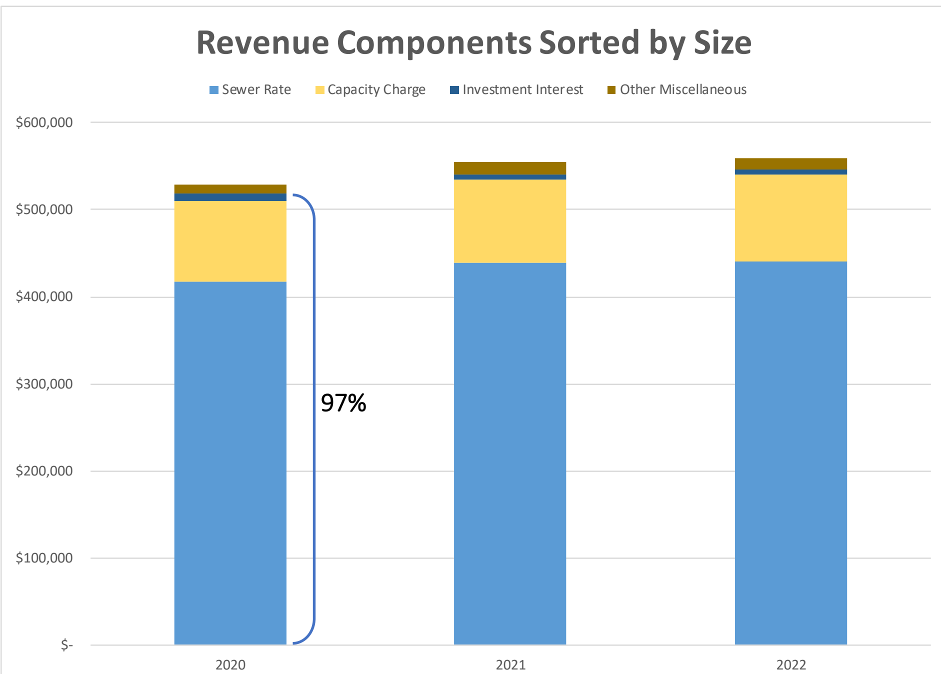
Summary of Estimated COVID-19 Revenue Impacts to the Wastewater Treatment Division (WTD) – September 10, 2020

1. Relative Scale of WTD Revenue Sources
2. Findings from the Limited Data
3. WTD Billing Structure – Impact on Revenue Timing
4. Assumptions Used to Estimate Revenue Impacts
5. Estimated Net Revenue Impact through the 2021-2022 Biennium

Relative Scale of WTD Revenue Sources

While most revenue sources will have some impact from COVID-19, the sewer rate, capacity charge, and investment earnings together make up 97% of total revenues and are the focus of the COVID-19 revenue impact estimates.

Exhibit 1: Scale of WTD Revenue Sources



The sewer rate revenue component represents 78% of total revenue. When considering COVID-19-related impacts, it is important to recognize that 55% of the sewer rates customer base is Single Family Residential (SFR) which are billed as one unit regardless of water use. Note that WTD is migrating to use of the term "Single Detached Dwelling Unit" in place of Single Family Residential. The familiar title will be maintained for this document since the change is recent and not yet implemented in sewer rate communication and billing.

The remaining 45% of RCEs (Residential Customer Equivalents) are comprised of Commercial and Multi-Family (Comm/MF) customers in a combined rate class. An RCE is used for billing purposes as a unit that represents wastewater flows that are equivalent to a Single Family Residence (750 cubic feet of water use = 1 RCE). The Commercial and Multi-Family class is billed based on flows and any COVID-19-driven reductions to Commercial water use will impact the customer base and related sewer rate revenue. Multi-Family water use is not expected to decline as residents spend more time in their homes during the pandemic, tempering the Commercial decline in this combined rate class.

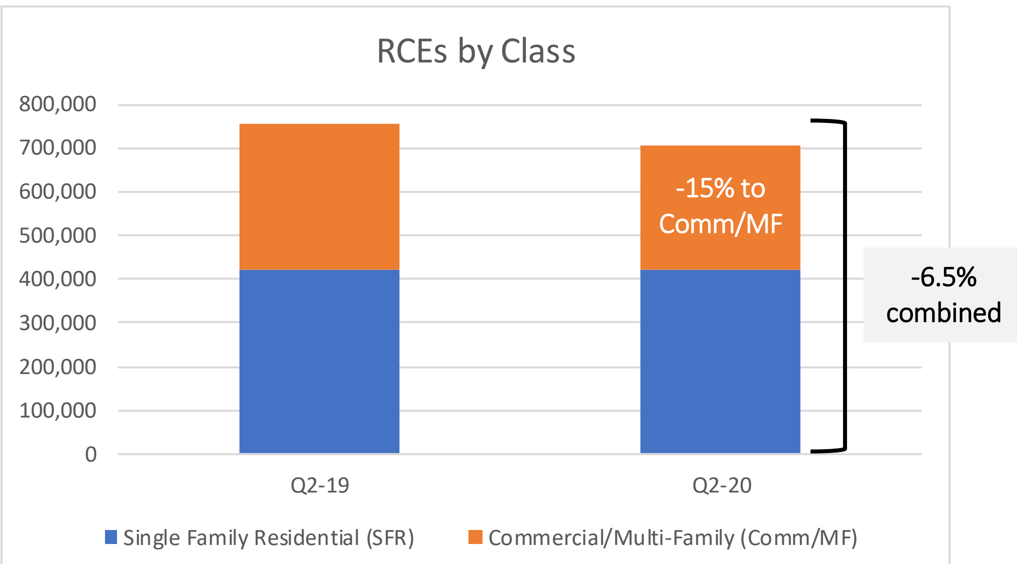
Findings from the Limited Data - Sewer Rate

Under the sewer contracts, the local agencies report RCE data quarterly. On March 23, 2020, the Governor issued the Stay Home, Stay Healthy Proclamation followed by the closing of all non-essential businesses on March 25, 2020. Only the last week of Quarter 1 (Q1) was within that timeframe and no material impact was observed in the Q1 data.

With the expectation of material impacts to Commercial RCEs, early Q2 data was gathered from some of our larger customers. Based on that sampling, WTD prepared an analysis of revenue impacts using a 20% reduction on flow-based RCEs from 2019. When Q2 data became available over the course of the summer, the actual impact to the number of Commercial RCEs reported was a 15% reduction.

When communicating the 15% reduction, it is important to clarify that a 15% reduction is to a portion (45%) of the *total* customer base (flow-based RCEs – Comm/MF). The fixed Single Family Residential (SFR) customer RCEs are stable and continue to see growth. The combined effect is a 6.5% reduction to the total Quarter 2 RCEs over 2019 levels.

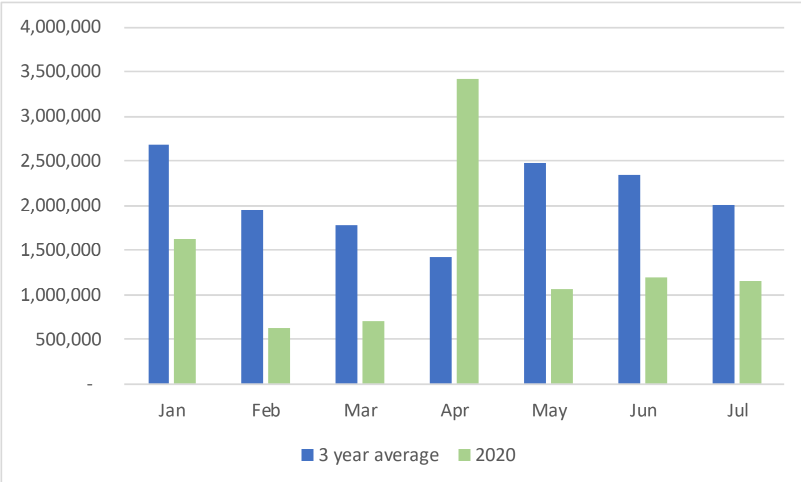
Exhibit 2: Share of Commercial/Multi-Family Flow-based RCEs



Findings from the Limited Data - Capacity Charge

The capacity charge revenue is made up of two kinds of payments, a fifteen-year payment plan structure which makes up about 85% of capacity charge revenues, and payment of the full amount upfront which represents 15% of total capacity charge revenue. The ongoing payments are stable while prepayments vary significantly year to year and are difficult to forecast since they are discretionary.

Exhibit 3: Prepayments 3-year Average Compared to 2020



Outside of a single large account prepayment in April (requested in March ahead of the closures, processed in April), 2020 prepayments are down as compared to the three-year average including 2017-2019. Of note, prepayments were down in Q1 ahead of the mandatory closure impacts, indicating 2020 was potentially going to be one of the lower prepayment years to begin with for this highly variable revenue source.

Findings from the Limited Data - Investment Earnings

Investment earnings in 2020 have decreased due to lower interest rates in the King County Investment Pool. This is partially offset by the higher cash balances resulting from the 2020 bond sales. WTD borrowing was sized to cover capital funding through 2022 to take advantage of the historically low interest rates. Estimated investment earnings have been revised downward for 2021 and 2022, given the most recent forecast by King County's Office of Economic and Financial Analysis.

WTD Billing Structure – Impact on Revenue Timing

A significant factor in evaluating the potential impact to WTD revenue is timing impacts of the billing structure. The time from reduced water use, to reporting resulting RCEs, to when those RCEs are billed includes significant delay to the impact on WTD revenue streams.

In contrast to the retail agencies that read meters and bill either monthly or bimonthly, RCE reporting and billing is on a quarterly cycle. Billings for the Single Family Residential class are based on RCEs reported in the quarter before the previous one (e.g., Q3 billing is based on Q1 reported).

The Commercial and Multi-Family (Comm/MF) billing structure includes additional delay. Billings are based on a four-quarter rolling average of RCEs with the intent to minimize variability of billings to the agencies. The Q3 2020 billing will be based on an average of reported RCEs from Q2-Q4 2019 and Q1 2020. The combination of reaching back to historical periods and the delay from reported to billing means that significant impacts to commercial water use in 2020 will materially impact WTD revenues the following year.

Exhibit 4: Sewer Rate Billing Delay

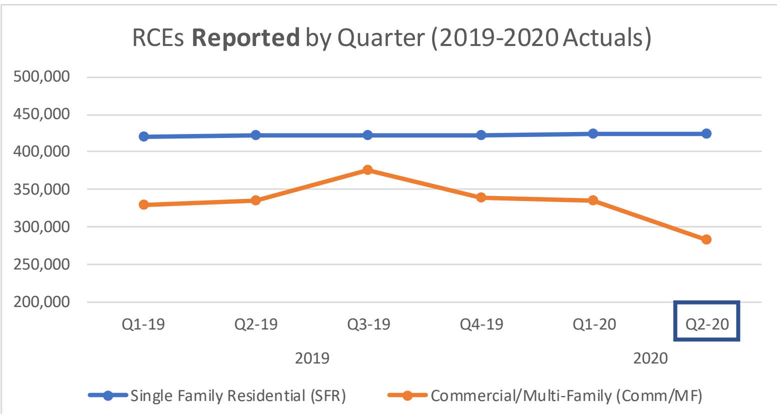
	2019				**2020**	
	Q1-19	Q2-19	Q3-19	Q4-19	Q1-20	**Q2-20**
Single Family Residential				**Reported**		**Billed**
Commercial / Muli-Family	**Four quarter average**					**Billed**

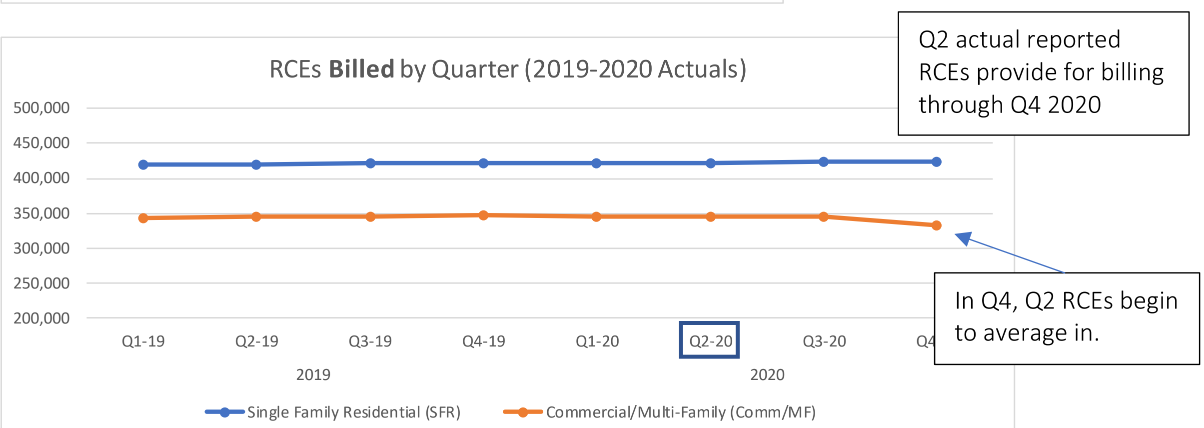
This evaluation of potential COVID-19 impacts focuses on 2020 projected year-end and the 2021-2022 biennium. A table detailing the RCE reporting period for each billing cycle is provided in Exhibit 5.

Exhibit 5: Commercial/Multi-Family Billed RCE Timing

Billing Basis	Q1	Q2	Q3	Q4
2020	1 quarter of 2018 **3 quarters of 2019**	All 2019	3 quarters of 2019 **1 quarter of 2020**	2 quarters of 2019 **2 quarters of 2020**
2021	1 quarter of 2019 **3 quarters of 2020**	**4 quarters of 2020**	**3 quarters of 2020** 1 quarter of 2021	**2 quarters of 2020** 2 quarters of 2021
2022	**1 quarter of 2020** 3 quarters of 2021	All 2021	3 quarters of 2021 1 quarter of 2022	2 quarters of 2021 2 quarters of 2022

Exhibit 6: 2020 Reported vs Billed RCEs





Assumption Used to Estimate Revenue Impacts

It is very challenging to project the impact COVID-19 will have on the economy and our own organizations. Rather than evaluating economic indicators and relationships, the future of commercial activity is driven primarily by mandatory closures, in addition to changes in elective economic behavior in response to the pandemic. Behind any forecasting of how the phases in Washington State might progress, are assumptions about the trend in current cases reported, timing of a vaccine, impact of a vaccine, and then the timing of an economic recovery to pre-pandemic activity and measures.

Because these variables cannot reasonably be forecast, general assumptions, as documented in Exhibit 7, have been applied to provide this estimate of impacts.

Exhibit 7: Revenue Projection Assumptions

	Revenue Projection Assumptions		
	2020	2021	2022
Single Family Residences (SFRs)	300 new customers each quarter in Jul-Dec (lowest of last 5 years)	300 new customers per quarter	300 new customers per quarter
Commercial / Multi-Family (MF)	15% reduction from 2019 levels in Jul-Dec	10% reduction from 2019 levels	Return to 2019 levels
Capacity Charge Ongoing Billings	3% Year-over-Year growth in Sept-Dec (2020's lowest, in Aug)	3% Year-over-Year growth	3% Year-over-Year growth
Capacity Charge Prepayments	$631k monthly in Aug-Dec (2020's lowest, in Feb)	Return to 2015 levels (lowest of last 5 years)	No growth from 2021

*Billings are based on RCEs reported two quarters prior. With Q2 2020 reported, all RCEs that will be billed in 2020 are available to determine 2020 sewer rate revenue.

Estimated Net Revenue Impact through the 2021-2022 Biennium

The estimated economic impacts include both negative revenue outcomes as well as opportunities for savings on the cost side. When low interest rates impact the earnings on our cash balances, they similarly reduce the interest rates WTD pays to borrow money. WTD was able to issue long-term, fixed rate bonds at a record low interest rate of 2.49% in July. This bond sale included refinancing some of our short-term bonds with significant savings based on lower interest rates than forecast in the rate plan. A conservative reduction to the 2021 and 2022 forecast interest rates (1.0% lower rate) to reflect the changed conditions generates significant projected savings in the biennium.

Operating expenditure savings of $6.9m are projected for 2020. Any adjustments to the biennial operating expenditures will be integrated when the Executive's proposed budget is transmitted at the end of September for Council consideration and action.

Exhibit 8 provides an annual cash flow projection of both the estimated revenue impacts and the mitigating savings as incremental adjustments to the adopted rate plan. While there is a $63m projected revenue shortfall, the net impact of the mitigating savings from reduced operating expenditures and lower debt service results in a projected $27.8m of net impact to address in the financial plan.

Exhibit 8: Revenue Impact Estimates

Net Operating Forecast ($'000s)	2020	2021	2022	'20-'22 Total
Variances Post Rate Adoption				
Operating Expenditures	(6,989)	0	0	(6,989)
Debt Service	(9,894)	(8,956)	(9,439)	(28,290)
Total	(16,883)	(8,956)	(9,439)	**(35,279)**
Estimated COVID19 Impact				
Sewer Rate Revenue	(653)	(23,271)	(19,614)	(43,538)
Capacity Charge Revenue	(5,734)	(2,501)	(3,512)	(11,747)
Other Revenue	(2,037)	(2,308)	(3,479)	(7,823)
Total	(8,424)	(28,080)	(26,605)	**(63,109)**
Net impact through 2022				**(27,830)**

Exhibit 9: Projected Fund Balance Impacts

WTD Reserves Available for COVID-19 Mitigation ($'000s)	2019 Ending
Water Quality Operating Reserve Uncommitted [1]	$ 36,045
Estimated Net Revenue Impact through 2022	(27,830)
Remaining Balance	$ 8,215
Rate Stabilization Reserve Account	$ 46,250
2022 Projected Debt Service Coverage	1.45x

[1] Excludes Liquidity Reserve Account (10% of operating expenditures) and Waterworks Grant carryforward appropriation.

Uncommitted operating reserves are sufficient to absorb the remaining projected net revenue shortfall after the mitigating savings. If the shortfall turns out to be larger than projected, the Rate Stabilization Reserve (RSR) account funds are also available.

The RSR has two purposes including smoothing rate impacts over a period of significant capital investment or other cost impacts to rates, and to address unexpected financial circumstances that would impact rates. This reserve is particularly important where debt service coverage targets are at risk due to revenue shortfall. While reserves are not recognized as a revenue to meet coverage, this type of reserve can be written into bond covenants so that draws on the reserve can be reported as revenue to meet coverage in the year funds are drawn. In years that transfers are made into the reserve, those are deducted from revenue available to meet coverage. In this case, debt service coverage is not anticipated to drop below the target 1.40x for rate-setting and so use of the operating reserve is optimal.

Key Take-Aways include:

- Q2 RCE data shows a 15% reduction to the Commercial and Multi-Family RCE customer base. The ability to evaluate whether that reduction will persist will be better understood with Q3 data is available in mid-November.
- WTD's billing cycle results in a significant delay from RCE reduction to revenue impact due primarily due to the historical rolling average billing basis for flow-based RCEs.
- There are unexpected material savings mitigating some of the revenue impacts, primarily in debt service based on historically low interest rates.

- The estimated net revenue shortfall after the mitigating savings can be absorbed by uncommitted operating reserve balance at the scale it is currently projected with no risk to the target debt service coverage.

These results will be updated with a presentation that is tentatively scheduled for the December 2020 RWQC meeting.

If you have any follow-up questions, please contact Mark Isaacson, WTD Director, at mark.isaacson@kingcounty.gov or 206-477-4601.