

End Commercial Tobacco Campaign: Retail and Outdoor Secondhand Smoke Sampling Methodology and Multi-Unit Housing Sampling Guidance

Issued: February 16, 2022

The California Health and Safety Code (HSC) Section 104375(h) authorizes the California Department of Public Health to issue guidelines for local lead agencies (LLAs) to develop plans that comply with HSC Section 104380. The [2022-2025 Comprehensive Tobacco Control Guidelines](#) are designed to direct each of the 61 designated tobacco control LLAs in the development of their comprehensive tobacco control plans. The implementation of these local plans will provide services to prevent tobacco use and promote smoking cessation.

LLAs are required to have intervention objectives related to the End Commercial Tobacco Campaign ("ECTC") in their comprehensive tobacco control plan. Two pathways are available for LLAs to choose from: trailblazers and pathfinders. LLAs are required to identify a minimum of one intervention community as part of ECTC and a pathway option. LLAs were provided guidance on how to select an intervention community in [Appendix 1](#) of the [2022-2025 Comprehensive Tobacco Control Guidelines](#).

To evaluate the intervention, LLAs are required to participate in data collection based on the pathway and intervention option selected by the LLAs. LLAs are only required to conduct the surveys based on the option selected as seen in Table 1 and Table 2 within the identified intervention community. For example, if an LLA chooses Option A.1, the LLA is required to conduct the Multi-Unit Housing observational survey ("MUH Survey") and the Outdoor Secondhand Smoke observational survey ("Outdoor SHS Survey").

Table 1. Indicator options for the Trailblazers pathway and required ECTC surveys

| Options | Indicators | Surveys |
|---------|---|----------------------------------|
| A.1 | 2.2.13 Smokefree Multi-Unit Housing AND 2.2.35 Comprehensive Smokefree Outdoor Public Places | MUH Survey Outdoor SHS Survey |
| A.2 | 2.2.29 Eliminate Tobacco Product Sales to Address Tobacco Waste | Retail Survey |
| A.3 | 3.2.17 No Sale of Commercial Tobacco Products | Retail Survey |

Table 2. Indicator options for the Pathfinders pathway and required ECTC surveys

| Options | Indicators | Surveys |
|----------------|---|---|
| B.1 | 2.2.13 Smokefree Multi-Unit Housing AND at least one of the following retail indicators: 1. 3.2.1 Tobacco Retail Licensing; 2. 3.2.9 Flavors/Menthol Sales Ban; or 3. 3.2.2 Tobacco Retailer Density/Zoning | MUH Survey Retail Survey Retail Survey -- |
| B.2 | 2.2.35 Comprehensive Smokefree Outdoor Public Places AND at least one of the following retail indicators: 1. 3.2.1 Tobacco Retail Licensing; 2. 3.2.9 Flavors/Menthol Sales Ban; or 3. 3.2.2 Tobacco Retailer Density/Zoning | Outdoor SHS Survey Retail Survey Retail Survey -- |
| B.3 | 3.2.1 Tobacco Retail Licensing, 3.2.9 Flavors/Menthol Sales Ban, 1.2.10 Minimum Price/Pack Size, 3.2.4 Coupon Redemption, AND 3.2.2 Tobacco Retailer Density/Zoning | Retail Survey Retail Survey -- -- -- |
| B.4 | Partner with an existing grantee to achieve a strong secondhand smoke and tobacco retail licensing policy in the same community documented by a written agreement between the LLA and partner agency communicating responsibilities of each party (e.g., integrated workplan, Memorandum of Understanding, etc.) AND at least one of the following indicators: 1. 2.2.13 Smokefree Multi-Unit Housing 2. 2.2.35 Comprehensive Smokefree Outdoor Public Places; or 3. 3.2.1 Tobacco Retail Licensing | MUH Survey Outdoor SHS Survey Retail Survey |

Abbreviation: MUH, multi-unit housing; SHS, secondhand smoke.

Retail Survey

LLAs working on retail objectives for ECTC (2.2.29 Eliminate Tobacco Product Sales to Address Tobacco Waste, 3.2.1 Tobacco Retail Licensing, 3.2.17 No Sale of Commercial Tobacco Products, 3.2.9 Flavors/Menthol Sales Ban, 1.2.10 Minimum Price/Pack Size) are required to conduct a retail observational survey.

CTCP calculated the sample size for each LLA based on the number of retailers in the intervention community based on a January 2022 list from the California Department of Tax and Fee Administration. CTCP provided the list of licensed tobacco retailers located within the intervention community for LLAs to visit and collect data as part of the retail observation. The target sample size for each LLA was determined with the following formula:

$$n_t = \frac{\left(\frac{z}{e}\right)^2 \times p \times (1-p)}{1 + \frac{\left(\frac{z}{e}\right)^2 \times p \times (1-p)}{N}} \quad (1)$$

where n_t was target sample size, z was the z-score for the desired confidence interval, p was the population proportion, e was the margin of error, and N was the population size.

The assigned number of retailers to observe to achieve the target sample was determined with the following formula:

$$n_o = \frac{n_t}{r_r} + 5 \quad (2)$$

where n_o was the number of stores to be visited (original sample size), n_t was the target sample size, and r_r was the predicted response rate. The predicted response rate was based on each LLA's response rate from the Healthy Stores for a Healthy Community retail observational survey conducted in 2019 (see Table 1). A buffer of 5 stores was added to each community.

CTCP utilized the following formula inputs: $z = 1.96$ (z-score for a 95% confidence interval), $p = 0.50$, and $e = 0.05$.

CTCP drew the minimum required stores to be surveyed for each LLA. If a simple random sample was needed, LLAs were provided an option to either select the minimum required random sample or to conduct a census of licensed tobacco retailers.

Unlike the Healthy Stores for a Healthy Community retail observational survey that restricted the survey to only licensed tobacco retailers accessible to minors, the ECTC retail observational survey will attempt to survey all publicly accessible

stores. Retailers that have active smoking (e.g., hookah bars, cigar bars), substantial cost-consideration and membership fees (e.g., airport retailers, wholesale clubs), or restricted access (e.g., military base) should not be surveyed.

Table 2. HSHC 2019 response rate by local lead agency

| Local Lead Agency | HSHC 2019 Response Rate | Local Lead Agency | HSHC 2019 Response Rate |
|--------------------------|--------------------------------|--------------------------|--------------------------------|
| Alameda | 83.2% | Orange | 88.3% |
| Alpine | 100.0% | Pasadena | 95.7% |
| Amador | 95.3% | Placer | 81.9% |
| Berkeley | 90.8% | Plumas | 96.8% |
| Butte | 93.3% | Riverside | 92.2% |
| Calaveras | 95.8% | Sacramento | 78.2% |
| Colusa | 97.3% | San Benito | 86.7% |
| Contra Costa | 93.8% | San Bernardino | 85.6% |
| Del Norte | 100.0% | San Diego | 88.1% |
| El Dorado | 92.7% | San Francisco | 96.2% |
| Fresno | 94.1% | San Joaquin | 79.9% |
| Glenn | 100.0% | San Luis Obispo | 87.5% |
| Humboldt | 94.2% | San Mateo | 89.2% |
| Imperial | 94.1% | Santa Barbara | 78.1% |
| Inyo | 90.5% | Santa Clara | 95.3% |
| Kern | 93.3% | Santa Cruz | 93.6% |
| Kings | 93.8% | Shasta | 97.7% |
| Lake | 94.1% | Sierra | 80.0% |
| Lassen | 93.5% | Siskiyou | 98.2% |
| Long Beach | 94.9% | Solano | 68.3% |
| Los Angeles | 96.5% | Sonoma | 91.8% |
| Madera | 95.9% | Stanislaus | 96.9% |
| Marin | 80.5% | Sutter | 100.0% |
| Mariposa | 95.7% | Tehama | 95.6% |
| Mendocino | 92.2% | Trinity | 100.0% |
| Merced | 84.1% | Tulare | 79.5% |
| Modoc | 100.0% | Tuolumne | 98.0% |
| Mono | 89.3% | Ventura | 86.9% |
| Monterey | 77.0% | Yolo | 93.8% |
| Napa | 96.8% | Yuba | 93.9% |
| Nevada | 94.7% | | |

Multi-Unit Housing Observational Survey

LLAs working on smokefree multi-unit housing objectives for ECTC (2.2.13 Smokefree Multi-Unit Housing) are required to conduct an observational survey at multi-unit housing properties. For the purposes of ECTC, multi-unit housing is defined based on the [model policy](#) definition:

“Multiunit Residence” means property containing two or more units, including, but not limited to, apartment buildings, common interest developments, senior and assisted living facilities, and long-term health care facilities. Multiunit Residences **do not** include the following:

- (1) a hotel or motel that meets the requirements of California Civil Code section 1940(b)(2);
- (2) a mobile home park;
- (3) a campground;
- (4) a marina or port;
- (5) a single-family home, except if used as a health care facility subject to licensing requirements; and
- (6) a single-family home with an accessory dwelling unit or second unit permitted pursuant to California Government Code sections 65852.1, 65852.2, or 65852.22 or an ordinance of the [city/county] adopted pursuant to those sections, except where the accessory dwelling unit or second unit is rented or is used as a health care facility subject to licensing requirements.

CTCP obtained a list of multi-unit housing in the targeted intervention community based on parcel and land use data obtained from Digital Map Product's SmartParcels database. More information regarding SmartParcels can be found here: <https://www.digmap.com/platform/smartparcels/>. For this campaign, CTCP limited the list frame to parcels with the following standardized land use code:

- 1002 TOWNHOUSE
- 1004 CONDOMINIUM (RESIDENTIAL)
- 1005 COOPERATIVE (RESIDENTIAL)
- 1100 RESIDENTIAL INCOME (GENERAL) (MULTI-FAMILY)
- 1101 DUPLEX (2 UNITS, ANY COMBINATION)
- 1102 TRIPLEX (3 UNITS, ANY COMBINATION)
- 1103 QUADRUPLEX (4 UNITS, ANY COMBINATION)

- 1104 APARTMENT HOUSE (5+ UNITS)
- 1105 APARTMENT HOUSE (100+ UNITS)
- 1106 GARDEN APT, COURT APT (5+ UNITS)
- 1107 HIGH RISE APARTMENTS
- 1112 APARTMENTS (GENERIC)
- 9106 HOMES (RETIRED; HANDICAP; REST; CONVALESCENT; NURSING)

LLAs will use the sampling frame list to conduct a purposive sample of multi-unit housing properties. The list frame may not be comprehensive, may have duplication depending on how each county handles parcel data, and may have parcels with no address. LLA should attempt to clean the sampling frame list prior to conducting a purposive sample. CTCP is including the county's assessor's parcel number, latitude, longitude, and neighborhood information to assist in cleaning.

LLAs should follow [TCEC's Sampling Decision Guide](#) to draw the purposive sample. The sample size should be large enough to be representative of the multi-unit housing properties in the targeted intervention community. LLAs should consider the property characteristics (e.g., property size, property type) when drawing the sample and account for non-participation (e.g., property owners deny access, safety) when calculating the number of multi-unit housing properties to be visited to meet the final sample size. LLAs should use a sample size calculator or pre-calculated sample size tables to determine the final sample size. A calculator can be found here: <https://www.qualtrics.com/blog/calculating-sample-size/>. LLAs should consult with TCEC if additional assistance is needed to determine the number of multi-unit housing properties to sample.

Outdoor Secondhand Smoke Observation

LLAs working on smokefree public places objectives ECTC (2.2.35

Comprehensive Smokefree Outdoor Public Places) are required to conduct an outdoor observational survey. LLAs are required to observe parks and sidewalks. LLAs have the option to conduct optional observational surveys for outdoor dining areas and outdoor event venues and should consult with TCEC. The outdoor dining area and outdoor event venues are not required components of the Outdoor SHS survey.

Park Component

CTCP drew a random sample of parks which LLAs will be required to survey. The list of parks is based on a December 2021 list from the California Protected Areas Database (CPAD) and from city, county, and community service district websites. More information regarding CPAD and park boundaries can be found here: <https://www.calands.org>. For this campaign, parks identified as not publicly accessible in CPAD and parks operated by state or federal agencies were excluded from the sampling frame. The target sample size for each LLA was determined with the following formula:

$$n_t = \frac{\left(\frac{z}{e}\right)^2 \times p \times (1-p)}{1 + \frac{\left(\frac{z}{e}\right)^2 \times p \times (1-p)}{N}} \quad (5)$$

where n_t was the target sample size, z was the z-score for the desired confidence interval, p was the population proportion, e was the margin of error, and N was the population size.

The assigned number of parks to observe to achieve the target sample was determined with the following formula:

$$n_o = \frac{n_t}{r_r} + 5 \quad (6)$$

where n_o was the number of parks to be visited (original sample size), n_t was the target sample size, and r_r was the predicted response rate. A buffer of 5 parks was added to each community.

CTCP utilized the following formula inputs: $z = 1.96$ (z-score for a 95% confidence interval), $p = 0.50$, $e = 0.05$, and $r_r = 1.00$.

Sidewalk Component

From the random park sample, LLA will purposively sample sidewalks within the jurisdiction. At a minimum, one sidewalk will be observed per park sampled. Sidewalks can be anywhere in the jurisdiction. LLAs that have 20 or more parks will only be required to select a minimum total of 20 sidewalks.

For example, an LLA that is required to observe 10 parks must observe a minimum of 10 sidewalks; an LLA that is required to observe 50 parks must observe a minimum of 20 sidewalks. LLAs should follow [TCEC's Sampling Decision Guide](#) to draw the purposive sample of sidewalks. LLAs should consult with TCEC if additional assistance is needed in selecting sidewalks.