To: Justin Elszasz

CC: Belinda Harris

From: Micah Rufsvold, Data Analyst Applicant

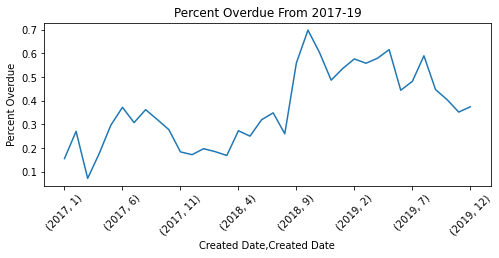
Date: 11 November 2020

Subject: Solid Waste Service Request Trends

**Summary**

The Bureau of Solid Waste has answered the call of hundreds of thousands of requests in the last three years. Serving this huge volume of essential services is a significant undertaking, and unfortunately, has overwhelmed the Bureau’s ability to meet its deadlines in many cases. According to the records of the services administered by the Bureau, after a spike in overdue services in fall of 2018, the overall percent of overdue services has remained high, hovering around 45%. This analysis had insufficient data to project the degree to which the burden of late services impacted Baltimoreans whom our government has historically underserved, but using crime data as a rough proxy showed that the Bureau has .

**Background and General Observations**

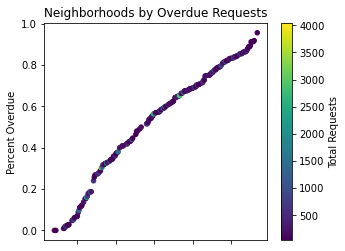
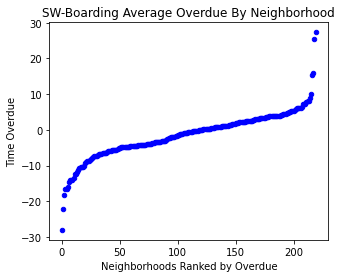
From 2017 through 2019, the Bureau saw the following totals, not including proactive measures, for each category of SW request: In 2017, 2018, and 2019, the Bureau saw an overall rate of overdue services at 26%, 34%, and 51%, respectively. You can see its change over time below as well. Obviously, the influx of late 2018 set 2019 to face some major challenges. Further information about the situation at that time is required to make contextualize this problem.

|  |  |
| --- | --- |
| **SR Type** | **Request Count** |
| Boarding | 24477 |
| Cleaning | 37157 |
| Dirty Alley | 72318 |
| Dirty Street | 44723 |
| HGW | 62972 |

**Equity and City Services**

Figure

Upon a cursory look at the percent of overdue services, one may be led to believe that neighborhoods receive a massive spread of service speeds regardless of the number of requests they make. However, residents do not experience the tardiness of service requests as a binary, so it is more illustrative to consider the average number of days services go overdue in each neighborhood. We can see that all neighborhoods experience a much tighter band of lateness. Two graphs, percent overdue for all services and average days overdue for a specific service, are offered below for contrast. Further visualizations are available upon request.

These observations indicate that, while there is variation in service quality between neighborhoods, creating a more geographically equitable agency is attainable.

However, it is vital that we consider other dimensions of residents lives beyond where they live. At time of writing, the author does not have access to quality demographic data to map onto the SW request records but was able to pull crime reports for 2017-2019. Grouping SW requests and BPD reports by geodata shows a very low correlation between crime incidents and service speed.