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

ACKNOWLEDGMENTS

This report was possible thanks to the many individuals deployed to the Emergency Operations Center's BeautifySJ Branch during the COVID-19 Emergency. Thank you for all your hard work in the efforts to Beautify San Jose and provide hygienic living conditions for San Jose's unhoused residents.

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ABSTRACT

In March of 2020, a new trash collection program was initiated for San Jose's unhoused residents to limit the spread of COVID-19. The new program supported hygienic living conditions by establishing regular trash collection services for unhoused residents living in encampments. The City of San José's COVID-19 Pandemic response began in March of 2020 and by the Fall of 2020, the program was fully operational and provided scheduled weekly or bi-weekly trash collection at over 100 encampments city-wide.

In an Emergency Response setting, staff needed to know where to provide this new service, how to allocate resources, and at what frequency. Despite this need, San José did not have an accurate and comprehensive dataset of encampments with mapped locations. Existing citizen reports of encampments were widespread throughout San Jose's expansive 180 square mile jurisdiction which made it difficult to scope down the problem to a scale that matched the resources available. A comprehensive GIS analysis was completed to clearly define areas where the trash and encampment problems intersected. Once the areas were identified, the team incorporated extensive field observations and assessments to ensure equitable service delivery and match the needs of areas with appropriate resources, on a defined schedule. The data-driven decision making used for the development of the program piloted an efficient, equitable, and effective approach to service delivery that could be monitored and pivoted in real-time using live dashboards.

INTRODUCTION

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 branches were formed including the BeautifySJ Response branch which aimed to advance public health guidance related to unsheltered unhoused 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 abatements[2], 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 such debris blocks public rights of way. This document outlines the methodology and data used to design, implement, monitor, and measure outcomes for the Encampment Trash Program.

METHODS & LIMITATIONS

The BeautifySJ Response branch within the Emergency Operations Center (EOC) was formed to improve hygiene conditions for unhoused encampment residents during the COVID-19 pandemic. The branch's focus was to create an efficient, equitable, and effective trash collection program for encampment residents city-wide. Prior to program implementation, a significant two-month problem assessment and scoping phase was necessary to determine where and how to establish the new program. The City of San José spans 180 square miles, and no comprehensive dataset existed which spatially displayed encampment locations. The problem scoping phase the team undertook was entirely data driven, with supporting field observations to confirm real-time conditions. The team

[1] People Experiencing Unhousedness | COVID-19 | CDC – 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.

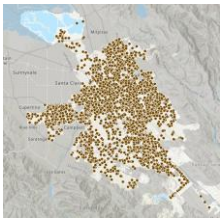
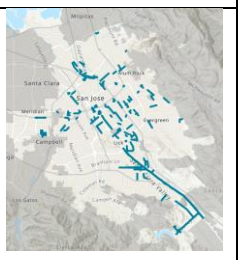
prepared and consolidated datasets, and performed a GIS hotspot analysis to scope the problem. The scoping phase aimed to determine where unhoused encampments and trash existed, and to assess the conditions at each location in order to ultimately create a tiered service model and schedule which assigned appropriate trash collection resources to each area with defined service dates.

Dataset Preparation

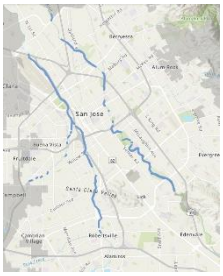
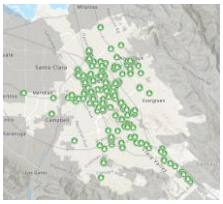
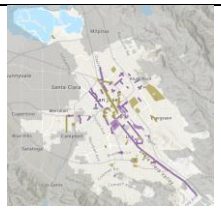
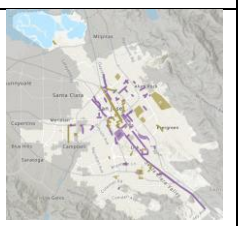
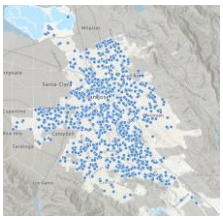
Data Inventory

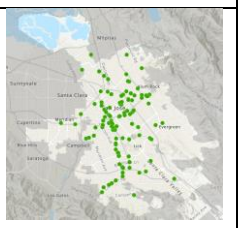
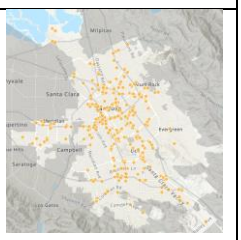
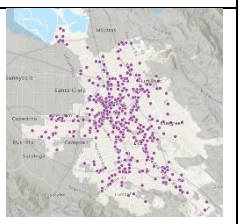
The first step of the scoping phase was to inventory, map/geolocate, and consolidate existing relevant datasets to prepare them for analysis. Despite many existing datasets that contained portions of encampment and trash/blight related information, no one dataset existed which showed where encampments were located and the trash conditions in each location. This led to the need to inventory relevant existing datasets to use for analysis. Ultimately 10 datasets spanning multiple city departments and databases were chosen, and six months of relevant data was used for each dataset (Table 1).

Table 1: List of datasets used for problem scoping and assessment phase

Dataset Name	Team/ Department	Description/ Database	Dataset Status at start	Image
Illegal Dumping requests	Removing and Preventing Illegal Dumping (RAPID)/Parks, Recreation and Neighborhood Services (PRNS)	*SJ 311 illegal dumping requests/Salesforce Unity (D0T) and GIS Center for Excellence*	Dynamic and Centralized[3]	
Illegal Dumping hotpots	Removing and Preventing Illegal Dumping (RAPID)/Parks, Recreation and Neighborhood Services (PRNS)	*Hot spots created from SJ311 complaints and field expertise of staff/Local GIS Shapefile*	Geolocated/ mapped but not centralized	

[3] Dynamic: Updates at an automated frequency
Centralized: A copy is stored in the City of San Jose, Department of Public Works GIS Center for Excellence

Dataset Name	Team/ Department	Description/ Database	Dataset Status at start	Image
High Trash Load Creek Areas	Environmental Services Department (ESD)	*Creek areas are rated annually by ESD staff by the amount of visual trash. This analysis used creek portions with the highest amounts of trash/Local GIS Shapefile*	Geolocated/ mapped but not centralized	
Encampment Trash Collection Locations	BeautifySJ Emergency Operations Branch	*When the BeautifySJ EOC branch was formed, the team started collecting trash in encamped areas they knew of, these locations were tracked/ArcGIS Survey123, GIS Center for Excellence*	Dynamic and Centralized	
Complaints/ Requests- Trash/Blight	Mayor and City Council	*E-mails and calls to council members of San Jose/Excel Spreadsheet*	Not mapped, not centralized	
Complaints/ Requests- Encampments	Mayor and City Council	*E-mails and calls to council members of San Jose/Excel Spreadsheet*	Not mapped, not centralized	
Vehicle Abatement Reports for occupied vehicles	Department of Transportation (DOT)	*SJ 311 vehicle abatement requests/complaints which indicated an inhabited vehicle or RV Salesforce Unity (D0T) and GIS Center for Excellence*	Dynamic and Centralized	

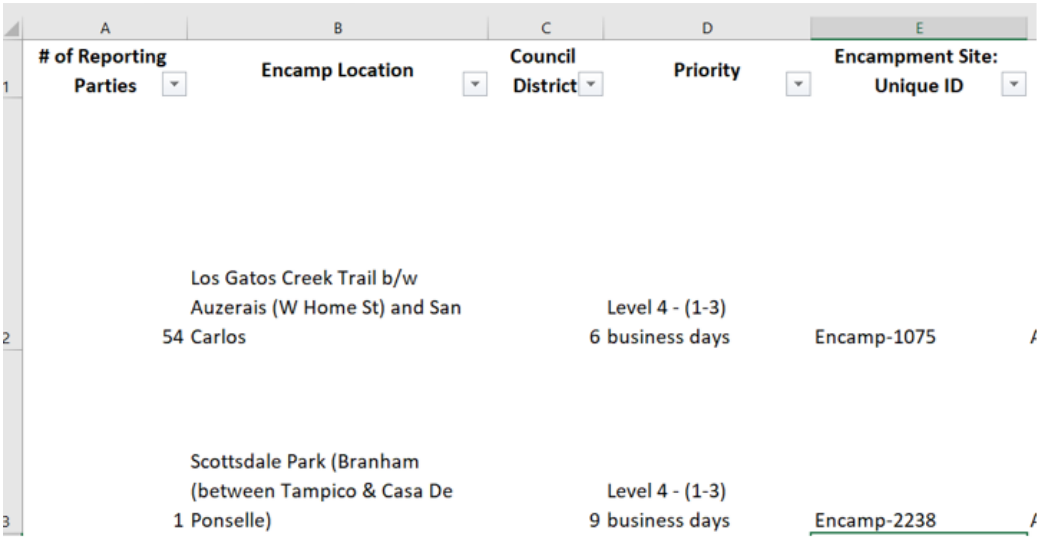
Dataset Name	Team/ Department	Description/ Database	Dataset Status at start	Image
Housing Encampment Abatements	Housing Department	*Locations where the housing department performed past encampment abatements/Excel Spreadsheet*	Not mapped, not centralized	
Unhoused Concerns Complaints	Housing Department	*Complaints received by the unhoused concerns e-mail and phone line/Housing Salesforce*	Not mapped, not centralized	
Unhoused Concerns Outreach	Housing Department	*Locations where housing outreach teams have visited encampments/Housing Salesforce*	Not mapped, not centralized	

Data mapping and formatting

To complete a spatial analysis with the chosen datasets in Table 1, all relevant datasets needed to be in a GIS shapefile/feature class format. Some datasets existed in excel spreadsheets or databases that did not allow for geolocation. Over multiple weeks, the data team manually mapped all datasets that existed in excel spreadsheets into GIS. The most time-consuming dataset was the encampment complaints and encampment outreach visits within Housing's Salesforce database (Table 1). Encampments within the database were tracked by ID number and intersections or addresses which were difficult to map because of duplicate encampment IDs and difficulty translating intersections, addresses, and location descriptions into geolocations that the mapping software could read (Figure 1). In addition, encampments often exist in creek areas or vacant areas of land which are difficult to track with addresses and intersections. After manual standardization of each ID and location, the data points were ultimately mapped. Although the historical data could be used for analysis, despite this extensive effort, the encampment complaint and outreach datasets within the Housing Salesforce database remain static meaning they do not automatically map to GIS through an Extract Transfer Load (ETL) process. Resolution of

this issue would data entry improvements and an integration between the Housing Salesforce database and the Department of Public Works GIS Center for Excellence.

Figure 1: Example encampment ID and location description in Housing Salesforce database.



	A	B	C	D	E
1	# of Reporting Parties	Encamp Location	Council District	Priority	Encampment Site: Unique ID
2	54	Los Gatos Creek Trail b/w Auzerais (W Home St) and San Carlos	6	Level 4 - (1-3) business days	Encamp-1075
3	1	Scottsdale Park (Branham (between Tampico & Casa De Ponselle)	9	Level 4 - (1-3) business days	Encamp-2238

Centralizing Data

Once the datasets were inventoried and formatted into GIS shapefiles/feature classes, they all needed to be centralized in one location for analysis. The data team used ESRI ArcGIS software, and the City of San Jose GIS Center of Excellence's Enterprise GIS system within the Department of Public Works (DPW) to consolidate and store all of the datasets (Table 1). The datasets were analyzed in ArcGIS Desktop software, then displayed in an ArcGIS Online platform for easier viewing and data sharing.

Geographic Hotspot Analysis

With formatted and consolidated datasets, analysis could begin. As shown in Table 1, it is difficult to visually draw conclusions from 10 different datasets that span San Jose's 180 square mile area with thousands of data points. In addition, at first glance the data communicates that both illegal dumping and encampments are widespread issues that stretch to almost every part of the city. Given limited resources and to ensure efficiency the team needed to scope these two widespread problems down to a more manageable size.

Ultimately three different hot spot analyses were performed. A digital layer of "hexbins" or hexagonal shapes were laid over the relevant datasets. Within each hexbin, the number of datasets that were present within each hexbin were counted using ArcGIS software. Areas with the most datasets received the highest scores, while areas with none received a score of 0. To target limited resources and understand where issues intersect

between encampments and trash/blight, the Response Branch created a combined hotspot map (Figure 2). This analysis was also done two additional times; one with only datasets that contained blight/trash information (Figure 3), and another with datasets that only contained encampment information (Figure 4). Areas of the maps with no visible hexbins either had no relevant datasets within them, or scored less than 2 (Figure 2).

Figure 2: Results of the hotspot hexbin analysis for datasets containing blight and encampment type information

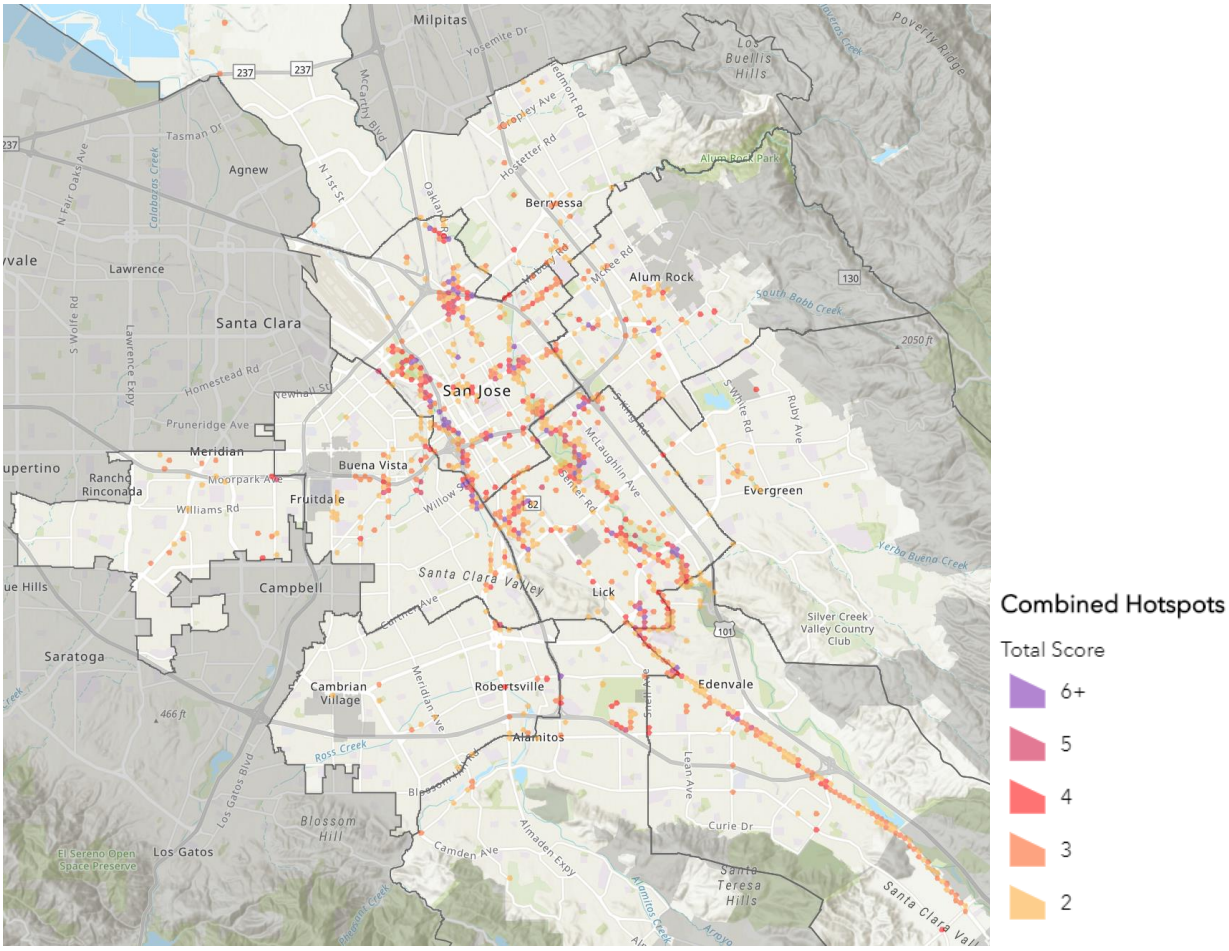


Figure 3: Results of the hotspot hexbin analysis for datasets containing blight information

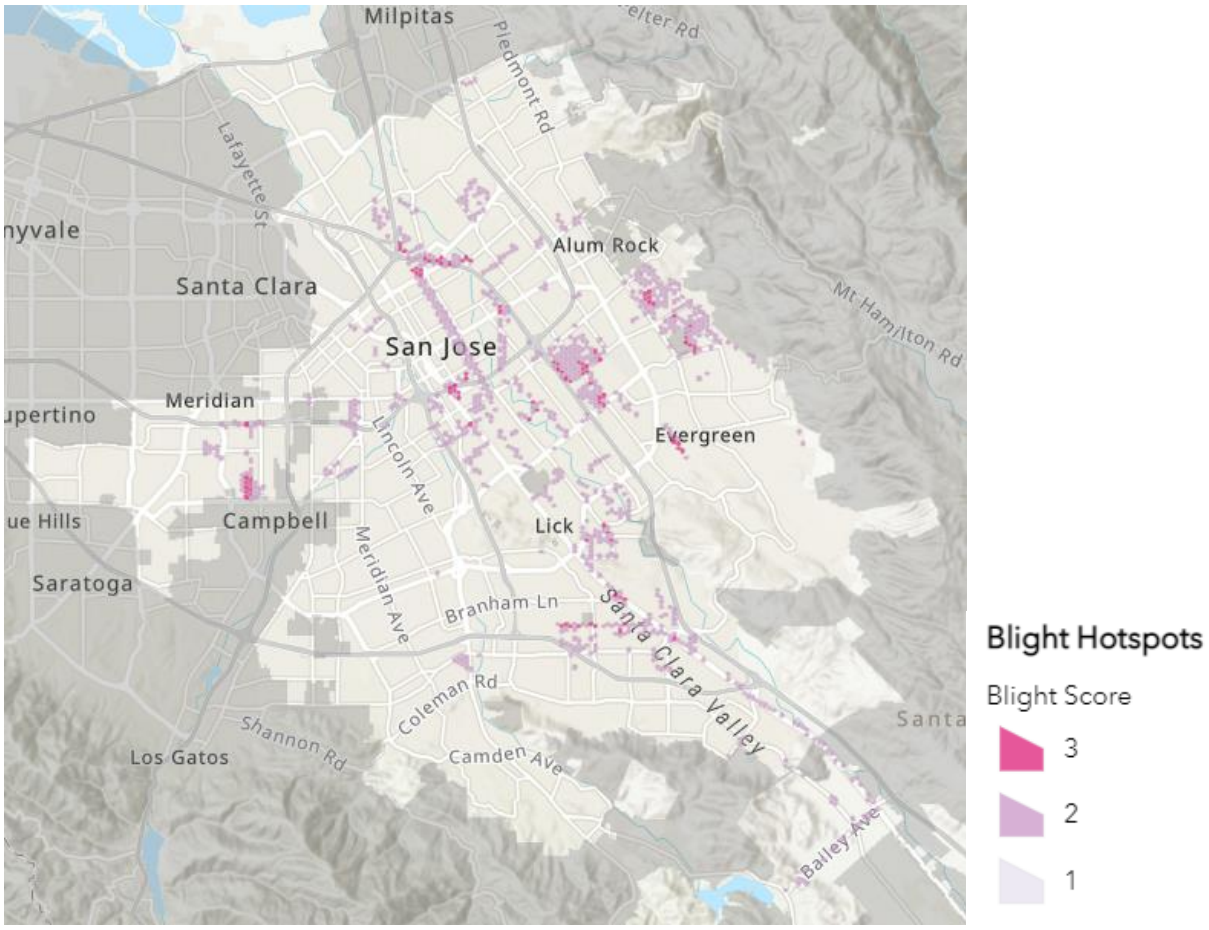
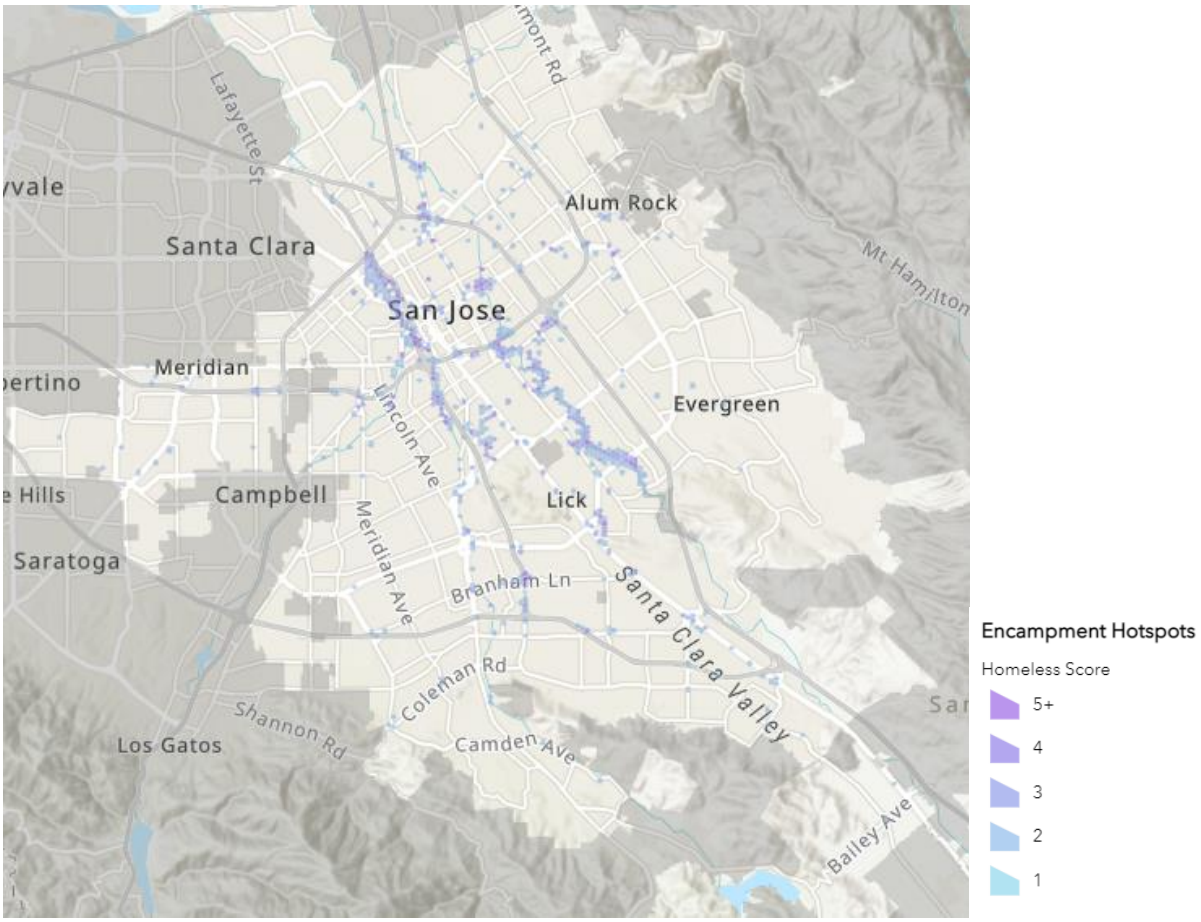


Figure 4: Results of the hotspot hexbin analysis for datasets containing encampment information



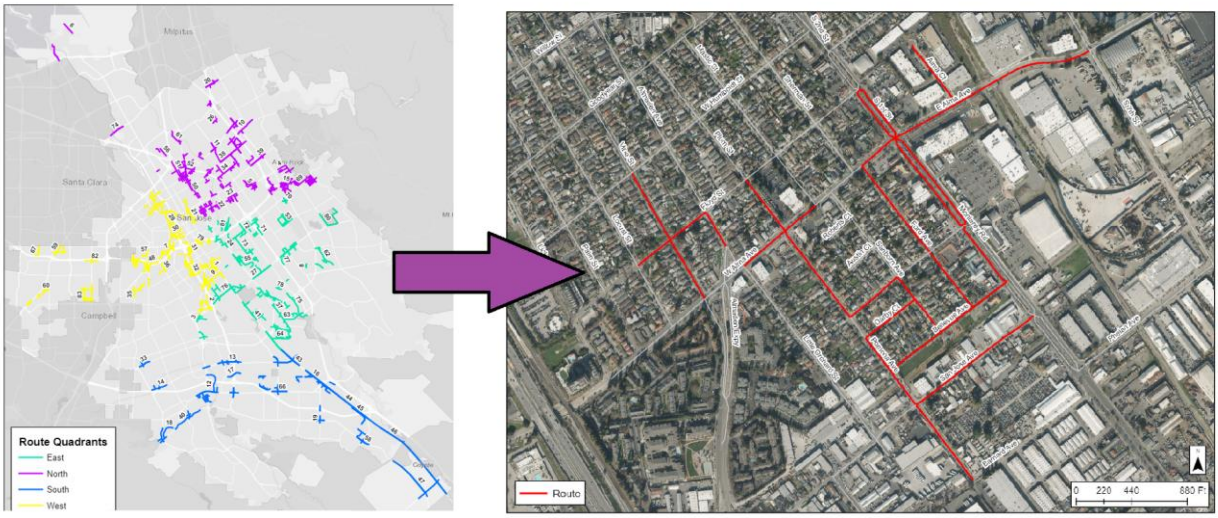
Field Assessments & Ground-Truthing

The resulting hotspot analyses helped scope two widespread conditions of blight and encampments down to smaller areas of the city. A limitation of the available data was that it mostly consisted of requests or complaint driven data. Citizens of San Jose have the opportunity to report issues such as graffiti, abandoned vehicles, illegal dumping, etc. to the city so that San Jose can be aware of the issues. While the hotspot maps are extremely useful in identifying more specific areas with both encampments and trash/blight conditions, the next step was for the team to ground truth the data for equitable, and effective resource allocation. Ground truthing is important to ensure equitable distribution of resources for two main reasons.

1.) An equitable approach requires balancing complaint-based historical data with actual field conditions. Some areas of the city may not have the ability to report for various reasons (awareness, resources, language barriers, lack of trust).
2.) Analyzing the magnitude of site issues relative to each other is necessary to identify which resources to assign to each area.

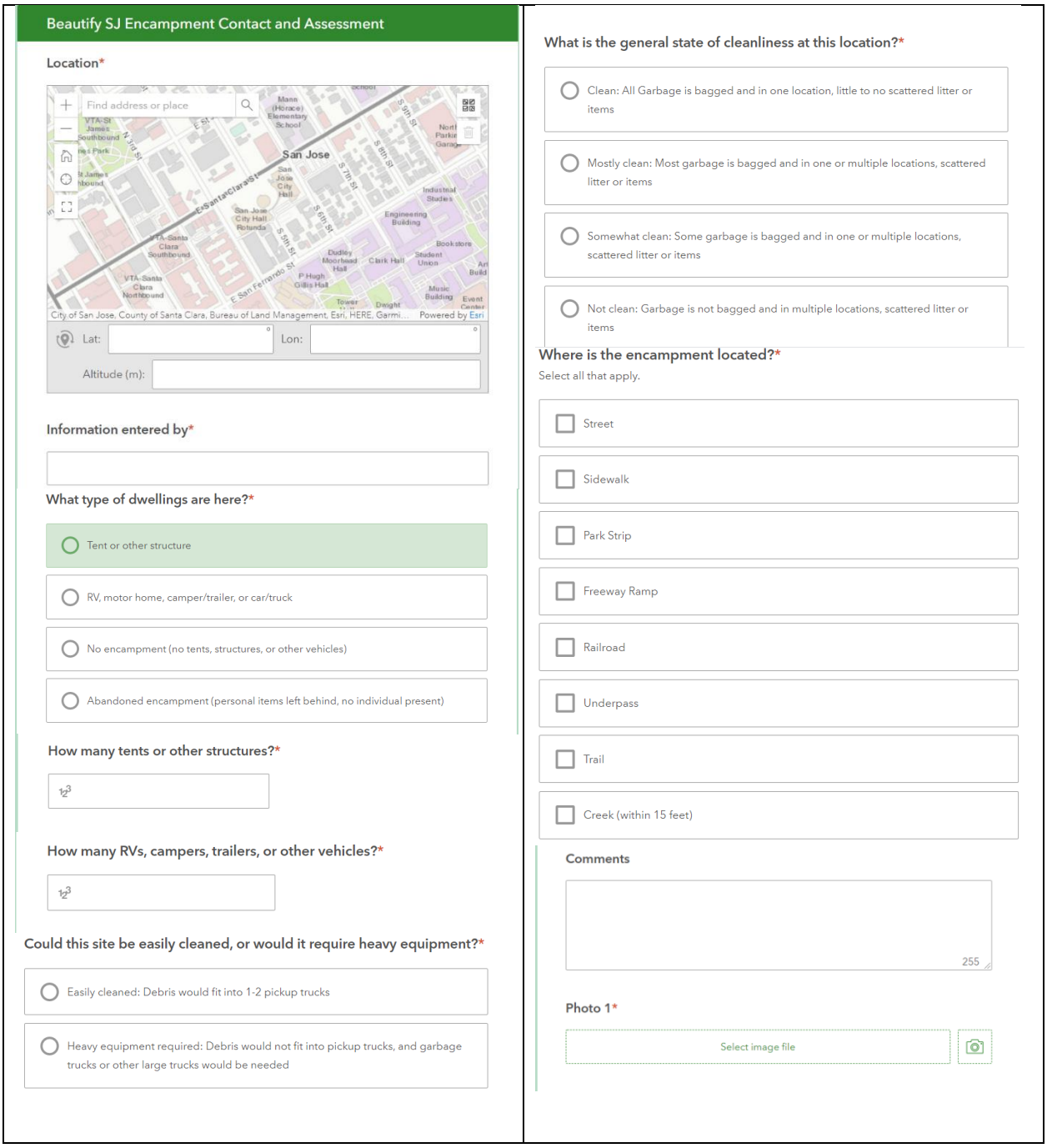
To plan out the ground truthing phase, the data team identified all hot spot hexbin areas scoring above 5, meaning they had 5 or more overlapping datasets within that area. Within each of those higher scoring hexbins, a route was drawn for city staff to observe and assess field conditions (Figure 5). A total of 83 assessment routes were created throughout the City and each route was named and numbered, and assigned a zone (Figure 5).

Figure 5: Routes were created to ground-truth hot spot data and identify encampment locations and trash conditions



The objective of ground-truthing each area was to both identify where encampments existed, and their conditions. To help with this, the data team developed an ArcGIS Survey123 tool which asked questions and captured the geolocation of each survey submitted (Figure 6). The BeautifySJ branch utilized redeployed Parking Traffic and Compliance Officers (PTCOs) to perform visual assessments during the pandemic. The PTCO's used the ArcGIS Survey123 tool to manually log and visually assess locations using cell phones and the Survey123 phone application. A PTCO would fill out this assessment shown below by answering multiple questions whenever they observed an existing encampment or Recreational Vehicle (RV) (Figure 6). If no encampments or RVs were discovered, no data was entered. This information was used to develop an approach for site cleanup.

Figure 6: Survey123 encampment location and condition assessment



The survey work took place over two weeks with 6 staff members to survey all routes. The PTCOs were split into three teams of two. One individual drove the vehicle while the other captured data. To ensure that sites get classified properly, the PTCOs were given examples of how to classify different structures so that sites do not get miscategorized to facilitate data accuracy (Figure 7).

Figure 7: Excerpt from dwelling type categorization guide to facilitate accurate data entry

Survey123 Dwelling Type Categorization

Tips for answering the first survey question. Telling the difference between a tent or other structure, abandoned encampment, and no encampment.

What type of dwellings are here?*

- ○ Tent or other structure
- ○ RV, motor home, camper/trailer, or car/truck
- ○ No encampment (no tents, structures, or other vehicles)
- ○ Abandoned encampment (personal items left behind, no individual present)

1. *The area in the photo below should be categorized as **Tent/Structure** because even though a person may not be visible at the time it's visited, it still shows signs of being lived in recently.*

What type of dwellings are here?*

- ○ Tent or other structure

The BeautifySJ Response Branch's first strategic goal was to develop a systematic waste collection system for San Jose encampment residents. The team was challenged to

develop this new program without complete and consolidated data on the conditions of encampments and blight/trash throughout the city. The data team went through a comprehensive effort to inventory existing datasets, format, consolidate, and analyze to ultimately perform a GIS analysis that scoped down two extensive and widespread issues to more manageable areas. Due to limitations in the data such as a reliance on complaints and not actual conditions, visual assessments of hotspot areas were needed to document actual conditions. To support this effort, a team of Parking and Traffic Control Officers (PTCO's) from the Department of Transportation (DOT) were deployed to assess hundreds of potential service sites based off of 83 assessment routes resulting from the hot spot analysis. This work was informed by existing City data sets that have not been previously analyzed together. Having PTCOs visually assess locations and perform detailed site assessments helped the BeautifySJ EOC Branch improve the intelligence available to create data-informed service delivery plans.

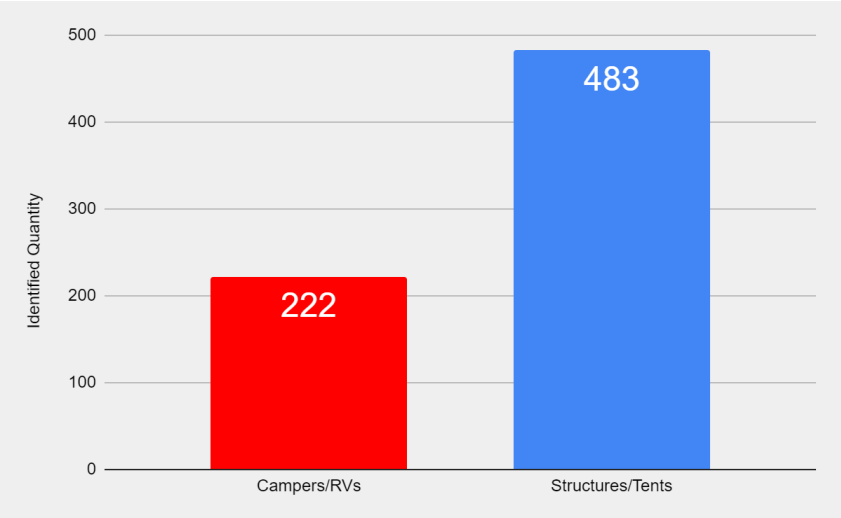
RESULTS

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.

Visual Assessments & Ground Truthing

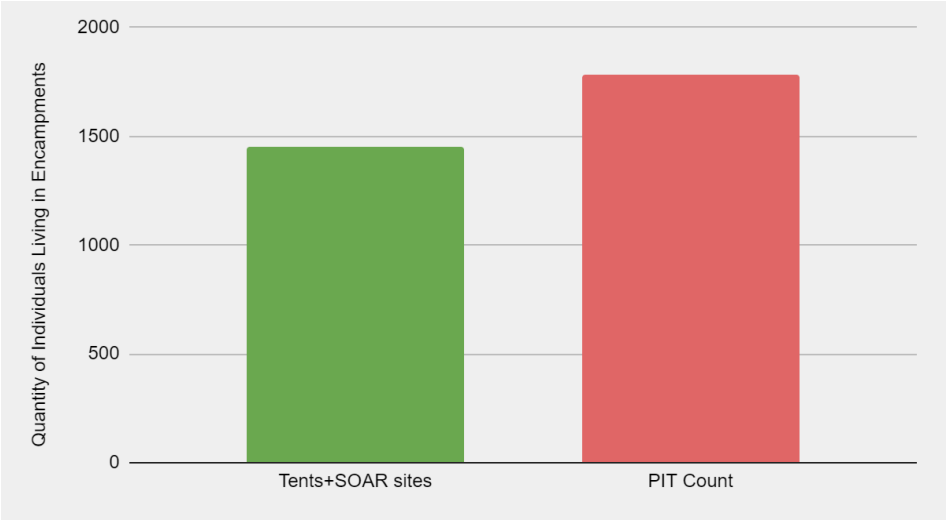
The visual assessments, through the use of the Survey123 application, resulted in 328 survey submissions reflecting the locations and current conditions of the unsheltered, unhoused individuals in the City of San Jose. From the 195 miles of city streets assessed, 483 structures/tents and 222 campers/RVs were identified from an accessible street view (Figure 8).

Figure 8: Identified encampments and RVs from PTCO visual assessments



To gain an understanding of how comprehensive this assessment was, the 2019 PIT count for San Jose estimated 1,782 people living in encampments. The PIT count is provided thanks to the City of San Jose's 2019 Homeless Census and Survey (see Appendix). Using the formula provided by ASR (see Appendix), a multiplier of 1.35 to the existing 483 structures/tents provides us a representation of about 650 people. The 16 SOAR sites, which are estimated to have at least 50 people each, represent about 800 people. In total, that accounts for nearly 1500 unhoused residents across San José in comparison to the almost 1800 counted for the PIT (Figure 9).

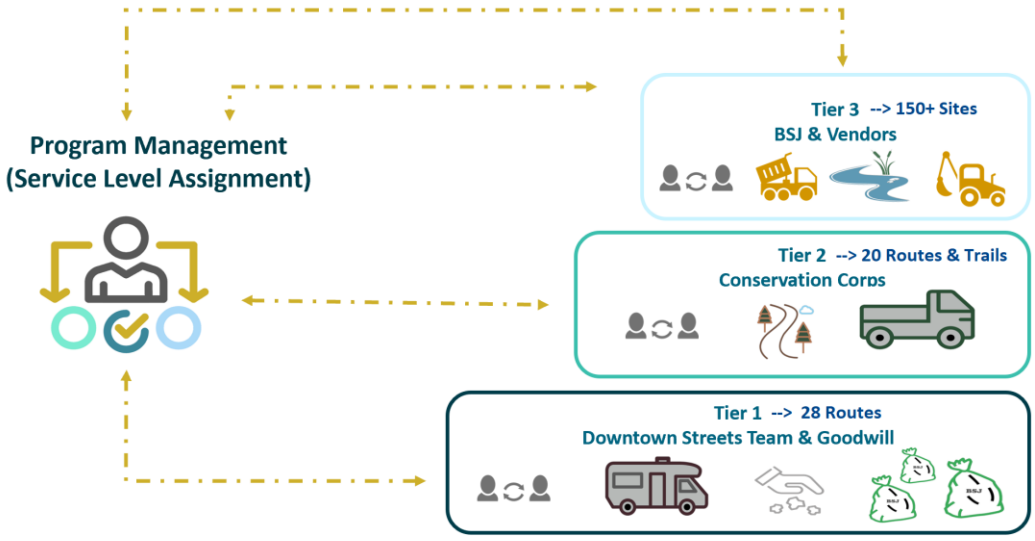
Figure 9: Initial Site assessments by City of San Jose PTCO staff compared to the annual Point in Time (PIT) count, 2019



Developing a Tiered Model

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. This was achieved through the development of a tiered service model. 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 10).

Figure 10: Tiered service model and assigned resources per tier



Tier 1

- Easiest to clean sites that are easily accessible, contain mostly litter, and more RVs than tents/encampments
- 28 routes assigned to contractors such as Downtown Streets Team, Goodwill who employed currently and formerly unhoused residents as part of the solution through December of 2020
- Downtown Streets Team and Goodwill cleaned up litter and provided new trash bags to residents at Tier 1 locations

Tier 2

- Encampments located along trail areas
- 20 routes and trails assigned to Conservation Corps
- Conservation Corps cleaned up litter and large items such as mattresses along trail areas

Tier 3

- Tier 3 work is the most complicated and requires heavy equipment such as compactors and skid-steers because of the volume of trash in difficult to reach areas. Tier 3 areas may also have a large number of residents (>15) in a concentrated area.
- Outreach is also an essential component to site cleaning. Many of these locations are also the Housing Department's Services Outreach Assistance Resources (SOAR) areas.
- Tier 3 contains roughly 150+ sites which were serviced by BSJ and Vendors
- A continuous evaluation was necessary to ensure that sites are appropriately assigned within the tiered system. This was achieved through regular site visits of tier 1 and 2 areas to ensure that encampments or RV's were present, and that the level of need met the type of resources provided. Most Tier 3 areas observed appropriately stayed in the Tier 3 level of service due to their size and complexity.

Additional Services and Pilots

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.

Figure 11: Results of the dumpster pilot at the Felipe Avenue location in San Jose

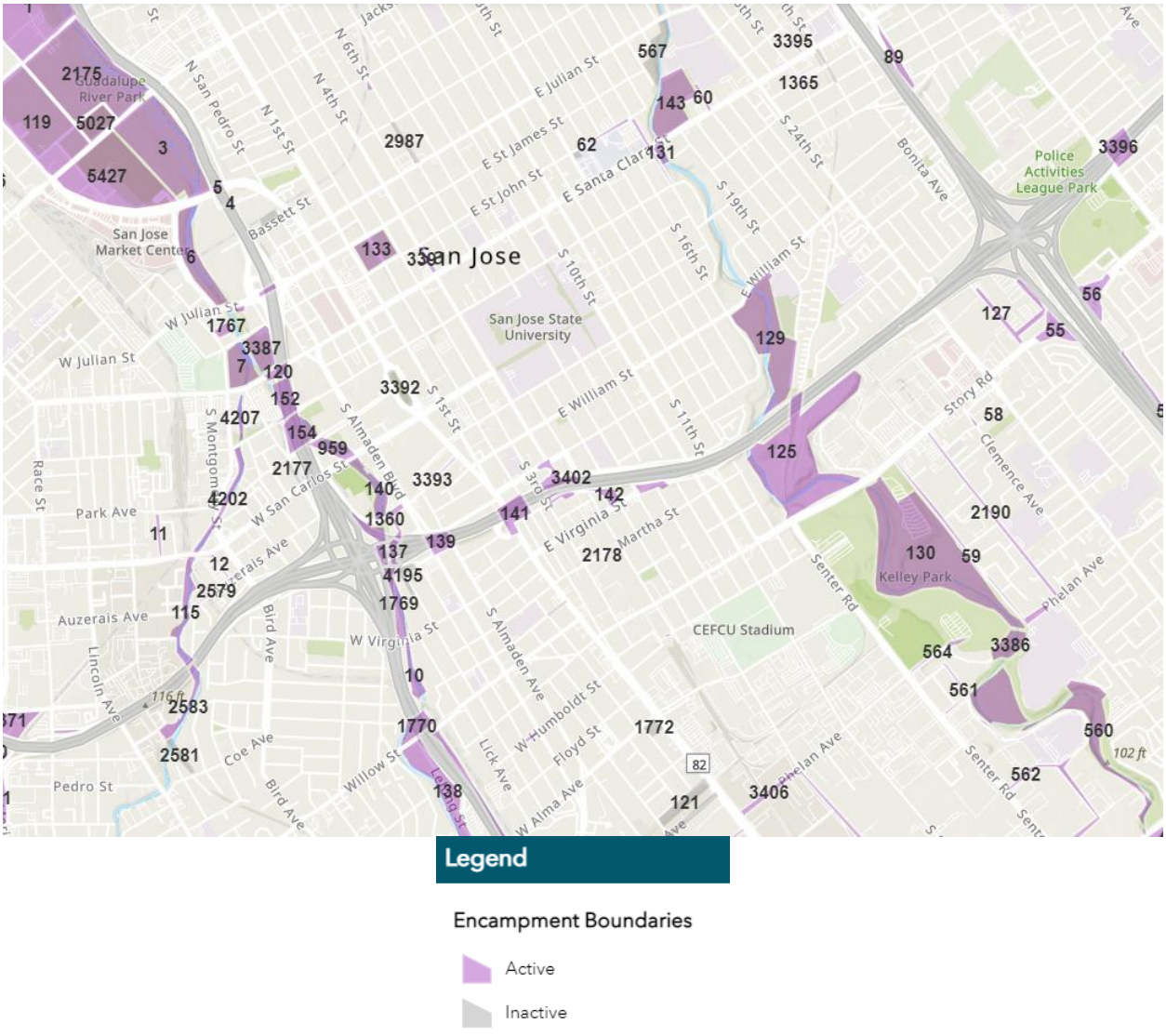
Additional service delivery programs were piloted. A flexible mobile trash service was put into place through the use of contractors on weekends with 2-person crews performing trash pickups in designated locations. A Cash for Trash Program that resumed in September 2020 was also created that provides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

New Encampment GIS Dataset

A new encampment GIS shapefile/feature class was created following the assignment of resources to each encampment location using submitted visual assessment surveys. The original visual assessment data provided was in the form of GIS points. Each point was associated with an encampment that was provided resources. Points on the map ended up being a difficult way to track the communities and movements of individuals who often reside within defined spaces. Due to this, a new polygon GIS shapefile/feature class

was created. The dataset was created by drawing defined boundaries around areas where groups of individuals were living. Some areas were segments of creeks, others vacant lots, and some street segments. The encampment boundary layer was the first created for the City of San Jose that could visually represent where encampment residents were living (Figure 12). A current version of the layer with assigned resources is available online at https://gis.sanjoseca.gov/maps/encampmentservices/.

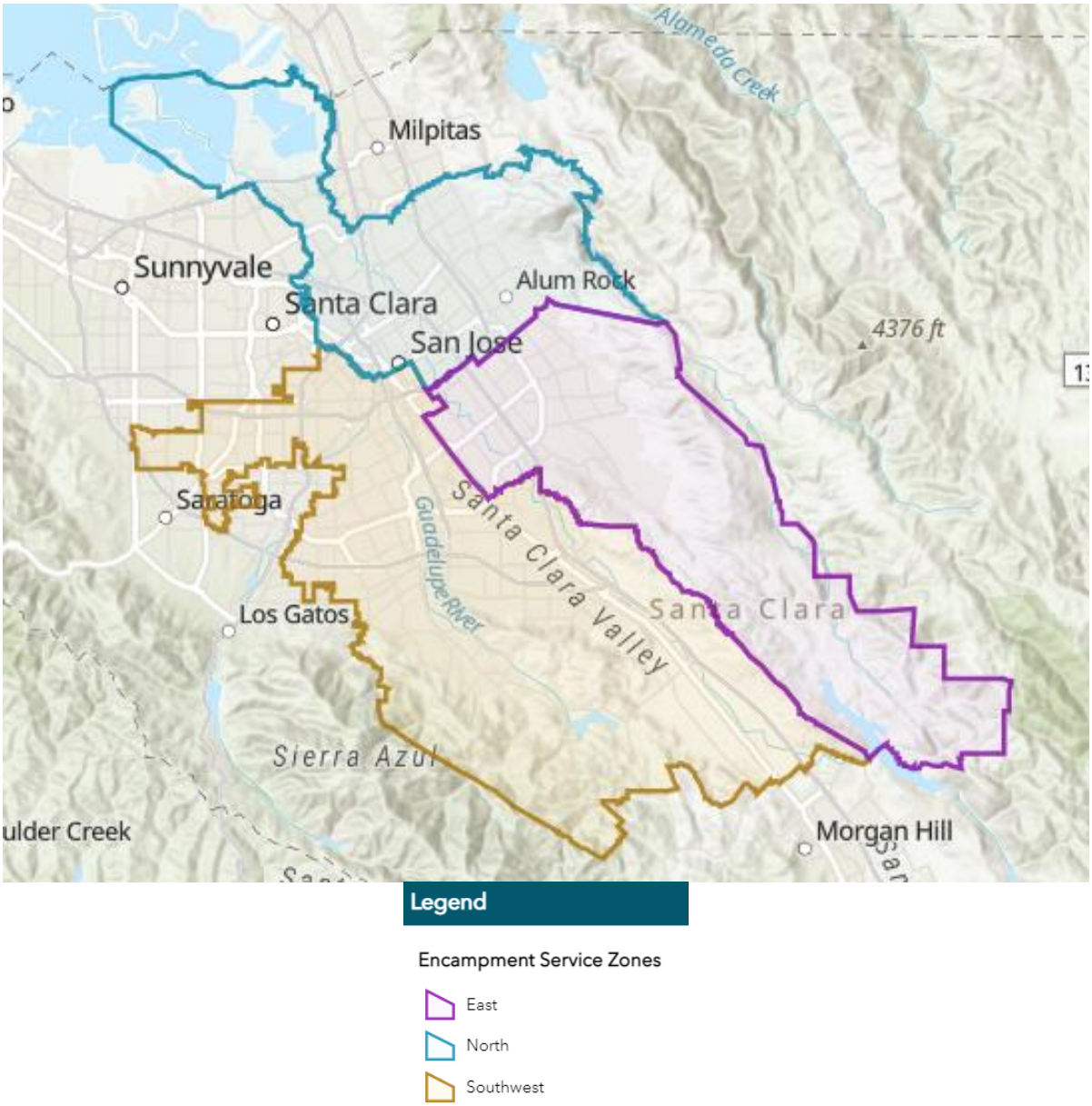
Figure 12: Encampment boundary layer drawn as a GIS polygon shapefile/feature class.



To aid with the assignment of resources, zones were also developed to divide up teams and resource assignments to three different areas of the city (Figure 12). Each zone

was created by equally dividing up the overall area of encampments. Future iterations of these zones could focus on population counts instead of overall area. Each zone was assigned a team of resources appropriate for the need and features of the area. For example, the southwest zone contains more RVs and street areas while the East zone contains more creek encampments, and the North zone has a mix of Southwest and East features.

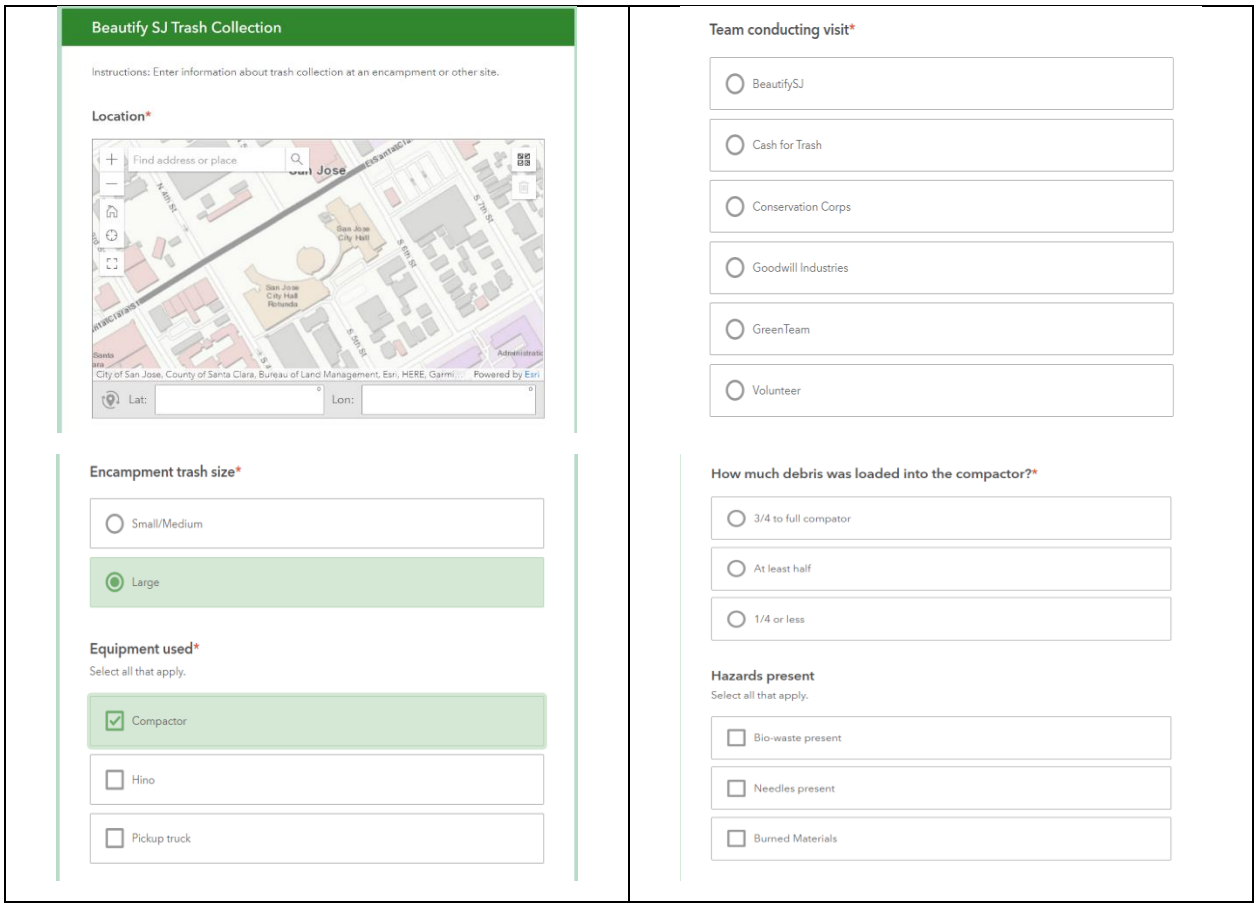
Figure 13: Encampment service zones



Capturing Data

Once Service Model 1.0 was established, all teams providing services for the program were required to log their work in Survey123 through a "Trash Collection Survey." These surveys allowed for data to be captured including which teams were performing different services in each location and with photos (Figure 14). This data allowed the team to see in real-time which areas of the city were being serviced and by whom.

Figure 14: Excerpt of trash collection survey

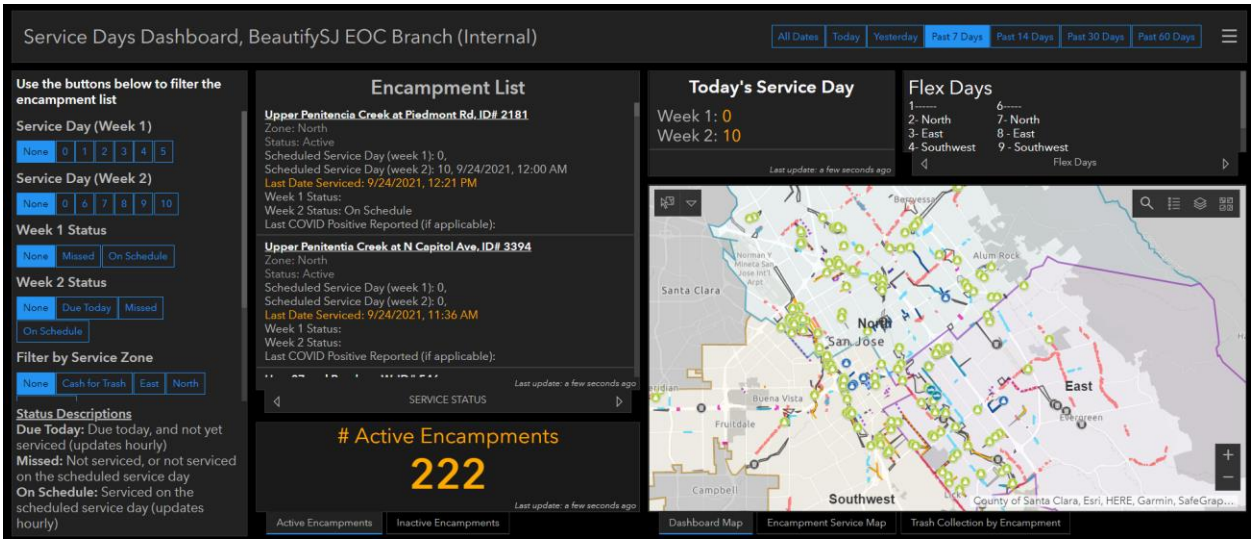


Developing and Monitoring a Service Schedule

Service Model 1.0 not only included tiered services matched to the need of each encampment area, it also included a maintenance schedule of service for many of the encampments identified. It is important to note that not every encampment identified was placed on a schedule. Some were outside of San Jose's jurisdiction/authority, and others could not be accommodated due to resource constraints. All encampments were tracked within the encampment boundary GIS layer, whether they were being provided service or not.

To create a maintenance schedule, encampments within each zone were assigned a day for service (Monday through Friday). The team worked within a two week service cycle, meaning encampments could be assigned to receive service once a week or once every two-weeks. The service frequency decisions were made by field staff. Areas with higher need were provided more frequent service. To track the service schedule, each service day was given a number within the two week service cycle. For example, Monday of week 1 is service day 1, and the following Friday within the second week of the service cycle was service day 10. When a trash collection survey123 was submitted, they were joined spatially in GIS with the drawn encampment boundary layer automatically. Each time a survey was submitted within an encampment boundary, that encampment would be tracked as receiving service in GIS. If the encampment was serviced on its scheduled service day, it would be marked complete. If it was serviced on a day that didn't match its scheduled service day, it would be marked as missed. The service schedule and status were monitored daily through the use of ArcGIS Operations Dashboard (Figure 15).

Figure 15: ArcGIS Operations Dashboard to monitor service day assignments and service completion for the Encampment Trash Program



Measuring Outcomes

Once the tiered service model and schedule were developed, the team turned their attention towards measuring the outcomes of the newly established program. The goals of the program were to deliver systematic waste management services to San José's unsheltered residents with the objectives below.

Program Objectives

1. Identify the right locations where unsheltered residents live
2. Provide the right level of trash services at right frequency
   2a. Supply sufficient trash bags
   2b. Pick up trash/waste/debris
3. Encourage encampment residents to voluntarily participate in the program
   3a. Trash is bagged
   3b. Trash is placed at designated location

Whether or not each objective was met was observed using the indicators in (Figure 16).

Figure 16: Indicators that the Program is meeting Objectives

Indicator	*Supporting Objective*
PROGRAM LEVEL METRIC	
Encampment present	1
NoBulky Items	2
BSJ Bags Visible	2
Trash Pile < 6cy Dumpster	2
Trash is Piled	3
Trash is Bagged	3
COMMUNITY LEVEL METRIC	
Illegal Dumping Near Encampment	
Personal Items Contained (> 12x12 ft)	

What is meant by Community-Level Metric?

Although the Encampment Trash Program is not directly/solely responsible for Community Level results, in the short-term, it does aim to influence certain outcomes expected by the community, mainly related to illegal dumping near encampments, as well as minimizing the foot print of encampments across the City.

Each of the indicators above was assessed through quarterly visual assessments, where teams went out into the field and observed the conditions listed above. An additional ArcGIS Survey123 tool was developed to ask an assessment question for each objective which was submitted by the assessment team. The overall results of the assessments were captured in an ArcGIS Operations Dashboard quarterly.

CONCLUSION

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.

The next steps for the BeautifySJ Encampment Trash Program include the team continuing to refine and right-size service areas to transition to weekly waste pickup services; aligning City datasets between BeautifySJ and the Housing Department to better provide social services for unhoused residents at encampment locations; review the tiered service delivery model and add services that enhance cleaner encampment locations; introduce new surveys that include an encampment cleanliness rating; and increase outreach and education to unhoused residents in an effort to better manage encampment locations.

APPENDIX

ASR & PIT explained

As mentioned within the City of San Jose's 2019 Homeless Census & Survey Comprehensive Report, Applied Survey Research (ASR) is a social research firm that has over 20 years of experience in homeless enumeration and needs assessment, having conducted homeless counts and surveys throughout California and across the nation. The City of San Jose, County of Santa Clara, and ASR were responsible in ensuring the success of the Point-In-Time (PIT) Census and Survey. The multiplier of 1.35 was provided from ASR directly for the City of San Jose. Thanks to this, the report was able to compare the Initial Site assessments by City of San Jose PTCO staff to the annual Point in Time (PIT) count. The City of San José HOMELESS CENSUS & SURVEY COMPREHENSIVE REPORT 2019 is linked below:
https://www.sanjoseca.gov/home/showdocument?id=38890