Memo

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Date:	Wednesday, August 5, 2020
To:	Cinnamon Williams, Acting Deputy Chief Financial Officer
From:	Joel Sherman, Solid Waste Forecaster, and Dennis Yee, Metro Economist
Subject:	Memo 3: Mid-Year COVID-19 Solid Waste Forecast Update

Background
In early April of this year, Dennis Yee and I updated our November 2019 Solid Waste Forecast to account for the sudden shift in economic conditions brought about by COVID-19. On April 6, 2020, we outlined the implications on solid waste revenues for the current fiscal year (see *Memo 1 of 2: COVID-19 Revenue Implications this Fiscal Year*). We followed that up on April 7, 2020 with more detail on the economic and solid waste tonnage expectations behind that forecast, as well as solid waste revenue implications for subsequent fiscal years (*see Memo 2 of 2: COVID-19 Forecast Changes and Detailed Results*). Since April, further economic changes have been captured and reported, and these indicators provide more current data by which to update the annual forecast.

Purpose
This memo summarizes the results of the mid-year forecast update. We'll start by reviewing the current economic outlook for both the US and regional economies. Next we'll summarize key solid waste program and policy assumptions impacting the forecast, including tonnage allocations to private facilities. Finally, we'll present tonnage and revenue results for the current (FY 2019-20) and next (FY 2020-21) fiscal years. We'll compare these results to those from the April update, and to those from the original November 2019 forecast. These results will provide more accurate insight into the current budget shortfall this fiscal year, as well as to the adequacy of rates to cover next fiscal year's tonnage-related revenue shortfall.

Economics
The following sections summarize the outlook for the US and Metro region economies, including forecasts of the key indicators that impact solid waste generation in the region. These forecasts are the latest and best estimates from IHS/Global Insight, Portland State University's Northwest Economic Research Center, and Metro's Research Center. Detailed information about Metro's economic and solid waste forecasting models is available upon request.

- ***Overall outlook:*** Economic activity rebounded sharply from April lows. Key economic indicators covering labor markets, consumer spending, and factory activity show that the US economy rose over the May–June period, but recent increases in COVID-19 infections have led some states to pause or roll back steps to resume economic activities. These developments, in addition to uncertainty about how consumers' fear of the virus will keep them from fully participating in the economy, feature prominently in the latest IHS Markit July US Forecast. Let's look at some particulars.

- ***Employment conditions:*** The latest forecast does not expect US employment to reach pre-COVID level until early-2022, nor full-employment until 2024. The seasonally adjusted unemployment rate for the region was 14.1% in May, little changed from April. The region's May rate was above the US rate (13.3%) and essentially the same as Oregon's rate (14.2%). Initial unemployment claims are now declining steadily from a peak in early April but are still significantly higher than normal. Infection levels now threaten the recovery and the path for jobs will depend on the course of the disease, treatment options, and herd immunity either by vaccination or other means.

- ***Assets:*** Home prices remain steady despite uncertainties in the economy. Nominal sales prices continue to rise. Home production and supply shortages have persisted since the Great Recession, likely bolstering the appreciation we see in home prices. The median house price (RMLS) rose 3.6% (year over year) in June and now stands at $435,000.

- ***Federal Reserve (Fed) Policy & Interest Rate Outlook:*** Facing consumer collapse, wide-spread business failures, and a potential global liquidity crisis, the Fed announced new credit facilities to banks and main street businesses while also restarting Great Recession quantitative easing measures to stabilize the US economy. The Fed announced a "whatever-it-takes" posture in April "to forcefully, proactively, and aggressively" utilize its legal powers to sustain orderly markets. In June, the Fed reaffirmed this policy for the foreseeable future. The Fed committed itself to maintaining a federal funds rate near 0% or the "effective lower bound for at least 2 more years". The Fed has injected and is expected to continue to provide significant amounts of liquidity to credit and main street markets. With the Fed tamping down yields to "risk-free" Treasury securities near the effective lower bound, expect mortgage interest rates to remain very low for the foreseeable near term.

- ***Construction:*** While construction jobs mostly bounced back in May after taking a sharp decline in April, growth will in part follow the cycle of residential new home construction. Non-residential construction may be more restricted going forward if demand for office and retail spaces is reduced because more people will work and shop from home. Residential building permits in the Portland region are down significantly in April and May since the lockdown orders, which could affect jobs in the sector in the near future.

Solid Waste

The following section calls out some of the key solid waste program and policy assumptions underpinning our current forecast. We can provide a more detailed list of inputs and assumptions upon request.

- ***Regional Waste Outlook*** – Regional tonnage likely hit bottom in the second quarter of this year. While our outlook expects garbage to bounce back up in the third quarter given business reopenings and pent-up consumer demand, we expect tonnage to remain below pre-COVID levels until the last quarter of 2021. The slow recovery in both regional economic and solid waste trends going forward will be greatly determined by the course of the virus, available and effective treatment options, herd immunity to the virus either by administration of a vaccine or other means, and continued economic support to unemployed workers and businesses by the federal government. All of these highly uncertain outcomes present great downside risk to our forecast.

- ***Sectoral Shifts and Policy Delays with Food Waste*:** As we expected, there have been significant declines in regional source-separated commercial food waste and significant increases in regional source-separated residential food waste mixed with yard debris since the stay at home order was issued in late March. On the commercial side, food waste is down almost 30% from 2019 and we expect 2020 tons to come in around 5,000 tons below 2019 levels. But in 2021, we expect that about half those losses will be recovered as more people return to restaurants, and we expect the other half to be recovered the following year, bringing tonnage back to pre-COVID levels by 2022. Of course, the Business Food Waste Program will soften the blow here, but we anticipate a one year delay to the implementation of that program. As a result, increased capture from that program won't start until March 2021. All other assumptions about the tonnage effects of that program are unchanged from our November 2019 forecast.

On the residential side, food waste mixed with yard debris is up by about 35%, and 2020 tons should come in more than 21,000 tons higher than they were in 2019. Some of the increase on the residential side is from the City of Hillsboro's new curbside program (which we anticipated last November), however, the bulk of the sectoral shift from commercial to residential waste streams is clearly COVID-related, as people are spending greater proportions of their time at home. We expect that tonnage levels should come back down to pre-COVID levels over the next five years.

- ***Wet Waste Tonnage Allocations*** : The assumption underlying our updated forecast here is that CY 2020 wet waste tonnage allocations (made last year, under the CY 2020 regionally-available tonnage assumptions in our November 2019 forecast) to private facilities will be adjusted down, proportionally, for the remainder of this year in order to ensure that Metro transfer stations can receive 40% of the available waste as required in Metro Code. For CY 2021 and beyond, we assume that facilities will receive allocations of regionally-available tons in proportion to those revised 2020 allocations. This assumption is likely to change in the weeks and months ahead, and therefore presents a source of uncertainty in the wet waste tonnage forecasts to Metro transfer stations.

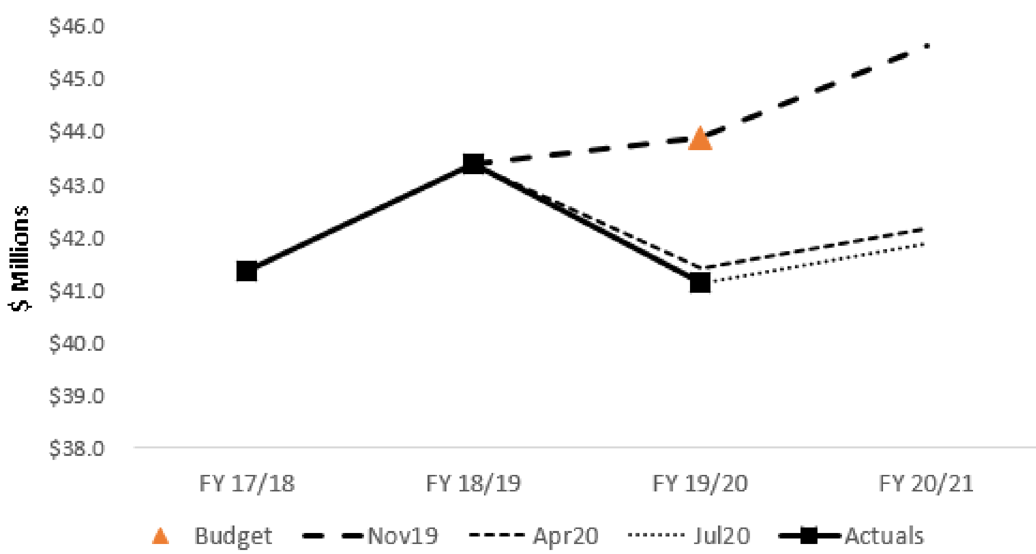
- ***Post-collection Recovery:*** Mixed dry waste recovery rates at public and private facilities hit bottom last year (on average) and are expected to grow slowly over the next few years. Many facilities that process mixed dry waste, including Metro's facilities, have seen several percentage point gains in their rates since last year. Metro's new contractor at Metro South station, for example, appears to have doubled rates of recovery at that facility and will likely keep improving in the years ahead. Increasing mixed waste recovery may be related to better markets, but is also likely related to less overall dry waste that a fixed or even growing labor supply must contend with.

- ***Significant but Transitory Shifts in Self-Haul:*** Use of Metro's staffed scales increased dramatically since the stay at home order was issued, and we expect continued high levels through the remainder of the year. It seems clear that when people spend additional time at home, they also find time for garage cleanouts and home improvement projects, all activities that cause increased self-haul traffic to Metro stations. FromMarch through May of this year, almost 6,000 more customers crossed Metro's staffed scales than they did the same period last year. Our expectation is that this is a temporary blip in self-haul activity, and use of the staffed scales, in general, should return to normal levels starting next year.

Results
Given the economic and solid waste outlook just described, we present the results of this forecast on revenues within three areas: (1) tons subject to Metro's tonnage and load charges, (2) tons subject to the Regional System Fee, and (3) tons subject to the Solid Waste Excise Tax. The first two are sources of funds for the Solid Waste Fund, while last is a source of funds for the General Fund.

- ***Metro Enterprise Revenues:*** Tonnage charge and transaction fee revenues from incoming streams to Metro's transfer stations was budgeted at $43.9M for FY 2019-20, and actuals came in at $41.1M, for a shortfall of about $2.75M for the fiscal year. Despite significant increases in residential organics, wood and yard debris tonnage, in addition to much higher load counts on the staffed scales, the loss of MSW tonnage resulted in a net shortfall.. Looking ahead to FY 2020-21, we estimate revenues to come in around $41.9M, which is about $3.76M below our November 2019 forecast, and about $270K below our last April 2020 forecast. Figure 1 below presents these results by fiscal year, for each forecast vintage, along with actual values. Table 1 (page 7) shows the tonnage results.

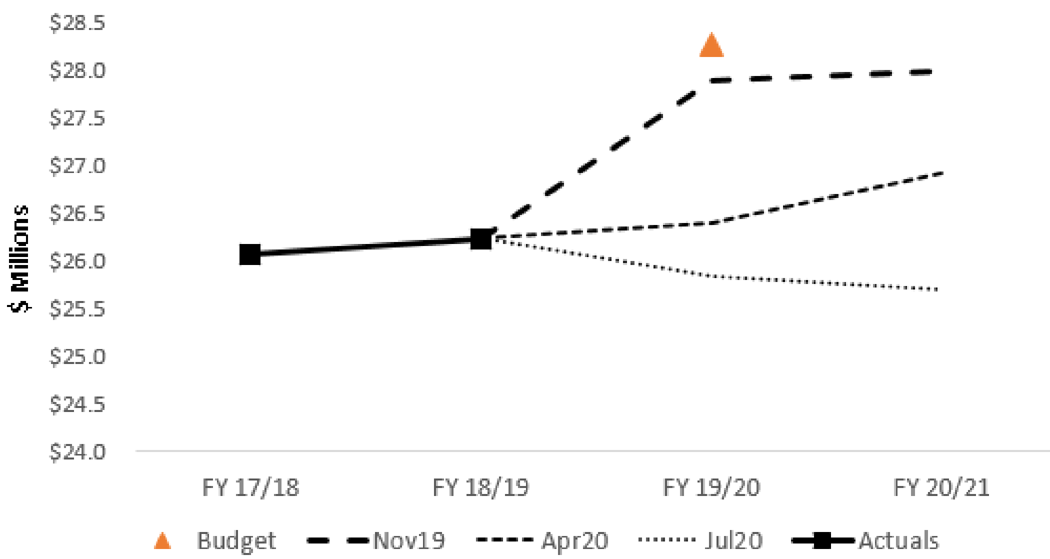
Figure 1: Metro Enterprise Revenues



- ***Regional System Fee Revenues:*** Regional system fee revenues were budgeted at $28.26M for FY 2019-20, and we currently expect about $25.84M, for a shortfall of about $2.42M for the fiscal year. Both full-freight sources of tons (regional MSW disposed, pre-consumer industrial process wastes) and reduced fee (environmental cleanup materials, petroleum-contaminated solids) materials are coming in well below budget. Looking forward to FY 2020-21, we estimate revenues to come in around $25.7M, which is about $2.3M below our November 2019 forecast, and about $1.2M below our April 2020 forecast. Figure 2 (page 5) presents these results by fiscal year for each forecast vintage, along with actual values. Table 1 (page 7) shows the tonnage results.

  A downside risk to the tonnage forecast, and therefore the revenue outlook in FY 2020-21 and beyond, is the potential for a new wet waste processing facility to divert tons from disposal. This facility is expected to come online in January 2021, and could divert as much as 9,000 tons from disposal in its first year of operation, and quickly ramp up to almost 18,000 tons each year thereafter. This diversion would reduce expected system fee revenues in FY 2020-21 by about $167K, and then by about $325K each year after (at current rates). More knowledge about timing and amounts of tons diverted should be known by the next solid waste forecast, and those impacts will be incorporated into the outlook then.

Figure 2: Regional System Fee Revenues



- ***Excise Tax Tonnage/Revenues***: Excise tax revenues were budgeted at $17.7M for FY 2019-20, and the current expectation is to see about $16.15M, for a shortfall of about $1.56M for the fiscal year. Looking forward to FY 2020-21, we estimate revenues to come in around $17.3M, which is about $1.6M below our November 2019 forecast, and about $860K below our last April 2020 forecast. Figure 3 (page 6) presents these results by fiscal year for each forecast vintage, along with actual values. Table 1 (page 7) shows the tonnage results.

  The processing facility described above also presents a downside risk to excise tax revenues, and could reduce expected excise tax revenues in FY 2020-21 by about $112K, and then by about $218K each year after (at current rates).

Figure 3: Excise Tax Revenues

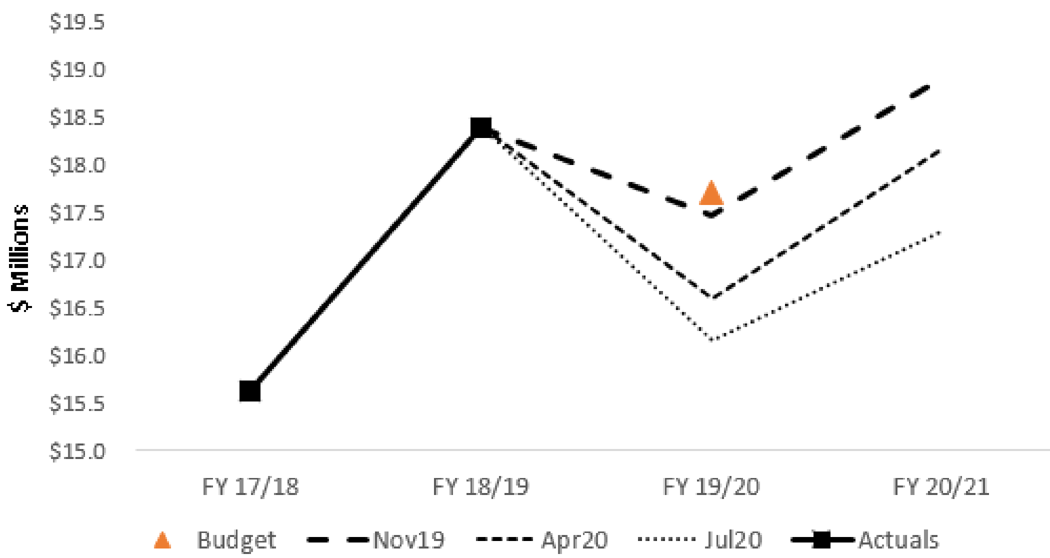


Table 1: Unit Forecasts By Area of Revenue - Comparison of Forecast Vintages

	<----*Actuals*		*Forecasts*---->						
	FY	FY	FY 2019-20				FY 2020-21		
	2017-18	2018-19	Budget	Nov19	Apr20	Jul20*	Nov19	Apr20	Jul20
Metro Enterprise									
Tons									
MSW	532,333	549,143	556,780	535,869	507,663	495,150	557,806	518,495	504,032
Res. Organics	44,658	42,982	36,471	45,827	44,917	50,195	45,701	45,382	51,055
Com. Organics	13,621	17,663	16,585	18,023	15,186	14,914	24,070	13,719	16,579
Wood	2,291	2,386	1,843	3,294	3,145	3,144	3,128	3,127	3,054
Yard debris	13,955	14,599	13,388	17,271	14,648	15,371	16,518	16,518	15,994
Loads									
Staffed	288,101	294,750	304,927	328,016	304,171	313,526	326,807	303,610	310,397
Automated	104,597	112,239	109,880	112,124	106,301	105,649	117,017	107,743	107,601
Regional System Fee									
Full-freight	1,400,326	1,445,177	1,477,270	1,473,734	1,402,543	1,351,658	1,477,385	1,419,208	1,344,946
ECU (Reduced)	273,996	195,544	326,219	202,057	135,435	290,173	219,661	219,685	283,882
Excise Tax									
Full-freight	1,420,785	1,466,723	1,502,310	1,492,911	1,422,109	1,370,810	1,498,043	1,439,027	1,364,900
ECU (Reduced)	273,996	195,544	326,219	202,057	135,435	290,173	219,661	219,685	283,882

Notes:
*Represent actual units for Metro Enterprise group, since June 2020 actuals were available at the time of this forecast