

## Improving Garbage Fee Collections: City of Saint Paul

### Summary

In May-June 2019, we partnered with the Office of Financial Services in Saint Paul, Minnesota—with the support of the Mayor’s Office and the City’s Innovation team—to improve garbage fee collections on overdue accounts. We tested whether a modified notice and modified notice plus envelope handwriting would improve payments. **The new notice plus handwriting increases payment amounts by 21 percent compared to the business-as-usual average.** We recommend continuously testing other efficient tweaks to the outside of the envelope and more significant modifications to the letter itself.<sup>1</sup> We also recommend applying these principles to water, parking, and taxes.<sup>2</sup>

### Intervention

Behavioral science research has often found that seemingly small hurdles can cause us to fail to follow through. This has been shown to impact us in areas as diverse as taxes, energy consumption, and health care utilization. Behavioral science research has also found that seemingly small tweaks, including personalization, simplification, and salience can substantially improve outcomes.<sup>3</sup>

We created a new notice that included a clear call to action at the top of the notice “please pay your garbage bill today.” The information on the new notice was broken up into five clear sections that all began with questions the resident might ask (e.g., “Why am I receiving this notice?”). We also included iconography and credit card logos to improve understanding across languages and to focus on payment steps. For a subset of accounts, Saint Paul staff also handwrote on the outside of the envelopes (“Open me please!”) to enhance the effects of the notice. Among other things, it clearly demonstrates to the resident that another person took the time to handwrite and therefore must be important.<sup>4</sup>

### Experiment

Our goal was to test whether such behavioral modifications actually improve overdue payments in garbage fee collections. Specifically, we randomized (using statistical software) half of the 7,999 accounts who had yet to pay their 2019 Quarter 1 garbage bill to business-as-usual (Office of Financial Services notice) or to the new notice (New Letter Only). Half of the new notice group also received handwriting on the outside of the envelope (New Letter + Envelope). We split these accounts randomly so that any observed differences in payments could be attributed to the new letter and not some unknown or other factor (e.g., resident familiarity with the process, the economy, etc.).

## Results

All notices were mailed on May 8, 2019 with a due date of June 10, 2019. The New Letter + Envelope intervention<sup>5</sup> increases the likelihood of paying by 8 percent and payment amount by \$4.46 per account (represents 21% of Business-as-usual average of \$21.13).<sup>6</sup> There was no meaningful change in payments for the New Letter Only intervention. Compared to Business-as-usual, we would expect the New Letter + Envelope intervention—if implemented to all 7,999 accounts and not just a random subset—to be responsible for an additional \$35,000 in payments.

Figure 1: Marginal Effect of Interventions per Account



n = 7,999 | \*\*\* p<.001, \*\* p<.01, \* p<.05

<sup>1</sup> [https://www.maxwell.syr.edu/uploadedFiles/XLab/Buffalo\\_Water\\_Results.pdf](https://www.maxwell.syr.edu/uploadedFiles/XLab/Buffalo_Water_Results.pdf)

<sup>2</sup> See <https://www.maxwell.syr.edu/XLab/Projects/>

<sup>3</sup> Bhargava, Saurabh, and Day Manoli. "Why are benefits left on the table? Assessing the role of information, complexity, and stigma on take-up with an IRS field experiment." *NA-Advances in Consumer Research Volume 40* (2012).

<sup>4</sup> <https://www.maxwell.syr.edu/uploadedFiles/XLab/Results.pdf>

<sup>5</sup> Property owners, not accounts, were randomized to treatment arms. This was done to reduce spillovers in estimating the effect of the interventions. The statistical analysis handles this higher-level randomization by clustering standard errors at the property owner level (n = 7,292).

<sup>6</sup> This represents the marginal effect of being assigned to the New Letter or New Letter + Envelope group. This model includes control variables for amount owed and number of properties owned. The raw average for the Letter Only group was \$20.76 and \$24.74 for the Letter + Envelope group.