

# Chattanooga 2020 Census Complete Count Committee

## Low Response Scores for Hamilton County Block Groups

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### Overview

The following includes low response score estimates for block groups within Hamilton County, Tennessee similar to those provided at the tract-level by the U.S. Census Bureau's [Response Outreach Area Mapper \(ROAM\)](#). Low response scores were obtained from the U.S. Census Bureau's 2018 Planning Database ([PDB](#)) which utilizes the estimation procedure outlined by [Erdman and Bates \(2017\)](#). As the authors found, estimating low-response scores (LRSs) by block group was slightly better at explaining the variation in mail-return rates compared to Census tracts. Additionally, community outreach efforts can be more effective at targeting those who are less likely to respond to an initial Census count in a "smaller" geographic area compared to larger Census tracts. For this reason, PDB data was used to analyze low response scores for Hamilton County, with particular focus on Chattanooga and other municipalities.

### Hard-to-Count Populations

As [Erdman and Bates \(2017\)](#) found in developing a "hard-to-count" (or low response) score, a number of factors that explain the difficulty in counting certain populations are similar to factors that explain voting and civic participation (or the lack thereof) among citizens. For instance, socioeconomic status (education, income, and occupational status or "prestige") and one's attachment to the community (e.g. homeownership, length of residency, or children who attend a local school) are similar to the results reported by [Erdman and Bates \(2017\)](#). From their findings, the following factors (coded as percentages of the total population) were significant (and positively correlated) in explaining residents' nonresponse:

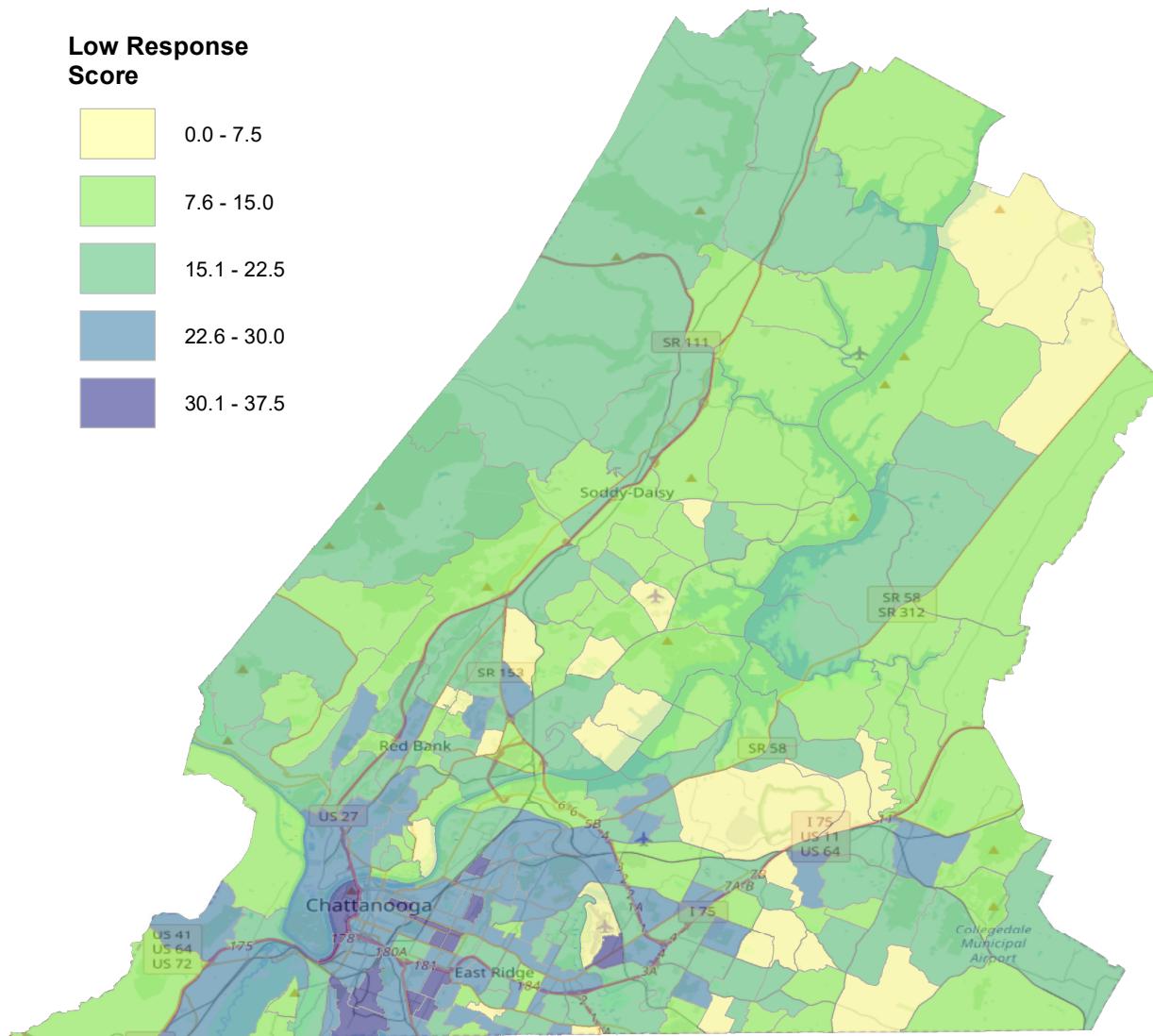
- Renter-occupied units
- Residents, 18–24 years old
- Female head of household (unmarried)
- Other (minor) factors (listed in order):
  - Males
  - Children under 6 years old
  - Vacant units
  - Median household income
  - Persons per household
  - Recently moved (2005-2009, prior to the 2010 census)
  - Hispanic
  - Households below poverty
  - Children, 5–17 years old
  - Median home value

Other factors that are negatively related to low response rates (read: positively related to higher response rates) are the percentage of: non-Hispanic whites; adults over 65; married family households; adults 25-44; college graduates; adults 45-64; single-unit structures and several other factors ([Erdman and Bates, 2017](#), p. 150). In all, these estimates can assist the Complete Count Committee in developing various strategies in how it targets residents—both geographically and demographically—and encourages them to respond to their 2020 Census questionnaires.

## Block Groups by Municipality and Place

The following blocks are grouped by Census Bureau's designated *places*. For classification purposes (and for that of the corresponding data), if the majority (or plurality) of a block group falls within a municipality, it has been designated as the "major" place.<sup>1</sup> For those that fall within two municipalities, the secondary city or town is designated as the minor place. If the majority (plurality) or minority of a block group falls within a census designated place (CDP, and *not* a municipality), the major and minor places are listed as such.<sup>2</sup> In these cases, the priority was given to municipalities; thus, if the majority of a block group resides within the county, but includes part of an incorporated area, the block group is listed below for each respective city or town. All other block groups that do not fall within a municipality or place were simply classified as *Hamilton County*.

Figure 1: Low Response Scores by Block Group: Hamilton County



<sup>1</sup>In Hamilton County, municipalities include: Chattanooga; Collegedale; East Ridge; Lakesite; Lookout Mountain; Red Bank; Ridgeside; Signal Mountain; Soddy-Daisy; and Walden.

<sup>2</sup>CDPs in Hamilton County include: Apison; Fairmount; Falling Water; Flat Top Mountain; Harrison; Middle Valley; Mowbray Mountain; Ooltewah; and Sale Creek.

## Chattanooga

Similar to what is apparent at the tract-level from the Census' ROAM site, the majority of block groups with the highest nonresponse scores are concentrated in Chattanooga and more densely-populated municipalities in the metropolitan area. In the case of Chattanooga, the block groups with particularly high nonresponse rates in the top-two quintiles (i.e. above 22.5% estimated nonresponse) are highlighted below, along with the estimated population using the most recent American Community Survey data for 2013–2017.

### Low Response Scores Above 30%

Figure 2: Chattanooga Low Response Scores Above 30%



Table 1: Chattanooga Low Response Scores Above 30% – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
012200	2	35.7%	264	94
001600	1	34.9%	2,619	914
001200	3	34.5%	1,222	422
001900	1	33.6%	1,761	592
012400	2	32.9%	1,270	418
002500	2	32.8%	2,291	751
003400	1	32.2%	1,293	416
001900	3	31.7%	1,326	420
001300	1	31.4%	1,323	415
001100	2	31.4%	792	249
002400	3	30.8%	1,249	385
002400	4	30.4%	2,455	746
001400	2	30.3%	897	272

Note: Undercount = LRS% × 2017 ACS Population

## Low Response Scores Between 22.6–30%

In addition to the 13 block groups with the highest nonresponse rates (above), another 51 block groups in Chattanooga fall within the second-highest quintile (22.6%–30%), and include many of the areas stretching from Lookout Valley to Moccasin Bend and Stringer's Ridge to Hixson, East Brainerd, Bonny Oaks, and Highway 58. The following figures ([Figure 3](#), [Figure 4](#), and [Figure 5](#)) and Table 2 highlight these areas.

Figure 3: Chattanooga Low Response Scores, Second Quartile (Downtown; North/East Chattanooga)

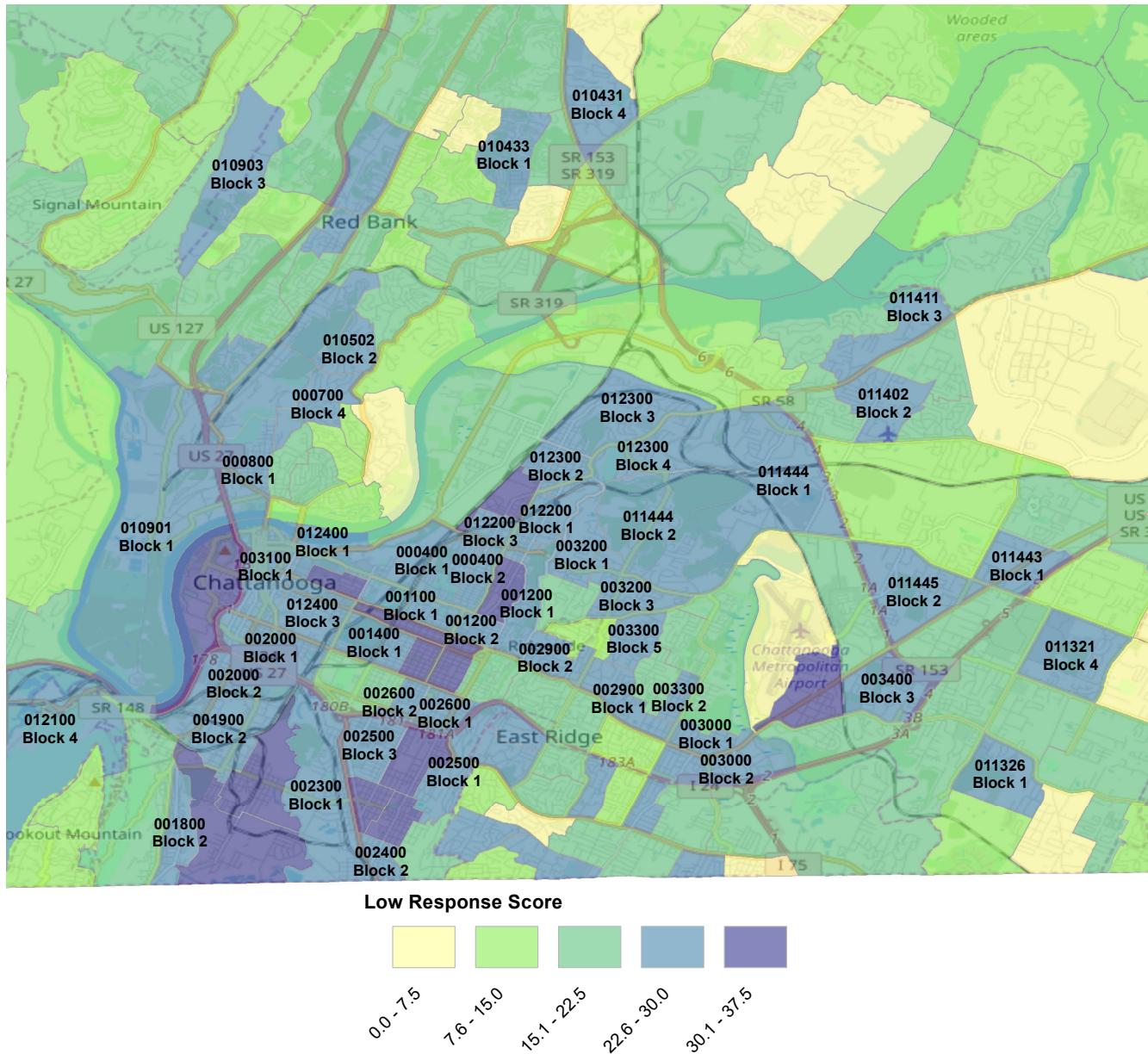


Figure 4: Chattanooga Low Response Scores, Second Quartile (East Brainerd)



Figure 5: Chattanooga Low Response Scores, Second Quartile (Moccasin Bend & Lookout Valley)

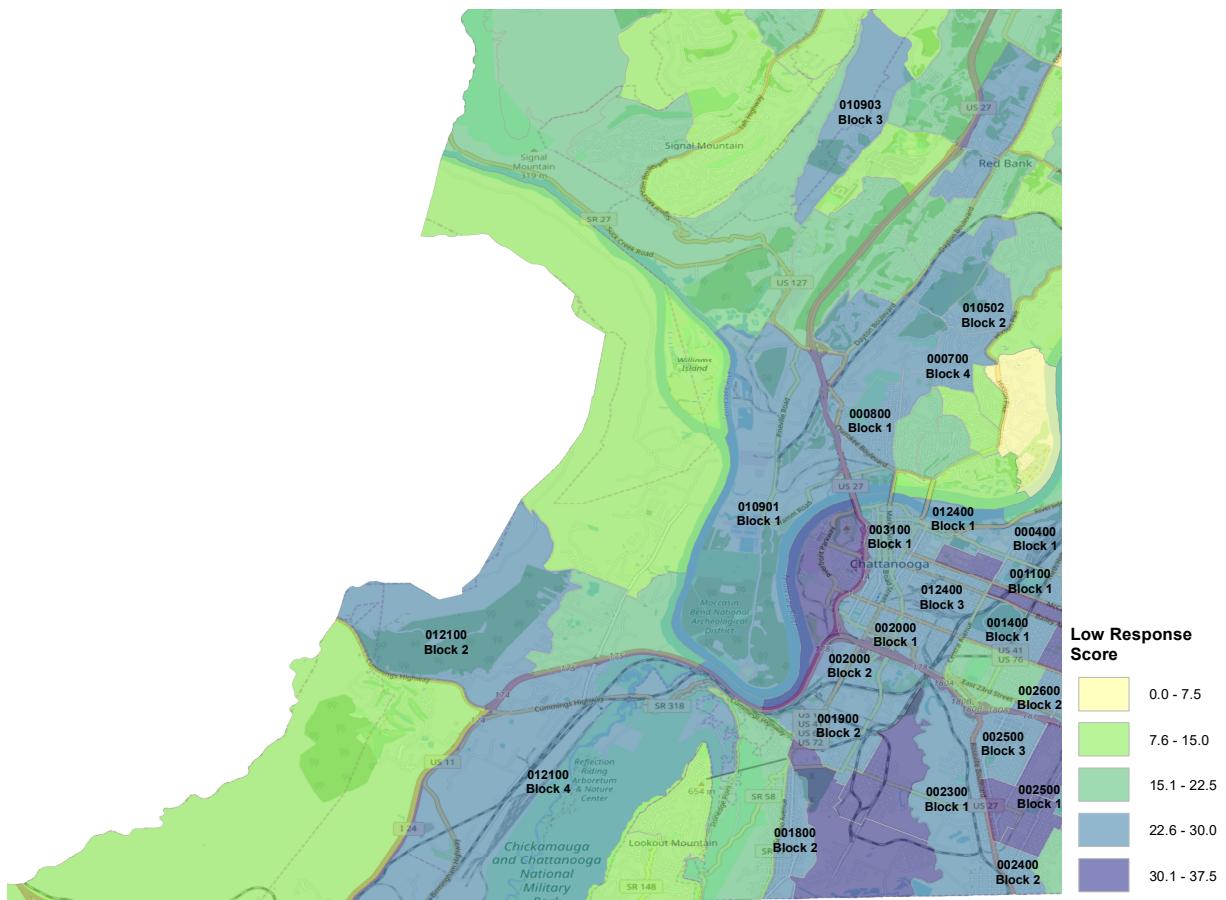


Table 2: Chattanooga Low Response Scores 22.6%–30% – Tracts &amp; Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
001200	2	29.4%	688	202
002600	2	29.3%	660	193
003000	2	29.2%	1,555	454
002900	1	29.2%	1,578	461
000400	2	28.8%	2,233	643
002300	1	28.7%	1,194	343
003400	3	28.6%	1,446	414
011326	1	28.3%	2,611	739
000700	4	28.2%	1,395	393
002600	1	28%	1,101	308
002500	3	28%	1,289	361
001100	1	28%	789	221
001200	1	27.9%	1,378	384
002400	2	27.8%	989	275
000400	1	27.8%	1,449	403
012400	3	27.5%	2,709	745
012200	3	27.4%	1,197	328
002900	2	27.1%	1,140	309
011321	4	26.9%	2,617	704
012200	1	26.7%	1,074	287
002500	1	26.6%	1,103	293
003300	2	26.5%	1,006	267
003300	5	26.5%	771	204
011443	1	26.4%	1,539	406
012100	2	26.1%	717	187
011311	3	25.9%	1,115	289
001900	2	25.3%	703	178
003100	1	25.2%	1,946	490
012300	3	25%	2,143	536
011444	1	24.9%	1,008	251
010502	2	24.9%	1,039	259
011445	2	24.7%	2,206	545
002000	2	24.7%	270	67
012400	1	24.5%	2,458	602
012300	2	24.5%	1,292	317
010901	1	24.3%	1,976	480
000800	1	24.3%	1,649	401
011444	2	24.2%	2,282	552
010433	1	24.2%	2,158	522
001400	1	24.1%	1,016	245
012300	4	23.7%	841	199
003000	1	23.6%	961	227
002000	1	23.6%	929	219
001800	2	23.6%	1,170	276
003200	1	23.1%	858	198
003200	3	23.1%	1,942	449
011411	3	23%	1,949	448
010431	4	22.8%	1,331	303
012100	4	22.7%	1,230	279
011402	2	22.7%	2,453	557
010903	3	22.7%	1,595	362

Note: Undercount = LRS% × 2017 ACS Population

## Collegedale

As shown in Figure 6, only one block group falls within the second-highest quartile (22.6–30% nonresponse) that includes part of Collegedale and a minor part of Chattanooga.

Figure 6: Collegedale: Low Response Scores

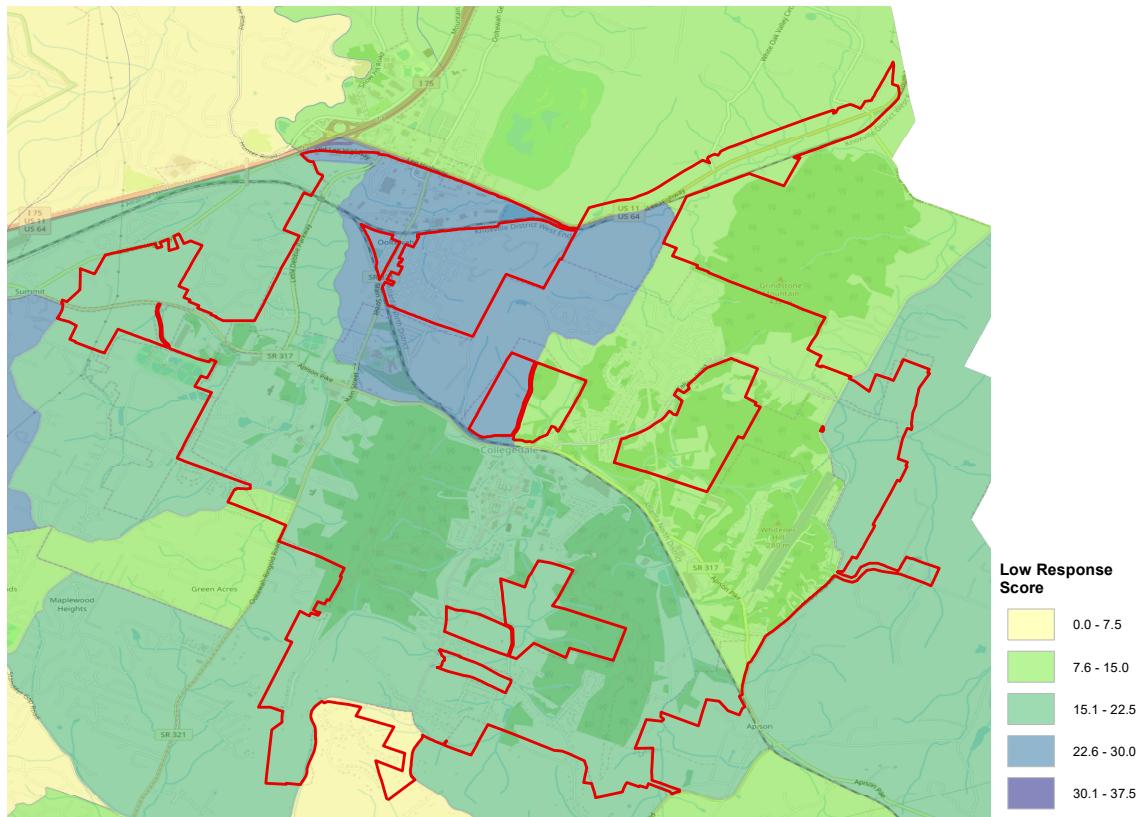


Table 3: Collegedale Low Response Scores – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
011201	5	22.6%	2,452	554
011203	2	21.2%	1,925	408
011311	4	21%	2,816	591
011311	5	19.4%	2,001	388
011204	3	18.7%	2,013	376
011203	1	17.7%	3,082	546
011314	3	12.7%	914	116
011204	1	10.2%	2,132	217
011204	2	9%	732	66
011201	4	8%	2,117	169
011203	3	6.1%	2,063	126
Total, Potential Undercount				3,557

Note: Undercount = LRS% × 2017 ACS Population

## East Ridge

Figure 7 highlights the seven block groups in East Ridge that fall into the second-highest quartile.

Figure 7: East Ridge: Low Response Scores

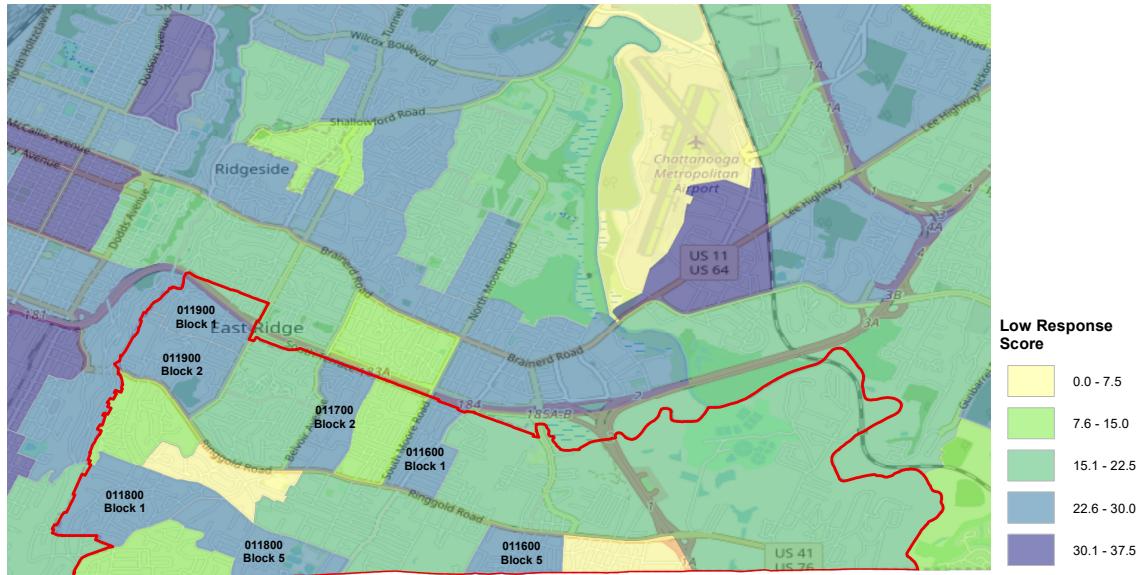


Table 4: East Ridge Low Response Scores – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
011800	5	30%	1,225	368
011900	2	25.3%	891	225
011600	5	24.6%	568	140
011600	1	23.1%	1,130	261
011800	1	22.9%	1,447	331
011900	1	22.8%	798	182
011700	2	22.8%	1,318	301
011442	1	22.3%	2,922	652
011600	2	21.7%	1,102	239
011700	4	20.7%	1,053	218
011700	3	19.3%	1,266	244
011800	4	17.9%	1,165	209
011600	6	17.8%	948	169
011800	2	14.6%	742	108
011700	1	13.1%	1,346	176
011800	6	11.6%	999	116
011800	3	3.1%	685	21
011600	4	0%	310	0
Total, Potential Undercount				3,960

Note: Undercount = LRS% × 2017 ACS Population

## Lakesite

As shown in [Figure 8](#) and [Table 5](#), estimated nonresponse rates are relatively uniform across the Town of Lakesite, and generally fall within the 10–15% range.

Figure 8: Lakesite: Low Response Scores

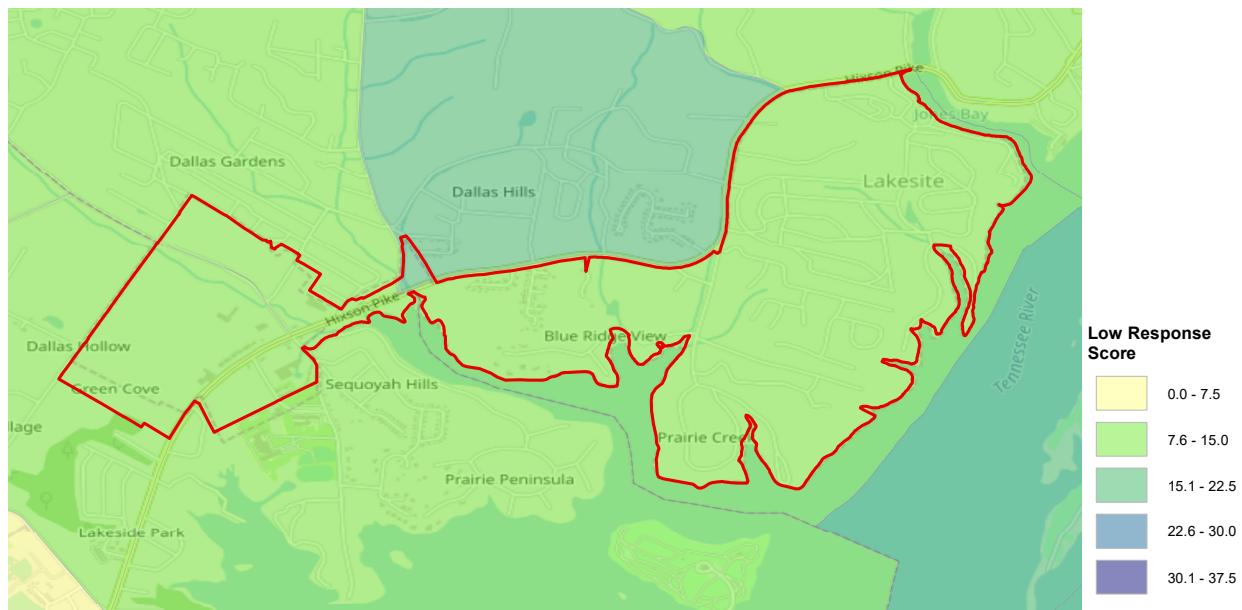


Table 5: Lakesite Low Response Scores – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
010304	3	15.5%	1,333	207
010303	2	14.8%	2,947	436
010413	2	12.7%	1,338	170
010304	1	12.4%	1,635	203
010412	2	10.6%	633	67
Total, Potential Undercount				1,083

Note: Undercount =  $LRS\% \times 2017\text{ ACS Population}$

## Lookout Mountain

Like Lakesite, the estimated nonresponse rates for Lookout Mountain are relatively similar, and fairly low at 10.6–12.2%.

Figure 9: Lookout Mountain: Low Response Scores

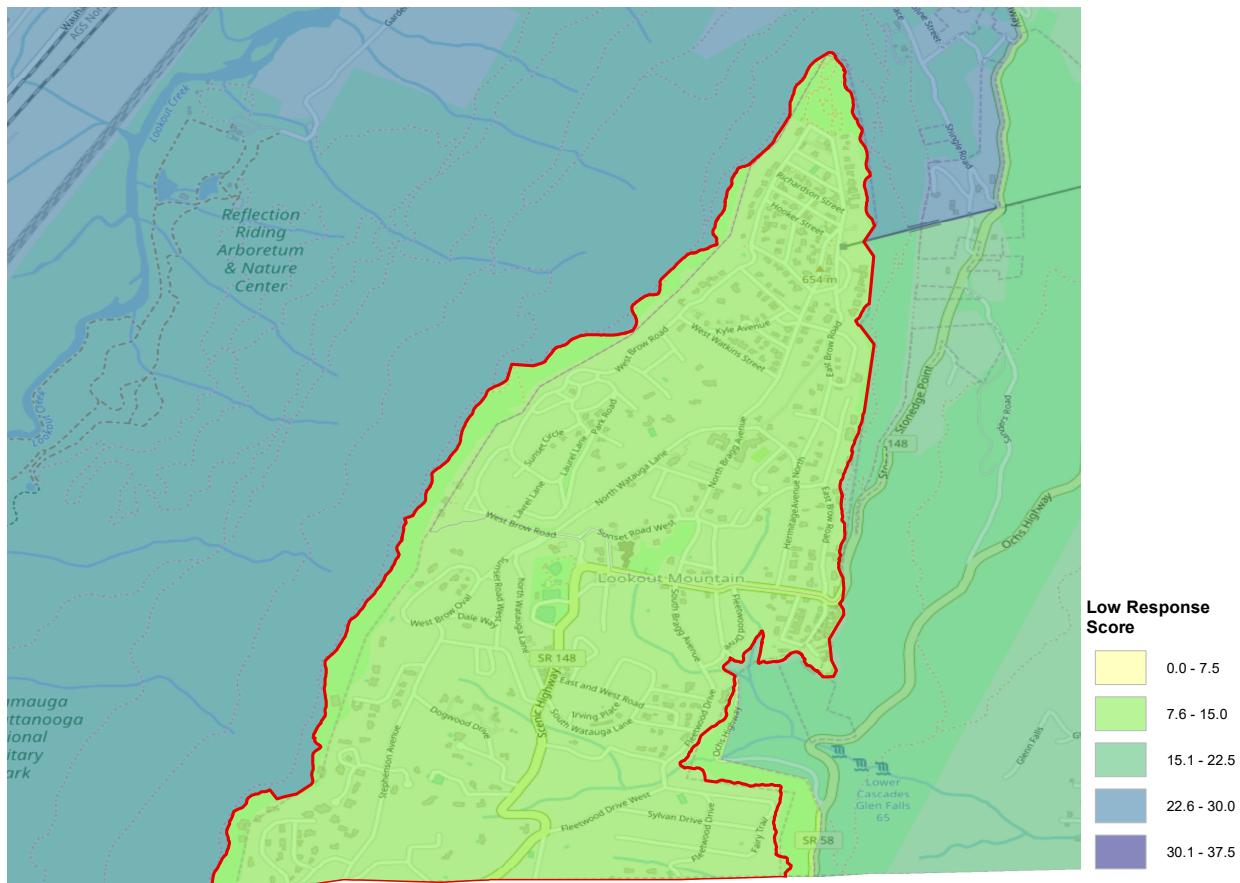


Table 6: Lookout Mountain Low Response Scores – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
012000	1	12.2%	1,086	132
012000	2	10.6%	897	95
Total, Potential Undercount				227

Note: Undercount =  $LRS\% \times 2017\ ACS\ Population$

## Red Bank

Red Bank includes five block groups (shown in Figure 10) that fall within the second-highest quintile, ranging from 23.6–28.2% of estimated residents who are less likely to complete the Census.

Figure 10: Red Bank: Low Response Scores

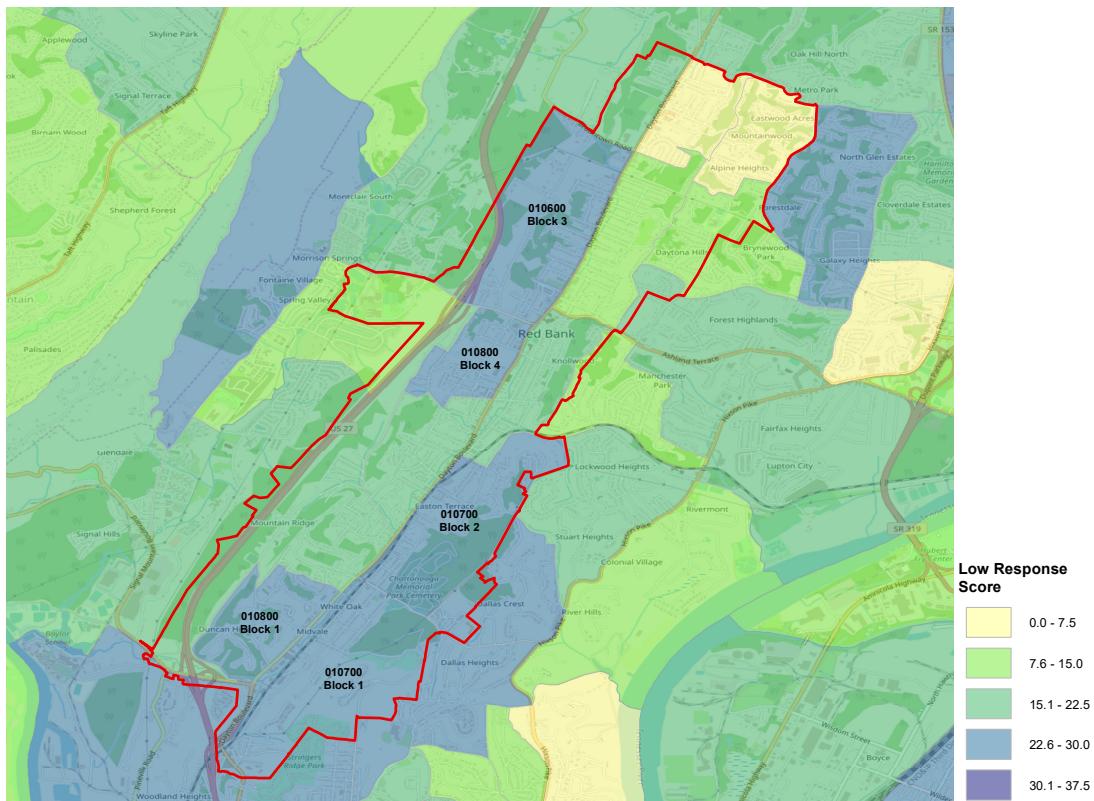


Table 7: Red Bank Low Response Scores – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
010700	1	28.2%	905	255
010700	2	25.4%	1,034	263
010800	1	24.8%	1,009	250
010800	4	24.4%	720	176
010600	3	23.6%	1,279	302
010800	2	21.7%	1,357	294
010800	3	20.8%	1,134	236
010700	3	17.1%	823	141
010600	2	14.9%	1,107	165
010501	2	13.2%	1,484	196
010600	1	5.8%	496	29
010501	1	1.7%	441	7
Total, Potential Undercount				2,314

Note: Undercount = LRS% × 2017 ACS Population

## Ridgeside

Similar to other relatively homogeneous communities, Ridgeside has a relatively low estimated nonresponse rate (13.3%) compared to most areas of Hamilton County. As shown in Figure 11, the town includes only one block group, with the exception of one property that falls within Tract 003200, Block Group 2.

Figure 11: Ridgeside: Low Response Scores

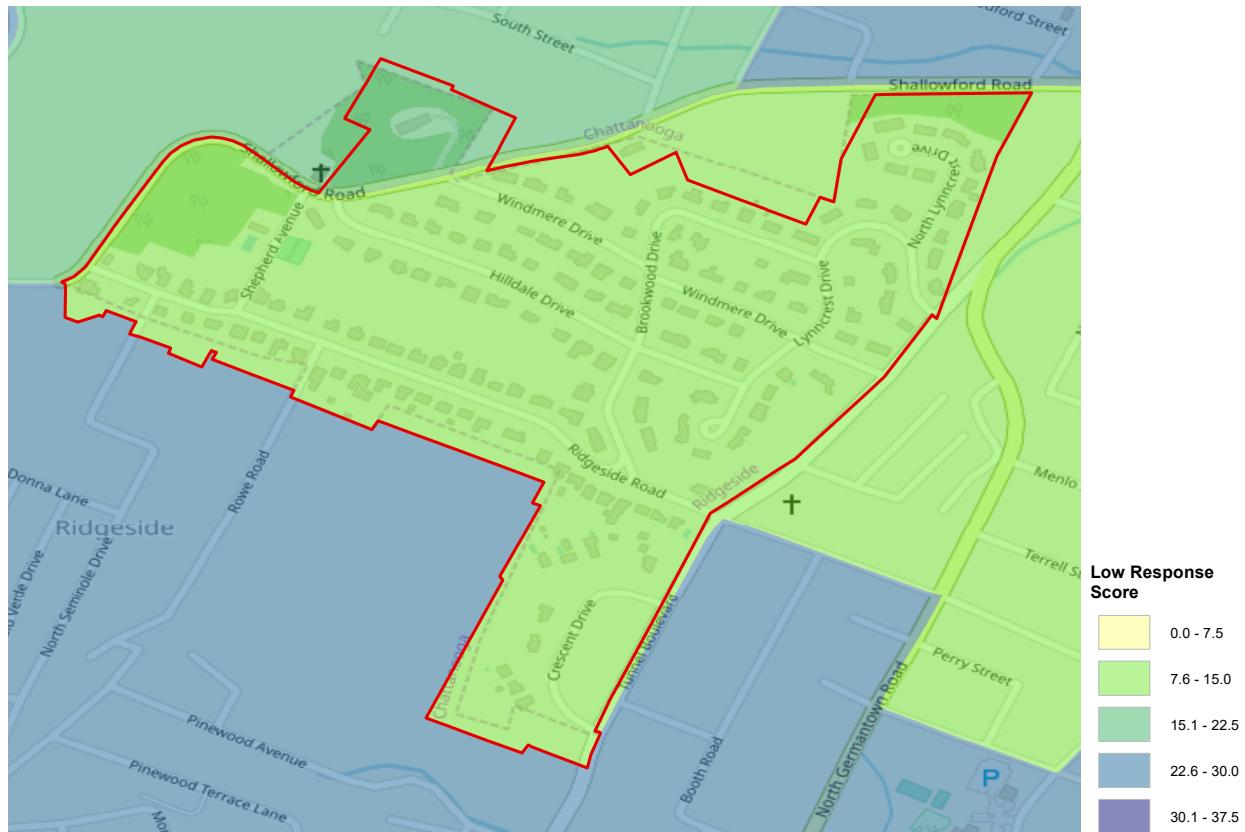


Table 8: Ridgeside Low Response Scores – Tract & Block

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
003300	6	13.3%	945	126

Note: Undercount =  $LRS\% \times 2017\text{ ACS Population}$

## Signal Mountain & Walden

Signal Mountain (shown in red) and Walden (shown in blue), like other communities which include residents with relatively high socioeconomic status and few multifamily structures, also have somewhat similar estimated nonresponse scores among their six block groups, ranging from 12.2–17%.

Figure 12: Signal Mountain & Walden: Low Response Scores

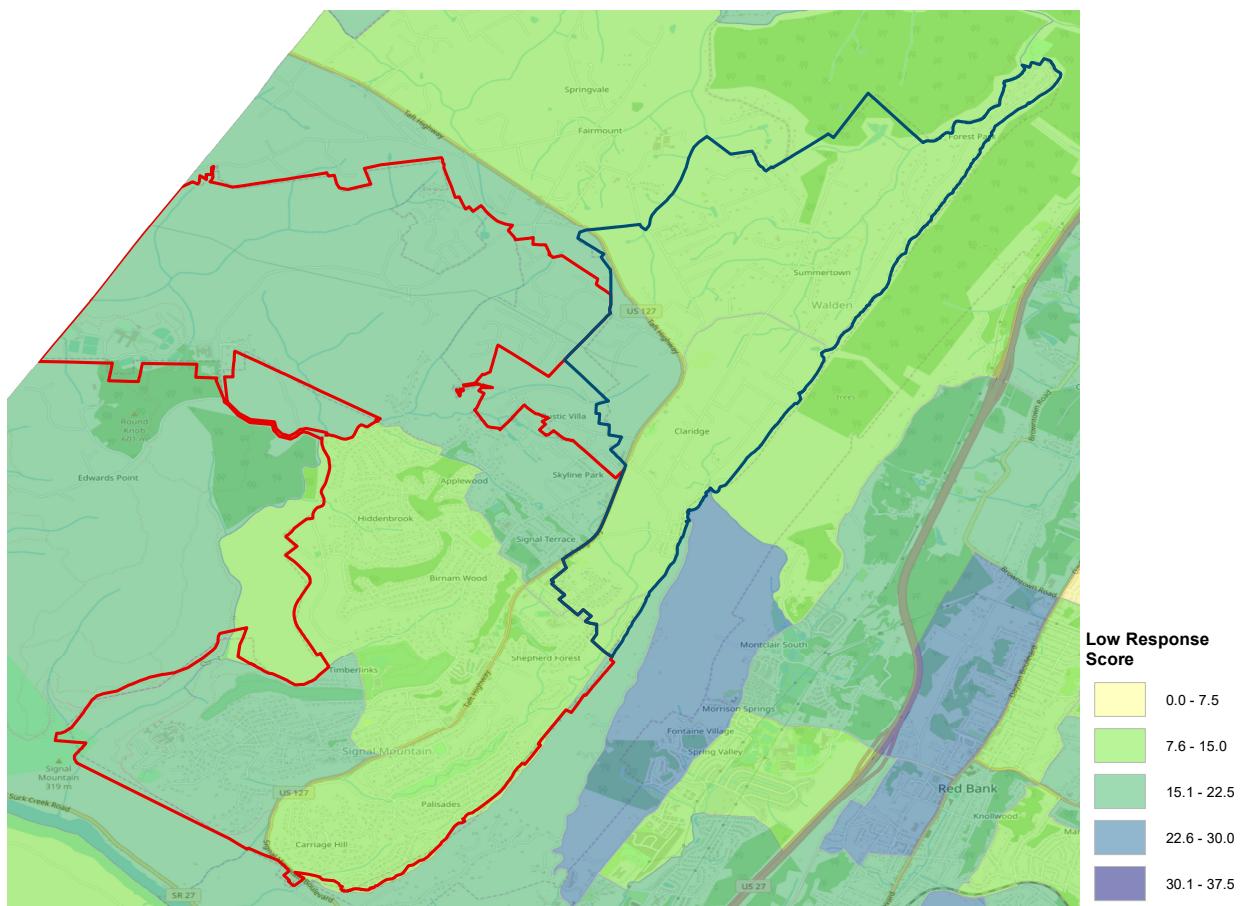


Table 9: Signal Mountain & Walden: Low Response Scores – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
011002	1	17%	Signal Mountain	3,668
011100	3	15.1%	Signal Mountain	1,614
011100	2	12.2%	Signal Mountain	2,067
011100	1	7.7%	Signal Mountain	2,486
011002	3	14.5%	Walden	2,221
011002	2	12.2%	Walden	818
Total, Potential Undercount (Signal Mountain)				1,311
Total, Potential Undercount (Walden)				422

Note: Undercount =  $LRS\% \times 2017 ACS Population$

## Soddy Daisy

Five of the block groups in Soddy-Daisy fall within the middle quintile (15.1–22.5%), including one area (Tract 010307, Block 2 – between Dayton Pike and Highway 27) that is over 20%.

Figure 13: Soddy-Daisy: Low Response Scores

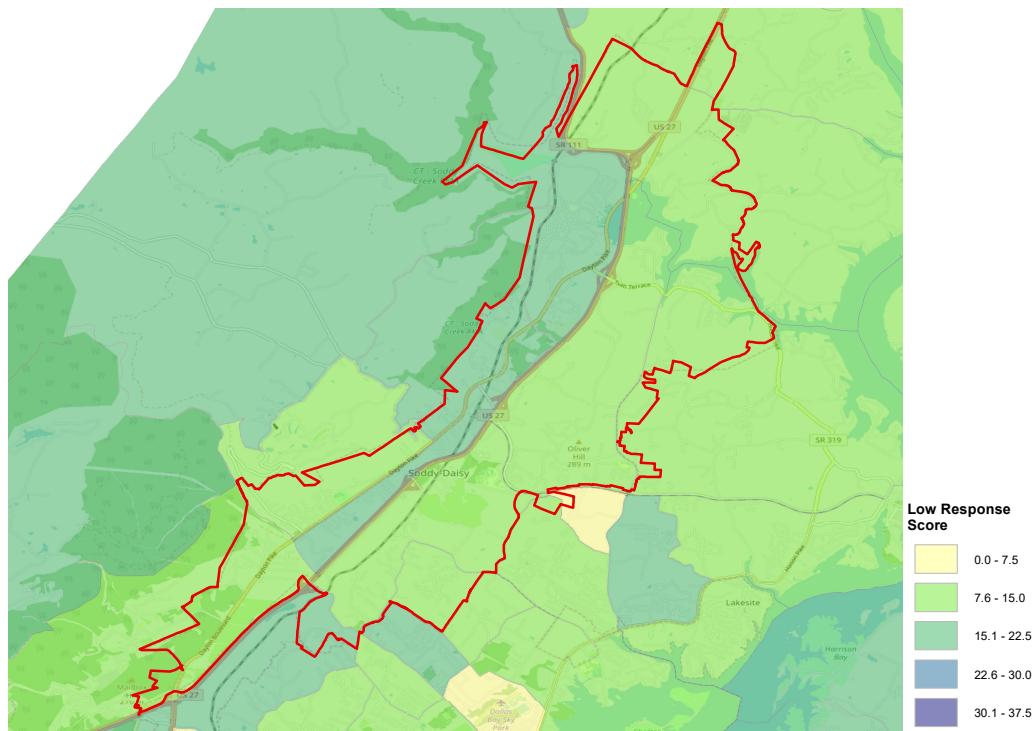


Table 10: Soddy-Daisy Low Response Scores – Tracts & Blocks

Census Tract	Block Group	Estimated LRS	2017 ACS Population	Potential Undercount
010307	3	20.5%	1,591	326
010307	1	18.7%	1,297	243
011001	1	16.2%	1,764	286
010307	4	16.2%	1,473	239
010412	4	16%	1,625	260
010306	2	14.9%	2,842	423
010434	1	13.7%	2,135	292
010305	1	13.2%	3,244	428
010201	3	10.8%	1,522	164
010306	1	10.7%	1,228	131
010201	1	9.3%	1,229	114
010307	2	9.2%	976	90
010201	2	9.2%	824	76
010412	1	7.9%	1,789	141
010303	1	0%	299	0
Total, Potential Undercount				3,213

Note: Undercount = LRS% × 2017 ACS Population

## Middle & Northern Hamilton County

The middle and northern parts of Hamilton County (which include the following CDPs: Falling Water; Fairmount; Flat Top Mountain; Middle Valley; Mowbray Mountain; and Sale Creek) are all relatively similar in the estimated response scores. In all, 20 of the 29 block groups in this section of the county range from 10.8–18.6% estimated nonresponse rates, with the other nine falling below 10%. The highest average CDP being the Sale Creek area (14.9–18.6%), followed by Fairmount at 15.6%.

Figure 14: Northern Hamilton County & CDPs: Low Response Scores

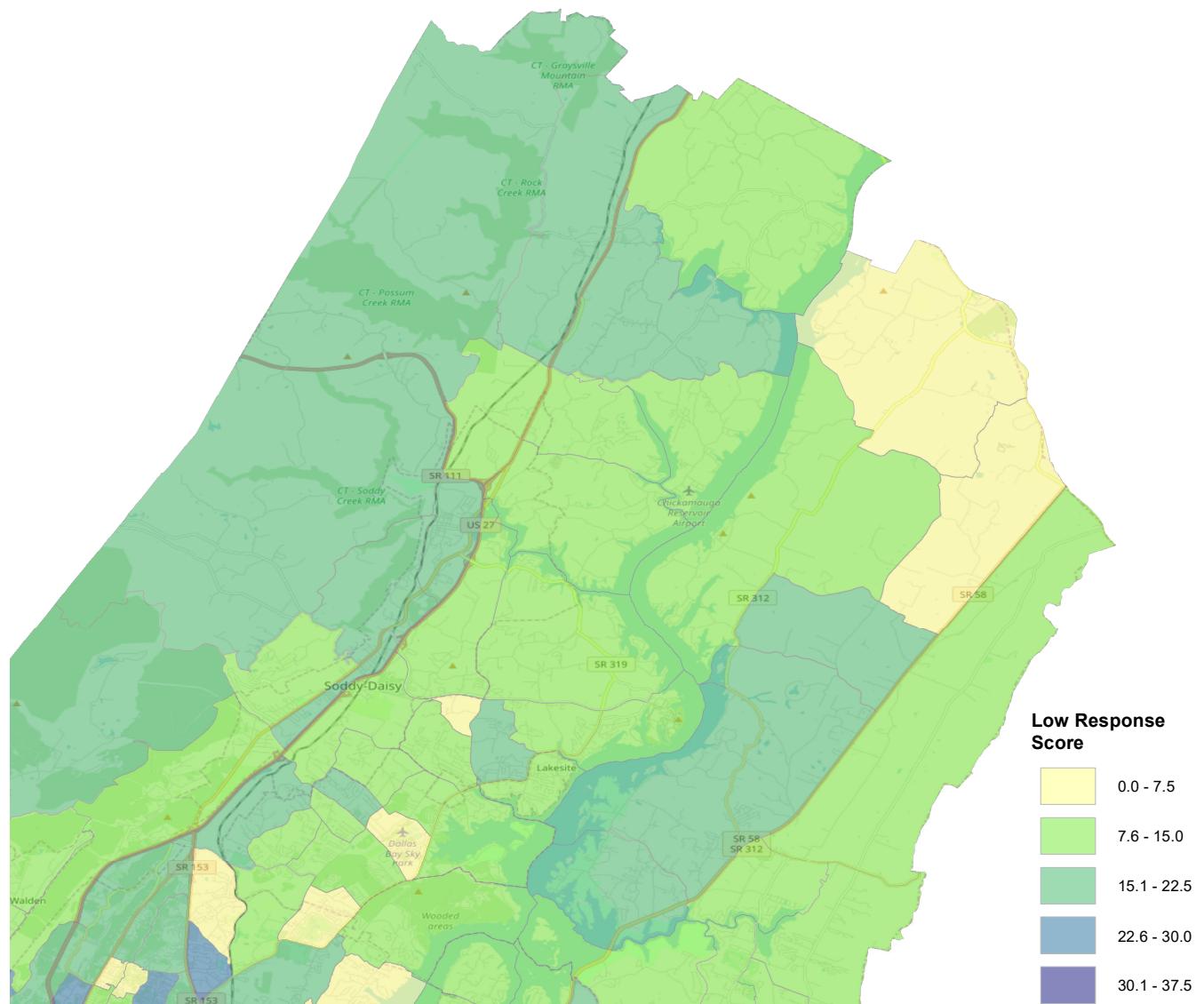


Table 11: Hamilton County &amp; CDPs: Low Response Scores – Tracts &amp; Blocks

Census Tract	Block Group	Place	Estimated LRS	2017 ACS Population	Potential Undercount
010202	1	Sale Creek	18.6%	589	110
010202	3	Sale Creek	15.7%	1,431	225
011002	4	Fairmount	15.6%	1,496	233
010202	2	Sale Creek	14.9%	1,017	152
011204	4	Apison	14.2%	1,196	170
010411	3	Middle Valley	11.2%	1,731	194
011413	1	Harrison	9%	885	80
010411	2	Middle Valley	8%	906	72
010412	3	Middle Valley	7.1%	1,246	88
011314	2	Hamilton County	16.9%	3,064	518
011447	4	Hamilton County	16.8%	2,568	431
010104	2	Hamilton County	16.3%	1,226	200
010103	2	Hamilton County	15.7%	2,625	412
010101	2	Hamilton County	15.3%	1,732	265
010101	1	Hamilton County	15.1%	2,303	348
010202	4	Hamilton County	14.6%	1,066	156
011324	2	Hamilton County	13.9%	2,612	363
010104	1	Hamilton County	13.8%	1,199	165
011447	1	Hamilton County	12.7%	2,833	360
011201	3	Hamilton County	12.6%	2,547	321
010103	1	Hamilton County	11.8%	1,460	172
010304	4	Hamilton County	11.8%	685	81
011325	4	Hamilton County	10.8%	2,278	246
010304	2	Hamilton County	9.1%	1,329	121
011314	1	Hamilton County	9%	1,745	157
010101	3	Hamilton County	8.9%	1,716	153
011324	1	Hamilton County	7.3%	1,805	132
010104	3	Hamilton County	6.4%	1,131	72
010104	4	Hamilton County	3.8%	749	28
Total, Potential Undercount					6,025

Note: Undercount = LRS% × 2017 ACS Population

## Summary

Using 2013–2017 ACS population estimates, combined with the block group low response estimates, Hamilton County could have an estimated 63,416 residents (including the Chattanooga and other municipalities) that go uncounted in the absence of efforts by the Complete Count Committee and other community partners. For the City of Chattanooga, this could total an estimated 41,178 that do not (initially) respond to the Census questionnaire. These totals, along with other municipalities in Hamilton County are listed below in Table 12.

Table 12: Estimated Total Undercount – Hamilton County, Municipalities & CDPs

<i>Municipality or Place</i>	<i>Estimated Undercount</i>
Chattanooga	41,178
East Ridge	3,960
Collegedale	3,557
Soddy-Daisy	3,213
Red Bank	2,314
Signal Mountain	1,311
Lakesite	1,083
Walden	422
Lookout Mountain	227
Ridgeside	126
Hamilton County ( <i>non-CDPs</i> )	4,701
Sale Creek	487
Middle Valley	354
Fairmount	233
Apison	170
Harrison	80
Total (estimate)	63,416

With regard to the populations less likely to complete the 2020 Census, all of the block groups in the highest quintile—with estimated nonresponse rates above 30%—are located within the City of Chattanooga. These block groups are primarily located in Alton Park, Avondale, East Lake, Glenwood, Highland Park, Orchard Knob, Westside, and the area just south of the Metropolitan Airport surrounding Lee Highway. Another 51 block groups in Chattanooga fall within the second-highest quintile (22.6%–30%), and include many of the areas stretching from Lookout Valley to Moccasin Bend and Stringer’s Ridge to East Brainerd and Highway 58.

In addition to Chattanooga, Collegedale (1), East Ridge (7), and Red Bank (5) have one or more block groups with LRSs in the second-highest quintile. These represent several hundred residents (respectively), in addition to those in other block groups, who should receive some form of communication, invitation, and/or assistance with regard to completing their 2020 Census. As noted earlier, and pointed out by [Erdman and Bates \(2017\)](#), a number of factors that contribute to low response rates are correlated with lower levels of civic engagement, socioeconomic status, and community “connectedness.” The challenge for government officials and community leaders will be to find ways to inform residents about the importance of the 2020 Census, provide reminders, and assist in its completion. Impeding these efforts are increasing levels of distrust in government—particularly among those less likely to respond—and uncertainty surrounding the introduction of a citizenship question in this decennial count. Regardless, it is in the best interest of local leaders to develop points of contact in the communities less likely to respond, for these are often the individuals and families who could benefit most from support; and who, in turn, rely on both the assistance and representation determined by a complete count.

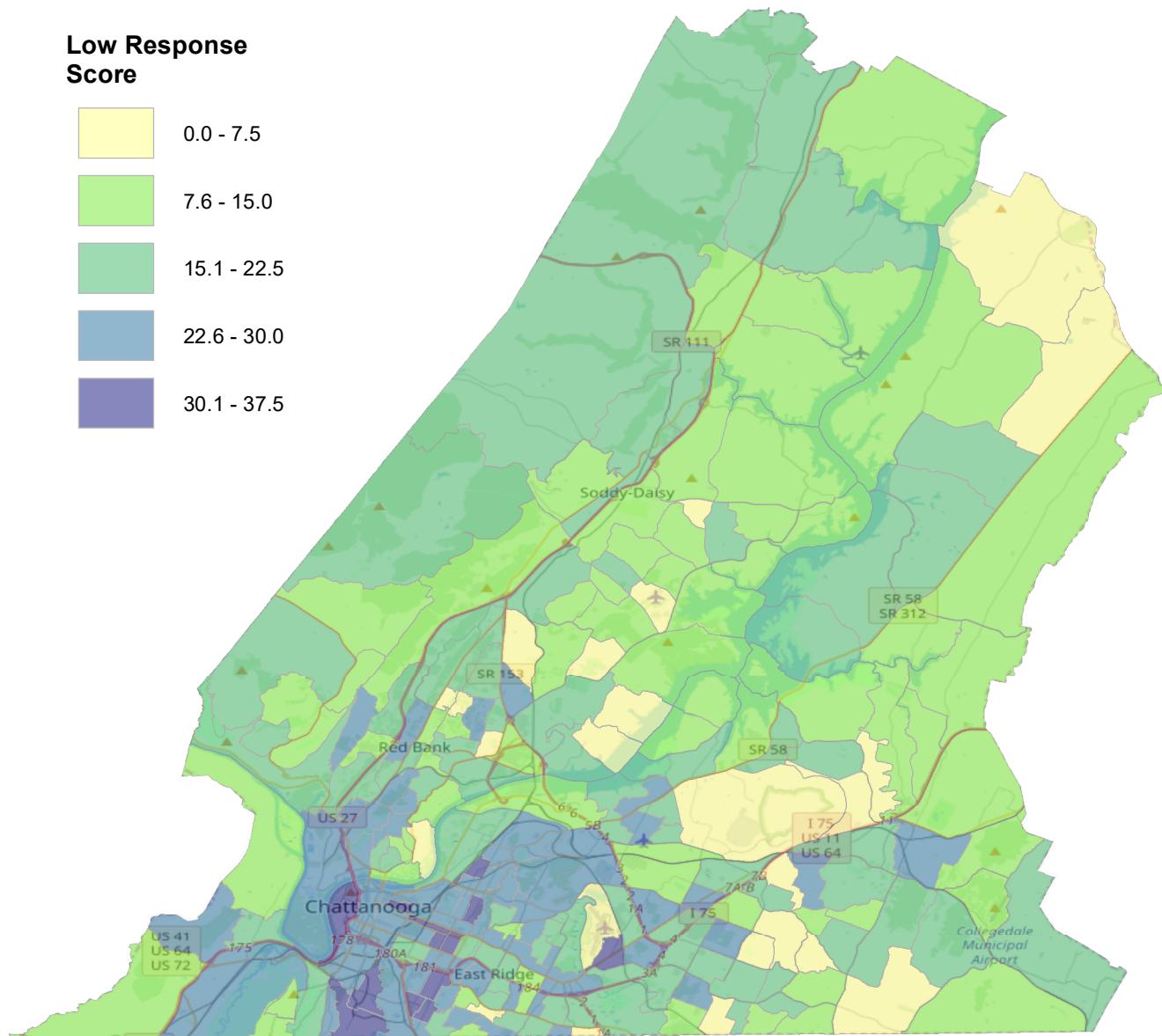
## **References**

- Erdman, C. and Bates, N. (2017). The low response score (lrs): A metric to locate, predict, and manage hard-to-survey populations. *Public Opinion Quarterly*, 8(1):144–156.
- United States Census Bureau (2018a). Planning database. Retrieved from: [https://www.census.gov/research/data/planning\\_database/](https://www.census.gov/research/data/planning_database/).
- United States Census Bureau (2018b). Response outreach area mapper (roam). Retrieved from: <https://www.census.gov/roam>.

## Appendices

### Hamilton County Low Response Scores

Figure 15: Low Response Scores by Block Group: Hamilton County



## Chattanooga LRS Scores by Block

Chattanooga Low Response Scores – All Tracts & Blocks

<i>Census Tract</i>	<i>Census Block</i>	<i>Estimated LRS</i>	<i>2017 ACS Population</i>	<i>Potential Undercount</i>
012200	2	35.7%	264	94
001600	1	34.9%	2,619	914
001200	3	34.5%	1,222	422
001900	1	33.6%	1,761	592
012400	2	32.9%	1,270	418
002500	2	32.8%	2,291	751
003400	1	32.2%	1,293	416
001900	3	31.7%	1,326	420
001300	1	31.4%	1,323	415
001100	2	31.4%	792	249
002400	3	30.8%	1,249	385
002400	4	30.4%	2,455	746
001400	2	30.3%	897	272
001200	2	29.4%	688	202
002600	2	29.3%	660	193
003000	2	29.2%	1,555	454
002900	1	29.2%	1,578	461
000400	2	28.8%	2,233	643
002300	1	28.7%	1,194	343
003400	3	28.6%	1,446	414
011326	1	28.3%	2,611	739
000700	4	28.2%	1,395	393
002600	1	28%	1,101	308
002500	3	28%	1,289	361
001100	1	28%	789	221
001200	1	27.9%	1,378	384
002400	2	27.8%	989	275
000400	1	27.8%	1,449	403
012400	3	27.5%	2,709	745
012200	3	27.4%	1,197	328
002900	2	27.1%	1,140	309
011321	4	26.9%	2,617	704
012200	1	26.7%	1,074	287
002500	1	26.6%	1,103	293
003300	2	26.5%	1,006	267
003300	5	26.5%	771	204
011443	1	26.4%	1,539	406
012100	2	26.1%	717	187
011311	3	25.9%	1,115	289
001900	2	25.3%	703	178
003100	1	25.2%	1,946	490
012300	3	25%	2,143	536
011444	1	24.9%	1,008	251
010502	2	24.9%	1,039	259
011445	2	24.7%	2,206	545

Note: Line breaks are at map quintiles.

Chattanooga Low Response Scores – All Tracts & Blocks (*Continued*)

Census Tract	Census Block	Estimated LRS	2017 ACS Population	Potential Undercount
002000	2	24.7%	270	67
012400	1	24.5%	2,458	602
012300	2	24.5%	1,292	317
010901	1	24.3%	1,976	480
000800	1	24.3%	1,649	401
011444	2	24.2%	2,282	552
010433	1	24.2%	2,158	522
001400	1	24.1%	1,016	245
012300	4	23.7%	841	199
003000	1	23.6%	961	227
002000	1	23.6%	929	219
001800	2	23.6%	1,170	276
003200	1	23.1%	858	198
003200	3	23.1%	1,942	449
011411	3	23%	1,949	448
010431	4	22.8%	1,331	303
012100	4	22.7%	1,230	279
011402	2	22.7%	2,453	557
010903	3	22.7%	1,595	362
002400	1	22.4%	1,345	301
011323	3	22.2%	508	113
010903	4	22.2%	1,849	410
001300	2	22.1%	573	127
003300	4	21.7%	1,070	232
002800	2	21.7%	783	170
011445	3	21.4%	1,191	255
010903	1	21.2%	1,604	340
003400	2	21%	1,377	289
002800	3	20.7%	1,562	323
010501	3	20.6%	1,222	252
003300	3	20.6%	807	166
001800	1	20.6%	1,193	246
010435	3	20.4%	2,350	479
011402	4	20.2%	1,733	350
010501	5	20.2%	919	186
010432	4	20.1%	699	140
011443	2	20%	1,594	319
011446	1	19.9%	1,766	351
011321	2	19.9%	1,358	270
010433	2	19.9%	1,129	225
010435	1	19.8%	1,948	386
011445	1	19.7%	274	54
011402	3	19.6%	1,381	271
011413	3	18.9%	1,383	261
011446	2	18.5%	2,268	420
002600	3	18.5%	477	88
000600	1	18.5%	931	172
011600	3	18.1%	1,157	209
011325	1	18.1%	1,411	255
000600	2	18.1%	1,477	267

Note: Line breaks are at map quintiles.

## Chattanooga Low Response Scores – All Tracts &amp; Blocks (Continued)

Census Tract	Census Block	Estimated LRS	2017 ACS Population	Potential Undercount
003300	1	17.5%	1,129	198
011321	1	17.3%	1,614	279
011311	1	17.2%	2,153	370
011411	2	16.9%	1,416	239
011325	3	16.8%	890	150
010902	1	16.6%	997	166
012100	3	16.5%	1,317	217
010502	1	16.5%	1,578	260
003200	2	16.4%	672	110
012300	1	16.3%	800	130
011402	1	16.1%	997	161
010435	2	15.8%	1,759	278
010501	6	15.6%	1,346	210
011413	5	15.4%	1,611	248
010411	4	15.3%	1,080	165
010432	1	15.2%	2,374	361
010903	2	15%	1,088	163
011411	1	14.5%	913	132
011413	4	14%	2,191	307
011323	1	13.8%	2,091	289
011201	2	13.6%	1,257	171
010433	4	13%	574	75
002800	1	12.8%	1,087	139
011325	2	12.7%	1,561	198
010411	1	12.5%	3,287	411
000700	3	12.4%	1,256	156
010431	2	12.3%	1,788	220
010502	3	12.2%	841	103
012100	1	12%	1,933	232
010413	1	11.8%	2,514	297
000600	3	11.7%	870	102
011201	1	11.3%	3,014	341
011443	3	11%	1,016	112
011443	4	10.6%	1,871	198
012100	5	9.9%	950	94
011413	2	9.3%	1,448	135
011326	2	8.1%	875	71
010501	4	8%	711	57
000700	2	7.8%	601	47
011323	2	7.4%	2,962	219
011447	3	6.8%	2,514	171
011326	3	6.5%	1,303	85
011321	3	4.5%	2,017	91
000700	1	3.9%	990	39
010431	3	3.8%	2,000	76
011311	2	3.5%	850	30
010432	2	2.6%	2,990	78
010433	3	0.1%	618	1
011447	2	0%	447	0
010432	3	0%	928	0
010431	1	0%	2,004	0

Note: Line breaks are at map quintiles.

## Corresponding Data Files

A copy of this report as well as the corresponding CSV and geographic shapefiles are available on Github: <https://github.com/acuff/CHA2020Census>.

### Comma-Separated Values Files

**hamco\_block\_lrs:** The hamco\_block\_lrs file includes the low-response score (LRS), major and minor place designation (municipality, county, or CDP) for each block group, estimated 2017 population, and potential undercount for each block group in Hamilton County. The included variables are as follows:

- **GEOID:** Census identifier for each block group
  - Consists of each state and county FIPS code, followed by the census tract and block group
- **Tract:** Census tract number
- **Block:** Census block group number
- **LRS:** Low-response score as calculated by Erdman and Bates (2017)
  - Available from the Census PDB: [https://www.census.gov/research/data/planning\\_database](https://www.census.gov/research/data/planning_database)
- **MajorPlace:** The Census Designated Place (CDP) that encompasses the majority of the block group
  - Determined by calculating intersection of the block group area within CDPs and identifying where the majority (or plurality) resided
- **MinorPlace:** The Census Designated Place (CDP) that encompasses the minority (or smaller portion) of the block group
  - Calculated in the same was as the MajorPlace variable, but for the second-most land area within a CDP
- **Pop2017:** Total population for each block group from the 2014–2017 American Community Survey
- **Undercount:** The potential (estimated) undercount derived by multiplying the 2017 ACS population with the LRS score (as a percentage) for each block group

**hamco\_block\_pdb2018:** The hamco\_block\_pdb2018 includes all of the block group data from the Census Bureau's 2018 Planning Database for Hamilton County, Tennessee. The data are provided "as is" from the 2018 PDB file.

**hamco\_tract\_pdb2018:** The hamco\_tract\_pdb2018 includes all of the tract data from the Census Bureau's 2018 Planning Database for Hamilton County, Tennessee. The data are provided "as is" from the 2018 PDB file.

### Geographic Shapefiles

Metadata, ArcMap 10.6, State Plane (meters), joins, Census block files (HamCo, Cities, Tracts, Blocks), etc.

The following shapefiles (and associated data) are included in the Github repository, and include the Census tract and block group files, as well as those for Census Designated Places within Hamilton County:

- **hamco\_block:** Census block groups within Hamilton County
- **hamco\_tract:** Census tracts within Hamilton County

- **hamco\_place:** Places within Hamilton County (municipalities and CDPs). Boundaries were derived from the Census Bureau's [2017 Cartographic Boundary Place Shapefiles](#) for Tennessee. The Hamco\_place file includes all of the places for Hamilton County, while the individual files listed below correspond to each place, individually:
  - **Apison:** Apison (CDP)
  - **Chattanooga:** Chattanooga (municipality)
  - **Collegedale:** Collegedale (municipality)
  - **EastRidge:** East Ridge (municipality)
  - **Fairmount:** Fairmount (CDP)
  - **FallingWater:** Falling Water (CDP)
  - **FlatTopMtn:** Flat Top Mountain (CDP)
  - **Harrison:** Harrison (CDP)
  - **Lakesite:** Lakesite (municipality)
  - **Lookout:** Lookout Mountain (municipality)
  - **MiddleValley:** Middle Valley (CDP)
  - **MowbrayMtn:** Mowbray Mountain (CDP)
  - **Ooltewah:** Ooltewah (CDP)
  - **RedBank:** Red Bank (municipality)
  - **Ridgeside:** Ridgeside (municipality)
  - **SaleCreek:** Sale Creek (CDP)
  - **Signal:** Signal Mountain (municipality)
  - **Soddy-Daisy:** Soddy-Daisy (municipality)
  - **Walden:** Walden (municipality)