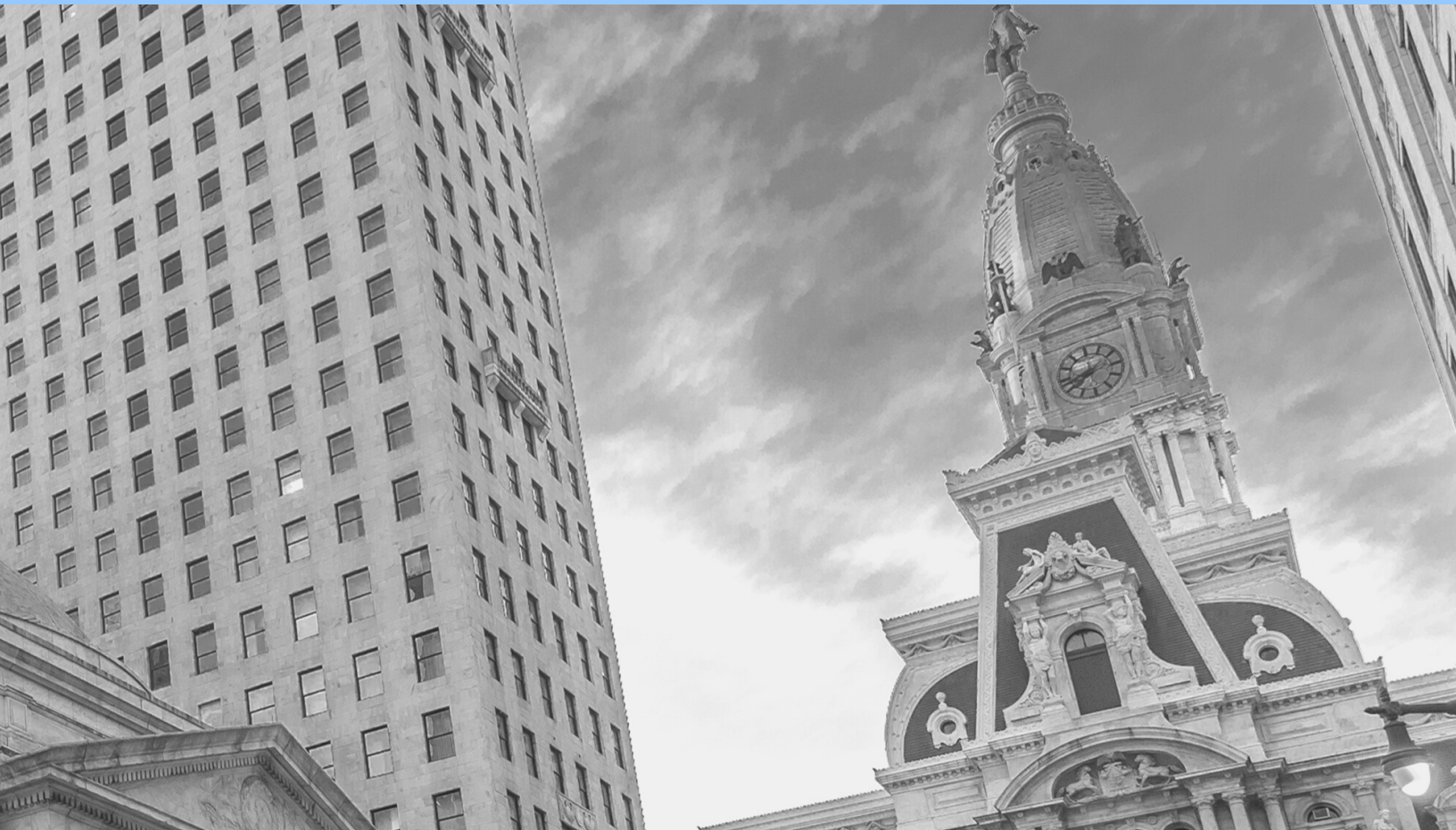


Data Release: Sanitation Performance Metrics



City Controller
Rebecca Rhynhart
November 2021

Under the leadership of City Controller Rebecca Rhynhart, the Controller's Office is committed to increasing transparency around city services to help ensure services reach all Philadelphians equally. To that end, the Controller's Office releases datasets and interactive reports to inform residents about areas of interest and public concern.

Since the COVID-19 pandemic began in March 2020, Philadelphians across the city have experienced recurring delays for trash collection. As such, the Controller's Office is releasing data about the on-time collection rate for trash pickup¹ as well as the total trash tonnage collected curbside by the Streets Department. The data, provided to the Controller's Office by the Streets Department, includes historical data since fiscal year 2009 (FY09) as well as data since 2017 for each of the city's 13 sanitation districts. The 13 sanitation districts are neighborhood-sized regions created by the Streets Department to assist with trash removal operations. This more granular data provides important insight into how the pandemic has affected trash collection in different areas of the city.

The data shows what many Philadelphians have experienced firsthand since the pandemic began — on-time trash collection declined sharply in the early months of pandemic and remained below the Streets Department's target goal for nearly every month since. During the same period, curbside trash tonnage rose sharply, increasing by about 25% relative to pre-pandemic levels. This increase in tonnage, combined with the pandemic's impact on staffing levels, created significant challenges for the Streets Department.

However, the data also reveals that the Streets Department was experiencing challenges prior to the pandemic's start. The City's on-time collection rate averaged 94% from FY09 to FY13. However, during these years, the condition of the Sanitation fleet had worsened, and a shortage of compactors, the vehicles used for most trash collection, began impacting performance in FY14. In the years since, the Streets Department has worked to build up its fleet to prevent compactor maintenance from affecting performance. Despite the additional compactors, the on-time rate has never fully recovered, hovering around 85% in the years leading up to the pandemic.

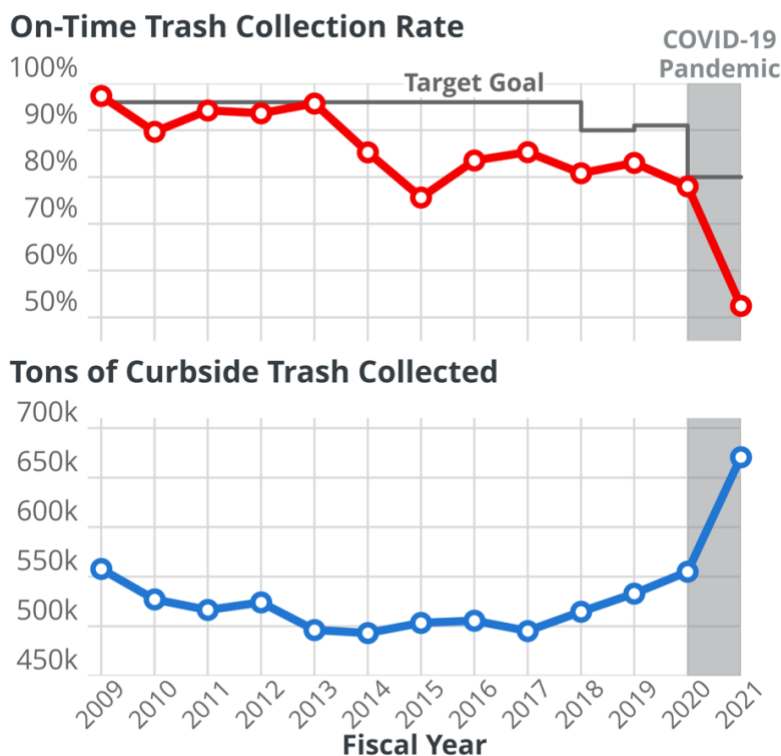
The on-time rate also varies significantly by sanitation district. From January 2017 to the start of the pandemic, all sanitation districts only met the on-time target rate twice. Certain districts, such as 4G in Northwest Philadelphia and 2D in South Philadelphia, had collection rates consistently worse than the citywide average prior the pandemic. On the other hand, districts like 2B in Center City and 6A in the Northeast fared consistently better than the citywide average. For the most part, these trends have continued since the pandemic's start, with areas of the city with better pre-pandemic performance able to maintain their relative success during the pandemic. The goal of this analysis is to provide the Streets Department with a resource to improve service delivery for Philadelphians and address the unequal nature of sanitation operations across the city.

¹ The on-time collection rate is a measure of how many trash loads are collected by 3pm in a given day. If no loads are left to be collected at 3pm, the rate is equal to 100%.

Citywide Performance

The figure below shows the citywide on-time trash collection rate and total trash tonnage for each fiscal year since FY09. In FY21, the on-time rate declined sharply to just 53%, well below the Streets Department's target goal of 80%. This drop coincided with an unprecedented 21% year-over-year increase in trash tonnage. The historical on-time rates show a sharp break beginning in FY14 when a compactor vehicle shortage, the result of years of inadequate fleet purchases, had a significant impact on sanitation operations. According to the Streets Department, the City began purchasing between 30 and 35 new compactors each year to resolve the shortage. While the Streets Department was able to reach a sufficient level of compactors in late FY19, curbside tonnage also increased during this time.² As a result, the on-time rate has never fully recovered to the level from earlier years, when the Streets Department consistently achieved an on-time rate of about 95%. Instead, the target goal was lowered from 96% to 90% in FY18, changed to 91% during FY19, and then lowered again to 80% during the pandemic.³

Historical Sanitation Performance Metrics



Source: Streets Department & Five Year Financial Plans

² While not the focus of this release, it is important to note recycling has declined since FY17, which has contributed to higher trash tonnage. However, this does not account for the full increase in trash tonnage during this period.

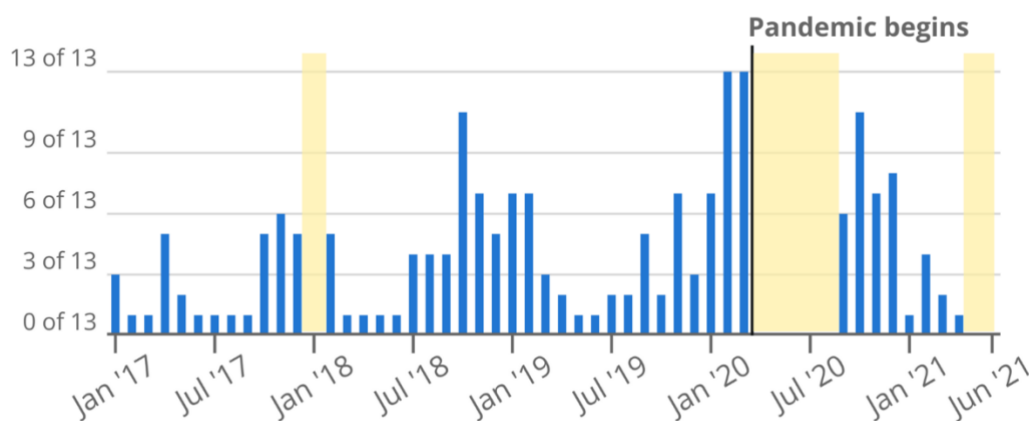
³ Source: Quarterly City Manager Report

Performance by Sanitation District

The pandemic's impact on sanitation operations has varied across the city's 13 sanitation districts. The figure below shows the number of districts meeting the target goal for on-time collection for each month since January 2017. Notably, zero districts have met the on-time goal in 7 of the 15 months since the pandemic began. This is in stark contrast to the three-year period prior to the pandemic when this occurred just once. While performance has been worse during the pandemic, clear performance issues also existed prior to it. Between January 2017 and the start of the pandemic, every sanitation district met the on-time goal just twice. The median number of districts to meet the on-time goal in any given month was just 3 out of 13.

Number of Districts Meeting Target Goal for On-Time Trash Collection Rate Each Month Since January 2017

Months with no districts meeting target goal are highlighted in yellow



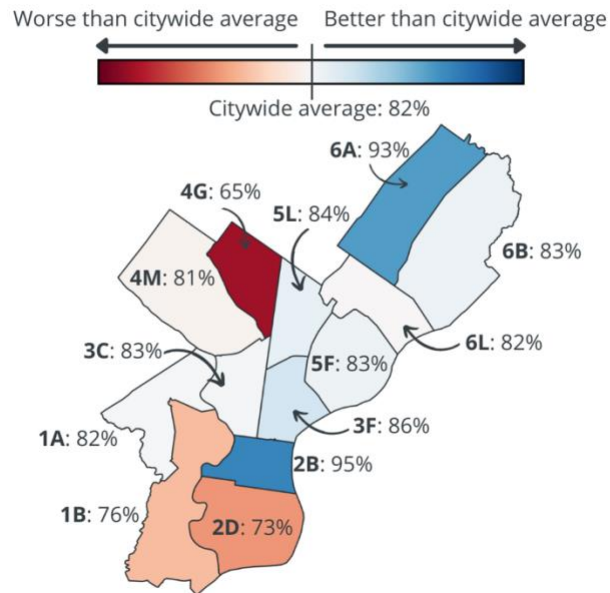
Source: Controller's Office analysis of Streets Department data

Note: Target rates were 96% from Jan. 2017 to Jun. 2018, 90% from Jul. 2017 to Jun. 2019, 91% from Jul. 2019 to Jun. 2020, and 80% afterwards.

Prior to the pandemic, from January 2017 to February 2020, on-time collection rates varied significantly between districts. The citywide average over this period was 82%, below the average target goal of 93%. Districts 2B in Center City and 6A in the Northeast were the only districts to meet this goal, significantly outperforming other districts with average rates of 95% and 93%, respectively. On the other hand, the worst performing districts were 4G in Northwest Philadelphia (65%), 2D in South Philadelphia (73%), and 1B in West Philadelphia (76%).

Average On-Time Trash Collection Rate by District from Jan. 2017 to Feb. 2020

Data is shown relative to the citywide average, 82%



Source: Streets Department

The figures on pages six through eight present the on-time collection rate and the average monthly trash tonnage for each of the city's 13 sanitation districts. The charts show the annual average of these metrics using data from 2017 through the first half of 2021. The data for each district is shown in color with the citywide value shown as a dark gray line. The figures highlight which districts are performing better or worse than the citywide average. From this data, several key takeaways are apparent:

- On-time collection has declined each calendar year since 2017, with the largest decreases in 2020 and 2021 during the pandemic.
- Trash tonnage has increased in nearly all districts since the pandemic began, although the size of the increase varies from district to district. For example, district 6L in the lower Northeast had the highest tonnage total prior to the pandemic and one of the largest increases during the pandemic. On the other hand, areas like district 2B in Center City have had only a marginal increase in tonnage.
- Some areas of the city have consistently better on-time rates, while others have consistently worse. For example, Center City (district 2B) is among the top performers in terms of on-time rate each month, while districts such as 4G in Northwest Philadelphia and 2D in South Philadelphia have collection rates consistently worse than the citywide average.

- Since 2017, district 2D's (South Philadelphia) on-time collection rate is worse than the citywide average despite having one of the lowest tonnage totals in the city. Similarly, district 4G (Northwest Philadelphia) has one of the lowest on-time rates in the city despite tonnage levels similar to the citywide average.
- Districts 2B (Center City) and 3F (Northern Liberties/Fishtown/Kensington) have lower-than-average tonnage totals and among the highest on-time rates in the city since the pandemic.
- The pandemic worsened pre-existing trends around on-time collection rates, with the gap between the worst-performing and best-performing districts widening. In 2017, the district with the best average rate (6A) was 31 percentage points better than the district with the lowest rate (4G). In the first half of 2021, that gap widened to 45 percentage points, with district 6L having an on-time rate of 30% and district 3F having a rate of 75%.

Conclusion

Since March 2020, stay-at-home orders and the rise of remote work have contributed to an unprecedented increase in curbside trash tonnage. The Streets Department struggled to handle the increase, with the citywide on-time collection rate declining to just 53% in FY21, well below its target goal of 80%. The impact on certain areas of the city have been even larger, with 8 of 13 sanitation districts averaging below 50% on-time collection during 2021. District 6L (lower Northeast) has experienced a significant increase in tonnage and has had an average on-time rate of only 31% in 2021. On the other hand, only two districts have had an average on-time rate above 70% in 2021 — district 2D (Center City) and district 3F (Northern Liberties/Fishtown/Kensington).

While the on-time collection rate worsened during the pandemic, clear performance issues existed prior to the pandemic. Prior to FY14, the Streets Department consistently managed an on-time rate of about 95%, but following a compactor shortage in FY14, on-time rates declined. The Streets Department did not reach a sufficient level of compactors until late FY19. Meanwhile, curbside trash tonnage began to increase, and on-time performance never fully recovered to the level of earlier years. Performance has also varied significantly across areas of the city, with some sanitation districts, such as 2D in South Philadelphia and 4G in Northwest Philadelphia, almost never achieving a 90% on-time rate. This stands in stark contrast to trash collection in Center City, which is nearly always above 90%. One point is clear: trash collection, one of the core services of City government, is not equal in Philadelphia.

On-Time Collection Rates and Total Tonnage by Sanitation District

Citywide average across all districts is shown as the dark gray line

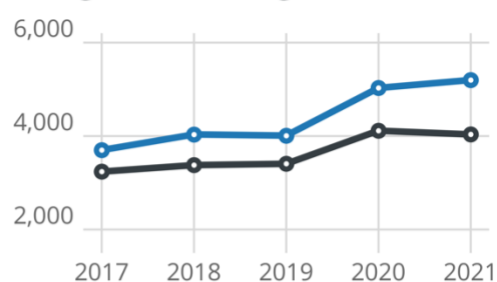
District 1A



On-Time Collection Rate



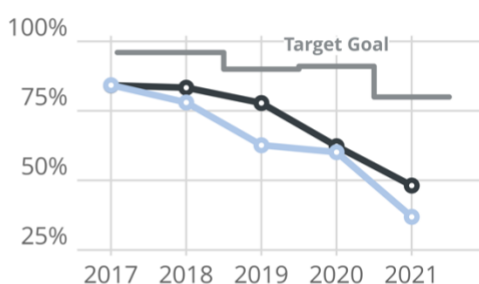
Average Trash Tonnage



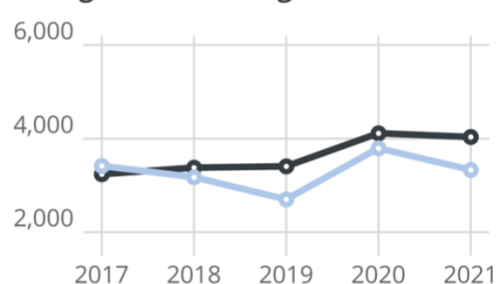
District 1B



On-Time Collection Rate



Average Trash Tonnage



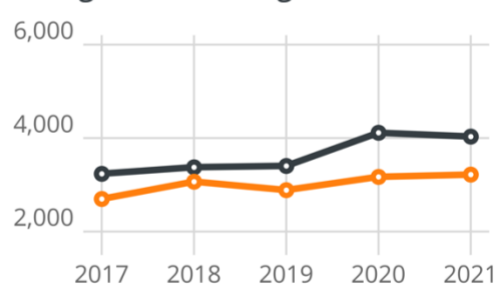
District 2B



On-Time Collection Rate



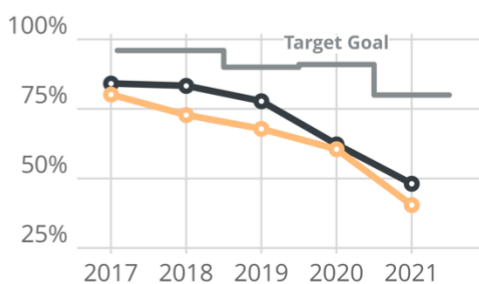
Average Trash Tonnage



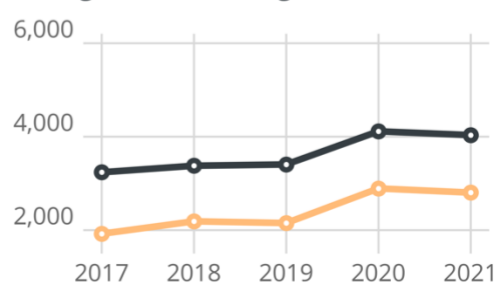
District 2D



On-Time Collection Rate



Average Trash Tonnage



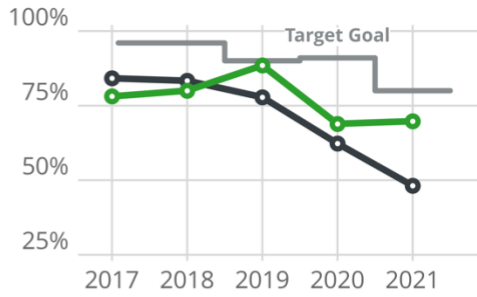
Note: Data represents a calendar year average of monthly data; 2021 includes data through June 2021

Source: Controller's Office analysis of data provided by the Streets Department

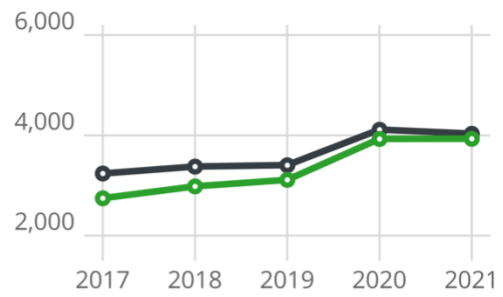
District 3C



On-Time Collection Rate



Average Trash Tonnage



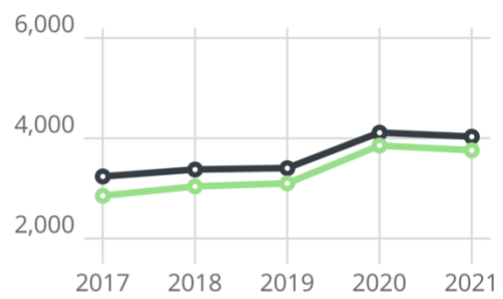
District 3F



On-Time Collection Rate



Average Trash Tonnage



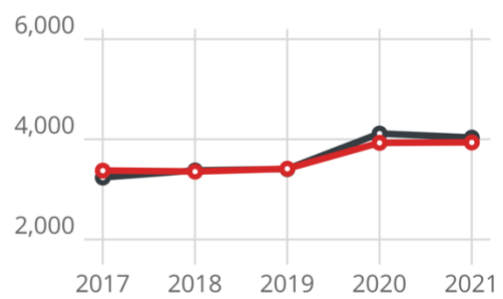
District 4G



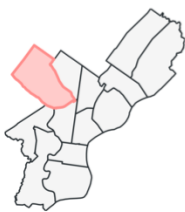
On-Time Collection Rate



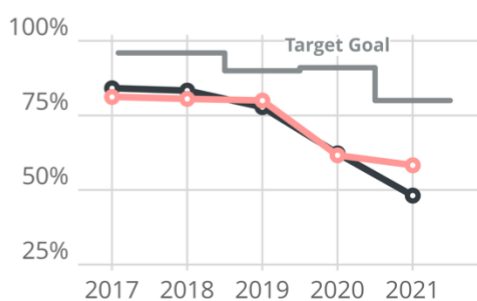
Average Trash Tonnage



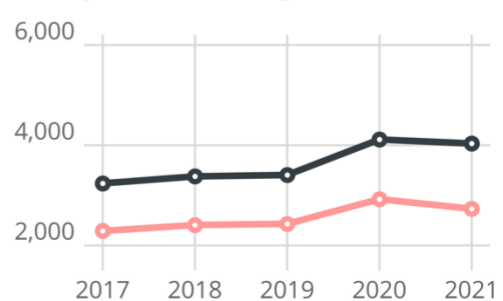
District 4M



On-Time Collection Rate



Average Trash Tonnage



Note: Data represents a calendar year average of monthly data; 2021 includes data through June 2021
Source: Controller's Office analysis of data provided by the Streets Department

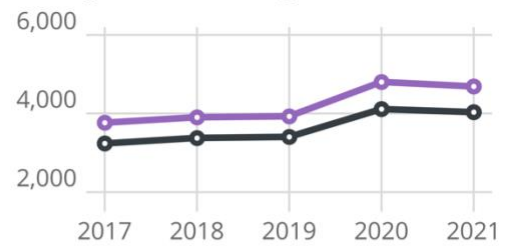
District 5F



On-Time Collection Rate



Average Trash Tonnage



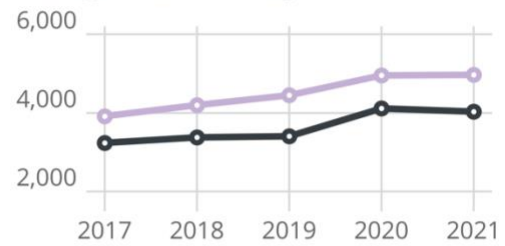
District 5L



On-Time Collection Rate



Average Trash Tonnage



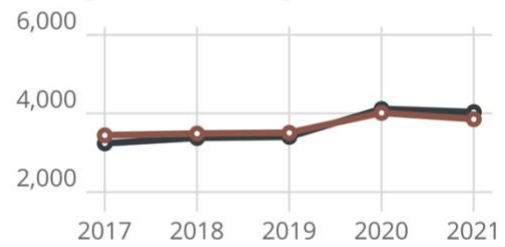
District 6A



On-Time Collection Rate



Average Trash Tonnage



District 6B



On-Time Collection Rate



Average Trash Tonnage



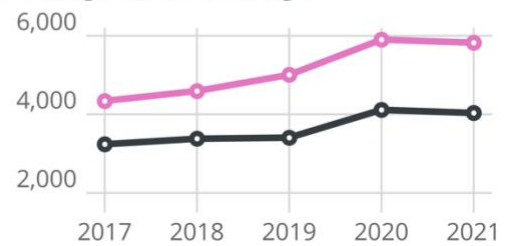
District 6L



On-Time Collection Rate



Average Trash Tonnage



Note: Data represents a calendar year average of monthly data; 2021 includes data through June 2021
Source: Controller's Office analysis of data provided by the Streets Department