

# The LUCA Operation: The Foundation for an Accurate 2030 Census

Local  
Update of  
Census  
Addresses

## PREPARING FOR

# LUCA

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## A Resource Guide for Stakeholders

Developed by: The 2030 Census  
National LUCA Working Group



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### Introduction

#### Summary

The foundation of every census is a comprehensive address list. **If a housing unit isn't on the Census Bureau's list, the people residing there are likely to be left out of the census altogether.** That's why the Local Update of Census Addresses (LUCA) operation is the first to occur in every decennial census cycle. LUCA gives state, tribal, and local governments their only opportunity to directly help ensure an accurate enumeration by reviewing and submitting updates or corrections to the confidential address list before the census starts. LUCA gives local governments the opportunity to correct and improve the Census Bureau's records, ensuring the data better reflect their communities' realities. It provides a vehicle for local experts to leverage their knowledge to improve the list of all residential housing units in the nation. The Census Bureau strives to count all people living in the United States as of Census Day, but historically the census has missed people of color, urban and rural low-income households, and young children at disproportionately high rates. Part of the reason for these undercounts can be traced to missing or inaccurate address information.

#### Census Day

Census Day is the official reference date used by the U.S. Census Bureau to determine where people should be counted and what information should be reported. In decennial censuses, Census Day is April 1 of the census year (*e.g.*, April 1, 2030).

The 2000 Census was the first to include the LUCA operation after Congress passed the [Census Address List Improvement Act](#) in 1994.

Without strong local engagement, communities with hard-to-identify housing—such as rural homes, informal units, or multi-family residences—are at greater risk of being missed. Participation in LUCA is voluntary, but it requires local knowledge, technical expertise, and funding—none of which are provided by the Census Bureau. However, by participating in LUCA, local governments and community partners can fill critical data gaps, improve the accuracy of the count, and ensure the census reflects the true makeup of their communities—laying the groundwork for informed funding allocations, fair representation, and effective services over the next decade.

#### **What is the 2030 Census National LUCA Working Group?**

The LUCA Working Group brings together experts from tribal, national, state, and local governments, along with community-based organizations and specialists in census policy and outreach. The group's goal is to help jurisdictions recognize the critical role of the LUCA in achieving an accurate count in 2030. It also supports efforts to leverage local knowledge and collaborate with community experts to identify neighborhoods where housing units may be missing from the Census Bureau's address list — the basis for delivering the decennial census and American Community Survey questionnaires. For more information, please contact [info@luca-census.org](mailto:info@luca-census.org)

## Objectives of this Resource Guide

### **1 Raise Awareness of LUCA's Impact on Community Resources**

- Help local officials, community stakeholders, and funders understand the basic steps of the LUCA operation and how an accurate address list affects census data, which in turn influences funding, representation, and services for their communities.

### **2 Empower Stakeholders to Support Local Address Update Efforts**

- Provide guidance on how community organizations can assist local governments—such as identifying hidden housing or advocating for participation in hard-to-count areas.
- Deepen the understanding of LUCA among state, tribal, county, and local governments by providing information about key elements of approaches that have been successful in the past.
- Help government policymakers and funders understand what work might require additional funding.

### **3 Foster Collaboration and Trust in the Census Process**

- Provide actionable information about how to begin now to prepare for the LUCA operation, which begins in 2027.
- Build partnerships between state and local officials, community groups, and philanthropic organizations to improve outreach,

share local knowledge, and promote confidence in the confidentiality and importance of the LUCA process.

This resource guide serves as a starting point to help community stakeholders prepare for LUCA. The main objective is to help community stakeholders understand the basics of the LUCA operation so that they can educate local officials on the importance of LUCA and why participation in the program is critical. The information can also be used by local governments to deepen their understanding of LUCA and begin preparing for the operation when it formally begins in 2027. As more information becomes available, the LUCA Working Group will update this guide to reflect the most up-to-date information from the Census Bureau.

## Why LUCA?

Everyone has a role to play! A successful LUCA operation depends on collaboration across various community stakeholders, ranging from local government officials, demographers, philanthropy, and community-based organizations. LUCA has its best chances of success when different stakeholders collaborate and build strong partnerships.

Take, for instance, New York City. NYC's Department of City Planning was able to uncover and fill gaps in the Census Bureau's address list for the 2020 Census, thus contributing to a more complete count of the population. The city's participation in LUCA revealed that there can be significant gaps in the Census Bureau's address list as well as errors with geographic information, especially in densely populated areas with complex living situations.

Participation in LUCA can also help rural communities ensure they are enumerated fully in the decennial census, which can lead to better funding and planning decisions. Texas has 254 counties, more than any other state, and 191 are classified as rural. In rural Hidalgo County along the state's southern border, local officials worked with community organizations to ensure that their addresses were updated. Without the LUCA operation, there is a very real chance that substantial numbers of housing units in parts of Hidalgo County would have been missed in the 2020 Census.

Since many tribal lands are located in rural communities, LUCA also has the potential to help reverse the historic undercount of American Indian and Alaska Native populations. New Mexico has 22 populated tribal areas that represent about 10% of all land area and more than 12% of the population. These tribal lands vary in population, size, and culture, but they do have several commonalities. Many contain atypical housing arrangements and hidden accessory dwelling units, which are often missed during the census. In the 2020 Census LUCA program,

In the 2020 Census, 12% of New Mexico's population identified as American Indian or Alaska Native, alone or in combination.

state and tribal government cooperation resulted in a substantial addition of housing units in some of the most hard-to-count areas of New Mexico tribal lands, thereby overcoming a long-standing problem of overlooked housing that contributed substantially to undercounting.

In Nevada, collaboration across different levels of government demonstrated the importance of working together to benefit both urban and rural communities. The effort by Nevada's state government is a prime example of how coordination at the state level can lead to added housing and population in the final census counts, as illustrated by the results for Clark and Pershing Counties—one largely urban and fast-growing, and the other rural, geographically vast, and sparsely populated.

Suburban communities can also benefit from participating in LUCA. For instance, the city of Issaquah, Washington, leveraged a locally developed, GIS-based address dataset—originally built for city planning, emergency services, and utility management—to identify and submit nearly 600 additional housing units in the Issaquah Highlands neighborhood that were missing from the Census Bureau's list. This case highlights Issaquah's successful effort to improve the accuracy of the 2020 Census through its participation in the LUCA operation.

These LUCA success stories underscore the importance of working with different stakeholders with a variety of skills, technical expertise, and community knowledge to ensure that the objective of the LUCA operation—an up-to-date, complete address list for the next decennial census and other household-based Census Bureau surveys—is successful. These and other LUCA success stories will be described in more detail later in this guide.

## The Five Pillars of Success

### Recommendations from the LUCA Working Group

The **2030 Census National LUCA Working Group** has identified five pillars of LUCA success. These pillars are based on collective stakeholder experience from the 2020 Census and elevate recommended practices that can enhance LUCA efforts across the country for the 2030 Census cycle. The case studies and strategies that follow are meant to serve as a resource for governmental units and knowledgeable stakeholders preparing for the 2030 Census LUCA program.

- 1 Local Address Data Capacity:** The capacity to leverage and compile local address databases and information that can be used to document existing housing.

- 2 Local Knowledge of High-Priority Areas:** On-the-ground knowledge that permits the identification of areas with particular types of housing units, such as an abundance of low-visibility accessory buildings, which the Census Bureau can easily overlook.
- 3 Partnerships with Trusted Voices:** The ability to create and maintain partnerships with local “trusted voices” who have the best source of knowledge about what is happening on the ground with respect to nontraditional housing situations.
- 4 Assessment of Housing and Group Quarters:** The capacity to evaluate the number and geographic location of residential housing units and group living facilities—in the office and in the field.
- 5 Understanding Geographic Gaps:** The ability to identify deficits in the Census Bureau’s address list—not only addresses that are completely omitted, but those with missing or incomplete geographic information. (A housing unit may be known to the Census Bureau but deemed “missing” because they don’t have the correct geographic coordinates to know where it belongs.)

Successful LUCA outcomes can be accomplished through collaboration among state, tribal, and local government officials, demographic and geographic specialists, philanthropy, and community-based stakeholders all working together to incorporate local knowledge into the process. Planning ahead—and identifying and assessing areas where addresses are most likely missing before receiving the formal LUCA invitation in 2027—will make LUCA participation more cost-effective and worthwhile.

## LUCA Overview

### Background

Historically, the Census Bureau invites only those households whose addresses are in the Bureau’s Master Address File (MAF) to participate in the decennial census. The bureau gets address updates throughout the decade from the U.S. Postal Service, field staff conducting other Census Bureau surveys (such as the American Community Survey), and administrative records from federal, state, local, and tribal partners.

The MAF establishes the universe of living quarters (including Group Quarters, such as college dorms, correctional facilities, and nursing homes) for the census count. The accuracy of the MAF and related digital maps (the TIGER files, which put housing units and Group Quarters in the correct location) is fundamental to an accurate census.

## The Master Address File

The MAF is a Census Bureau file intended to contain an accurate, up-to-date inventory of all known living quarters in the United States, Puerto Rico, and associated island areas. The MAF is used to support the decennial census and many surveys that the Census Bureau conducts, including the American Community Survey and ongoing demographic surveys. The content of the MAF includes address information and Census Bureau geographic location codes, as well as source and history data.

Census enumerators are allowed to add housing units to the MAF, and enumerate the residents, if they identify a living quarter not already on the address list during their door-to-door follow-up visits with households that haven't self-responded. This process, however, is not an ideal way to ensure that missing addresses are included in the census universe, as enumerators may not be adequately trained or have sufficient time to look for housing units that have been overlooked.

Public Law 103-430, The Census Address List Improvement Act of 1994.

If a housing unit is missing from the Master Address File, the people living there are likely to be left out of the count—and the bureau won't even know they were missed. In developing an accurate address list and maps that guide census-taking, the bureau can easily overlook commercial buildings that have been converted (in whole or in part) to residential units, non-traditional, low visibility housing (such as garages), informal subdivided living quarters, and multiple households living in one structure. Addresses in rapidly changing areas such as those impacted by natural disasters or that have explosive growth, or that do not have traditional city style street addresses (i.e., number, street name, apartment number), may also be missed. Local officials and community members are most informed about their community's housing stock, especially in low-income neighborhoods and rural areas where difficult-to-spot or purposely "hidden" living quarters may be more prevalent, and they can help ensure the accuracy of the MAF.

## The LUCA Process

The LUCA operation gives local leaders and community stakeholders a one-time opportunity to review and improve the Census Bureau's MAF, ensuring all housing units—and the people in them—are counted.

By law, the Census Bureau must offer this opportunity to state, tribal, and local governments three years before the census. The bureau invites the highest elected official in every jurisdiction (e.g., governor, mayor, tribal leader) to participate and provides a limited window—just a few months in past decades—to review and submit corrections under strict confidentiality protocols.

Smaller jurisdictions can opt to have their county or state conduct the review on their behalf. Typically, agencies with geographic expertise—such as planning departments, emergency services offices, or state demographers—take the lead in organizing and submitting LUCA data for an eligible governmental unit.

Ideally, the focus of an address list review should be on areas where new, nontraditional, or hard-to-identify addresses are likely to be missing from the MAF—especially those that don't receive mail directly



from the Postal Service and that can't be easily identified via satellite imagery. These include:

- Internally subdivided homes or informal units
- Converted garages, sheds, campers, or back houses
- Buildings with shared mail delivery
- Buildings without a civic address (i.e., number + street name)
- Entrances in alleyways or other non-standard locations

In the 2020 Census, only 29% of eligible governments participated in LUCA—yet their efforts collectively added 3.2 million unique addresses that the bureau did not previously have on the MAF. Many of these hidden or overlooked living quarters are home to historically undercounted populations, including low-income households and residents in both overcrowded and remote areas. Identifying them requires the insight of trusted local service providers and community advocates working directly in these neighborhoods who can advise local governments who plan to participate in LUCA, all in accordance with strict statutory confidentiality protections.

## Confidentiality Protections

The LUCA operation is subject to the same strict data confidentiality protections, set in law, that govern all decennial census activities and Census Bureau censuses, surveys, and statistical programs more broadly. Participating governmental units must ensure that all staff involved in the process, as well as community-based organizations that assist with identifying priority areas where low-visibility and hidden housing units might exist, understand these protocols and their responsibility to uphold them in order to bolster public trust in the census process.

Once information about an address (that is, the existence of a housing unit or group facility at a specific location) is submitted to the Census Bureau, it becomes strictly confidential and cannot be shared outside of the bureau again or used in any way to harm any individual associated with that address, including in a legal, administrative, or law enforcement proceeding. Before staff and officials who will work on a LUCA submission for an eligible governmental unit can view the Census Bureau's Master Address File, they must take the same confidentiality oath that all bureau staff take, subjecting them to significant penalties (including fines and imprisonment) for violating that oath. CBOs and government staff must prioritize the confidentiality framework of LUCA and ensure that all efforts to identify overlooked housing units are subject to the same confidentiality protocols, even if community canvassing activities are not technically within the formal LUCA operation. Governmental units, however, can strengthen the con-

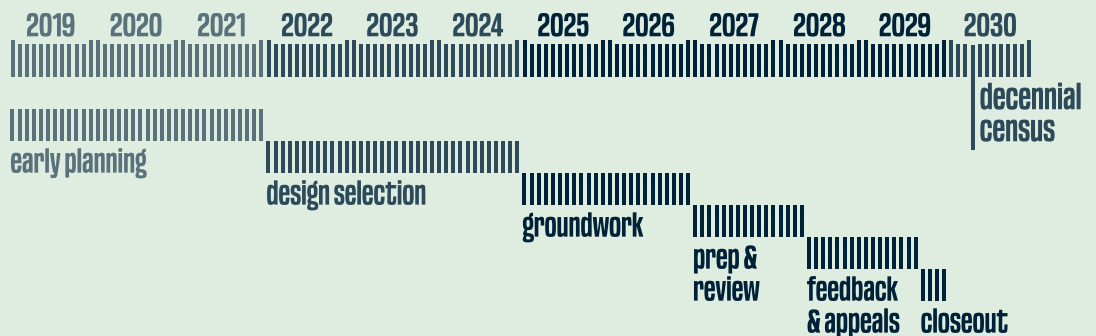


confidentiality framework for their LUCA participation by including knowledgeable community canvassers as official LUCA team members subject to the statutory confidentiality oath under the Census Act ([Title 13, United States Code](#)).

Check out the [Roadmap to 2030](#) website for a broader timeline for the 2030 Census and how to gear up for the count!

## The LUCA Timeline

Preparations for the [2030 Census](#) are well underway, with operational milestones such as the LUCA operation on the horizon. The timeline below shows the LUCA operation as part of the decade-long 2030 Census planning cycle, with updates and more detail expected from the Census Bureau in the coming months and years.



Now to  
2026

### Groundwork & stakeholder education

- ▶ Community-based organizations, state/tribal/local governments, and funders learn about the LUCA operation and determine strategy and funding gaps.
- ▶ Eligible governments can organize their address databases and identify areas where LUCA Review (see below) would be most helpful, using tools available on the [Census Bureau website](#).

Early to  
Mid 2027

### Prepare to participate in LUCA

- ▶ Participants learn about LUCA, set up accounts, and register for the program.
- ▶ Gather materials to support LUCA Participant Review.
- ▶ Option to simulate conducting an address-level LUCA Participant Review, with opportunities for training and hands-on practice.

Late 2027  
to  
Early 2028

### Review address list and submit changes

- ▶ Continued opportunity to learn about LUCA, set up accounts, and register to participate.
- ▶ Eligible and registered governments conduct LUCA Participant Review.

- ▶ Participants have six months to complete their reviews and submissions (compared to four months in previous censuses).
- ▶ LUCA submissions have a firm deadline, as the Census Bureau needs time to process submissions and ensure all eligible addresses are included in the 2030 Census address file.

## Early 2029

### **Participants receive feedback on LUCA submissions; option to submit appeals**

- ▶ Census Bureau updates address count listing files reflecting the results from LUCA submissions and other pre-2030 Census geographic work.
- ▶ Participants with confidentiality agreements receive address-level feedback on how their submissions are incorporated into the Census Bureau's address list.
- ▶ The Office of Management and Budget (OMB) is expected to provide an independent option to appeal within 45 days, as the law requires.

## Late 2029

### **Closeout**

- ▶ Participants' access to confidential address files and related confidential LUCA materials ends; they must destroy all feedback materials, except for a summary page of actions the Census Bureau took as a result of their submissions.

## 2030

### **Decennial census and beyond**

- ▶ Census Bureau leverages updated Master Address File for a complete count in 2030.
- ▶ Assessment and evaluation phase of LUCA operation

## Preparing for LUCA: The Time is Now!

Given sufficient time, knowledge, and resources, there are many ways that census stakeholders can help their state, tribal, and local governments participate effectively and efficiently in the LUCA operation to make sure that every household gets a census packet. To be cost-effective and thorough, this process needs to begin well in advance of LUCA's formal start in 2027.

### **Make a LUCA Assessment and Develop a Plan**

- ▶ Assess prior LUCA participation.
  - Conduct a comprehensive review of 2020 LUCA participation

For more information about LUCA and access to tools to facilitate LUCA preparation, visit the Census Bureau's website at: <https://www.census.gov/programs-surveys/decennial-census/decade/2030/planning-management/where/2030-census-luca.html>



across all counties and cities, coordinate with the Census Bureau to obtain participation records, and analyze which jurisdictions participated, how they participated, and identify those that did not.

- Contact city or county planning departments or regional councils of government to determine if and how the area participated in 2020 LUCA activities.

- ▶ Learn more about how LUCA works by participating in trainings hosted by the 2030 Census National LUCA Working Group, Census Bureau, Census Counts, and other organizations. Consider organizing a state and/or local LUCA briefing.
- ▶ Conduct an assessment to determine if LUCA is a good investment for your community using [Census Bureau tools](#) and local data. If you determine that LUCA participation would be valuable, begin developing materials to help make the case for local or state governments to lead or support the effort.
- ▶ Convene state, tribal, and local government leaders, together with philanthropic and community-based organizations, to create a draft LUCA plan. This should include a strategy for determining priority geographic areas in your jurisdiction most likely to have missed addresses, which will be the focus of your community's LUCA Review. You should also determine where intergovernmental collaboration would make sense.
- ▶ Ensure government offices or other institutions tasked by state, tribal, and local governments to prepare the LUCA submission have sufficient capacity and funding support to effectively participate. Consult municipal and state officials (executive and legislative) about options for securing adequate resources for meaningful LUCA participation.

A list of resources is available [here](#).

### **Learn about Census Counts!**

Census Counts brings together a wide spectrum of community-based organizations that advocate on behalf of immigrants, LGBTQ people, people with disabilities, people of faith and no faith, and infants and children, and on issues related to civil rights, poverty and homelessness, labor, health care, education, and more, to help prepare for the 2030 Census through trainings, strategy sessions, resources, and webinars. For more information check out [www.censuscounts.org](http://www.censuscounts.org).

# The Role of Stakeholders

The LUCA program is voluntary. In fact, only 29% of eligible state, tribal, and local governments participated in 2020 Census LUCA activities. Community organizations can encourage their civic leaders to accept the invitation to participate in the 2030 Census LUCA program and to allocate resources for a thorough review and updating of address and map information for their area. Knowledgeable local leaders also can help government entities identify hard-to-find, converted, and hidden housing units during the address review process, as long as they follow the [strict confidentiality procedures](#) governing the information the Census Bureau shares as part of the LUCA operation.

In order for stakeholder engagement to be effective, the process of identifying problematic addresses that might not be on the MAF needs to begin well in advance of the formal start to the LUCA operation, marked by the Census Bureau invitation to participate. There are several steps that should begin now to identify communities where LUCA submissions can be most meaningful. With sufficient knowledge and resources, there are many ways that census stakeholders can help ensure that their respective state, tribal, and local governments are able to effectively and efficiently participate in the program to make sure that every household gets a census form in 2030.

The [2020 Local Update of Census Addresses \(LUCA\) operational Assessment Report](#) outlines results of the 2020 LUCA operation. It also includes lessons learned as well as information to assist in implementing address update partnership programs in the future.

## Community-Based and Nongovernmental Organizations

### Basic Steps for State and Local Census Stakeholders

#### 1 Landscape Analysis

- a Determine the extent to which your state and/or key local jurisdictions participated in the 2020 Census LUCA program by contacting the Census Bureau regional offices and checking with local governments to verify their participation. Evaluate whether historically undercounted communities live in neighborhoods or communities that are more likely to be missed by the Census Bureau's standard updating procedures and determine whether they participated in 2020 Census LUCA—either directly or through a higher level of government.
- b Identify who in your state or local jurisdiction would be most likely to have access to the data required for LUCA and did the work for the 2020 LUCA program or would be needed to do the work for the 2030 LUCA program. Ascertain which government agency or official oversees each jurisdiction's address databases.

- **State Level:** At the state level, start with your state demographer who may be part of the Census Bureau's [Federal State Cooperative for Population Estimates](#) (FSCPE). You may also contact your state's State Data Center Program (SDC) and/or [Census Information Centers](#) (CIC).
  - **County or Municipal Level:** At the county or municipal level, check agencies such as a Land Bank or a housing, planning, land management, or tax department. Keep in mind that your jurisdiction may not have participated in LUCA previously.
  - **Tribal Level:** Many tribes have their own housing authority or a regional housing authority, which may have vital data for LUCA participation.
- c Ensure that the relevant agencies are connected to information sources for the Census Bureau's LUCA training and technical assistance program. Encourage them to attend briefings organized by census advocacy organizations, like [Census Counts](#).

## **2 Education and Advocacy**

- a Educate your state and local jurisdictions' top elected officials and their support staff about the direct link between a complete address list for the census and the accuracy of the population count.
- b Determine whether the appropriate state and/or local agencies have the interest, staff and resources, and technical capacity to properly gather and transmit data required by the LUCA program. Determine whether additional funding may be required and develop a strategy to ensure there is sufficient capacity. This guide highlights several case studies from the 2020 Census that show how effective collaboration between different levels of government and universities can lead to better outcomes—offering valuable lessons to inform efforts for 2030.

## **3 Coalition and Capacity Building**

- a Develop strong relationships with local leaders, educating policymakers and community members about the importance of the decennial census and the role that LUCA plays in ensuring an accurate count.
- b Encourage officials/staff to develop a coordinated state plan to avoid unnecessary duplication of effort among various governmental units. A state-level submission that incorporates address list corrections for local and tribal jurisdictions with problematic areas might be the optimal approach, although that may still require funding for local or tribal staff with technical expertise to coordinate with the relevant state agency. However, if a state or county decides not to pursue the potential benefits of LUCA participation, that approach may not be an option and a more local strategy might be preferred.
- c Talk with government officials to understand how your state and key

Make a habit of checking the Census Bureau's [LUCA information page](#) for updates on the 2030 LUCA operation.

local jurisdictions prepared their LUCA submissions for the 2020 Census. Identify the neighborhoods and communities most likely to benefit from more thorough preparation for the 2030 Census LUCA operation.

## State, Tribal, and Local Governments

Governments at all levels play a crucial role in the LUCA process. The Census Bureau depends on local expertise from government officials to help update the Master Address File and get ready for census engagement and enumeration. Here are some ways that state and local governments can prepare in advance:

### **1 Review and Understand Past LUCA Participation**

- a Determine who was asked to participate in previous LUCA operations in order to review and understand previous LUCA efforts. If they didn't participate, understand why. If they did participate, understand what was done and what would be useful to prepare for the 2030 program.
- b Review analyses and available research from the 2020 LUCA operation to identify points of potential improvement and prepare for meaningful contribution in the upcoming LUCA operation in 2027. Work closely with tribal, state, and local partners and have enumerators review the unique challenges of tribal areas as related to address situations on tribal reservations, off-reservation lands, and in rural areas. Review past address canvassing and any guides that might be useful for LUCA.

### **2 Build and/or Leverage Local Address Data**

- a Review available local data that are used to deliver services, such as information for emergency and disaster response.
- b Determine the availability of local planning and taxation information and data on the location and use of buildings, such as certificates of occupancy.
- c Explore the availability of lists to help evaluate the presence of group quarters facilities, such as state licensing data (e.g., nursing homes), lists of correctional facilities, university dormitory authorities, and agencies and organizations providing services to special populations (e.g., group homes).
- d Evaluate the use of local databases made for business purposes.
- e Identify areas where natural or other disasters may have eliminated housing and altered roads to focus attention on these problematic areas during the formal LUCA Review.
- f Identify areas where residents receive mail only at P.O. Boxes and lack traditional street addresses (also called "city-style addresses"). Deter-



mine if there are alternative markers for physical housing units, such as data employed by 911 systems.

- g Utilize in-office “fieldwork” using widely available data, such as Google Street View and other commercially available aerial imagery.
- h For tribal areas, leverage land co-stewardship agreements between tribes and federal and state agencies, which often have vigorous GIS programs and expertise.
- i Promote research on the use of American Indian/Alaska Native (AIAN) administrative records in tribal reservation areas by requesting that the Department of Housing and Urban Development (HUD) Office of Native American Programs (ONAP) develop a Memorandum of Understanding (MOU) with the U.S. Census Bureau for such research.

### **3 Train and Mobilize Personnel**

- a Equip government and partner organization staff with training on census procedures and the LUCA operation; direct them to training by the Census Bureau or 2030 Census National LUCA Working Group.
  - Identify staff within government agencies who have access to data required for effective LUCA participation and who may have done work for the 2020 LUCA program or would be needed to do the work for the 2030 LUCA program.
  - Identify organizations that can recruit individuals to conduct field work—such as community service agencies, local universities, and other knowledgeable nonprofits—to help with address list development.
- b Create a LUCA Steering Committee that can develop a common vision for the operation, convey a unified image for LUCA support staff, and reduce the need to review the Census Bureau’s address list from scratch.
- c For tribal areas, promote technical assistance through the National American Indian Housing Council (NAIHC). NAIHC serves as the primary inter-tribal national organization on housing issues, with a core component of their work focused on training and technical assistance (TA).
  - Urge the U.S. Census Bureau to collaborate with NAIHC to serve as the TA for the LUCA operation by providing hands-on guidance and instruction to tribal and regional housing authorities about how to complete LUCA forms and provide outreach and education materials on why LUCA is important.

### **4 Establish and Cultivate Partnerships**

- a Foster working relationships with [regional Census Bureau offices](#) and community-based organizations to help identify areas that may be prone to being undercounted due to missed living quarters.



- b For tribes, data sharing agreements following meaningful consultation are needed between state and tribal leaders to collaborate on the LUCA process.
  - Establish a working relationship between state/local officials and local tribal leaders and review any previous data sharing agreements.
- c Participating government officials should reach out to housing developers, group quarters managers and service providers, and local U.S. Postal Service management officials to discuss their understanding of housing unit designators.
- d In consultation with local officials, civic leaders, and stakeholders, begin to identify geographic areas that are likely subject to undercounts, such as those with unconventional housing units and new residential developments.

## 5 Leverage Technology and Resources

- a Participate in available trainings from the Census Bureau on its resources and tools as soon as they become available. These resources may include:
  - Address count lists and associated interactive map viewers.
  - Geocoding tools.
  - Examples of acceptable and unacceptable address formats
  - Guidelines for submitting addresses so that entities can identify addresses that they use, such as mile markers or fire hydrants, that the Census Bureau will not need.
  - Guidelines and examples of how to use these tools and resources to identify where entities have good coverage and where they may lack comprehensive coverage.
  - The Census Bureau's [MAF/TIGER](#) system, an integrated digital geographic database that helps to determine whether the placement of geographic features and ranges of addresses are consistent with local data (for example, the accuracy of address ranges on streets in a new development). Such geospatial information is essential for determining the precise location of housing units.
  - Work with tribal, state, and local partners to gain early access to the Master Address File—by encouraging participation in the early 2027 pre-LUCA practice review—in order to better understand how hidden housing units in respective tribal areas might be identified and included in the MAF.

MAF (Master Address File) is a continually updated list of all known living quarters in the United States, including residential addresses, used to ensure everyone has a chance to be counted in the census.

TIGER (Topologically Integrated Geographic Encoding and Referencing) is a digital map database that includes geographic features like roads, rivers, boundaries, and census tracts. It links address data to physical locations and geographic areas.

## 6 Construct a LUCA Plan

- a Jurisdictions can begin prioritizing areas for a deeper look now using the periodic releases of block-level housing unit counts from the MAF (i.e., the Address Count Listing Files available [here](#)).

The quality of submissions during LUCA is as important as the quantity of address records provided. This depends on local knowledge of communities and neighborhoods to understand geographic areas that are likely to be missed.

- b Map comparisons between the bureau's official block housing unit counts and local information, such as data from Taxation and Finance files, local parcel datasets, and fieldwork, among other sources, can provide local jurisdictions and their representatives with important information about those areas that will require the most attention as the LUCA review approaches and about the veracity of their own local data sources.
- c Be alert for apartments in buildings without standard mail delivery or address nomenclature and flag blocks with an abundance of these addresses.

## Approaches to LUCA: Case Studies from 2020

Seven case studies were developed by the 2030 Census National LUCA Working Group to showcase the approaches used to achieve success during the last census cycle. These "Success Stories" are summarized below, with the full case studies provided in the Appendix.

- [Bronx County, New York City](#)
- [Clark and Pershing Counties, Nevada](#)
- [Fresno, California](#)
- [Hidalgo County, Texas](#)
- [Issaquah, Washington](#)
- [New Mexico Tribal Areas](#)
- [New Orleans, Louisiana](#)

### Bronx County, New York City

#### **Improving the census address list using a combination of in-office and in-field canvassing of low-visibility units and those "hiding in plain sight."**

New York City's Department of City Planning strategically leveraged local datasets, field visits, and in-office review to address gaps in the Census Bureau's Master Address File in two Bronx neighborhoods: Castle Hill and Co-op City. In Castle Hill, the discovery of nearly 250 previously unlisted housing units—mostly basement apartments and subdivided homes—accounted for more than 10% of the area's total housing stock. In Co-op City, an additional review uncovered more than 300 apartment units not listed in the Census Bureau's file, many of which were known but geocoded incorrectly, from entire building wings to alternating floors. NYC's LUCA submission ultimately enabled the

enumeration of thousands of residents who otherwise would have gone uncounted. These efforts put a priority on local information and dedicated resources, especially in dense, complicated urban settings.

## Clark and Pershing Counties, Nevada

**How coordination at the state level can pay off in the form of added housing and population in areas of recent, rapid growth and in sparsely populated rural counties.**

Nevada's statewide LUCA efforts, coordinated by the State Demographer's Office, is a powerful example of how state-level leadership can bolster census accuracy in both rapidly urbanizing and deeply rural contexts. In Clark County's North Las Vegas, LUCA reviews corrected years of housing development that Census Bureau records failed to include, adding 110 new addresses to a previously undeveloped block. In Pershing County, which spans more than 6,000 square miles but houses just 6,700 residents, LUCA efforts added 76 housing units—many of which were previously excluded due to incomplete location indicators. The state's process involved identifying gaps, cross-referencing assessor data with Census Bureau files, and reviewing local submissions for accuracy and duplication. Nevada's approach offers a replicable model for state agencies supporting local capacity.

## Fresno, California

**Community organizing was the lynchpin in efforts to identify low-visibility, non-traditional housing to better inform a state-run LUCA effort.**

Fresno's LUCA strategy centered around grassroots canvassing to identify hidden, nontraditional housing units common in immigrant and low-income communities. Organized by the Central Valley Immigrant Integration Collaborative, canvassers used local knowledge, Community Connect Labs' digital tools, and encrypted mobile data submissions to report garage conversions, trailers, and backyard units that were not registered in official records. The canvassers were often residents of the canvassed communities, trained to ensure confidentiality, cultural competence, and accurate reporting. The Fresno project added about 4% more housing units to the 2020 count, 73% of which were non-postal units such as back houses and converted sheds. On a more macro scale, six counties in California utilized the same techniques to add nearly 13,000 units to the Master Address File before the census started.

# Hidalgo County, Texas

**Information about the location of housing possessed by the county staff, combined with on-the-ground knowledge and access to local community organizations, made all the difference.**

Hidalgo County's LUCA initiative targeted rural and border communities, where missing addresses and outdated maps posed significant enumeration challenges. In Pueblo de Palmas, a predominately Hispanic community near the U.S.–Mexico border, county officials and community-based partners updated internal address systems used for emergency services and then cross-referenced them with Census Bureau data. The results were striking: 73% of the 219 total housing units counted in the 2020 Census were included solely because of LUCA submissions. Many of these addresses were known to the Census Bureau in name only—lacking the precise location data needed for enumeration. Countywide, Hidalgo submitted 10,000 addresses, which may have ensured the successful enumeration of more than 20,000 people and unlocked hundreds of millions of dollars in future federal and state funding.

# Issaquah, Washington

**A fast-growing, suburban community is a model for how methods to optimize the delivery of services aligns with the goals of LUCA.**

In the suburban city of Issaquah, Washington, a dedicated GIS analyst used a pre-existing, city-maintained spatial database to support LUCA efforts. Originally designed for emergency dispatch and urban planning, the dataset included unit-level detail that the Census Bureau's records often lacked. By adapting this database to the bureau's Geographic Update Partnership Software (GUPS), city staff efficiently identified and submitted missing addresses—mostly due to absent geocodes or newly built homes in Issaquah Highlands. The LUCA review yielded close to 600 additional housing units, accounting for 17% of all units enumerated in that neighborhood. This case demonstrates the return on investment for cities that maintain robust geospatial infrastructure—not only for planning and services, but also for ensuring fair representation and funding through census operations.

## New Mexico Tribal Areas

**Starting with state in-office evaluation, the local knowledge provided by tribal governments proved invaluable in the success of LUCA in 2020, an outcome that was impossible for either group to achieve on its own.**

Tribal lands in New Mexico, home to 22 distinct communities and more than 12% of the state's population, presented unique challenges for the LUCA process due to hidden accessory dwelling units, atypical housing structures, and limited local GIS capacity. In response, the state LUCA liaison offered technical assistance and workspace to tribal representatives for side-by-side data review sessions. With tools like integrated GIS platforms, aerial imagery, and address count files, tribal leaders identified structures omitted or misclassified in the Master Address File. One tribal partnership alone added more than 450 housing units—9% of the tribe's total housing. This success illustrates how local cultural insight, combined with state-provided technical support, can dramatically enhance count accuracy in historically under-counted communities.

## New Orleans, Louisiana

**Local knowledge and fieldwork were critical to filling gaps in the address list in an area devastated by a natural disaster.**

New Orleans leveraged its citywide GIS system and Master Address Database (NOMAD) to identify and correct major address gaps, especially in areas rebuilt after Hurricane Katrina. Two redeveloped public housing complexes—now known as 2 Oaks and Faubourg Lafitte Apartments—were previously omitted from the Census Bureau's address list due to outdated data and the exclusion of tax-exempt properties from earlier municipal databases. By mapping NOMAD against the Census Bureau's 2018 LUCA file in two of the study area census tracts, the city pinpointed where housing unit counts diverged and submitted updated records. The result is that more than 500 housing units were added, representing 23% of total housing in the two tracts.

# Appendices

## A. The Decennial Census

The U.S. Constitution requires a count of the nation's population—or census—every 10 years for the purpose of apportioning seats in the U.S. House of Representatives among the states. Responsibility for taking the census lies with Congress, which in turn has delegated authority to conduct the count to the U.S. Department of Commerce and its Census Bureau. A series of Supreme Court cases subsequently established that congressional districts must have roughly equal numbers of people (14th Amendment's equal representation clause), so census numbers also are used for drawing district lines (the redistricting process). Additionally, census data help direct more than \$2.8 trillion in federal funds (in FY 2021) to states for education, hospitals, roads, and other public goods annually.\*

\* <https://www.census.gov/newsroom/press-releases/2023/decennial-census-federal-funds-distribution.html>

\*\* <https://www.prb.org/resources/how-accurate-was-the-2020-census-and-why-should-you-care/>

\*\*\* <https://www.census.gov/programs-surveys/decennial-census/about/coverage-measurement/pes.2020.html>

Results from the 2020 Census echoed a historical pattern of disproportionately undercounting Black Americans (–3.30%), American Indians and Alaska Natives living on reservations (–5.64%), Hispanics (–4.99%), and those who reported being of Some Other Race (–4.34%), while overcounting White and some Asian populations. Moreover, the level of undercount for Hispanics more than tripled between the 2010 and 2020 Censuses. Children ages 0–4 continued to be the most undercounted age group with a net undercount of 5.4% nationwide.\*\* In addition, renters were undercounted, while homeowners were overcounted, and there were widespread errors found in data for the group quarters population.\*\*\*

### Important Uses of the Decennial Census

- 1 Political Representation:** Census data determine the apportionment of seats in the U.S. House of Representatives. States may gain or lose congressional seats based on population shifts, which directly affects political power at the federal level, including the number of Electoral College votes assigned to each state for a decade.
- 2 Redistricting:** State and local governments use census data to redraw district boundaries for congressional, state legislative, and local elections, ensuring fair representation.
- 3 Federal Funding:** Census data guide the allocation of more than \$2.8 trillion annually in federal funds to states and local communities. This funding supports critical public services like education, health care, infrastructure, emergency preparedness, rural economic development, and social service programs.



- a **Policy and Planning:** Governments and nonprofits use census data to make decisions on where to locate schools, hospitals, roads and transit, and recreation areas, as well as where to provide social services.
- b **Economic Planning and Research:** Businesses use census data to identify market trends, labor force demographics, and potential growth areas and where to locate retail and service establishments. Researchers and policy analysts use the data for demographic, economic, and health studies that inform prudent decision-making.

## B. 2020 Census LUCA Case Studies

### Overview

The 2030 Census National LUCA Working Group enlisted several experts who work with or for state, tribal, county, and local governments and who were involved—directly or indirectly—in compiling 2020 Census Local Update of Census Addresses (LUCA) submissions to the Census Bureau.

Like all of those who made 2020 LUCA submissions on behalf of state, tribal, and local governments, these technical experts know how many of the submitted addresses were accepted by the Census Bureau, as part of the feedback they received in 2019. What none of them know, however, is how many of those added addresses resulted in additions to the housing unit count, due to the confidential nature of the Census Bureau’s address list outside of the LUCA process. This is the ultimate measure of success—local knowledge leading to a better count of housing units.

Working Group members with technical expertise were asked to provide a small subset of geographic areas from their 2020 Census LUCA efforts (primarily census tracts and/or blocks) to the Census Bureau for review to see how many of the submitted addresses resulted in housing unit increases in the 2020 Census. Selection of areas was based on local knowledge related to difficulties revealed by the LUCA process, such as low visibility housing, housing without standard postal addresses, and irregular housing arrangements, such as structures that may not appear as inhabitable to most observers. In addition, a few examples included problematic apartment configurations in both older buildings and in new developments. Finally, we tried to include a blend of dense urban neighborhoods, suburbs, rural/farm communities, tribal areas, and areas that had been affected by catastrophic events, all of which contain places that are home to population groups historically subject to undercounts.

In sum, more than 12 geographic areas in seven states were provided to the Census Bureau for review and are the basis of these case stud-

Group quarters, places where people live or stay in a group living arrangement, and that are owned or managed by entities or organizations providing housing and/or services for the residents, were not part of the case studies.



ies. For each of the areas, the Census Bureau found at least some evidence that the LUCA submission improved the housing unit count in the census, largely resulting in related increases in the population counts. With this knowledge in mind, the goal was then to learn as much as we could about the approaches that were used for these successful submissions.

The goal of the case studies is twofold:

- a To demonstrate that participation in LUCA can make a demonstrable difference in the count of housing units, which in turn will help ensure a more accurate population count.
- b To showcase the data and methods that led to successful participation in the 2020 LUCA operation to inform planning for 2030 Census LUCA participation.

As we look towards the 2030 Census, encouraging meaningful participation in the LUCA program is a key early goal. Such participation should be focused on providing only those addresses to the Census Bureau that are not generally available through its normal updating channels, such as the U.S. Postal Service. This will encourage a more efficient use of time and resources by state, tribal, and local governments and by the Census Bureau, which will benefit all parties involved. We hope these case studies provide some important guideposts to promote such an outcome.

The Census Bureau plans on providing local users with a system to check—ahead of time—whether addresses being considered for submission in LUCA are already present in the census address file.

### **LUCA Success Stories**

- [Bronx County, New York City](#)
- [Clark and Pershing Counties, Nevada](#)
- [Fresno, California](#)
- [Hidalgo County, Texas](#)
- [Issaquah, Washington](#)
- [New Mexico Tribal Areas](#)
- [New Orleans, Louisiana](#)



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