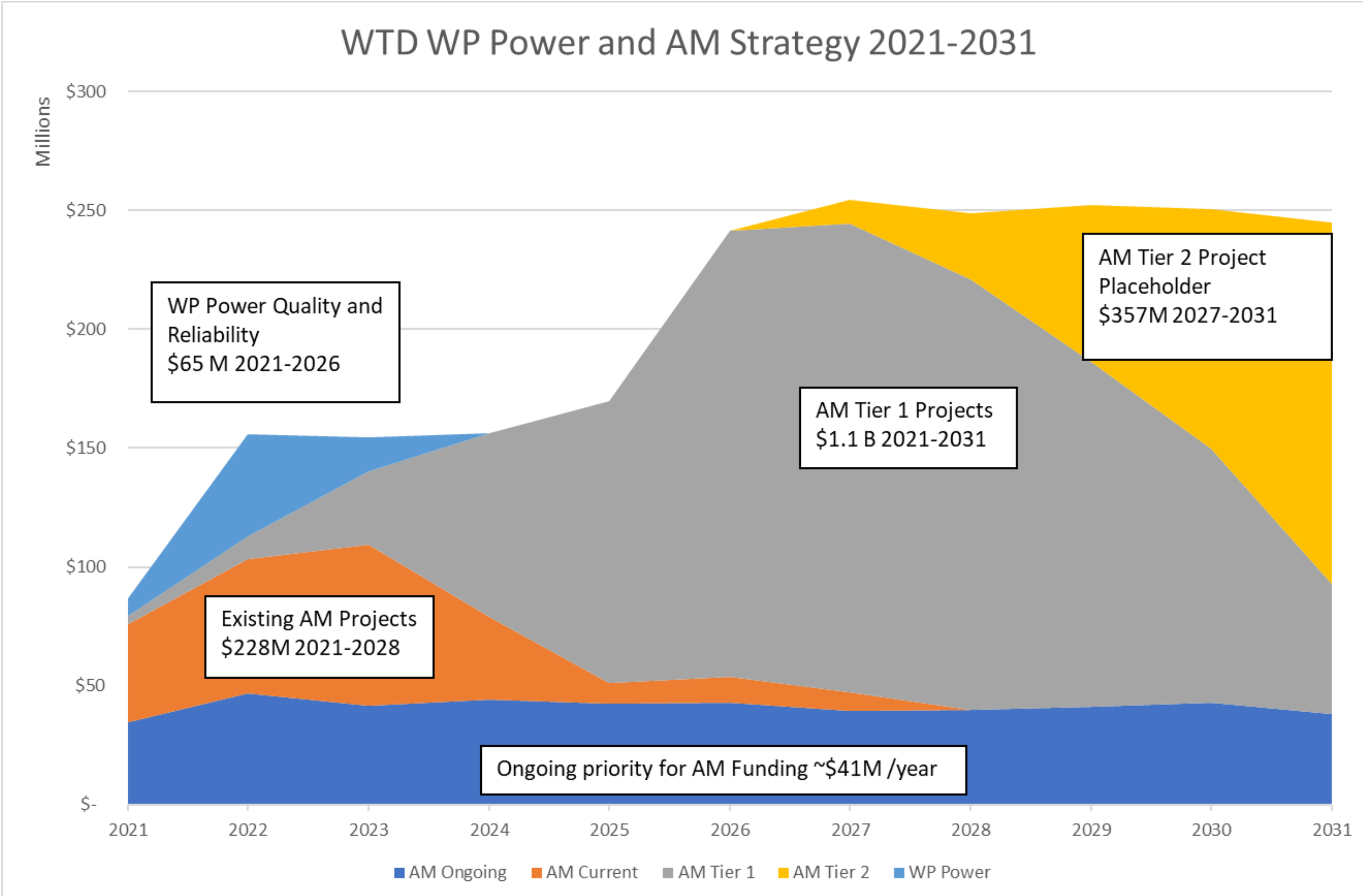
The summary below shows the **% decline in flow-based RCEs as compared to 2019 levels.** The table includes related revenue impacts as they were projected in the Fall of 2020, and after the current update. The 0% reduction indicates return to 2019 levels, a positive number is a return to growth after recovery.

**Commercial & Multi-Family RCE % Change from 2019**

| | Forecasted in Fall 2020 | | | | | Forecasted in February 2021 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Total Shortfall | Q1 | Q2 | Q3 | Q4 | Total Shortfall |
| **2020** | 1.9% | -15.1% | -13.5% | -15.0% | $652,897 | 1.9% | -15.1% | -13.5% | -10.0% | $649,056 |
| **2021** | -10.0% | -10.0% | -10.0% | -10.0% | $23,276,799 | -15.0% | -15.0% | -10.0% | -10.0% | $21,682,191 |
| **2022** | 0.0% | 0.0% | 0.0% | 0.0% | $19,636,111 | -10.0% | -10.0% | -5.0% | -5.0% | $24,340,266 |
| **2023** | 0.52% | 0.52% | 0.52% | 0.52% | $6,177,560 | 0.0% | 0.0% | 0.0% | 0.0% | $16,285,165 |
| **Total** | | | | | **$49,743,367** | | | | | **$62,956,679** |

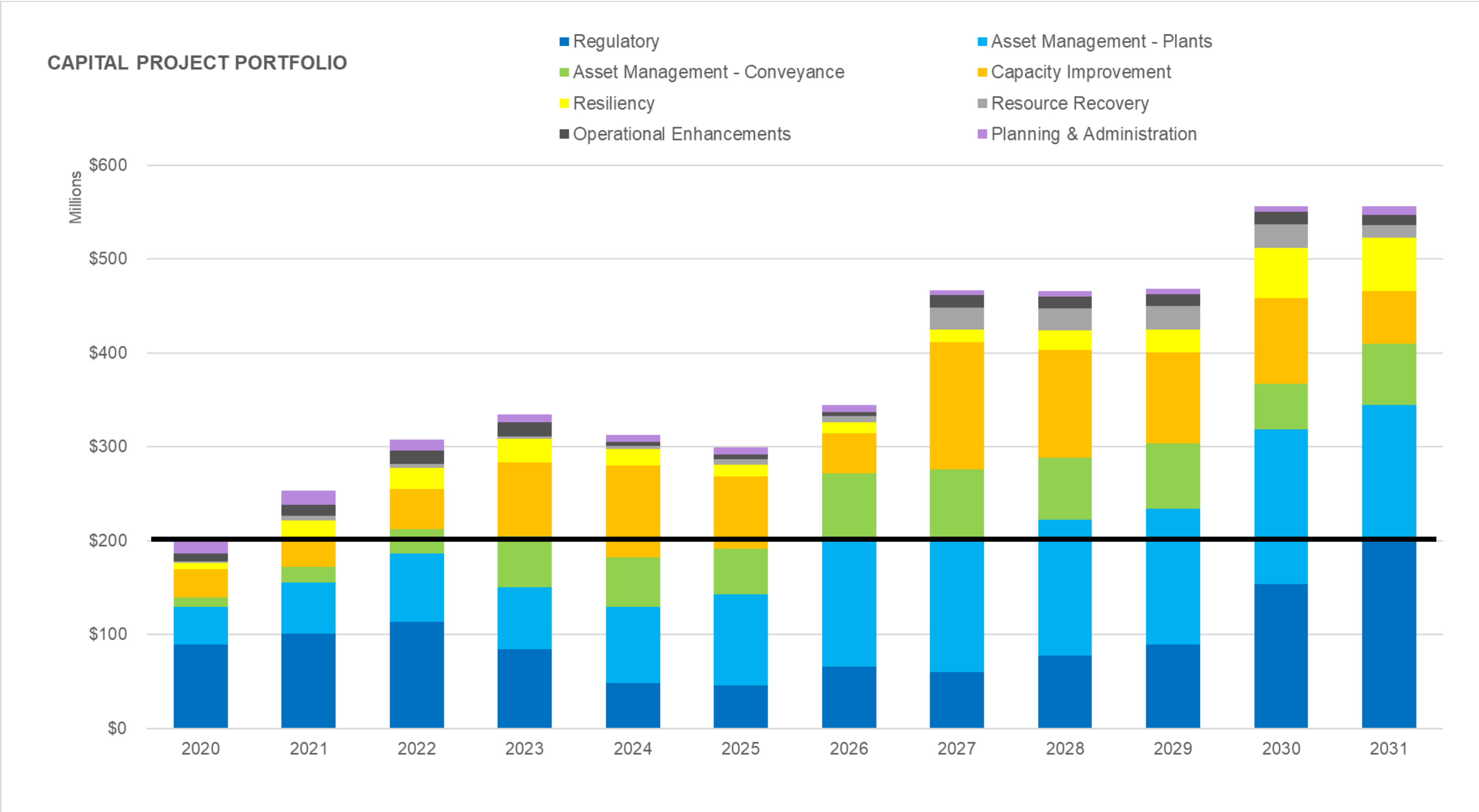
Actuals

## APPENDIX C – Asset Management Inventory



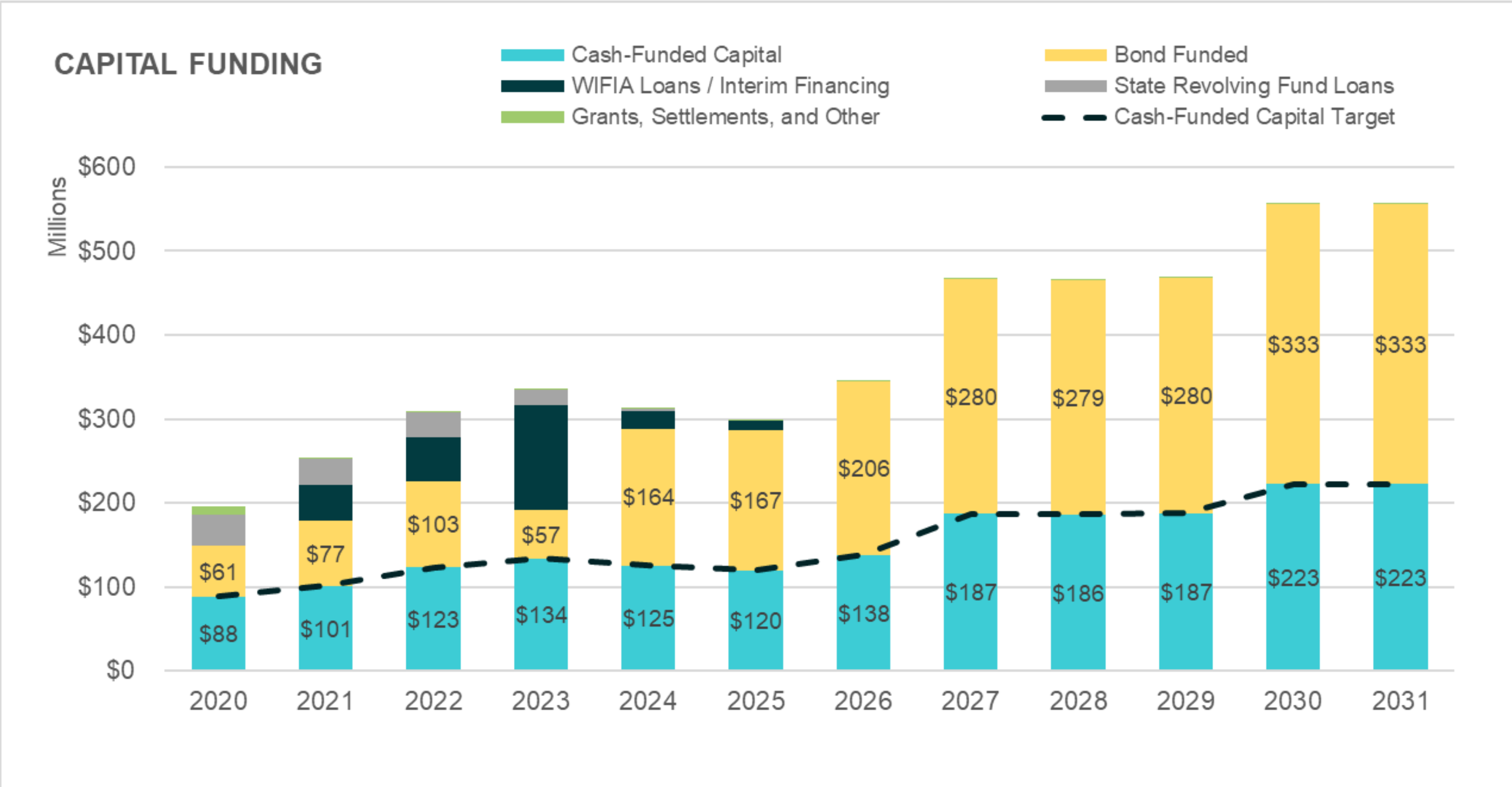

**Ongoing (Dark Blue):** High priority minor (low cost) asset replacements or refurbishments.
**Existing (Orange):** Highest priority large asset replacements or refurbishments that are currently appropriated and in project delivery.
**Tier 1 (Gray):** Equipment or pipeline that is currently in poor condition, unserviceable, or for which spare parts cannot be found. The equipment is currently not meeting all of the functions it was intended to do (for example a pump being able to pump at its full capacity or having a lot of unplanned maintenance) or is currently at risk of having a catastrophic failure due to the condition (in the case of a severely corroded pipeline), or does not have spare parts available and is located in an area where failure would have unacceptable consequences. Consequences of failure include sewage overflows, other operating permit violations, or would disrupt operations in a way that there would be no easy workarounds. Since wear and tear and corrosion are progressive, every year of delay means that the risk of failure goes up incrementally.
**Tier 2 (Yellow):** Equipment or pipeline that is old, showing wear, or has corrosion that indicates that it will fail in the future. In the case of equipment, the equipment is currently doing its job, but due to the age of the equipment, it will likely be performing poorly or failing unexpectedly in the near future due to either corrosion or just wear and tear. In the case of pipelines, they are showing signs of corrosion that currently isn't as severe as Tier 1 pipelines, but since corrosion is a progressive process, they will eventually have the same severe corrosion as a Tier 1 pipeline in the future. The consequences of Tier 2 failure are the same, but just less likely right now. Tier 2 also includes equipment that may have more severe condition but isn't located in a critical process. This equipment may be more likely to fail, but the consequences wouldn't be as severe. The delay risk is the same as Tier 1.

## APPENDIX D – CIP Portfolio Chart



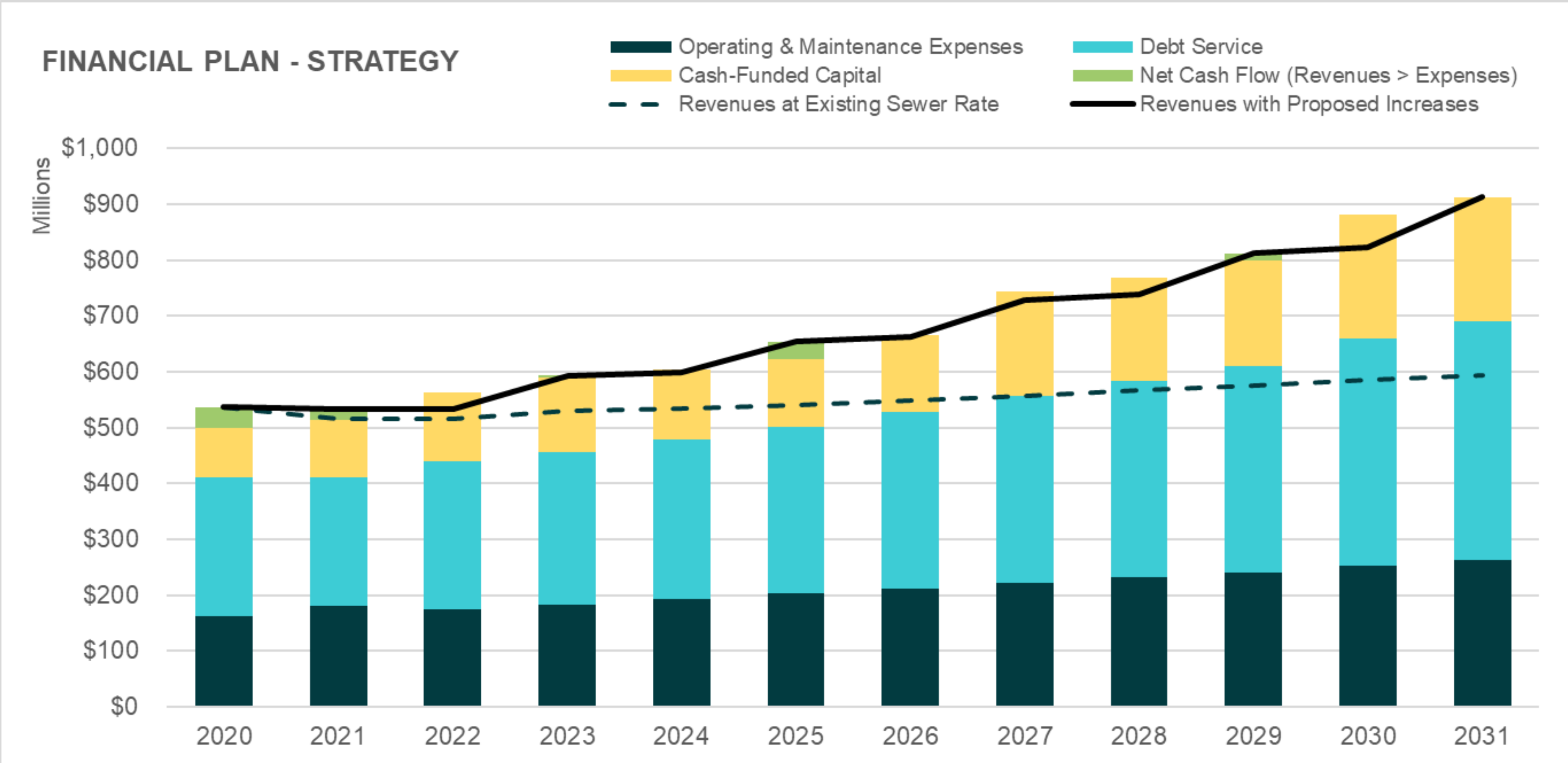
## APPENDIX E – Sewer Rate Forecast Charts

**Capital Funding Plan**




*WIFIA Water Infrastructure and Finance and Innovation Act

**2022-2031 Proposed Sewer Rate Plan Revenue Needs Components**



## APPENDIX F – CSO Schedule Sensitivity & Other Supporting Information

### CSO Schedule Sensitivity

Sensitivity **2030** CSO Completion from Proposed Sewer Rate Plan Basis

| 2022-2031 Rate Plan | Adopted 2020 | Set in 2021 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sensitivity 5** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **Rate Increase %** | 4.50% | **0.00%** | 30.00% | 0.00% | 30.00% | 0.00% | 30.00% | 0.00% | 0.00% | -8.50% | 0.00% |
| **Monthly Sewer Rate** | $47.37 | $47.37 | $61.59 | $61.59 | $80.07 | $80.07 | **$104.10** | $104.10 | $104.10 | $95.26 | $95.26 |
| **Rate Increase $** | $2.04 | $0.00 | $14.22 | $0.00 | $18.48 | $0.00 | $24.03 | $0.00 | $0.00 | ($8.84) | $0.00 |
| All-In Debt Service Coverage | 1.54x | 1.36x | 1.78x | 1.65x | 2.01x | 1.80x | 2.05x | 1.87x | 1.77x | 1.50x | 1.46x |
| Projected CIP Spend ($m) | $252 | $303 | $402 | $455 | $590 | $782 | $1,353 | $1,309 | $981 | $439 | $629 |
| Est. Jobs Supported (Annual) | 3,000 - 5,000 | 3,500 - 5,900 | 4,500 - 7,600 | 5,000 - 8,300 | 6,300 - 10,400 | 8,100 - 13,400 | 13,500 - 22,500 | 12,700 - 21,200 | 9,200 - 15,400 | 4,000 - 6,700 | 5,600 - 9,300 |

### Annualized Equivalent of Proposed Rate Plan

Sensitivity Annualized Rate Increases from Proposed Sewer Rate Plan Basis

| 2022-2031 Rate Plan | Adopted 2020 | Set in 2021 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Annualized Proposed** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **Rate Increase %** | 4.50% | **4.00%** | 4.00% | 4.00% | 4.00% | 5.00% | 6.00% | 6.00% | 6.00% | 6.00% | 7.50% |
| **Monthly Sewer Rate** | $47.37 | $49.27 | $51.25 | $53.30 | $55.44 | $58.22 | $61.72 | $65.43 | $69.36 | $73.53 | **$79.05** |
| **Rate Increase $** | $2.04 | $1.90 | $1.98 | $2.05 | $2.14 | $2.78 | $3.50 | $3.71 | $3.93 | $4.17 | $5.52 |
| All-In Debt Service Coverage | 1.54x | 1.42x | 1.47x | 1.45x | 1.44x | 1.44x | 1.46x | 1.49x | 1.51x | 1.47x | 1.52x |
| Projected CIP Spend ($m) | $254 | $308 | $335 | $313 | $299 | $345 | $467 | $466 | $469 | $557 | $556 |
| Est. Jobs Supported (Annual) | 3,000 - 5,100 | 3,600 - 6,000 | 3,800 - 6,300 | 3,400 - 5,700 | 3,200 - 5,300 | 3,600 - 5,900 | 4,700 - 7,800 | 4,500 - 7,500 | 4,400 - 7,300 | 5,100 - 8,500 | 4,900 - 8,200 |

## Rate Plan Sensitivity to Lower Cash-Funded Capital and Coverage Target

Sensitivity 1.30x Debt Service Coverage Target [30% CIP cash funding 6-year, 29% 10-year] from Proposed Sewer Rate Plan Basis

| 2022-2031 Rate Plan | Adopted 2020 | Set in 2021 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Proposed 1.30x DSC** | **2021** | **2022** | **2023** | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** | **2030** | **2031** |
| **Rate Increase %** | 4.50% | **0.00%** | 2.00% | 0.00% | 11.00% | 0.00% | 11.00% | 0.00% | 14.50% | 0.00% | 9.50% |
| **Monthly Sewer Rate** | $47.37 | $47.37 | $48.32 | $48.32 | $53.64 | $53.64 | $59.55 | $59.55 | $68.19 | $68.19 | **$74.67** |
| **Rate Increase $** | $2.04 | $0.00 | $0.95 | $0.00 | $5.32 | $0.00 | $5.91 | $0.00 | $8.64 | $0.00 | $6.48 |
| All-In Debt Service Coverage | 1.54x | 1.39x | 1.39x | 1.30x | 1.38x | 1.30x | 1.38x | 1.30x | 1.43x | 1.30x | 1.36x |
| Projected CIP Spend ($m) | $254 | $308 | $335 | $313 | $299 | $345 | $467 | $466 | $469 | $557 | $556 |
| Est. Jobs Supported (Annual) | 3,000 - 5,100 | 3,600 - 6,000 | 3,800 - 6,300 | 3,400 - 5,700 | 3,200 - 5,300 | 3,600 - 5,900 | 4,700 - 7,800 | 4,500 - 7,500 | 4,400 - 7,300 | 5,100 - 8,500 | 4,900 - 8,200 |

### Implications of Lower Debt Service Coverage (DSC):

*Rate impact*

- Lower DSC is accomplished by reducing cash funding of the CIP from current year rate revenue (status quo policy target of 40% of CIP)
- Lower cash funding produces higher rates over the long term – by 2032 rates under the 1.30x scenario surpass those set based on 40% cash funding

*Debt balances*

- Setting the sewer rate based on 1.30x DSC results in an additional $320 million of borrowing over the forecast period.

| Oustanding Debt (millions) | Balance 2020 | Balance 2031 | Growth | % of 2020 |
|---|---|---|---|---|
| Base Case **40%** Cash Funding | $ 3,608 | $ 4,755 | $ 1,148 | 32% |
| Sensitivity **1.30x** DSC Ratio | $ 3,608 | $ 5,075 | $ 1,468 | 41% |
| Difference - Higher Balance | | $ 320 | $ 320 | 9% |

*Ratings*

- Investors value higher DSC ratios because they reduce the risk that agencies will have insufficient revenue to pay debt service
- Moody’s median DSC tracking for water and sewer agencies shows a ~30% increase between 2009 and 2019 (WTD ~19%)
    - DSC is trending upward in the industry - growing attention to financial capacity to address aging infrastructure
- Historical coverage performance has exceeded 1.40x since 2016 and trended higher (1.58x in 2019).
    - Median DSC for Aa sewer utilities in the US is 2.2x (Moody’s, 2018 data)

History of WTD DSC and Ratings:

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WTD All-in DSC Ratio** | 1.24x | 1.33x | 1.30x | 1.32x | 1.28x | 1.33x | 1.33x | 1.36x | 1.41x | 1.51x | 1.49x | 1.58x |
| **S&P Rating** | **AA+** | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ | AA+ |
| **Moody's Rating** | **Aa3** | Aa3 | **Aa2** | Aa2 | Aa2 | Aa2 | Aa2 | Aa2 | Aa2 | **Aa1** | Aa1 | Aa1 |

## History of 40% Cash-Funding Approach:

- 2017 implementation of 40% cash funding included in adopted rate plan to reduce growth in WTD debt balance
- Responded to MWPAAC Debt Review Committee proposal to target 1.40x debt service coverage
- S&P August 2019 Ratings Median Data Report indicates WTD is highly leveraged in the industry:
    - King County WTD Debt-to-Capitalization Ratio 2018: **98%.**
    - Northwest Utilities: **30%**
    - National “Very Large” Utilities: **47%**
- Asset management investments are approximately equal to the 40% cash funding – cash funding replacements considered best practice
- Cash funding 40% (2021 projected $101 million) is less than annual system value loss (depreciation $179.5 million 2019 audited)