Results of the 2021 Volunteer Homeless Count in Hollywood

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Abstract

1 Introduction

The Los Angeles Homelessness Services Authority (LAHSA) typically conducts a Point In Time (PIT) census of the unhoused population of Los Angeles County annually. These data inform programmatic funding levels, educate residents, undergird local and state legislative efforts, and shape the day-to-day practices of thousands of professional and volunteer service providers. As the official assessment of the scope of one of the most pressing humanitarian issues of our time, the LAHSA Count is invaluable. However, due to disruptions from COVID-19, LAHSA decided to cancel the unsheltered portion of the 2021 PIT count. As roughly 70% of LA's unhoused residents are unsheltered, this move ensures data on homelessness immediately following one year of unprecedented economic disruptions and government interventions will be substantially incomplete.

Greater Hollywood is an epicenter of LA's homelessness crisis. According to the official 2020 Count, the Hollywood and East Hollywood Communities were home to 2203 unhoused residents, 1714 of whom (78%) were unsheltered. This figure corresponds to roughly 5% of LA's homeless population concentrated in an area with only 2.5% (**CITE**) of its total population. In some regions in those communities, 1-in-30 residents are unhoused compared to 1-in-100 citywide.

While the above statistics are tragic, Hollywood is also marked by increasingly formal coalitions of service providers, business leaders, residents, and quasi-governmental entities dedicated to humanely ending the homelessness crisis. Each of these stakeholders relies on the annual PIT count: lay residents need to be educated as to the size of the challenge; funders need to understand how many people require services; legislators need to know how many people are dwelling where. For these reasons, and given the capacity of the above organizations and individuals, the Hollywood community decided to proceed with an unsponsored 2021 grassroots PIT count.

This document describes the methodology and findings of that count, which took place on Thursday, February 25, 2021. Section 2 describes data acquisition, analysis, and volunteer training protocols. Section 3 present estimates of the unsheltered populations in the Hollywood and East Hollywood CoCs and contextualizes those findings in terms of previous LAHSA results. Section 4 describes factors that would modulate them up or down. Section 6 summarizes. Additional information can be found in the Appendix, including a table of tract-level results in each of the survey's 39 US Census tracts.

2 Methodology

Our count took place on 25 February 2021, with the majority of census tracts surveyed beginning at 7.00 PM. This timing corresponds to one month later and four hours earlier than the official event would have occurred. Beyond those choices, our program adhered as closely as possible to the official LAHSA 2020 PIT data collection and analysis protocols. Ancillary data from regularly monitored census tracts suggests that the date offset is unlikely to substantially erode comparability between this and past datasets. Limited daytime recounts also suggest that time-of-day effects are sub-dominant.

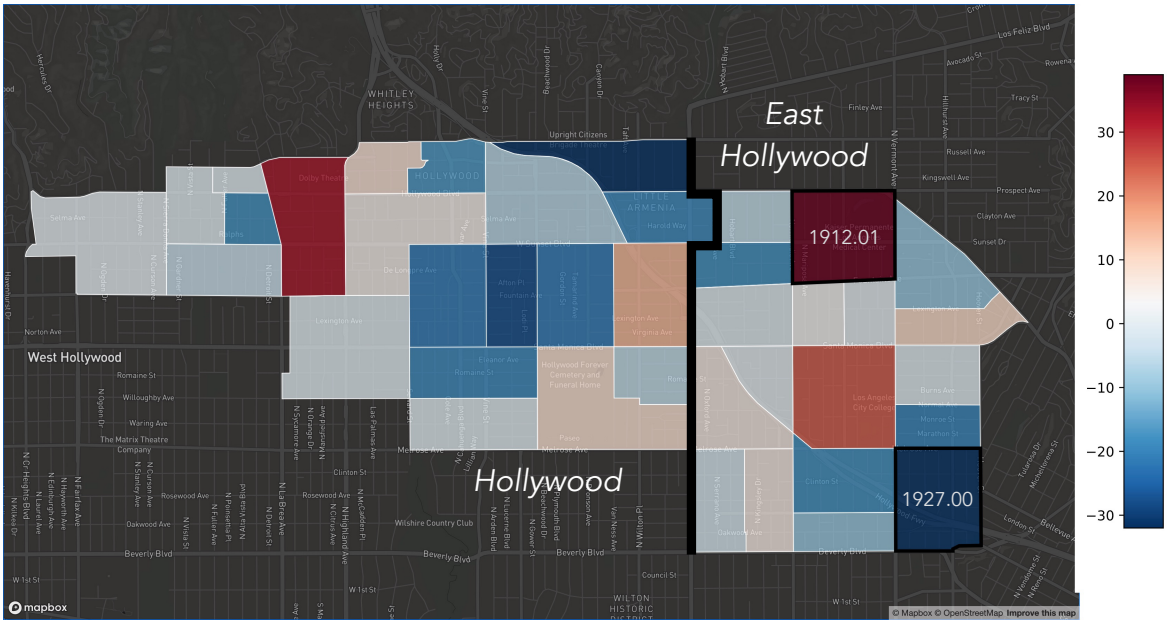


Figure 1: The 2021 volunteer count covered Greater Hollywood, comprising the officially recognized LAHSA Hollywood and East Hollywood Continua of Care. The former stretches from Laurel Canyon Blvd to Western Ave, the latter from Western to Hoover Ave. Hollywood is bounded to the north and south respectively by Franklin and Melrose Aves, with East Hollywood bounded by Hollywood Blvd and Beverly Ave. Hollywood comprises 21 census tracts; East Hollywood 18. The grey lines above show census sub-tracts used by LAHSA but ignored in this count.

The count was based out of The Center at Blessed Sacrament ("The Center"), a major service provider in Hollywood, at 6636 Selma Ave. All volunteer teams launched from and returned to this location as they would in previous years to a LAHSA community count hub. The major difference was that training was performed remotely as a COVID precaution and volunteer counters never left their vehicles.

2.1 Data Acquisition

The count covered the 39 US Census tracts constituting the LAHSA-defined Hollywood and East Hollywood Communities (21 and 18 tracts, respectively). Our count did not recognize census tract "splits" or sub-tracts—e.g., "1905.10a"—which sets a coarser resolution floor to our results compared to past PIT results. That choice also slightly modifies of the definition of both communities: Hollywood includes all of tract 1905.10 as opposed to only the "a" sub-tract, and East Hollywood includes all of 1913.01 instead of just the "b" sub-tract. Such modifications have an insignificant impact on community-level results—since 2016, 1905.10b has never been seen to host more than 7 unsheltered people; 1913.01a never more than 15. Sections 3 and 5 discuss community-level results with tract-level tallies provided in the Appendix. Results for Greater Hollywood are not directly comparable to any official service geography but are available upon request. Figure 1 shows the count footprint.

All tracts were vetted by professionals from The Center prior to assignment. Tracts deemed especially challenging—due, e.g., to their proximity to freeway on-ramps and peripheries—were reserved for professional counting teams. Vetting produced 9 such tracts, which were surveyed by outreach personnel from The Center and Covenant House—another local provider—circa 3:00 PM on 25 February. The remaining 30 tracts were divided among the volunteer vehicle-based teams and surveyed beginning at 7.00 PM. Importantly, with the exception of one tract in East Hollywood, teams were restricted to one or the other community, making the community-level results nearly independent. Cross-comparisons therefore serve as data quality indicators (Section 5). Table 1 records which tract was counted by which kind of team.

Thirty-two volunteer vehicle-based teams participated in the count itself, which was limited to existing COVID "pods" of two to three people to ensure that the

possibility of transmission minimized. Singlet volunteers were admitted but remained on-site to assist with traffic control and material distribution. All participants wore personal protective equipment and maintained social distancing when appropriate.

Counting followed 2020 LAHSA PIT protocols to the greatest extent possible. Each vehicle-based volunteer team comprised at least a Driver and a Counter and was assigned two tracts to count. Three-person teams also included a Navigator. In such teams, the Navigator directed the Driver while the Counter tallied unhoused individuals/dwellings. In two-person teams, the Counter doubled as the Navigator. Training emphasized techniques aimed at reducing the Counters' cognitive loads and so minimize counting errors. These included driving slowly using hazard lights and covering interior streets in a serpentine pattern before circling the tract border. Teams were instructed to count both sides of interior streets but only interior sides of border streets. Teams were also instructed to watch the official training video from the 2020 PIT count in addition to receiving the training from our team.

Upon arriving at The Center, organizers gave each team a clipboard with:

- tract maps (2×);
- tally sheets (2×);
- a 1-page training summary with a contact number for in-field issues.

Examples of each of the above documents are included in the Appendix. The latter was used once to alert site volunteers to the possibility of an unaccompanied minor.

The tally sheets—the data acquisition tool—contained separate columns for each of the nine categories of unhoused individuals or dwellings recognized in the 2020 LAHSA PIT count:

1. adults (ages ≥25);
2. transition age youths ("TAY," 18–24);
3. unaccompanied minors;
4. families (at least one adult with at least one minor);
5. cars;
6. vans;
7. RVs;
8. tents;
9. makeshift structures.

The dwelling classes—Items 5–9—are treated differently than the individual classes in the analysis, and are hereafter referred to by their acronym, "CVRTM," when appropriate.

All teams were deployed to their tracts by roughly 7:30 PM and returned by 9:55 PM.

Upon returning, organizers approached each team with a tablet computer or smartphone. Counters verbally read-off their results for each category as organizers entered them into a google form/spreadsheet. The organizer read back the results for confirmation before recovering all materials—including hand-written tallies—from the volunteers. Volunteer email addresses were also retained for follow-up.

Once all materials were collected, the organizers convened to cross-check the electronic records with the physical tally sheets and identify any uncounted areas. Any disagreement between electronic and paper references was cross-checked and corrected to the paper tally.

Given the number of volunteers, every tract was counted by at least two volunteer teams, with four tracts counted in triplicate. Such repeat measurements were designed to aid understanding of random counting errors (Sections 2.3) but also served a data robustness purpose: one tally could not be associated with a census tract and therefore had to be removed.

All told, the data set comprises 37 pair-wise volunteer measurements—29 duplicates + 4 triplicates (=8 additional pairs)—and 9 unique professional assessments.

2.1.1 Volunteer Training

Teams underwent mandatory, ∼30 minute Zoom-based training sessions before arriving for the count. Each participant was also required to watch the official 2020 LAHSA count training video and sign participation waivers.

The training covered the motivation for the count, an overview of the survey geography, team roles, and examples of the classes of unhoused individuals/dwellings. Except in the case of people standing next to tents—as describes in the 2020 LAHSA video—volunteers were instructed to count CVRTM and individuals separately and not to try to estimate how many people might live in or be associated with a specific dwelling. This ensured that results could be analyzed as a function of the CVRTM weights, which may change with future information (see Section 2.2).

Volunteers were primed only with min/max estimates of tract-level individual+dwelling counts ("0–120") and the likelihood of encountering unaccompanied minors or families ("very unlikely") or TAY ("in some tracts in Hollywood"). These statements were informed by the 2020 LAHSA PIT results. No other prior count-based

information was established to minimize biases. The training presentation is available at: https://drive.google.com/file/d/1xFrtU26yjPuiUv9KHZ3Uj2_sAoT1ClGo/view?usp=sharing.

In sum, about 20% of tracts in both communities were counted by professionals. The latter comprised roughly 43% of the total individuals and dwellings counted. Year-on-year trends are consistent between volunteer- and professionally counted tracts. The largest increase was observed by volunteers, the largest decrease by professionals; both tracts are located in E. Hollywood.

2.2 Data Analysis

The core component of the raw data was a 9×73 spreadsheet containing the tract-level tallies for each unhoused individual/dwelling class. Repeat counts of the same tract associated with the Hollywood or East Hollywood community, were averaged, and unweighted where appropriate by the CVRTM mean occupancies. This process was repeated 10,000 times randomly perturbing the counts and weights according to their respective uncertainties (see below). The result is a $9 \times 10000 \times 39$ array can then be split and summed to provide aggregate-, tract-, or category-level unsheltered population estimates and uncertainties.

Our baseline result incorporates the 2020 SPA-4/CD13 estimates of the CVRTM weights provided by LAHSA. These estimates underpin the latest LAHSA Community Summaries. We recognize that COVID-related activities may have changed these weights—e.g., via concerted tent distribution efforts—since the last PIT count and analyze the impact of various CVRTM choices in Section 4.2. However, reasonable modifications—including those based on updated occupancy surveys—do not significantly affect our findings.

2.2.1 Monte Carlo Estimations of Unsheltered Probability Densities

Our analysis accounts for two known sources of uncertainty: Poisson errors in the visual tallies and random deviations of the CVRTM weights from their quoted means. The former represents how a given tally might change if performed at a different (but comparable) time or by a different team. The latter represents how the mean occupancy of CVRTM structures in Hollywood might differ from the mean occupancy in the geography in which the weights were defined.

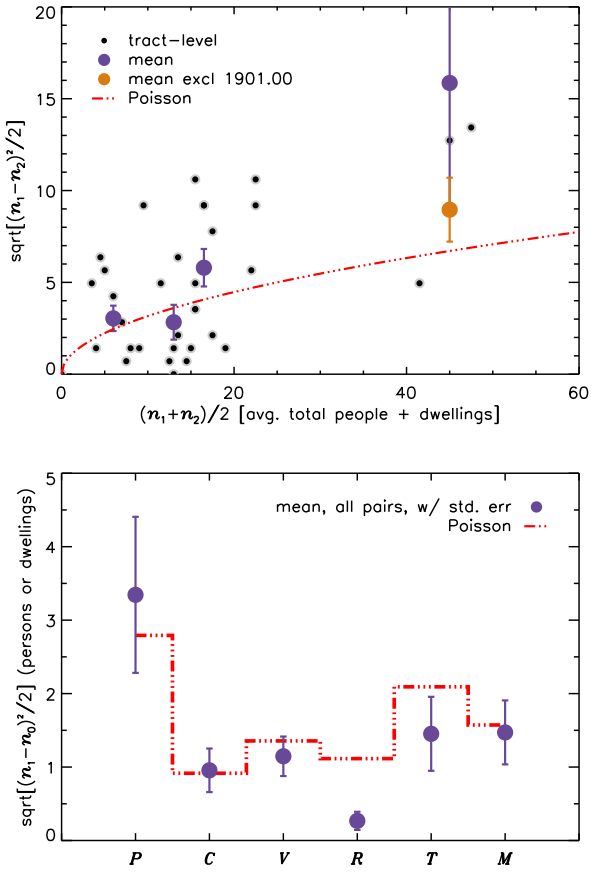


Figure 2: default

We model both uncertainties as Gaussian distributions with standard deviations of $\sqrt{n}$ and σ, respectively, where n is the raw tally and σ is the standard error on the respective mean CVRTM weight, w, quoted by LAHSA. As such, the i-th estimate of the true number, N, of people in the j-th unsheltered class in any tract is:

$$N_{i,j} \;=\; \left[n_j + \mathscr{G}_i(0,\sqrt{n_j})\right] \;\times\; \max[\mathscr{G}_i(w_j,\sigma_j),1], \quad (1)$$

where $\mathscr{G}(\mu,\Sigma)$ is a Gaussian random number with mean μ and standard deviation Σ. If more than one team counted a given tract, n is replaced by the average of their tallies and the attendant counting error is divided by the square root of the number of teams.

The final output probability distribution functions (PDFs) are based on 10,000 realizations of Equation 1. For the Adult, and TAY, classes all weights are fixed to unity, such that $(w,\sigma) \equiv (1,0)$ for all trials and uncertainties reflect only counting errors. One potential family and one potential unaccompanied minor were reported, but not confirmed. We therefore set those entires to zero, though still infer upper-limits.

We place a floor on the CVRTM mean occupancies at 1 person per dwelling; i.e., we assume that the average person does not own more than one tent. This is not to say no one may own more than one tent, just that such a statement is never representative. This choice induces a mild asymmetry in our global PDFs but does not significantly affect inferences.

2.3 Duplicate Tract Counts

All volunteer tracts in each community were assigned to at least two independent counting teams. Four tracts additionally received a third counter. Pass 1 was organized numerically by tract number. Pass 2 paired high-population tracts with an adjacent tract. Pass 3 was Pass 1 with the tract pairings presented to the teams in reverse order (such that, if 2 teams were deployed simultaneously, they would likely start in different tracts).

Results for one of the two teams assigned to tract 1925.20 could not be interpreted, making that tract the only tract with one one estimate.

Figure 2 shows the intercounter comparisons of raw counts (people+dwellings) at the tract and category levels. Average offsets are roughly consistent with Poisson expectations in all cases except for the highest occupancy tract (discussed momentarily), and RVs. The latter agree significantly better than random errors would suggest, which is expected as RVs are salient.

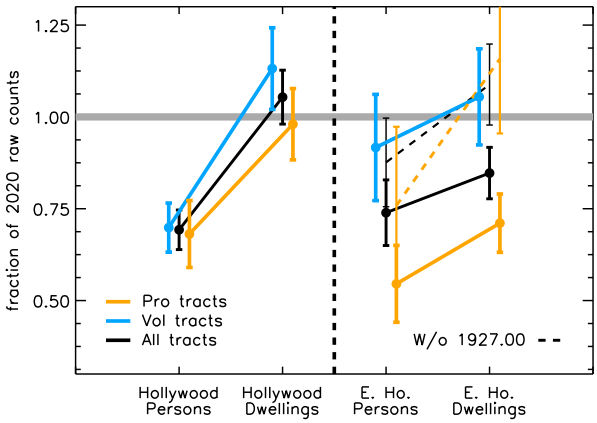


Figure 3

The only tract whose intercounter variance is an outlier is 1901.00 ($\sim 8\sigma$). There, one team counted $P,C,V,R,T,M = 23,1,1,1,6,2$ while the other counted $76,1,15,10,1,6,6,$. Abramson re-counted this tract on-foot 14 hours after the PIT tally, obtaining $36,4,6,0,8,2$. In total, this tally (56 ± 7) is within 1.9σ of the mean of the two volunteer teams (75 ± 6). As such—and given the direction of this disagreement in the context of our main result—we treat these entries identically to the rest. We show what the implied intercounter variance would be without it, however, in Figure 2, top.

- Above holds true for 1912.01, which is in Hwood and also a SELAH recount tract. LEA counted 51 totoal ppl/dwellings 12:30 P on 27 Feb vs 51 by vols night of count.

No team counted tracts spanning communities. As such, the volunteer tracts in the Hollywood and East Hollywood areas are totally independent. The only cross talk is one tract in East Hollywood that was counted by the same team that counted 5 in Hollywood. We discuss comparisons between volunteer and professionally counted tracts in both communities in Section 3.3

3 Results

This section presents CoC level estimates for the number of unsheltered individuals and dwellings in the Hollywood and East Hollywood areas as of the evening of 25 February 2021. We start with summaries of each CoC in Sections 3.1 and 3.2 before discussing how these estimates compare to last year's official LAHSA count in

Section 3.3. Section 5 describes how varying elements of Section 2.2.1's analysis modulates these results.

3.1 Hollywood CoC

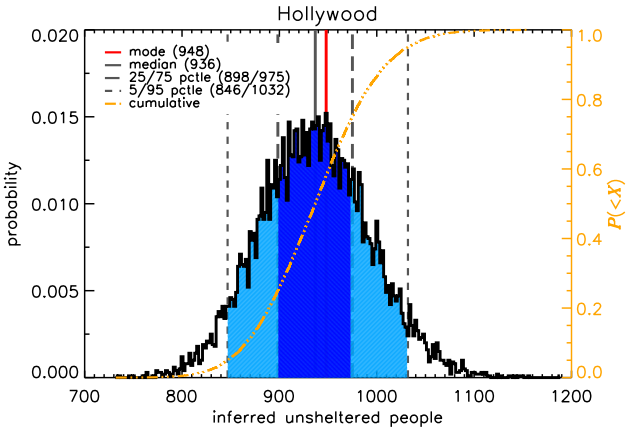


Figure 4

3.2 East Hollywood CoC

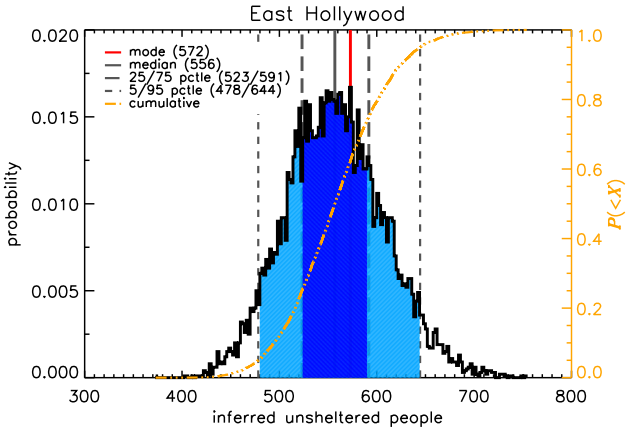


Figure 5

3.3 Comparison to 2020

4 Systematics

We discuss these potential sources of systematic errors below.

Table 1: Census Tract-level Unsheltered Data

Tract	Team	n_{teams}	Median Est.	90% CI
1898.00	V	1	8	4–14
1899.02	V	1	23	15–32
1899.03	V	1	3	0–8
1899.04	V	1	38	27–50
1899.05	V	1	20	13–29
1901.00	V	1	67	53–80
1902.01	V	1	36	26–47
1902.02	V	1	23	15–31
1903.01	V	1	109	89–131
1905.10	V	1	52	38–66
1907.00	V	1	106	87–124
1908.01	V	1	88	70–105
1908.02	V	1	88	71–106
1909.01	V	1	39	27–52
1909.02	V	1	26	16–36
1910.00	V	1	156	132–181
1917.10	V	1	12	6–19
1917.20	V	1	25	15–35
1918.10	V	1	45	32–58
1918.20	V	1	16	9–23
1919.01	V	1	58	43–73
1916.10	V	1	42	28–56
1916.20	V	1	16	9–24

this is a placeholder table

4.1 Null Entries

As stated in Section 2.1.1, some (too few) tracts have unsheltered populations near zero, or at least are not observed to host any people or dwellings of a specific category. Such null entries are consistent with a range of non-zero values for the true population due to shot noise. As such, the Monte Carlo PDF reconstruction must allow them to take non-zero values based on an assumed background rate.

Ideally, that rate would be based on the variations in a category's counts (or count densities) in other, similar tracts defined by some independent criteria. While sufficient data from, e.g., the US Census may enable such an exercise, it is beyond the scope of this analysis. Instead, we base our noise floor on the number of counts of a given category expected if the total was evenly distributed across all tracts. That is:

$$\sigma^2_{j,\min} = \frac{1}{39} \sum_{\text{tracts}} n_j, \tag{2}$$

where σ_j and n_j are defined as in Equation 1.

This method works for any category, j, for which there is at least one individual/dwelling observed in any tract. However, for categories for which even this is not the case—unaccompanied minors and families, in the case of Hollywood—we set $\sigma_{j,\min}$ to the lowest non-zero value of the other categories (corresponding to TAY).

State the bkg levels.

While we admit that such a treatment is somewhat arbitrary, due to the intrinsically low levels of at least unsheltered unaccompanied minors and families, it does not significantly affect our CoC level estimates. It does affect TAY, however, and as such, taken with the difficulty of disambiguating older TAY from younger adults, we caution against relying on the TAY estimates for anything beyond lower-limits.

4.2 CVRTM Biases

Less easily handled are potential biases in the CVRTM demographic weights our count adopts. Typically, specialized teams perform detailed interviews of people experiencing homelessness to update these weights in various geographic contexts. However, the cancellation of the official PIT count means that this will not occur in 2021. As such, we are forced to rely on year-old estimates.

We present

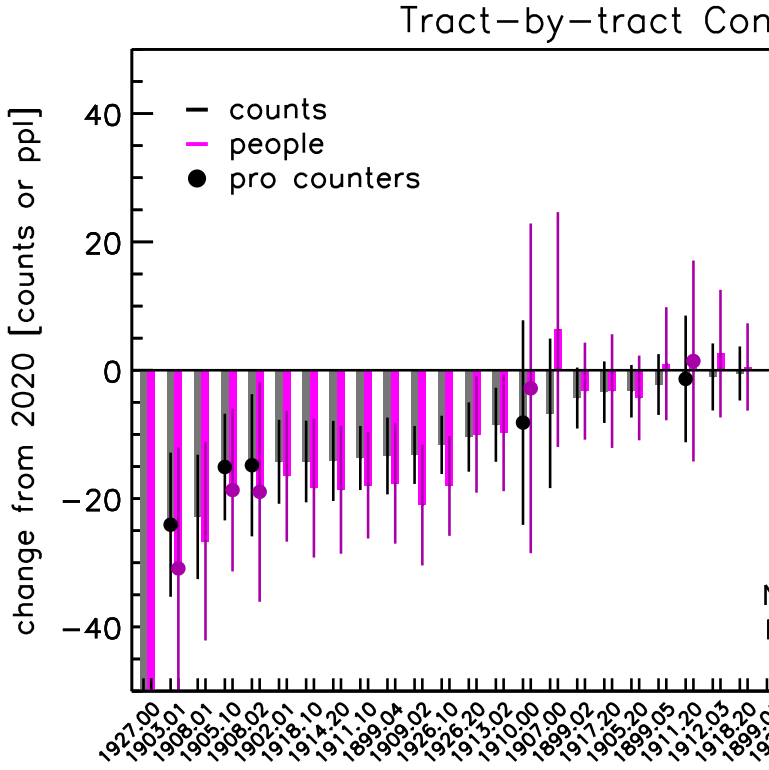


Figure 9

4.2.1 Nulling the 2021 Result

4.2.2 Examining Past Variability

4.2.3 Relying on Smaller Geographies

4.2.4 Using External Data

The Hollywood Partnership—one of Hollywood's Business Improvement Districts (BIDs)—has performed weekly visual scans of its footprint since spring 2019. These inspections tally unsheltered people and tents separately. As such, they can be used to bound the possible evolution of the CVRTM tent weight between the official 2020 value and what it may be today.

SECZ

A lower-bound on the the weight can be derived by assuming that all of the tents captured by the BID's censuses were empty and all of their inhabitants visible. The weight would the be just the number of people on the number of tents. If any of the tents were not empty, the true weight would be higher than the inferred weight. Ergo, the BID/SECZ derived tent weight may reflect a *conservative* estimate which, when applied to the entire footprint, would produce something like a lower-bound

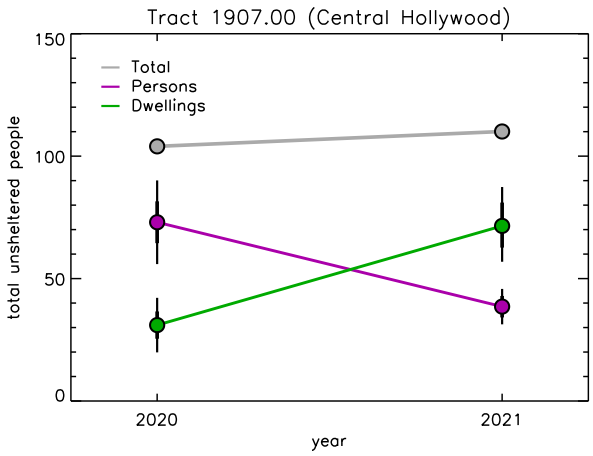


Figure 10

on the tent contribution to the 2021 count.

We'll use the BID counts outside the SEZ and find (tents+people)/tents for the past year. We'll fit it and get a range of values for the night of the count. It's typically higher than 1.45 (thru last July, at least), so we can just find the decline and peg it to 1.45.

Plot the trend; discuss it in terms of the 2020 value; see what it does; talk about why we don't think most of the folks on foot in the SECZ are interlopers.

5 Discussion

PRK effects.

ABH effects.

PSH effects.

1907.00 people and tents switched. Total unsheltered ∼constant but visual perceptions in this most-highly trafficked tract will make it *feel* like homelessness has increased by a lot.

SPLA.

Edges.

6 Summary

Acknowledge Kelson

A Example Documents

B Full Tract-level Results

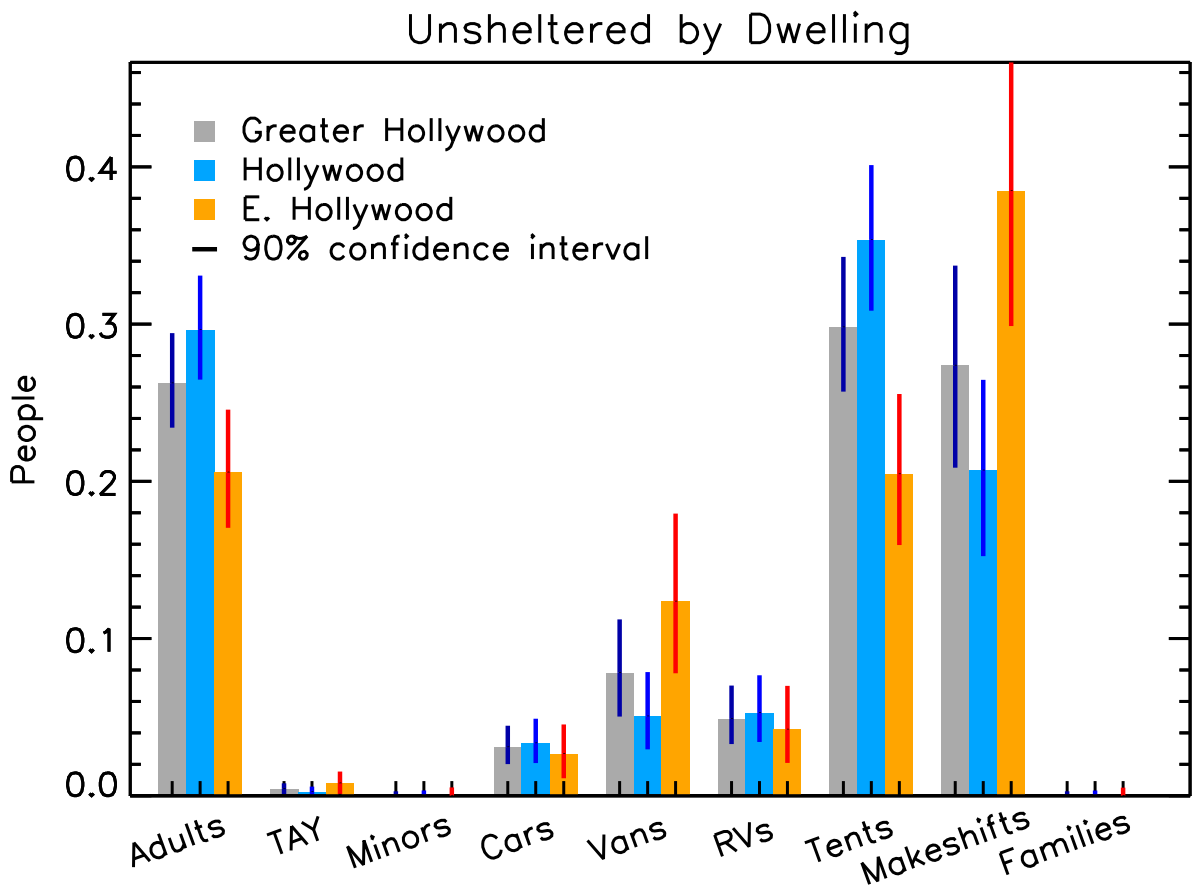


Figure 6

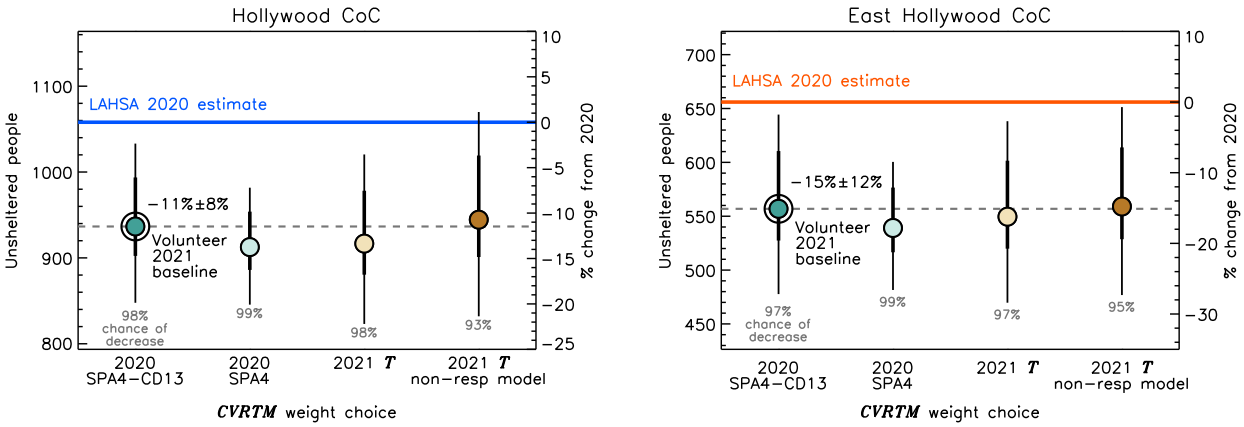


Figure 7: Unsheltered populations in Hollywood (left) and East Hollywood (right) as functions of CVRTM weights. The baseline estimate uses the same weights as the 2020 LAHSA Community Summaries. Using SPA4 weights or replacing the tent weight, T, with results from a survey conducted in Hollywood yields consistent results. All imply at least a 93% chance that unsheltered homelessness has fallen by some amount, with likely declines of $12\% \pm 9\%$ and $15\% \pm 12\%$ in Hollywood and East Hollywood, respectively.

Table 2: Greater Hollywood 2021 PIT Unsheltered Data and Population Estimates

	Adult	TAY	Car	Van	RV	Tent	Makeshift	**2021 Total**	**2020 Total**	**Difference**
Hollywood										
Counts	277	2	21	27	34	224	115	**702**	**831**	**−15%**
Inhabitants	277 (27)	2 (5)	32 (11)	49 (13)	50 (14)	332 (29)	195 (24)	**937 (93)**	**1058**	**−11% (9%)**
Category share	30% (3%)	0% (0%)	3% (1%)	5% (1%)	5% (1%)	35% (3%)	21% (3%)	–	–	–
East Hollywood										
Counts	114	4	10	39	16	77	127	**389**	**469**	**−17%**
Inhabitants	114 (19)	4 (4)	15 (8)	70 (15)	24 (9)	115 (19)	216 (23)	**557 (83)**	**656**	**−15% (12%)**
Category share	20% (3%)	1% (1%)	3% (1%)	13% (3%)	4% (2%)	20% (3%)	39% (4%)	–	–	–

Parentheses denote 90% uncertainties(binomial in the case of the categories). Uncertainties larger than estimates imply that only upper limits are available. No unaccompanied minors or families were observed.

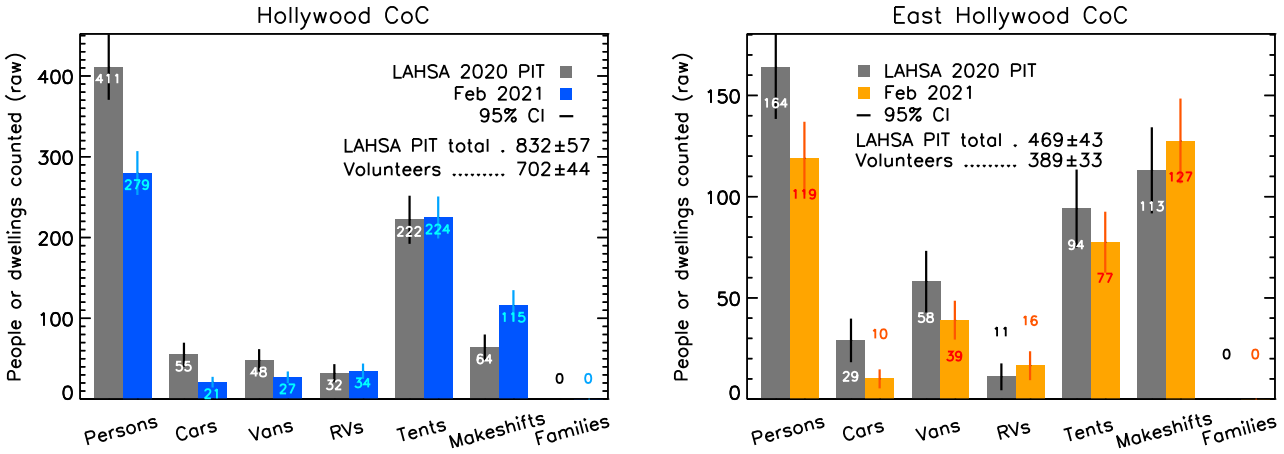


Figure 8: Raw tallies of unsheltered persons and dwellings in Hollywood and East Hollywood (left/right) from the 2020 and 2021 PIT counts (grey/colors). Persons, cars, and vans fell in both communities while RVs and tents stayed statistically flat. Makeshift structures are the only category to show a potential common increase. Overall, we identified 208 fewer people and dwellings compared to 2020, with similar 16% decreases assessed by almost entirely independent teams in both communities. "Persons" are TAY+Adults.

Table 3: Tract 1898.00 Unsheltered Data

	Adult	TAY	Unacc Minor	Car	Van	RV	Tent	Makeshift	Family	**Total**
Counts	3	0	0	0	0	0	1	1	0	**5**
Inhabitants	3 (3)	0 (1)	0 (1)	1 (2)	1 (2)	1 (2)	2 (2)	2 (2)	0 (1)	**9 (6)**
Category share	0.31 (0.29)	0.03 (0.10)	0.03 (0.10)	0.09 (0.18)	0.10 (0.19)	0.07 (0.16)	0.16 (0.23)	0.18 (0.24)	0.03 (0.10)	-

Quantities in parentheses denote 95% uncertainties (binomial in the case of the categories). Uncertainties larger than estimates imply that only upper limits can be stated confidently.

Data Acquisition Sheet – 2021 Greater Hollywood Homeless Count

Tract:

Date:

Time:

Team members:

Adults	*18--24 yr olds*	*Unacc Minors*	*Cars*	*Vans/SUVs*	*RVs*	*Tents*	*Makeshift*	*Families*

Comments:

Figure 11: Counter tally-sheet

Tract 1899.02 (Sierra Bonita–La Brea/Fountain–Sunset)

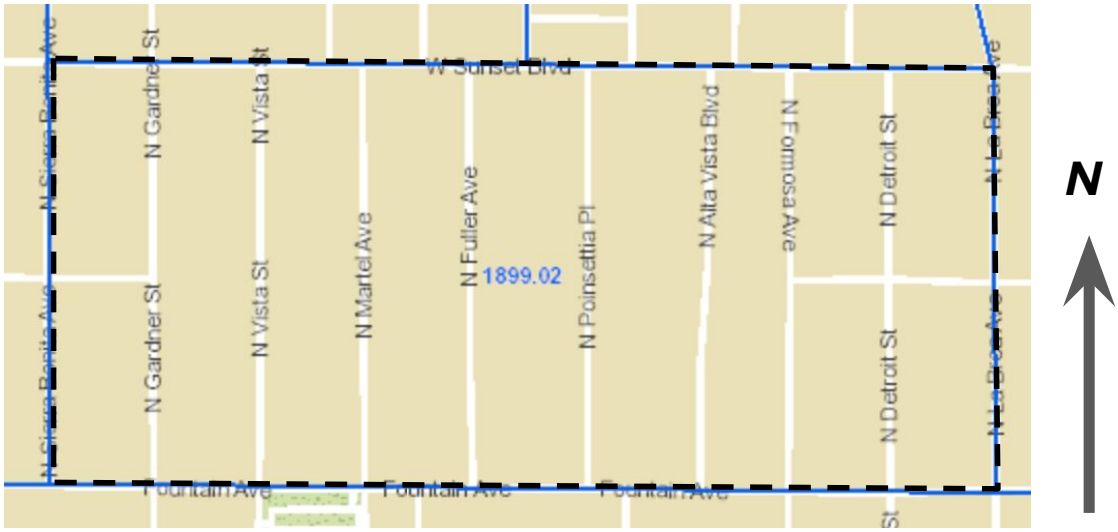


Figure 12: Example Hollywood tract map.

2021 Greater Hollywood Volunteer Homeless Count

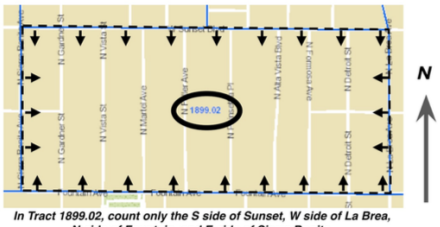
Materials:

- Tract maps (up to 2, see below).
- Tally sheets (up to 2, one per tract, see below).
- Clipboard + pens.

Instructions:

1. Ensure Counter has tally sheets + tract maps. Ensure Navigator has tract maps if present.
2. Drive to a tract. Enter an intersection in google maps for directions (e.g., "Fountain/Normandie"). **Record tract number on tally sheet.**
3. Drive every street in the tract.
   - Drive slowly so Counter can survey each street. Use hazard lights.
   - If present, Navigator should direct Driver and mark streets that have been counted. Else, Counter should do this.
   - **Count only the interior side streets on tract borders.**
   - If you do not count a street, mark on map and note in "Comments" section of the tally sheet (see below).
   - **Do not exit your vehicle for any reason during the count.**

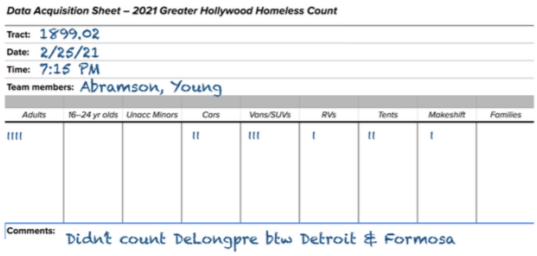
Tract **1899.02** (Sierra Bonita–La Brea/Fountain–Sunset)



In Tract 1899.02, count only the S side of Sunset, W side of La Brea, N side of Fountain, and E side of Sierra Bonita.

Tally example:

- Record the tract number, printed in **bold** at top of each tract map (see example above).
- **Read your results to the volunteer who collects your materials back at *The Center*.**



Data Acquisition Sheet – 2021 Greater Hollywood Homeless Count

Tract: 1899.02
Date: 2/25/21
Time: 7:15 PM
Team members: Abramson, Young

Adults	16–24 yr olds	Unacc Minors	Cars	Vans/SUVs	RVs	Tents	Makeshift	Families
IIII			II	III	I	II	I	

Comments: Didnt count DeLongpre btw Detroit & Formosa

Dwelling examples:

RV *Tent* *Makeshift* *Car* *Van*

Emergency contact: [redacted]

Figure 13: Count primer **SCRUB EK'S NUMBER!**