

**Using data to develop a trash collection program
for unhoused San Jose residents during the COVID-
19 Pandemic**

ACKNOWLEDGMENTS

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The City of San José's Emergency Operation Center (EOC) is activated during any emergency or crisis affecting San José residents, including the COVID-19 pandemic. In 2020, due to the COVID-19 pandemic, many Emergency Operations Center branches were formed, including the BeautifySJ Response branch which aimed to advance public health for unsheltered communities. Preventing the community spread of COVID-19 was essential. This was—and continues to be—especially critical considering that 1) the virus can cause severe illness or even death, 2) the most vulnerable should be protected, 3) the healthcare system must be protected from being overwhelmed, and 4) COVID-19 may be spread by people who are not showing symptoms.

People experiencing homelessness are more vulnerable to COVID-19 because they have limited access to sanitation like clean water and soap, are more prone to illnesses, and they lack spaces to shelter indoors. The City of San José has a significant lack of shelter spaces to meet the needs of the over 5,000 people who are living on San Jose's streets or in other areas not designed for habitation. Living outdoors presents immense challenges to preventing the spread of disease, and naturally results in the outcome of increased blight, including increased litter, trash, and dumping as unhoused residents do not receive regular waste management service.

To prevent the spread of coronavirus infectious disease (COVID-19), the Centers for Disease Control and Prevention (CDC) recommends that if individual housing options are not available, people who are living unsheltered or in encampments should remain where they are. This consideration is due to the fact that, "Clearing encampments can cause people to disperse throughout the community and break connections with service providers. This increases the potential for infectious disease spread."¹

To help reduce the spread of disease and the blight impacts exacerbated by the suspension of encampment abatements², as part of the City's COVID-19 encampment response, the City launched two programs to support sanitation efforts. The first is a pilot encampment support program, SOAR, that provides the city's 16 largest encampments with portable toilets, handwashing stations, and enhanced outreach. The second program is the Encampment Trash Program, which is more expansive in terms of number of locations. The latter has had the dual purpose of: 1) collecting trash at encampments (by distributing and collecting trash bags), and 2) ensuring that encampments do not accumulate too much debris (large items), that could spread disease or cause other public safety issues when

¹ [People Experiencing Homelessness | COVID-19 | CDC](https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/unsheltered-homelessness.html#facility-encampments) – Considerations for encampments

<https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/unsheltered-homelessness.html#facility-encampments>

² Abatements are when residents are asked to leave their structures. They are asked to take/sort out personal belongings. Personal items they cannot take with them are stored for a defined period. Whatever is not personal or is taken is then broken down and disposed of. Unhoused residents are provided notice of abatements in advance via paper postings that are posted in the area of the encampment.

such debris blocks public rights of way. This document measures the outcomes for the Encampment Trash Program.

The guiding framework for the BeautifySJ EOC branch was how to serve the right locations with the right service, at the right frequency to achieve clean conditions. A system was needed that applied resources efficiently, and effectively. A comprehensive hot spot analysis and visual site assessments led to the creation of a tiered service model which was the first scheduled and maintenance-based approach to providing trash collection services to encampment residents in San José. Some of the insights gained from the initial visual assessments were that some sites were easier to clean (less debris and more easily accessible) than others. Larger and harder to access sites required multiple services and extensive encampment engagement and robust cleanup. The analysis resulted in the creation of Service Model 1.0, a three-tiered service model that, depending on the magnitude of issues at a site, is assigned appropriate resources (Figure 1).

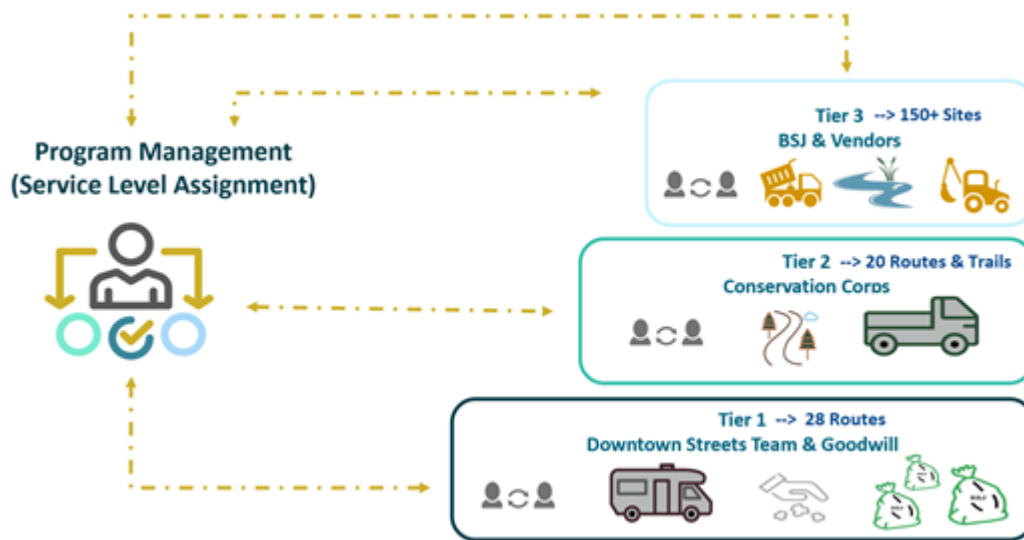


Figure 1: Tiered service model and assigned resources per tier

Another program created that ties into the Service Model 1.0 is the Dumpster Pilot. This trial run was set to deploy 20 dumpsters at 11 locations. 10 out of the 11 locations are sites monitored by the Services Outreach Assistance and Resources (SOAR) program. The SOAR program, in partnership with BeautifySJ, has been providing comprehensive street-based support services to unhoused individuals throughout the city since the onset of the pandemic. There was an initial success in cooperation, cleanliness, and cost-effectiveness to reduce trash and blight at these locations. However, success is complicated. While the dumpsters have been put into use, they require sustained resident engagement to keep it as a success. If residents stop utilizing the dumpsters, trash and blight will continue to be a problem. Illegal dumping also remains a challenge, with dumpsters and the surrounding area often overflowing with trash.

Additional service delivery programs were piloted. A flexible mobile trash service was put into place through the use of contractors on weekends with 2-person crews performing trash pickups in designated locations. A Cash for Trash Program that resumed in September 2020 was also created that provides \$4 per bag of trash to unhoused residents in select encampments.

Within one year, during the COVID-19 Pandemic, the BeautifySJ EOC branch planned and implemented an entirely new data-informed program to provide trash service to encampment residents. The widespread conditions of illegal dumping and individuals living in encampments made this a difficult program to implement with limited resources. Inventorying, digitizing/mapping, consolidating datasets, and GIS analysis provided the team with scoped down areas to focus resources. Ground-truthing and visual assessments were essential to this program because they allowed for the team to support the data with actual site conditions. The largest impact of the data analysis work was to scope down a very widespread problem to more manageable areas of focus. The use of data also led to the creation of the tiered service model and service schedule which assured that the appropriate resources were assigned to the right locations at the right frequency. Once implemented, the work was continuously monitored through the use of Survey123 and ArcGIS Operations dashboard.