



# Hawaiian Geography at the Census Bureau

American Association of Geographers 2024 Annual Meeting

316A (Maui) 10:40 AM - 12:00 PM

Joshua Coutts

Madeline Sovich

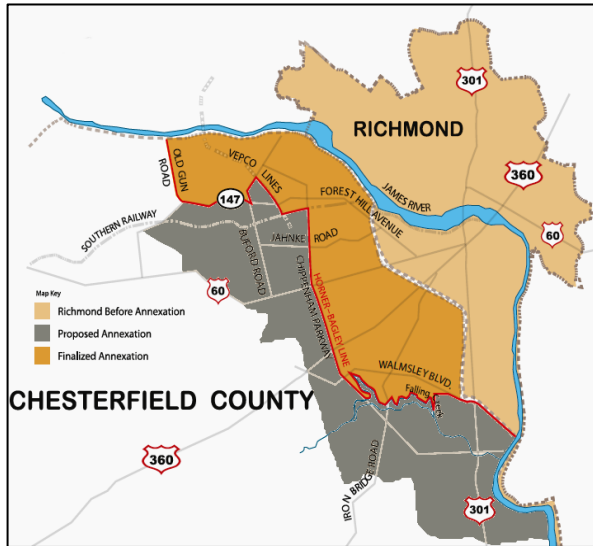
# Overview

- How the Census Bureau collects geography
- Census Bureau Geography in the State of Hawaii
- Hawaiian Home Lands



# Boundary and Annexation Survey (BAS)

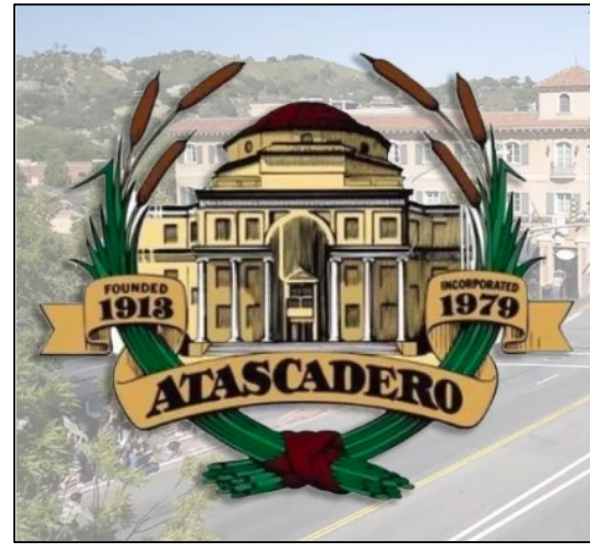
Annual opportunity for tribal, state, and local governments to submit:



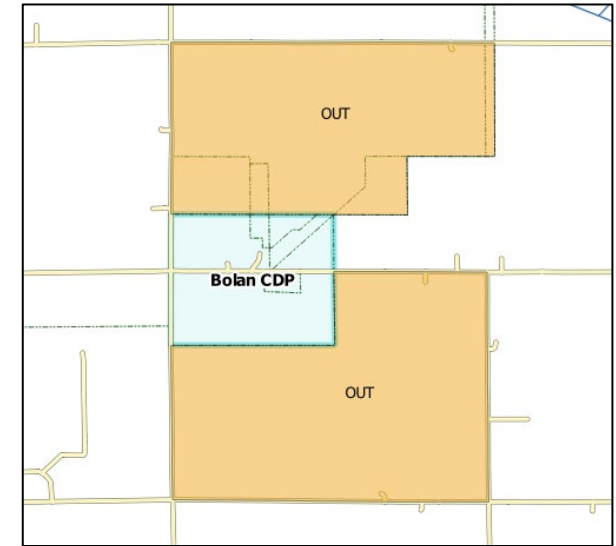
Boundary changes  
(de/annexations, corrections)



Name or description  
changes



Status updates  
(new reservation or trust  
status, dis/incorporations,  
mergers, consolidations)

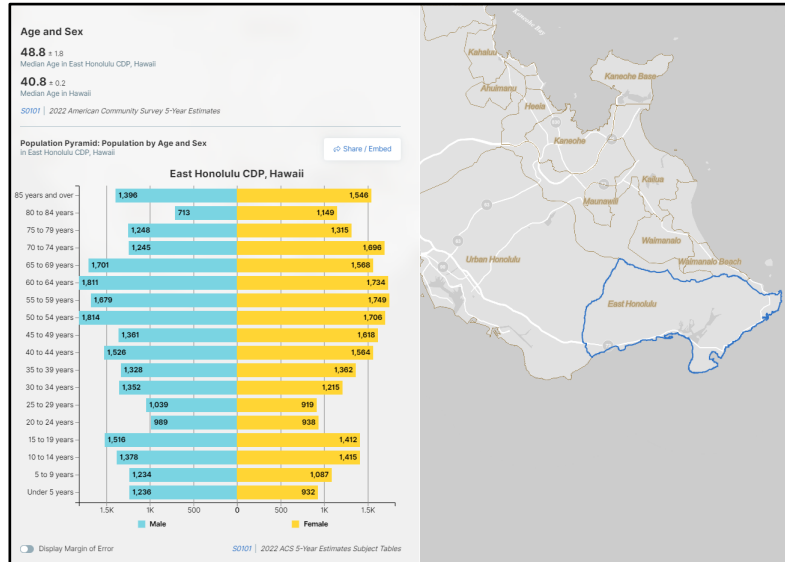


Updates to Census  
Designated Places (CDPs)

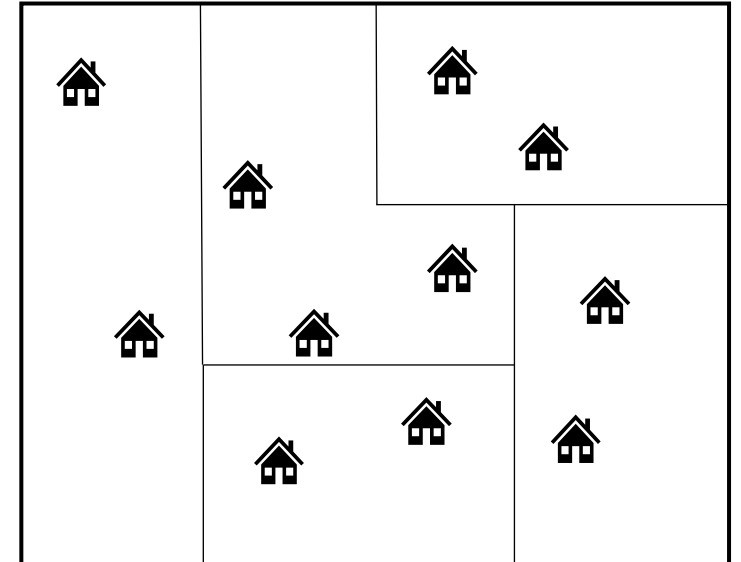
# Purpose of BAS



Data collected through BAS

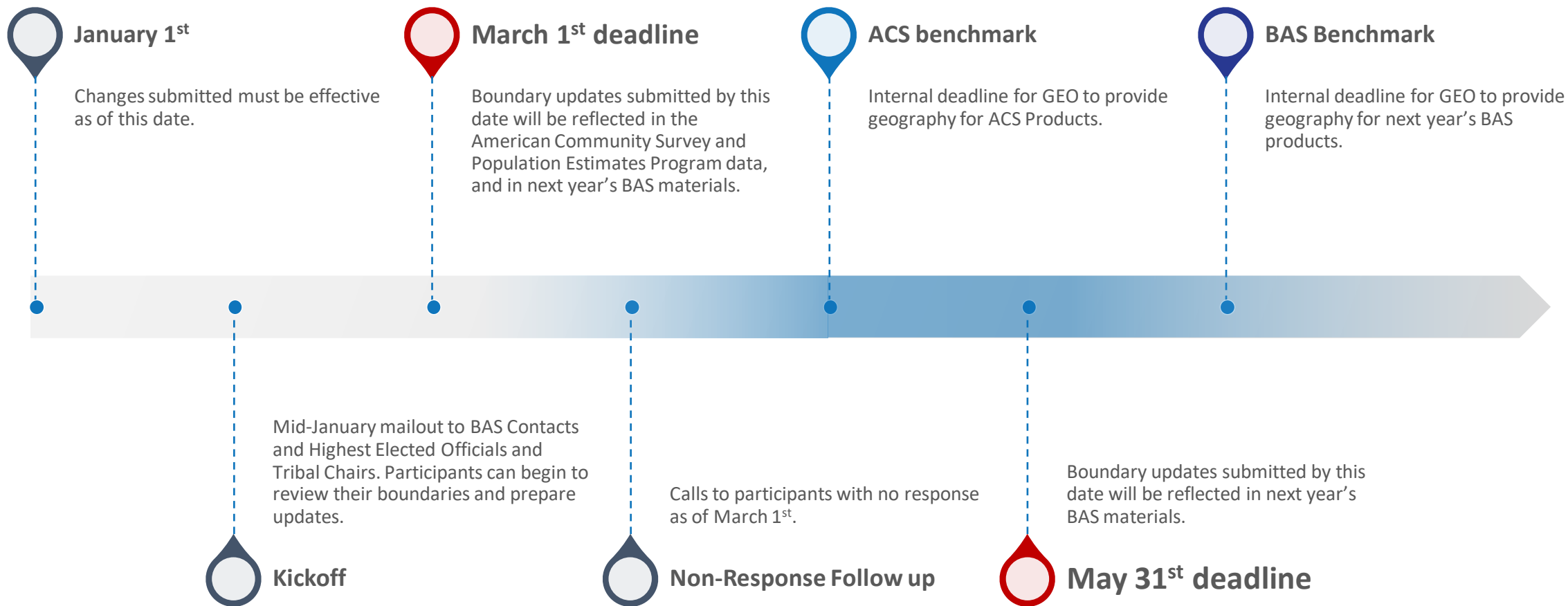


Used to tabulate data from censuses, surveys, programs, and operations



Used to establish housing and population counts

# BAS Timeline





# BAS Geographies

Federally recognized reservations

Federally recognized off-reservation trust lands

States

Counties or county equivalents, such as boroughs or parishes

Minor civil divisions, such as towns and townships

Incorporated places, such as cities, towns, and villages

Consolidated cities

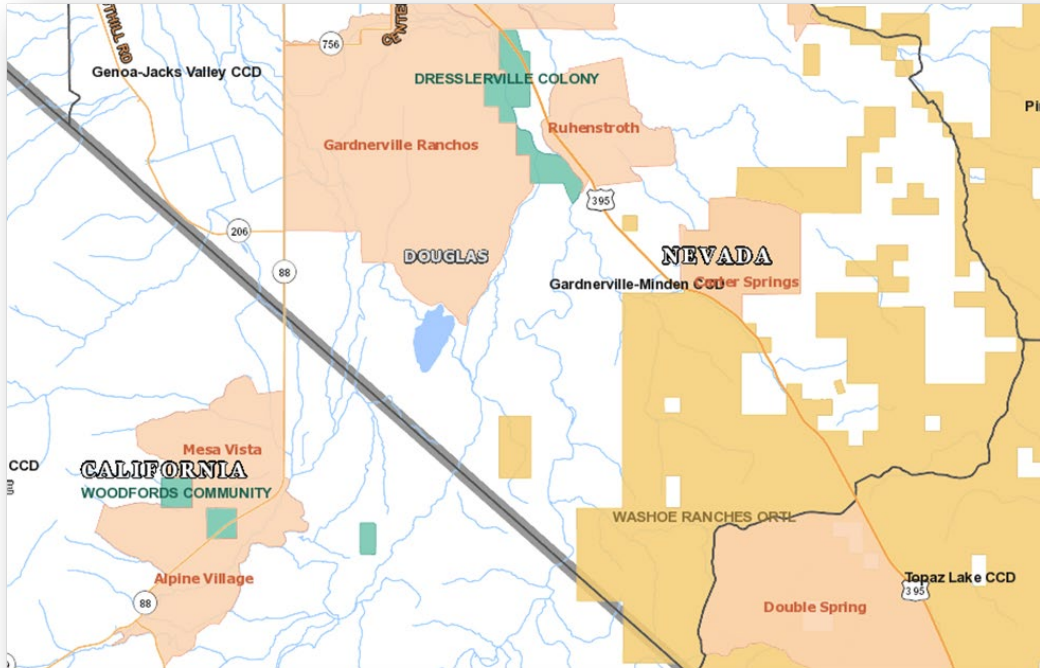
Hawaiian Home Lands

Alaskan Native Regional Corporations

Census Designated Places

# Geographic Data Products

## TIGER/Line Shapefiles



## BAS Partnership Shapefiles

### Washington Partnership Shapefile Batch Download

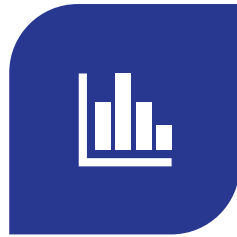
Please select up to 5 individual counties to download the shapefiles for those counties.

- |                                                  |                                                           |                                                     |
|--------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> Adams County (53001)    | <input type="checkbox"/> Grays Harbor County (53027)      | <input type="checkbox"/> Pierce County (53053)      |
| <input type="checkbox"/> Asotin County (53003)   | <input checked="" type="checkbox"/> Island County (53029) | <input type="checkbox"/> San Juan County (53055)    |
| <input type="checkbox"/> Benton County (53005)   | <input type="checkbox"/> Jefferson County (53031)         | <input type="checkbox"/> Skagit County (53057)      |
| <input type="checkbox"/> Chelan County (53007)   | <input type="checkbox"/> King County (53033)              | <input type="checkbox"/> Skamania County (53059)    |
| <input type="checkbox"/> Clallam County (53009)  | <input type="checkbox"/> Kitsap County (53035)            | <input type="checkbox"/> Snohomish County (53061)   |
| <input type="checkbox"/> Clark County (53011)    | <input type="checkbox"/> Kittitas County (53037)          | <input type="checkbox"/> Spokane County (53063)     |
| <input type="checkbox"/> Columbia County (53013) | <input type="checkbox"/> Klickitat County (53039)         | <input type="checkbox"/> Stevens County (53065)     |
| <input type="checkbox"/> Cowlitz County (53015)  | <input type="checkbox"/> Lewis County (53041)             | <input type="checkbox"/> Thurston County (53067)    |
| <input type="checkbox"/> Douglas County (53017)  | <input type="checkbox"/> Lincoln County (53043)           | <input type="checkbox"/> Wahkiakum County (53069)   |
| <input type="checkbox"/> Ferry County (53019)    | <input type="checkbox"/> Mason County (53045)             | <input type="checkbox"/> Walla Walla County (53071) |
| <input type="checkbox"/> Franklin County (53021) | <input type="checkbox"/> Okanogan County (53047)          | <input type="checkbox"/> Whatcom County (53073)     |
| <input type="checkbox"/> Garfield County (53023) | <input type="checkbox"/> Pacific County (53049)           | <input type="checkbox"/> Whitman County (53075)     |
| <input type="checkbox"/> Grant County (53025)    | <input type="checkbox"/> Pend Oreille County (53051)      | <input type="checkbox"/> Yakima County (53077)      |

# Partnership Programs



Boundary and  
Annexation Survey



Participant  
Statistical Areas  
Program



Memorandums  
of  
Understanding

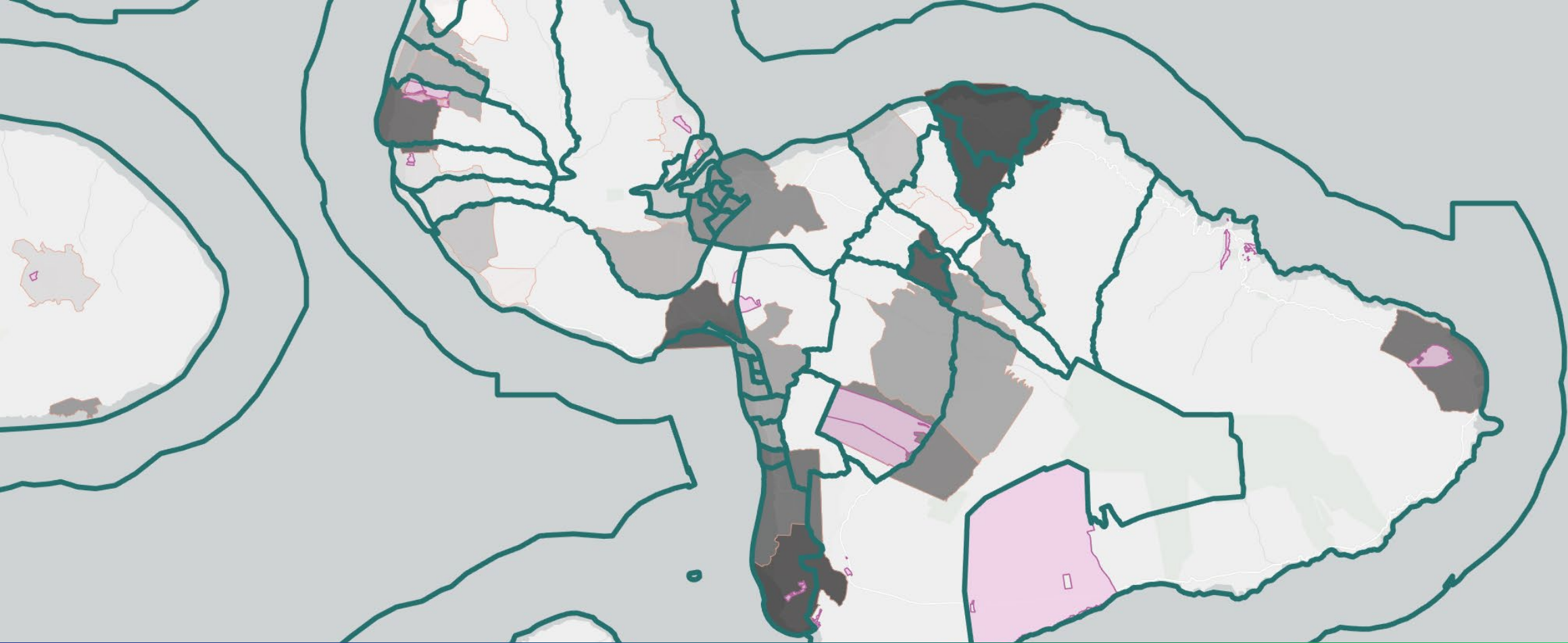


State Agreements and  
Consolidated County  
Agreements



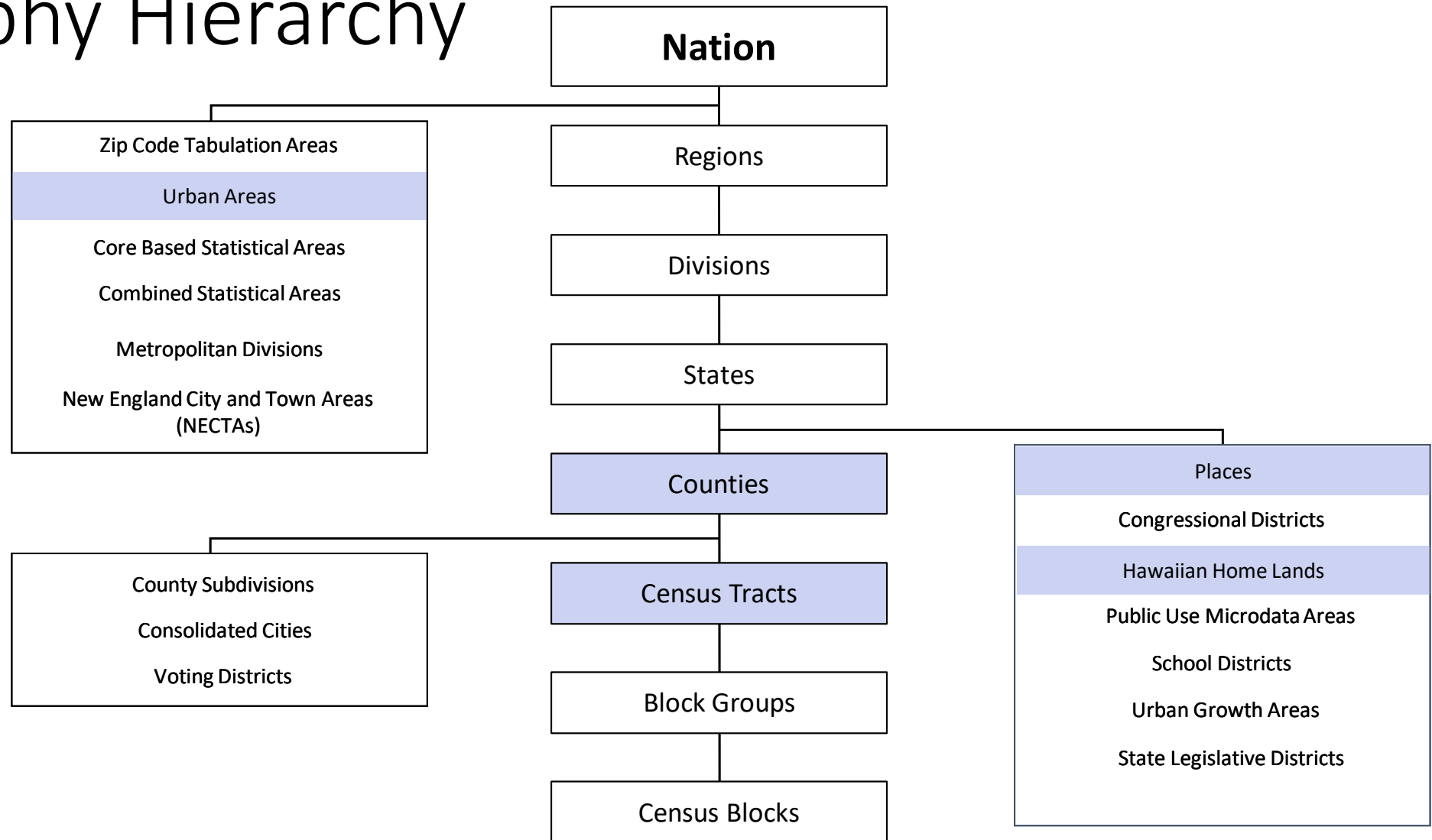
Tribal  
Consultations





# Census Bureau Geography

# Geography Hierarchy



# Counties and Islands



Hawaii has 5 counties.

Some cover more than one island.  
Honolulu County covers the islands in  
the northern part of Hawaii.

# Counties and Islands



Hawaii has 5 counties.

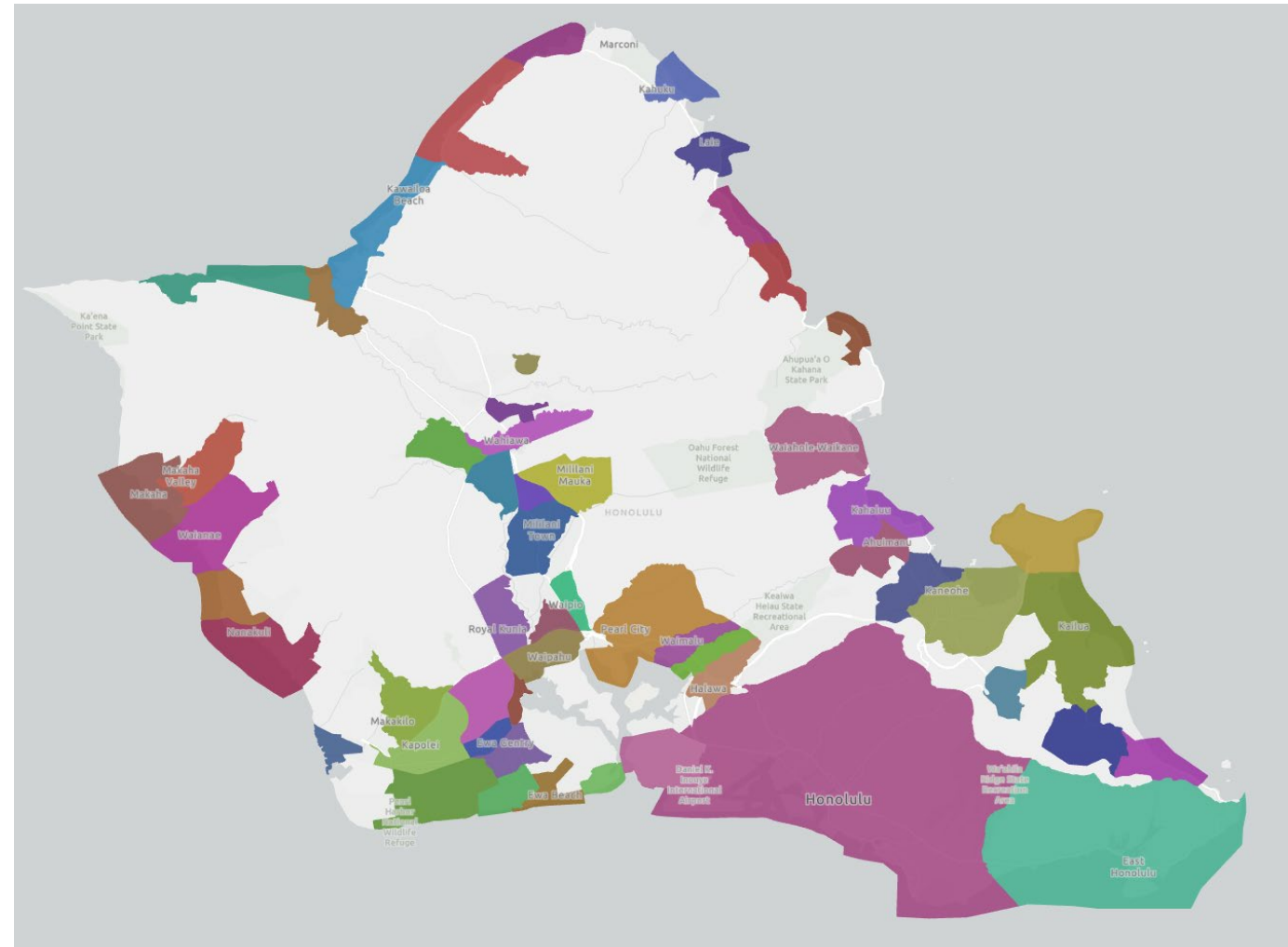
Some cover more than one island.  
Honolulu County covers the islands in  
the northern part of Hawaii.

Molokai Island technically has two  
counties as it includes Kalawao County  
as well as Maui County.



# Census Designated Places (CDP)

<b>Definition</b>	<ul style="list-style-type: none"><li>• Delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under state laws</li><li>• Statistical counterparts of incorporated places</li></ul>
<b>Relationships</b>	<ul style="list-style-type: none"><li>• Nest within states</li><li>• Hawaii has no incorporated places</li></ul>
<b>Criteria</b>	<ul style="list-style-type: none"><li>• Densely settled</li><li>• Named community</li><li>• No legally defined boundaries</li><li>• No minimum population or housing unit threshold</li></ul>
<b>Update Program</b>	<ul style="list-style-type: none"><li>• Boundary and Annexation Survey (BAS)</li><li>• Participant Statistical Area Program (PSAP)</li></ul>







# Census Tracts

<b>Definition</b>	<ul style="list-style-type: none"><li>• Small, relatively permanent statistical subdivisions of a county or equivalent entity that are updated by local participants</li></ul>
<b>Nesting Relationship</b>	<ul style="list-style-type: none"><li>• Nest within counties</li></ul>
<b>Coverage</b>	<ul style="list-style-type: none"><li>• Continuous</li></ul>
<b>Stakeholders</b>	<ul style="list-style-type: none"><li>• State and local partners, generally county or regional planning agencies, following Census Bureau criteria and guidelines</li></ul>
<b>Min Pop/Housing</b>	<ul style="list-style-type: none"><li>• Population: 1,200</li><li>• Housing: 480</li></ul>
<b>Optimum</b>	<ul style="list-style-type: none"><li>• Population: 4,000</li><li>• Housing: 1,600</li></ul>
<b>Max Pop/Housing</b>	<ul style="list-style-type: none"><li>• Pop: 8,000</li><li>• Housing: 3,200</li></ul>
<b>Updates</b>	<ul style="list-style-type: none"><li>• Participant Statistical Areas Program (PSAP)</li></ul>



# Census Tracts in the Real World

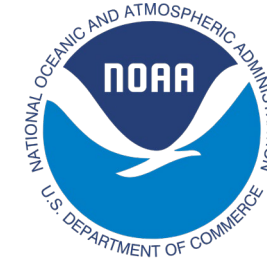


## FEMA Community Disaster Resilience Zones (CDRZ)

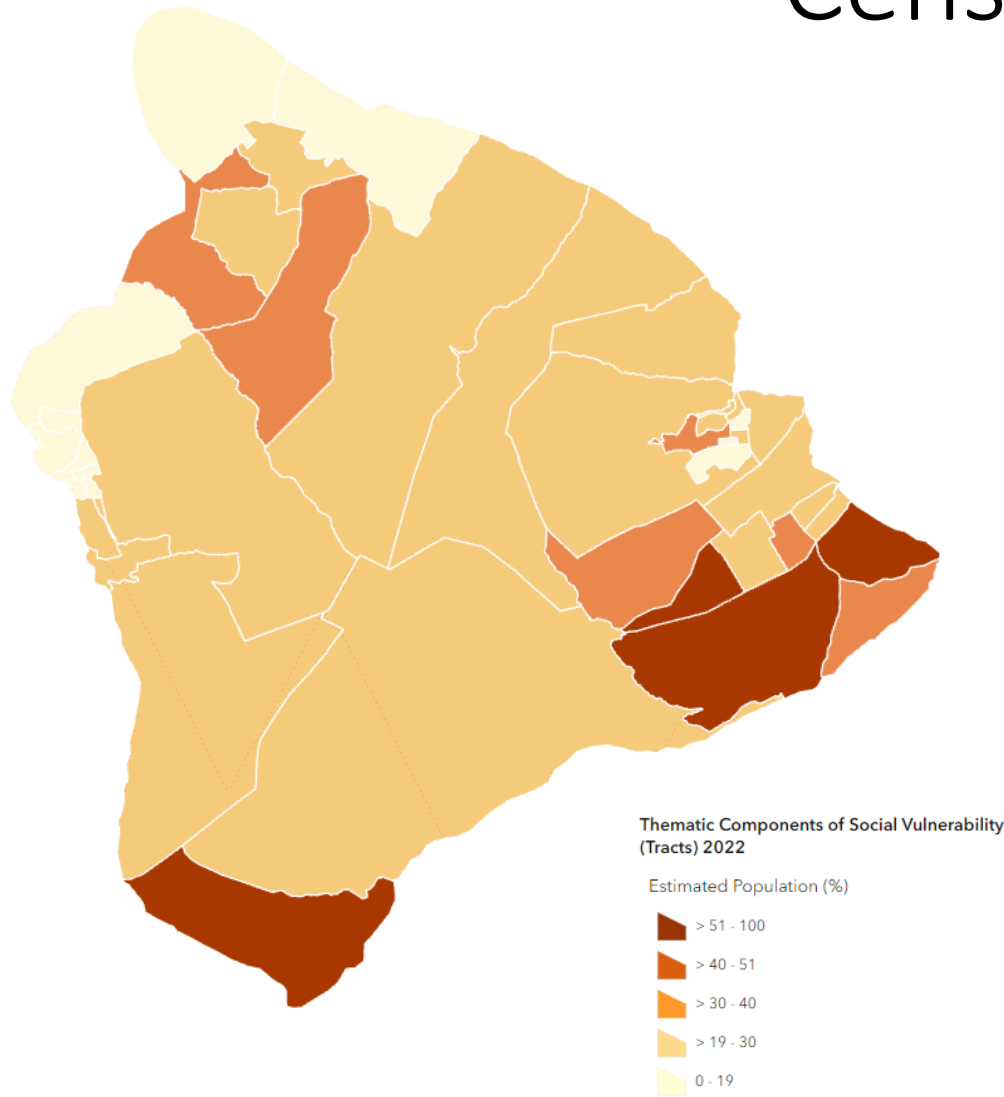
FEMA uses Census Tracts and American Community Survey 5-year estimates to create and designate resilience zones which identifies disadvantaged communities most at-risk to natural hazards.



**FEMA**



# Census Tracts in the Real World



## Community Resilience Estimates

The Census Bureau produces the Community Resilience Estimates (CRE) as an easily understood metric of the social vulnerability of every neighborhood in the United States to the impacts of disasters, including COVID-19.

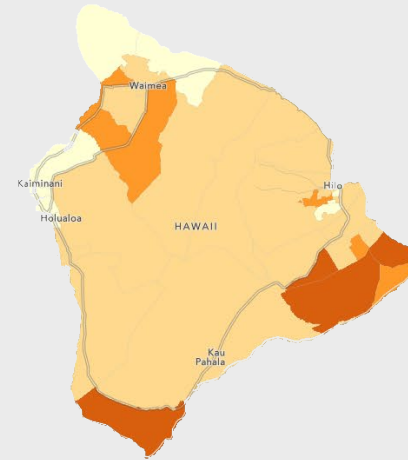
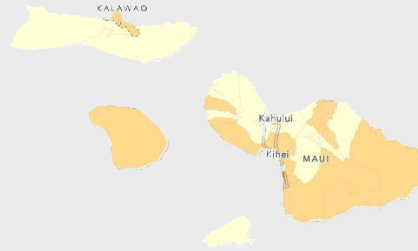
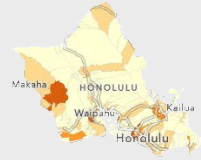
Census Tract 212.04, Hawaii County, Hawaii: 3+ Components of Social Vulnerability

Zoom to Pan

**Census Tract 212.04, Hawaii County, Hawaii**  
**Total Population: 2,639**

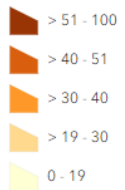
% of Residents with 3+ Components of Social Vulnerability: 44.10% (+/- 9.73%)  
# of Residents with 3+ Components of Social Vulnerability: 1,308 (+/- 289)

# Census Tracts in the Real World



Thematic Components of Social Vulnerability (Tracts) 2022

Estimated Population (%)





# Urban Areas

## Definition

- Densely developed cores of census blocks that meet minimum housing unit density requirements
- Adjacent territories containing non-residential urban land uses
- Lower density territories that link outlying densely settled territories with the densely settled cores

## Relationship

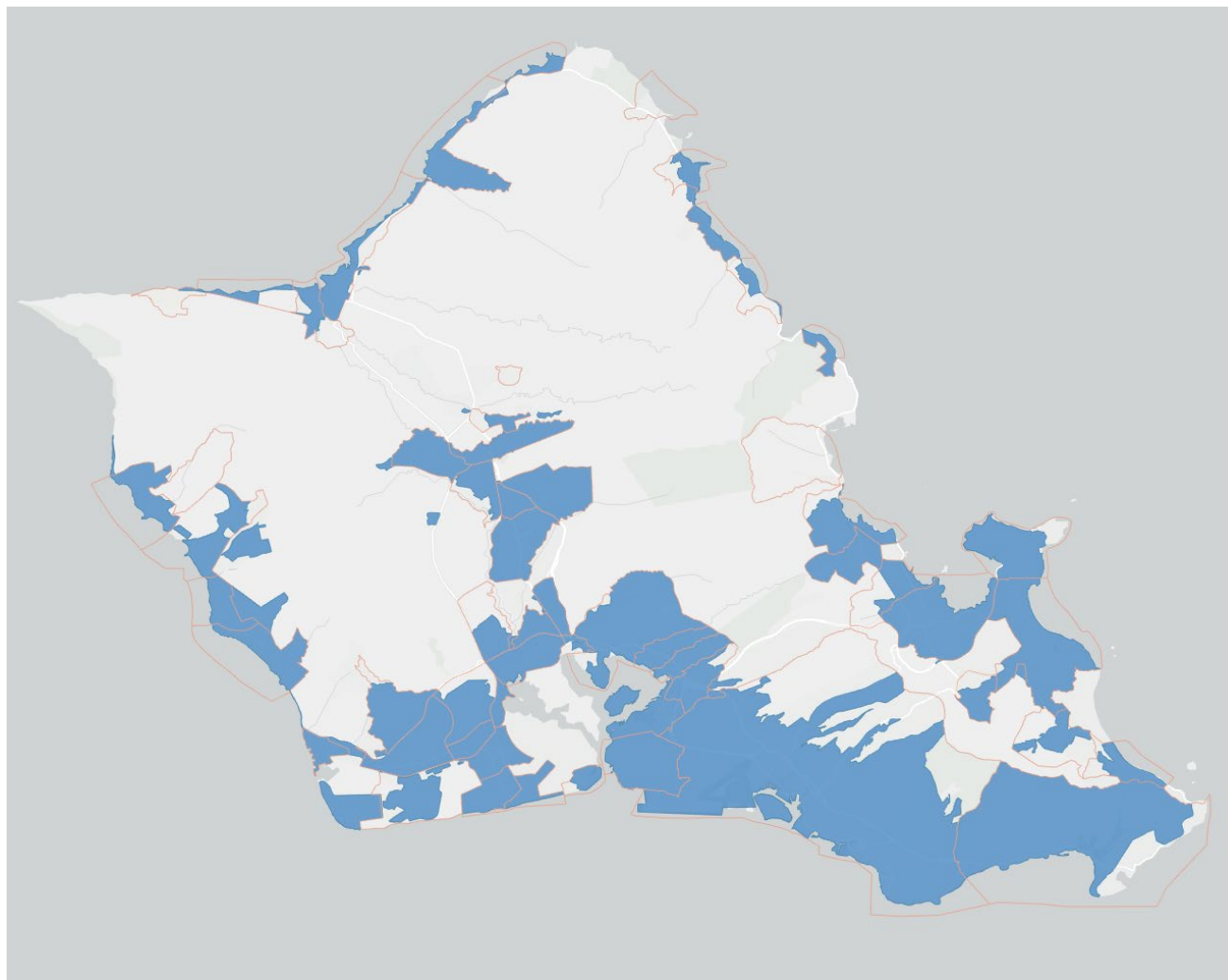
- Nest within the nation
- Can cross state lines

## Criteria

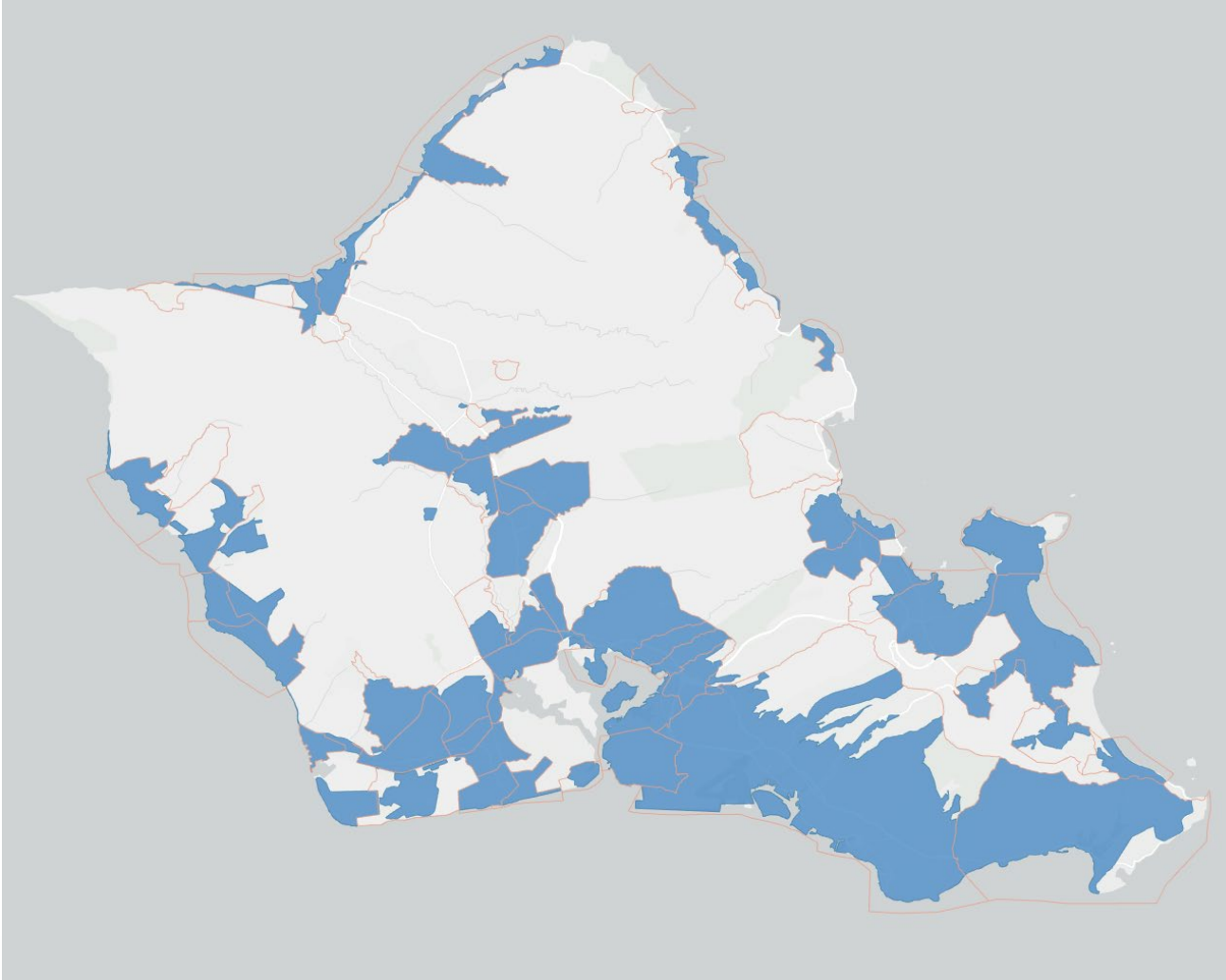
- The territory identified must encompass at least 2,000 housing units or at least 5,000 persons
- The term “rural” encompasses all population, housing, and territory not included within an urban area

## Updates

- Delineated after each decennial census



# Urban Areas in the Real World



U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA) uses the Census Urban Area Designation rather than the CDP unit eligibility for these programs:

- Metropolitan Planning Organizations (MPOs)
- Transportation Management Areas
- Metropolitan Planning Program funding from State Departments of Transportation to MPOs
- Surface Transportation Block Grant Program
- Highway Performance Monitoring System
- National Highway Freight Program
- Congestion Mitigation and Air Quality Improvement Program

# Hawaiian Home Lands (HHLs)

What are they?

Areas held in trust for Native Hawaiians by the state of Hawaii, pursuant to the Hawaiian Homes Commission Act of 1920, as amended.

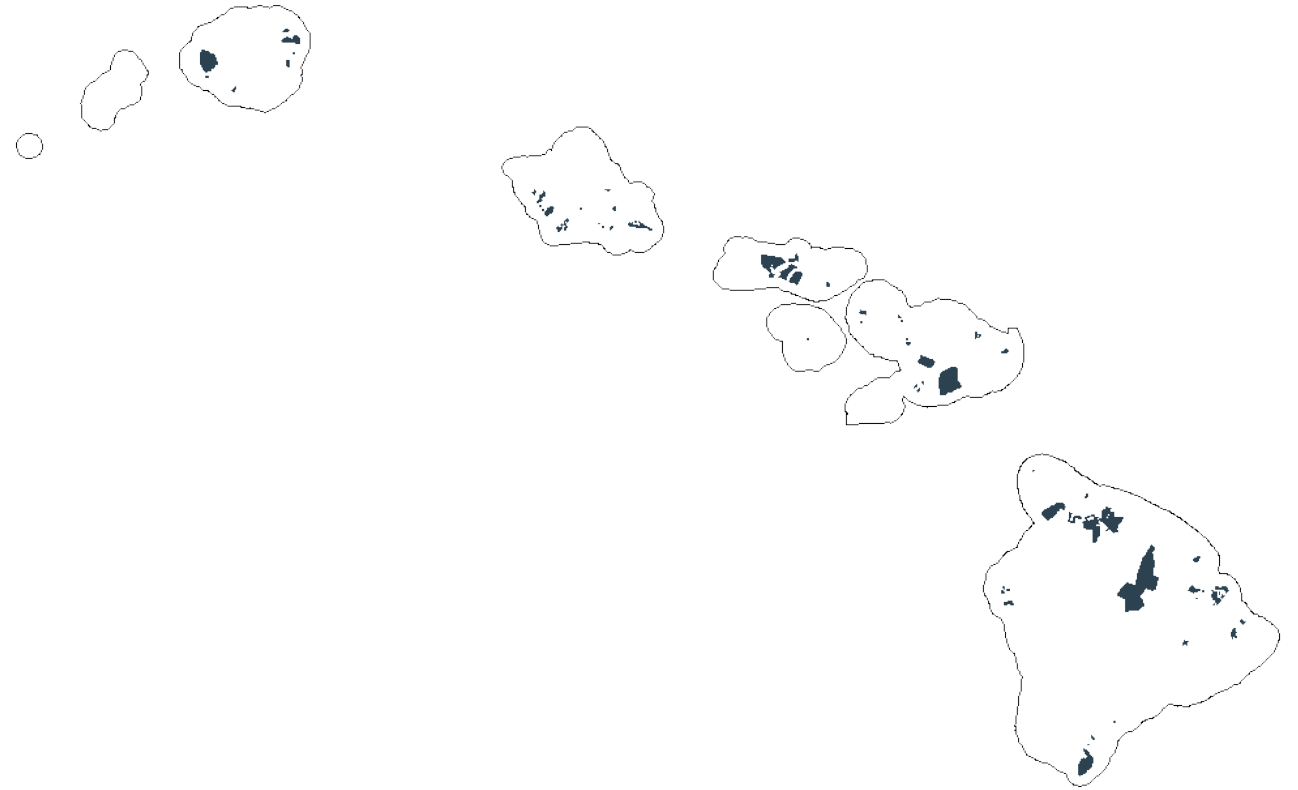
Treated as equivalent to off-reservation trust land areas in Census Bureau data.



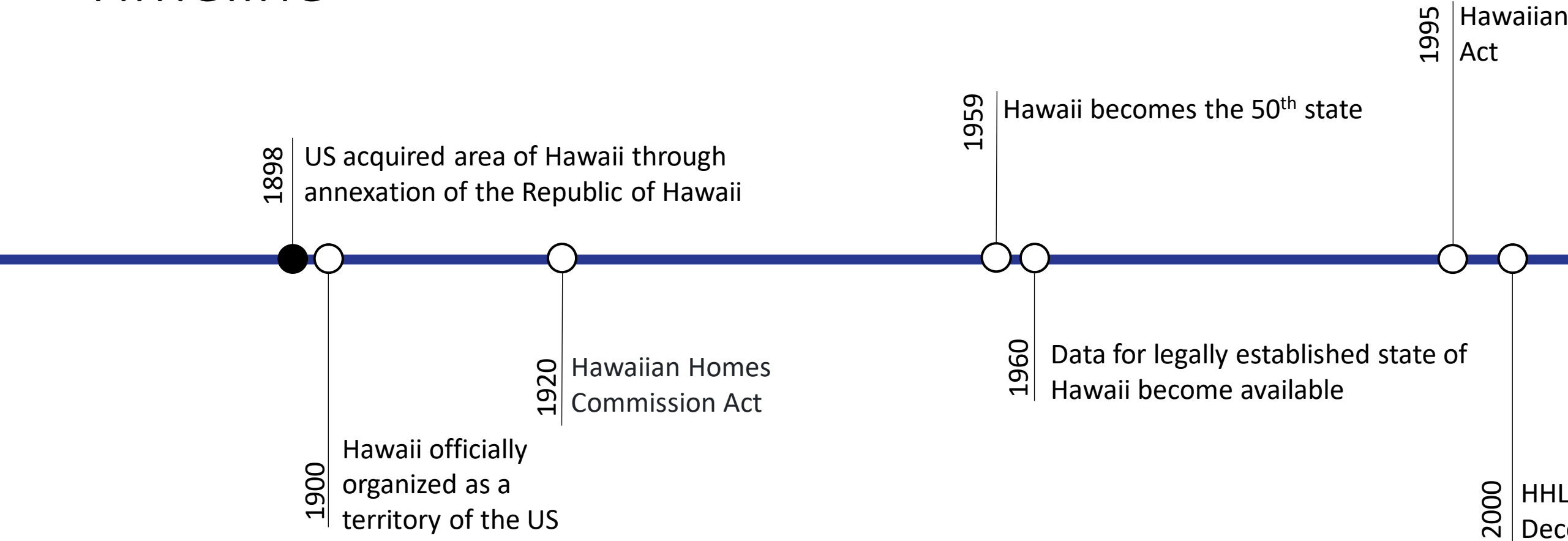


# Hawaiian Home Lands

<b>Definition</b>	<ul style="list-style-type: none"><li>• Areas held in trust for Native Hawaiians by the state of Hawaii</li></ul>
<b>Relationship</b>	<ul style="list-style-type: none"><li>• Within Hawaii</li></ul>
<b>Initial Creation Date</b>	<ul style="list-style-type: none"><li>• Delineated by Census for the first time in 2000</li></ul>
<b>Source</b>	<ul style="list-style-type: none"><li>• State Officials</li><li>• Federal Law</li></ul>
<b>Updates</b>	<ul style="list-style-type: none"><li>• Boundary and Annexation Survey (BAS)</li></ul>

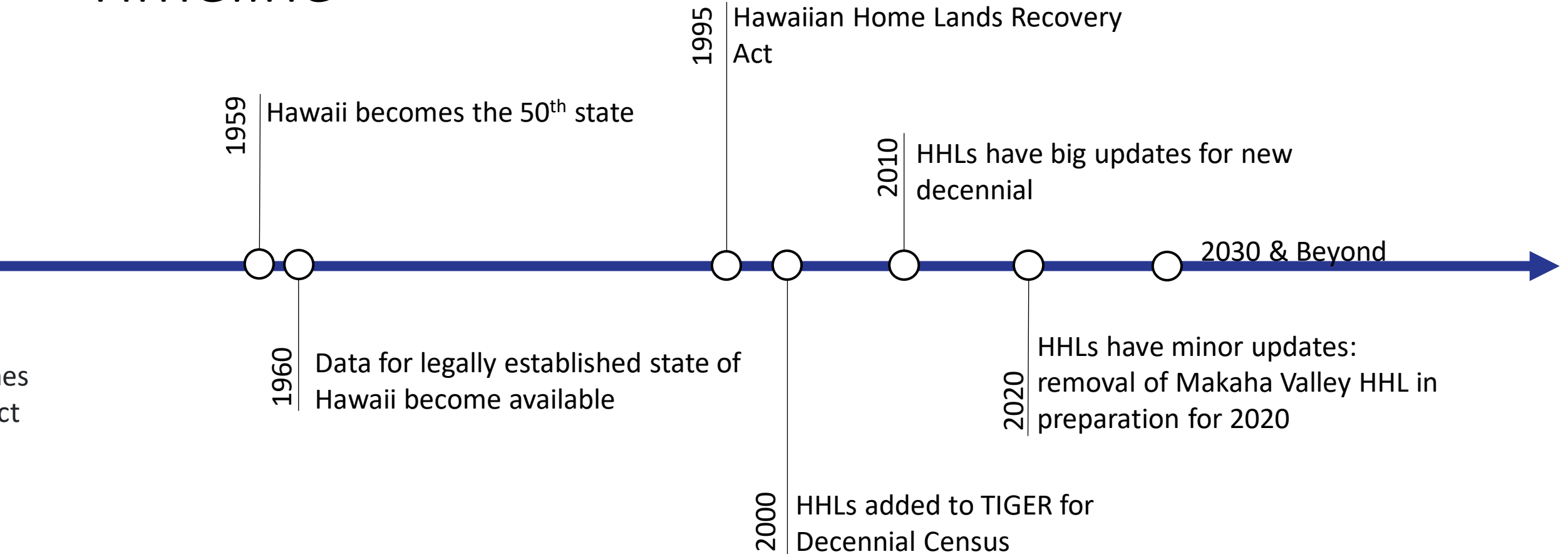


# Timeline





# Timeline



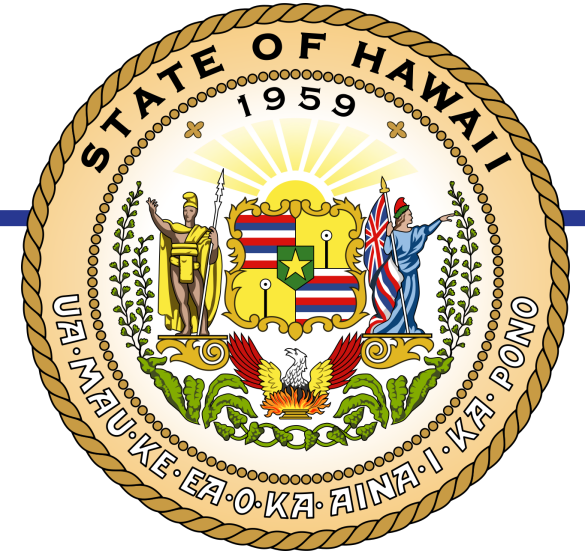
es  
ct

# Hawaiian Home Lands

## How are they collected?

The Census Bureau obtains the names and boundaries for HHLs from state officials.

The names of the home lands are based in part from the traditional ahupua'a names of the Crown and government lands of the Kingdom of Hawai'i from which the lands were designated, or from the local name for an area.



# Hawaiian Home Lands Updates

Lead up to 2010 saw major updates to Hawaiian Home Lands:

- Name changes.
- Merges & Consolidations.
- New HHLs established.

2010 Census  
Hawaiian Home Lands

<https://tigerweb.geo.census.gov/tigerweb2020/>





# Nanakuli Hawaiian Home Land in TIGER as of the 2020 Census



# U.S. Federal Survey of Hawaiian Home Lands



- Researching all title(s) of origin and investigating all necessary land records to determine exact legal boundaries as first recorded.
- Ascertaining the actual location of HHL boundaries on the ground.
- Providing the necessary data and information to list each parcel in the BLM official land records system.

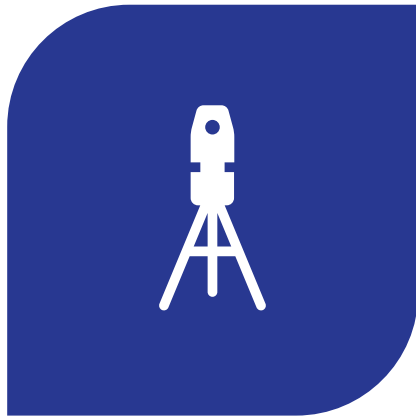


Source: <https://www.doi.gov/hawaiian/land-survey>



# Hawaiian Home Lands

Looking Forward 2030



Land Surveys Are Ongoing



BAS Is Annual  
Let's Not Wait Until 2030



Build Partnership and  
Communication Throughout Decade

# Sources for more information

## Census Bureau References:

- Boundary and Annexation Survey - <https://www.census.gov/programs-surveys/bas.html>
- TIGER Web - <https://tigerweb.geo.census.gov/tigerweb/>
- TIGER/Line Files - <https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html>
- Geographic Change Notes - <https://www.census.gov/programs-surveys/geography/technical-documentation/boundary-change-notes.html>
- Geography Definitions - [https://tigerweb.geo.census.gov/tigerwebmain/TIGERweb\\_geography.html](https://tigerweb.geo.census.gov/tigerwebmain/TIGERweb_geography.html)

## Additional References:

- Department of Hawaiian Home Lands - <https://dhhl.hawaii.gov/>
- State of Hawai'i Office of Planning - <https://planning.hawaii.gov/>
- Department of Interior Native Hawaiian Office - <https://www.doi.gov/hawaiian>
- DOI Hawaiian Home Lands Maps - <https://www.doi.gov/hawaiian/home-land-maps>