# case study

# CITY OF SAN JOSE ILLEGAL MATTRESS DUMPING PILOT PROJECT

In July 2020, the Mattress Recycling Council (MRC) invited the 21 Illegally Dumped Mattress Collection Initiative (Initiative) participants with the highest per capita rates of illegal mattress dumping to apply for illegal dumping pilot project funding. MRC awarded funds to the City of San Jose for a surveillance and educational outreach project at select multifamily dwellings.

# **The Problem**

The illegal dumping of bulky items, including mattresses, has been a challenging issue for the City of San Jose for many years. In 2017, the City changed its Junk Pickup program. Previously funded by a pay-per-appointment model, it is now funded by garbage and recycling rates, providing residents free and unlimited appointments for bulky item pickup. Yet, illegal dumping continues to be a problem, particularly at multifamily dwellings. Each year from 2019 to 2021, more than 5,000 illegally dumped mattresses were collected in San Jose, and the City estimated 2022 would match or exceed those numbers.

# How the City Addressed the Problem

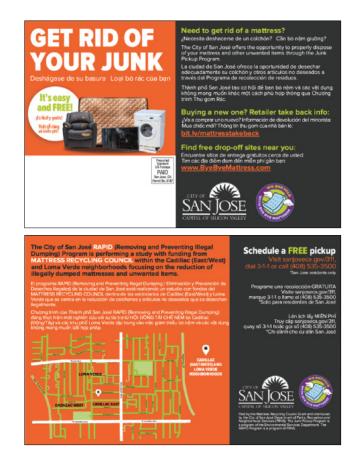
With funding provided by MRC, the City identified four neighborhoods with multifamily dwellings that have been hot spots for illegal dumping. The goal of this project was to decrease the number of dumped mattresses and promote proper mattress disposal through the City's Junk Pickup program and drop-off locations participating in MRC's Bye Bye Mattress program. The pilot project, conducted from November 2021 through April 2022, studied the effectiveness of combining targeted educational outreach with the installation of surveillance video cameras with license plate readers.

To raise awareness among residents about the City's Junk Pickup program and MRC's Bye Bye Mattress locations, the City created a multilingual direct mail flyer that included information about the project, a map of the study site and details about how to schedule a bulky item pickup appointment. The flyer also included links to MRC's Bye Bye Mattress website for more information about participating drop-off locations and retailer take back. The flyer was mailed to residents at the start and midway through the pilot program. A digital version was posted on the Nextdoor social media platform and website once a week for the first four weeks of the pilot project. The second component was the installation of surveillance cameras in two illegal dumping hot spots. The camera footage was monitored weekly for illegal dumping activity, and incidents were recorded and forwarded to the City's Code Enforcement group for further review.

The city applied the following strategies at each hot spot location:

- Site 1: No camera and no outreach Site 2: No camera and outreach only Site 3: One camera and no outreach
- Site 4: One camera and outreach

To assess the effectiveness of the pilot project, the City tracked the total number of Junk Pickup appointments, the number of those appointments that included mattresses, the number of illegally dumped mattresses, and the number of citations or warning notices issued based on evidence collected by the cameras.



### **Results**

The city compared the project data with comparable periods in 2019-2020 and 2020-2021. It is important to note that both appointments for bulky item pickup and the number of illegally dumped mattresses increased, sometimes significantly, during the 2020-2021 period, likely due to COVID-19 mandates and changes in residents' behaviors. Additionally, there were no illegal dumping incidents that occurred within 350 feet of the camera placement. As a result, no citations or warning notices were issued for incidents captured on camera.

#### Site 1 (no camera, no outreach)

With no interventions, education or enforcement strategies used in this area, the number of scheduled Junk Pickup appointments decreased, while the number of illegally dumped mattresses increased. Table 1. shows the year over year comparison of scheduled pickup appointments and illegally dumped mattresses in the study area.

Year	Number of scheduled pickup appoinments	Number of illegally dumped mattresses
2019 - 2020	31 (15 included mattresses)	12
2020 - 2021	46 (17 included mattresses)	26
2021 - 2022	28 (12 included mattresses)	45

Table 1. Total scheduled pickups and illegally dumpedmattresses for study Site 1

#### Site 2 (no camera, outreach only)

The city was hopeful the number of scheduled pickup appointments would increase in this area during the study. They did increase over the comparable 2019-2020 period but were below the 2020-21 level. The number of illegally dumped mattresses dropped by 36%, compared with 2020-21, most likely due to the outreach efforts in this area. Table 2. shows the year over year comparison of scheduled pickup appointments and illegally dumped mattresses in the study area.

Year	Number of scheduled pickup appoinments	Number of illegally dumped mattresses
2019 - 2020	59 (27 included mattresses)	19
2020 - 2021	73 (36 included mattresses)	85
2021 - 2022	68 (30 included mattresses)	54

Table 2. Total scheduled pickups and illegally dumpedmattresses for study Site 2

#### Site 3 (one camera, no outreach)

The camera in this area had a significant impact on the number of illegally dumped mattresses, which dropped to the lowest level in three years. A total of 35 mattresses were dumped more than 300 feet from the camera, and, notably, no mattresses were illegally dumped within 300 feet of the camera. The number of scheduled pickup appointments also increased. Table 3. shows the year over year comparison of scheduled pickup appointments and illegally dumped mattresses in the study area.

Year	Number of scheduled pickup appoinments	Number of illegally dumped mattresses
2019 - 2020	39 (16 included mattresses)	37
2020 - 2021	45 (21 included mattresses)	58
2021 - 2022	66 (29 included mattresses)	35

Table 3. Total scheduled pickups and illegally dumpedmattresses for study Site 3

#### Site 4 (one camera, outreach)

The city observed an unexpected result at this site, where scheduled appointments dropped from the previous year but were higher than the 2019-2020 period. Notably, there were no illegal dumping incidents within 350 feet of the camera. Table 4. shows the year over year comparison of scheduled pickup appointments and illegally dumped mattresses in the study area.

Year	Number of scheduled pickup appoinments	Number of illegally dumped mattresses
2019 - 2020	18 (6 included mattresses)	18
2020 - 2021	33 (17 included mattresses)	38
2021 - 2022	27 (14 included mattresses)	34

Table 4. Total scheduled pickups and illegally dumpedmattresses for study Site 4



# What the City Accomplished

The education and enforcement strategies implemented in this pilot project were effective. In the areas where strategies were employed (Sites 2, 3 and 4) the city achieved a 32% decrease in illegally dumped mattresses. In contrast, the city documented a 73% increase in illegally dumped mattresses in the area where no strategies were employed.

Educational outreach through direct mail flyers and digital media posts helped to reduce illegally dumped mattresses at one site by a total of 36%, which is better than the 20% decrease the city originally expected. This prevented 31 mattresses from being illegally dumped in one San Jose neighborhood.

The placement of surveillance cameras reduced illegally dumped mattresses by a total of 28%, just slightly lower than the 31% the city expected. This prevented 27 mattresses from being illegally dumped at sites with cameras.

All of the illegally dumped mattresses collected during the project were brought to drop-off locations participating in MRC's Bye Bye Mattress program.

# **Going Forward**

Resident turnover in multifamily dwellings is often higher than in other neighborhoods, so the need for ongoing, regularly scheduled education efforts about the City's Junk Pickup program and MRC's Bye Bye Mattress drop-off locations in these areas is essential to prevent illegal dumping and establish community awareness of proper disposal methods.

Additionally, the ongoing use of deterrents, such as surveillance video cameras with license plate readers, allows for increased enforcement against illegal dumping. The City plans to continue to use cameras and increase outreach regarding its Junk Pickup program and MRC's collection network.

