To: Justin Elszasz

CC: Belinda Harris

From: Micah Rufsvold, Data Analyst Applicant

Date: 11 November 2020

Subject: Solid Waste Service Request Trends

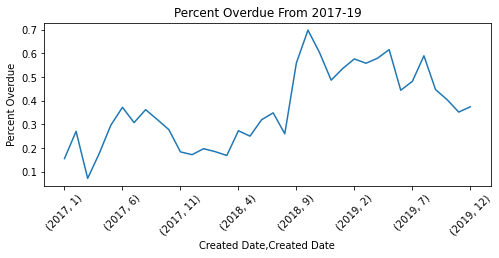
**Summary**

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 some mildly positive news. The Bureau has administered services with no measurable correlation with crime rates.

**Background and General Observations**

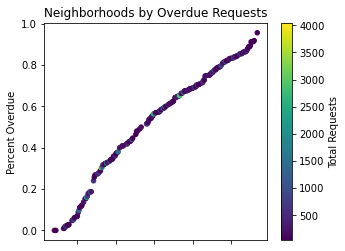
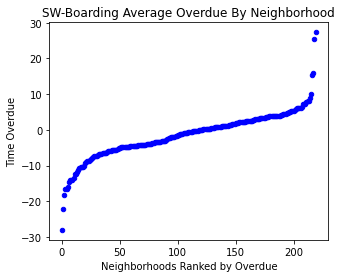
From 2017 through 2019, the Bureau saw the totals in the following table for each category of SW request, not including proactive measures. In 2017, 2018, and 2019, the Bureau saw an overall rate of overdue services at 26%, 34%, and 51%, respectively. You can see its change over time below as well. Obviously,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

|  |  |  |  |
| --- | --- | --- | --- |
| **SR Type** | **Request Count** | **Ave Days Overdue** | **Standard Deviation** |
| Boarding | 24477 | -1.4 | 6.6 |
| Cleaning | 37157 | -36.5 | 50.4 |
| Dirty Alley | 72318 | -26.7 | 31.6 |
| Dirty Street | 44723 | -3.5 | 14.3 |
| HGW | 62972 | -63.8 | 60.9 |

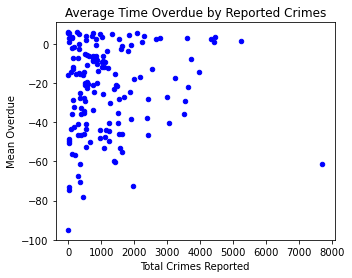


**Equity and City Services**

There is a significant variation between

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 shows a very low correlation between crime incidents and service speed in any given area.

To align with Biennial Comprehensive Crime Reduction Plan (2019), BPW and BSW must publish their plan to engage in anti-violence efforts. One strategy that could be implemented is shifting resources to assure that neighborhoods that have suffered from decades from disinvestment receive timely services on their residents’ solid waste requests.

**Conclusion**

In the face of a serious mismatch in resources to demand, these data shows that the Bureau of Solid Waste has made a significant effort to apply their resources equitably across the city, even as they fall short in some areas. More comprehensive, detailed analysis could answer the following outstanding questions: What are the neighborhoods that are significant outliers for overdue rates? Is there a correlation between race, socio-economic status, and other identities and quality of service? What are the fiscal, time, and human capital cost differences between each type of service? How could the Bureau rebalance resources between service types and regions of the City to achieve even better outcomes and equity?

Addendum A – Graphs of Average Days Overdue for Each Service Type by Neighborhood

