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# Redistricting San Francisco: An Overview of Criteria, Data & Processes

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# Criteria in the San Francisco Charter:

Districts must conform to all legal requirements, including the requirement that they be equal in population. Population variations between districts should be limited to 1 percent from the statistical mean unless additional variations, limited to 5 percent of the statistical mean, are necessary to prevent dividing or diluting the voting power of minorities and/or to keep recognized neighborhoods intact; provided, however, that the redistricting provided for herein shall conform to the rule of one person, one vote, and shall reflect communities of interest within the City and County.

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## Judicially recognized traditional districting principles:

- Compactness
- Contiguity
- Preservation of Cities and Counties
  
- Respect for Communities of Interest
  - (“actual shared interests” Miller v Johnson, 1995)
- Incumbent protection
- Preservation of district cores
- Compliance with VRA Section 2

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# CA ELECTIONS CODE SECTION 21500-21506

- In establishing the boundaries of the districts the board may give consideration to the following factors: (a) topography, (b) geography, (c) cohesiveness, contiguity, integrity, and compactness of territory, and (d) community of interests of the districts.

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## ...moving on to Data in Redistricting!

- Which data are used to draw lines?
- Which data are used for which criterion?
- Which data are easily accessible?
- Which ones are not?
- Which data sources are available but difficult (or impossible?) to use?

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# Redistricting Criteria and Data used:

Equal Population – PL94-171

Compliance with Federal Law (VRA) – PL94-171, SOR, SOV

Contiguity – Census Geography

Preserve recognized Neighborhoods – Data/Geography submitted  
by City/County, Public Testimony

Preserve Communities of Interest – Public Testimony,  
Data/Geography submitted by Public

Compactness (?) – Census Geography

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# Equal Population

- That's why we do it!
- Constitutional requirement
- One person, One vote
- 14<sup>th</sup> Amendment: Equal protection clause
  
- How equal is equal???

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# How equal is equal?

- Different standards for different jurisdictions

For San Francisco's Board of Supervisors:

Population variations between districts should be limited to 1 percent (+/- 732) from the statistical mean unless additional variations, limited to 5 percent (+/- 3660) of the statistical mean, are necessary to prevent dividing or diluting the voting power of minorities and/or to keep recognized neighborhoods intact



# S.F. Board of Supervisors – Deviations by district

<b>Table 1: Total 2011 PL94 Population and Deviation from Ideal District Population</b>			
<b>District</b>	<b>Population</b>	<b>Deviation</b>	<b>% Deviation</b>
01	68,253	-4,950	-6.76%
02	68,021	-5,182	-7.08%
03	68,955	-4,248	-5.80%
04	71,586	-1,617	-2.21%
05	70,675	-2,528	-3.45%
06	94,788	21,585	29.49%
07	69,825	-3,378	-4.61%
08	69,263	-3,940	-5.38%
09	65,673	-7,530	-10.29%
10	78,661	5,458	7.46%
11	79,535	6,332	8.65%

# 2000 Decennial Census

Census 2000 used 2 forms:

1. The “short” form – asked for basic demographic and housing information, i.e. age, sex, race, ethnicity, # of people in housing unit, renter/owner

**EVERY HOUSEHOLD RECEIVED THIS FORM**

2. The “long” form – collected the same information as the short form plus income, education, citizenship, language spoken at home, etc.

**ONE IN SIX HOUSEHOLDS RECEIVED THIS FORM**

Long form data aka “sample data.”

Short form data aka “100 percent data” (or 100% sample)

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# 2010 Decennial Census and American Community Survey (ACS)

## What's New?

2010 Census used only the “short” form.

The sample data are now collected by the ACS instead of the “long” form.

## What's Old?

Short form data were released by the Census bureau before April 1, 2011, one year following Census day

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# 2010 Decennial Census PL94-171 Data

- Basic Information/ Data that jurisdictions are required by law to use for Redistricting
- Census 2010 Redistricting Data (Public Law 94-171, or "PL94") contains the count of the U.S. population
- Is a BLOCK-LEVEL dataset
- Includes data on people's race and ethnicity, for both the total and the voting age population
- Information is based on answers to the questions in the Census 2010 Short-Form questionnaire.
- There are 5 detailed tables available in the PL94-171 data product.

# 2010 Decennial Census PL94 Data Summary Tables

<i>Subject</i>	<i>Table #</i>
<b>Race</b>	
<i>Total population</i> . . . . .	P1
<b>Hispanic or Latino, and Not Hispanic or Latino by Race</b>	
<i>Total population</i> . . . . .	P2
<b>Race for the Population 18 Years and Over</b>	
<i>Total population 18 years and over</i> . . . . .	P3
<b>Hispanic or Latino, and Not Hispanic or Latino by Race for the Population 18 Years and Over</b>	
<i>Total population 18 years and over</i> . . . . .	P4
<b>Occupancy Status</b>	
<i>Housing units</i> . . . . .	H1

# 2010 PL94 Data Summary Table Subject Layout

## **P1. Race**

Universe: Total population

Total:

Population of one race:

White alone

Black or African American alone

American Indian and Alaska Native alone

Asian alone

Native Hawaiian and Other Pacific Islander alone

Some other race alone

Repeats for the Population of two or more races.....

## **P2. Hispanic or Latino, and Not Hispanic or Latino by Race**

Universe: Total population

Total:

Hispanic or Latino

Not Hispanic or Latino:

Population of one race:

White alone

Black or African American alone

American Indian and Alaska Native alone

Asian alone

Native Hawaiian and Other Pacific Islander alone

Some other race alone

Repeats for the Population of two or more races.....

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# 2010 PL94 Data Summary Table Subject Layout

## **P3. Race For The Population 18 Years and Over**

P1 variables are repeated for the Population 18 Years and Over

## **P4. Hispanic or Latino, and Not Hispanic or Latino By Race For The Population 18 Years And Over**

P2 variables are repeated for the Population 18 Years and Over

## **H1. Occupancy Status**

Universe: Housing units

Total:

Occupied

Vacant

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## 2010 Census and American Community Survey (ACS)

- nationwide survey that replaces the long-form
- collects same information on people and housing as the long-form questionnaire used in Census 2000.
- is an on-going survey versus data released on PL94-171, which are collected on “census day” (April 1, 2010)
- is released in “multi-year estimates” on census block-group level

The ACS does NOT release data on the census block level!

Detailed demographic, social, economic, and housing data are no longer collected as part of the decennial census.

ACS data can be grouped into four main types of characteristics – **social, economic, housing, and demographic**



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## American Community Survey

### Demographic Characteristics



- Sex
- Age
- Race
- Ethnicity

# American Community Survey

## Social Characteristics



- Education
- Marital Status
- Fertility
- Grandparent  
Caregivers
- Citizenship
- Veteran Status
- Disability Status

# American Community Survey

## Economic Characteristics



- Income
- Benefits
- Employment Status
- Occupation
- Industry
- Commuting to Work
- Place of Work

# American Community Survey

## Housing Characteristics



- Tenure
- Occupancy & Structure
- Housing Value
- Taxes & Insurance
- Utilities
- Mortgage/Monthly Rent
  
- And our personal favourite: PLUMBING!



# American Community Survey

## Data Products Release Schedule

Data Product	Population Size of Area	Data released in:							
		2006	2007	2008	2009	2010	2011	2012	2013
1-Year Estimates	65,000+	2005	2006	2007	2008	2009	2010	2011	2012
for Data Collected in:									
3-Year Estimates	20,000+			2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012
for Data Collected in:									
5-Year Estimates	All Areas*					2005-2009	2006-2010	2007-2011	2008-2012
for Data Collected in:									

\* Five-year estimates will be available for areas as small as census tracts and block groups.

Source: US Census Bureau

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## District Building Blocks: U.S. Census Geography

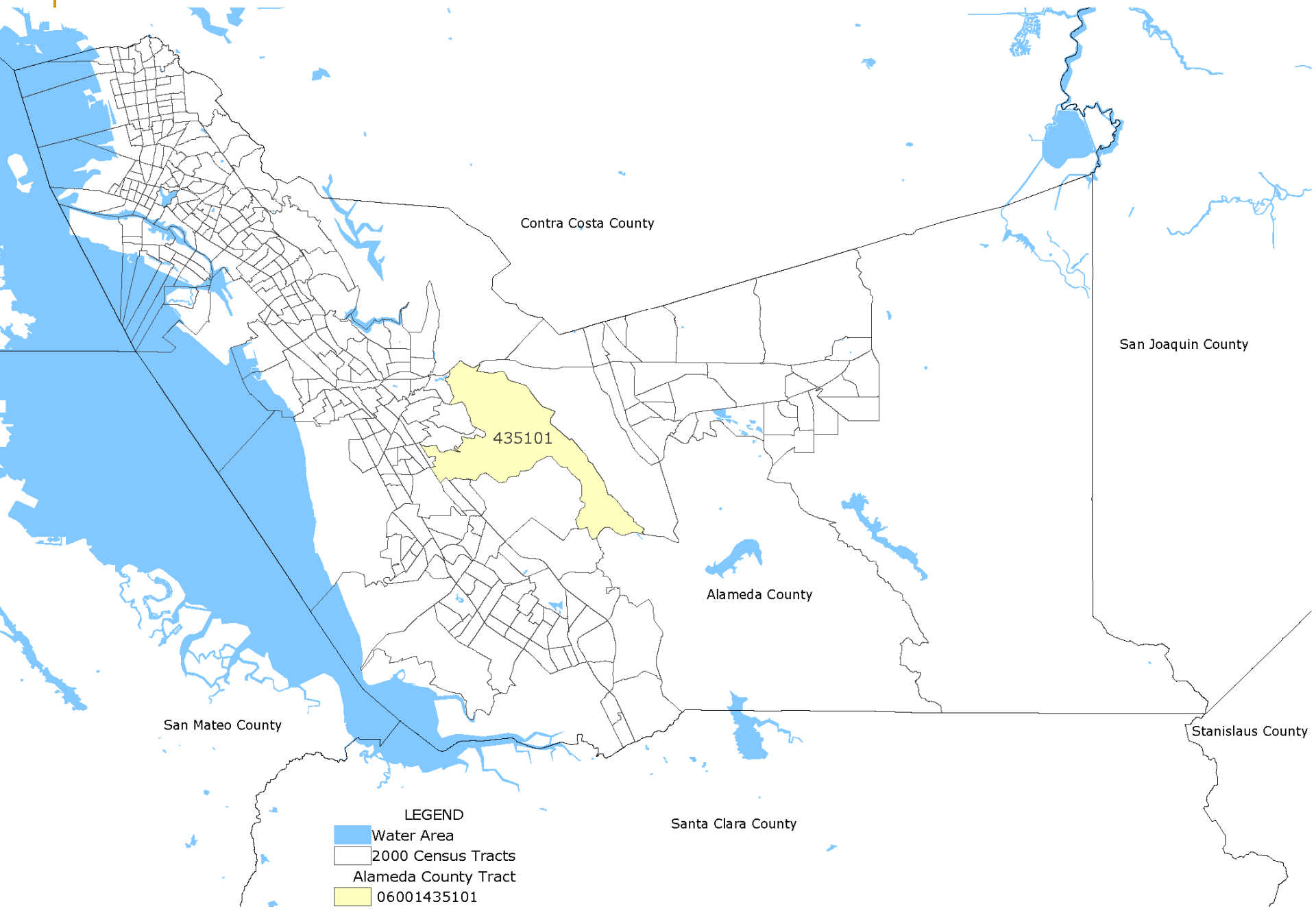
- Blocks: smallest ‘unit of analysis’ on which data are reported”
  - Block groups
  - Tracts
  - Places (cities)
  - Counties
  - State

# California's 58 Counties



# Alameda County, California

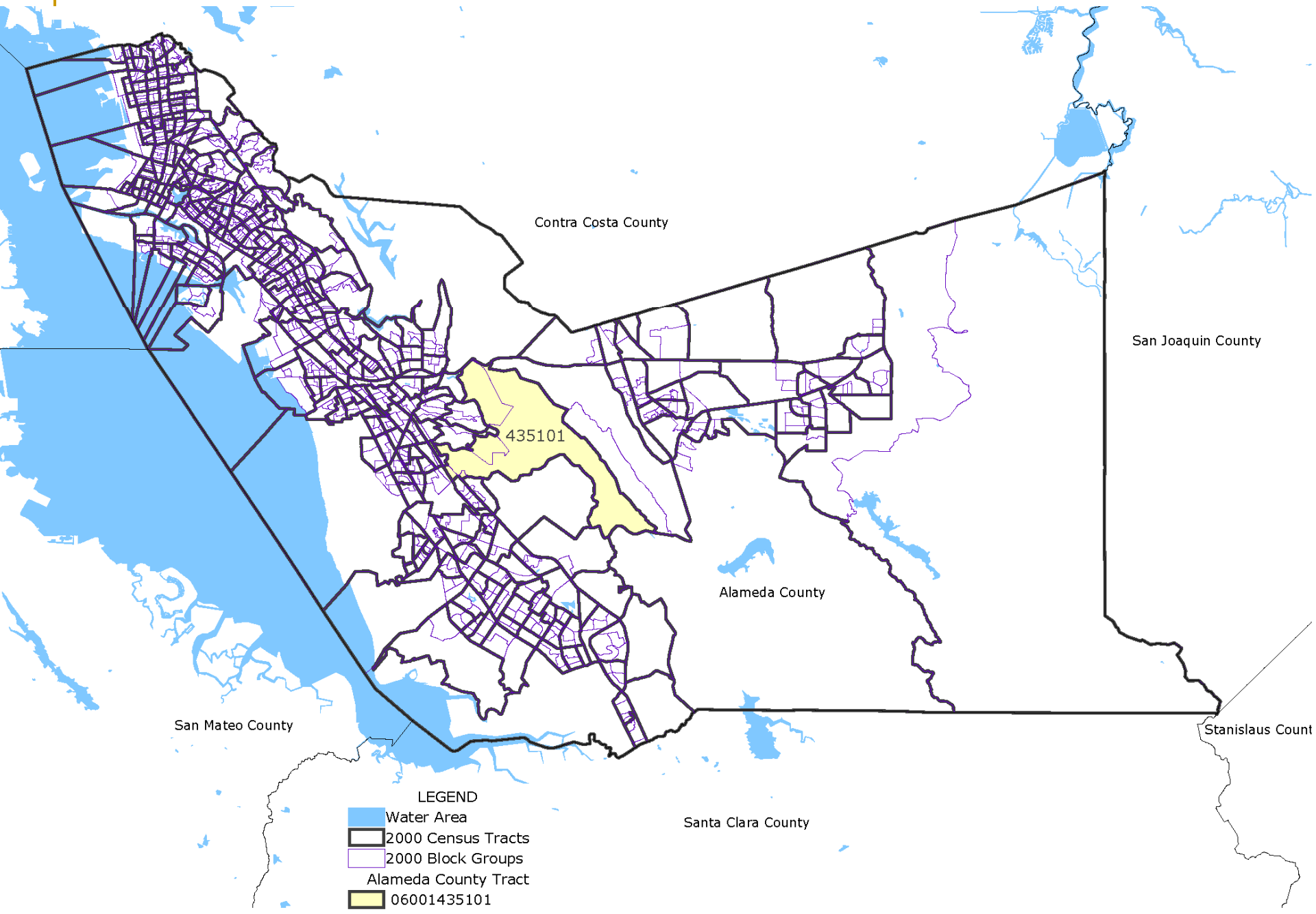
2000 Census Tracts (321 tracts in county)





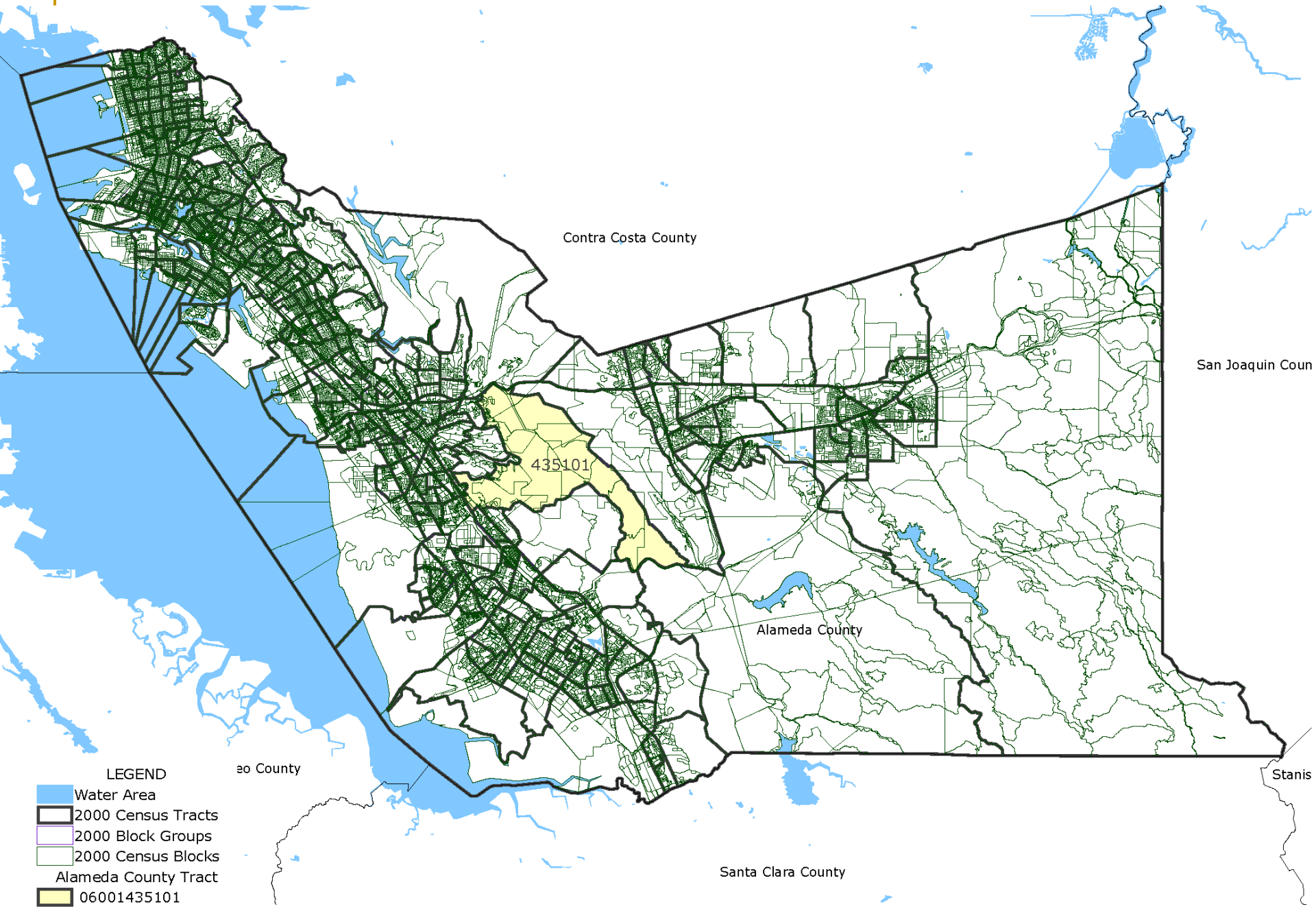
# Alameda County, California

2000 Census Block Groups (983 block groups in county)



# Alameda County, California

2000 Census Blocks (14,931 blocks in county)

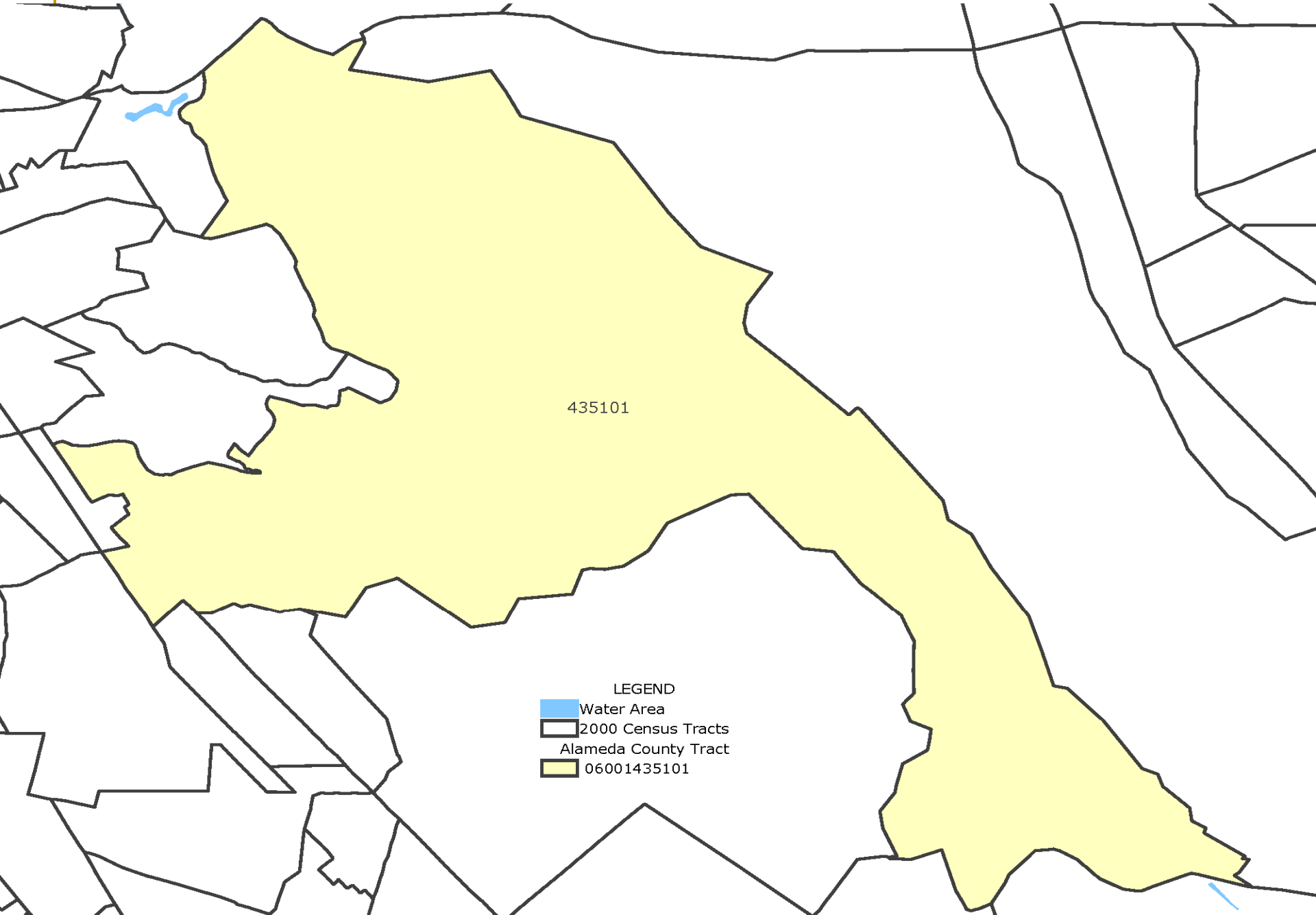


## LEGEND

- Water Area
- 2000 Census Tracts
- 2000 Block Groups
- 2000 Census Blocks
- Alameda County Tract
- 06001435101




Alameda County, California

2000 Census Tract 435101



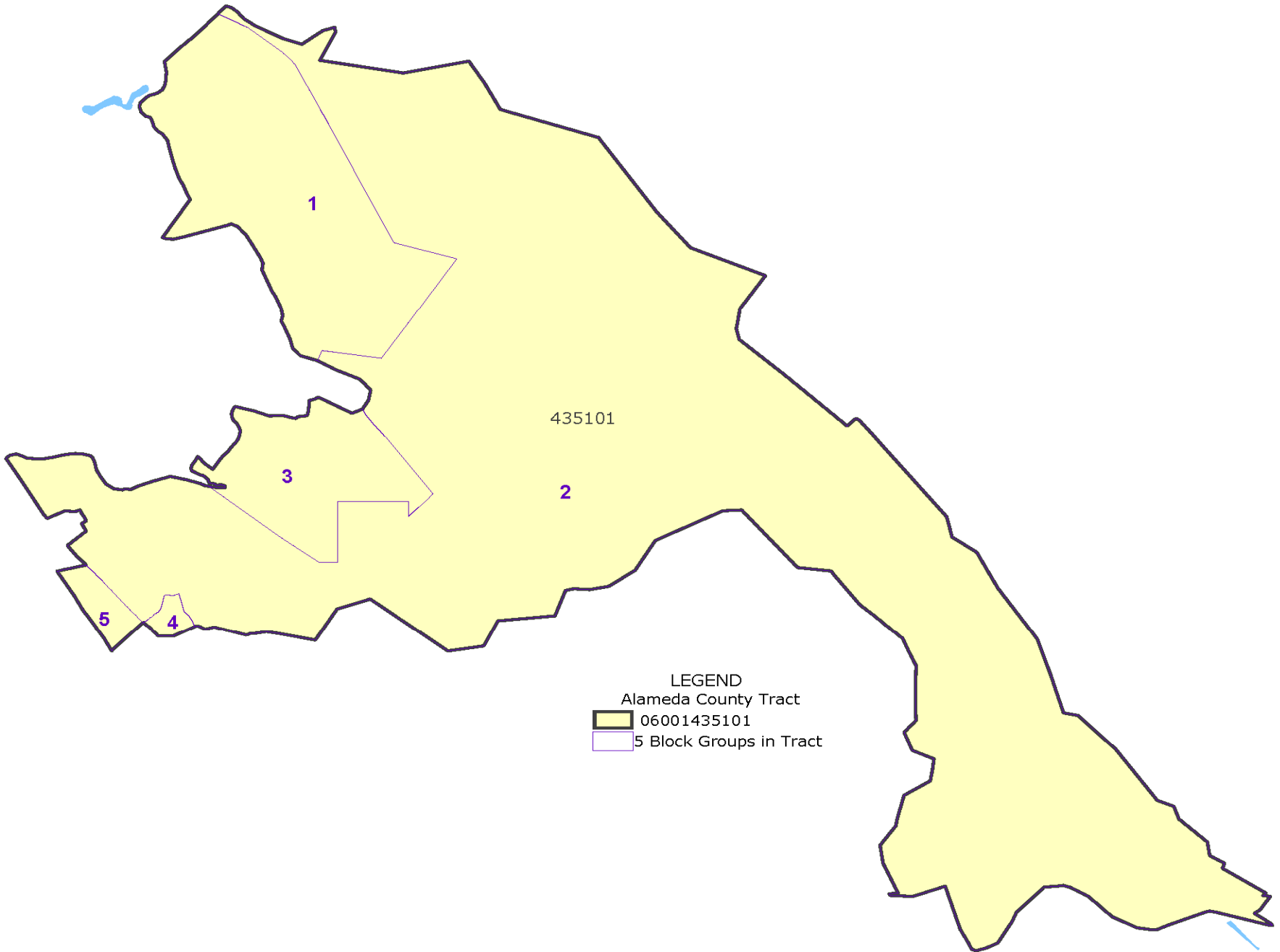
435101

LEGEND

-  Water Area
-  2000 Census Tracts
-  Alameda County Tract  
06001435101

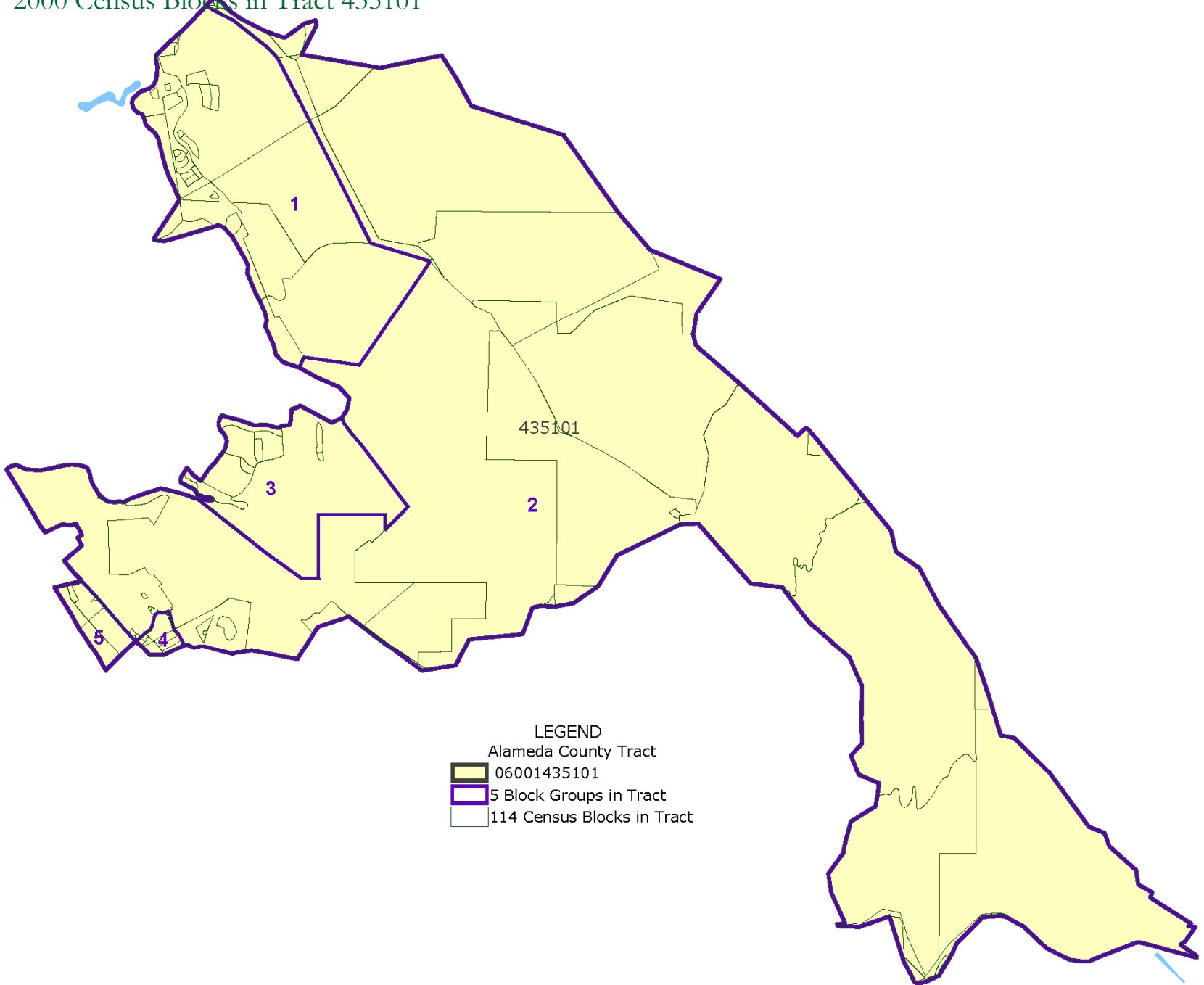
Alameda County, California

2000 Census Block Groups in Tract 435101



Alameda County, California

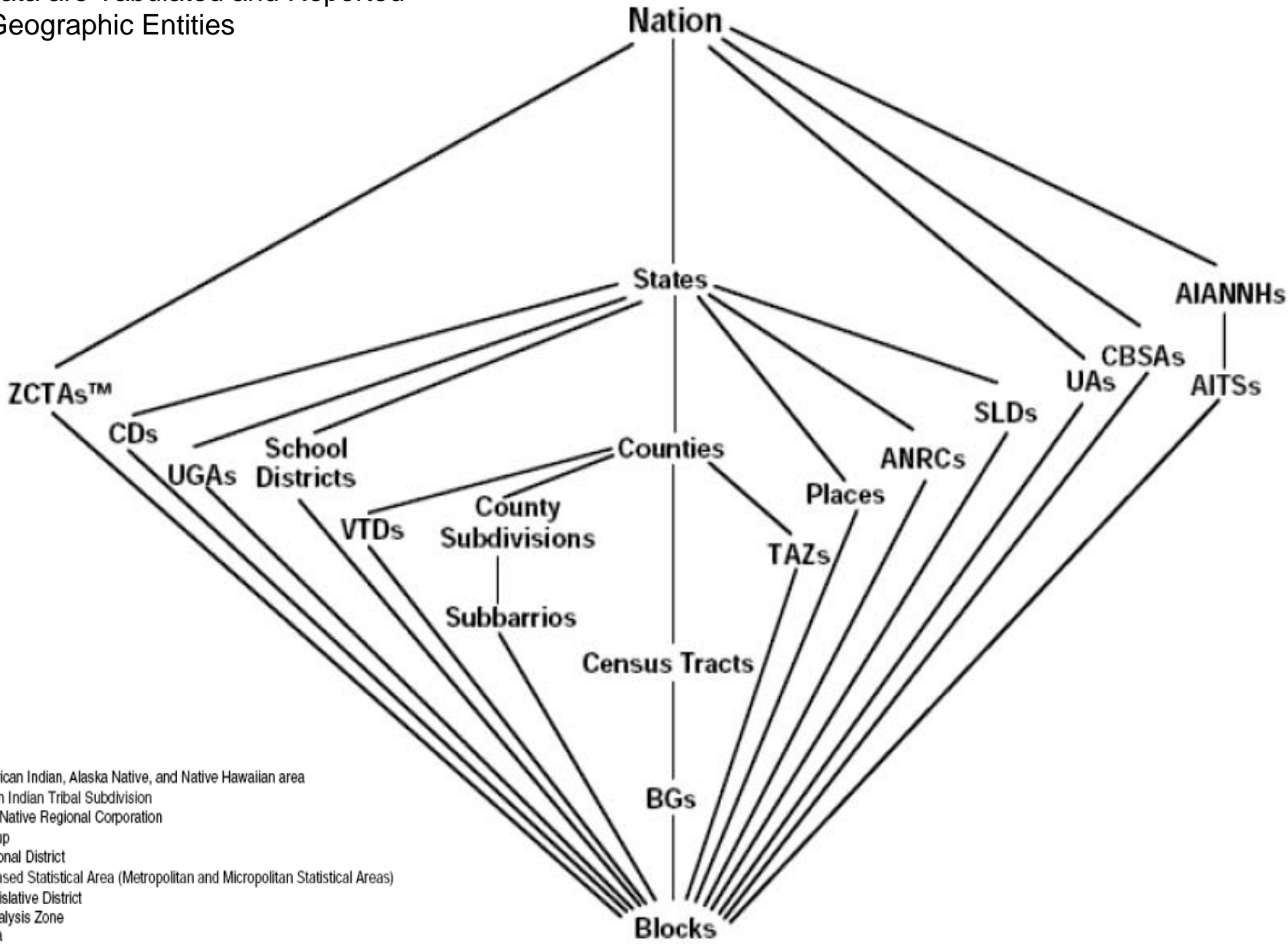
2000 Census Blocks in Tract 435101



LEGEND

- Alameda County Tract
- 06001435101
- 5 Block Groups in Tract
- 114 Census Blocks in Tract

PL94 Data are Tabulated and Reported for All Geographic Entities



- AIANNH: American Indian, Alaska Native, and Native Hawaiian area
- AITSS: American Indian Tribal Subdivision
- ANRC: Alaska Native Regional Corporation
- BG: Block Group
- CD: Congressional District
- CBSA: Core Based Statistical Area (Metropolitan and Micropolitan Statistical Areas)
- SLD: State Legislative District
- TAZ: Traffic Analysis Zone
- UA: Urban Area
- UGA: Urban Growth Area
- VTD: Voting District
- ZCTA™: ZIP Code Tabulation Area

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# U.S. Census Bureau TIGER/Line

Topologically Integrated Geographic Encoding and Referencing system

## San Francisco Census Geography: units of analysis

### Census 2000

**5,830 census blocks**

**575 census block groups**

**176 census tracts**

### Census 2010

**7,386 census blocks**

**581 census block groups**

**197 census tracts**

# Election Data! Are those needed???

Voting Rights Act: Section 2

## Section 2 – Majority Minority Districts

- >Minority group must be large enough to constitute a majority in the district (50%+)
- >Minority group must be geographically compact
- >Minority group votes cohesively
- >There must be evidence of polarized voting against the minority group

**NOTE: Sec 2 does NOT prohibit the drawing of “influence seats” nor considering racial/ethnic Communities of Interest**



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# Sec 2 assessment and the ACS

- Bartlett v Strickland:
  - Need >50% of Citizen Voting Age Population
  - Which data source to use?
  - Limitations of ACS CVAP data

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# Electoral Geography

## **Precincts**

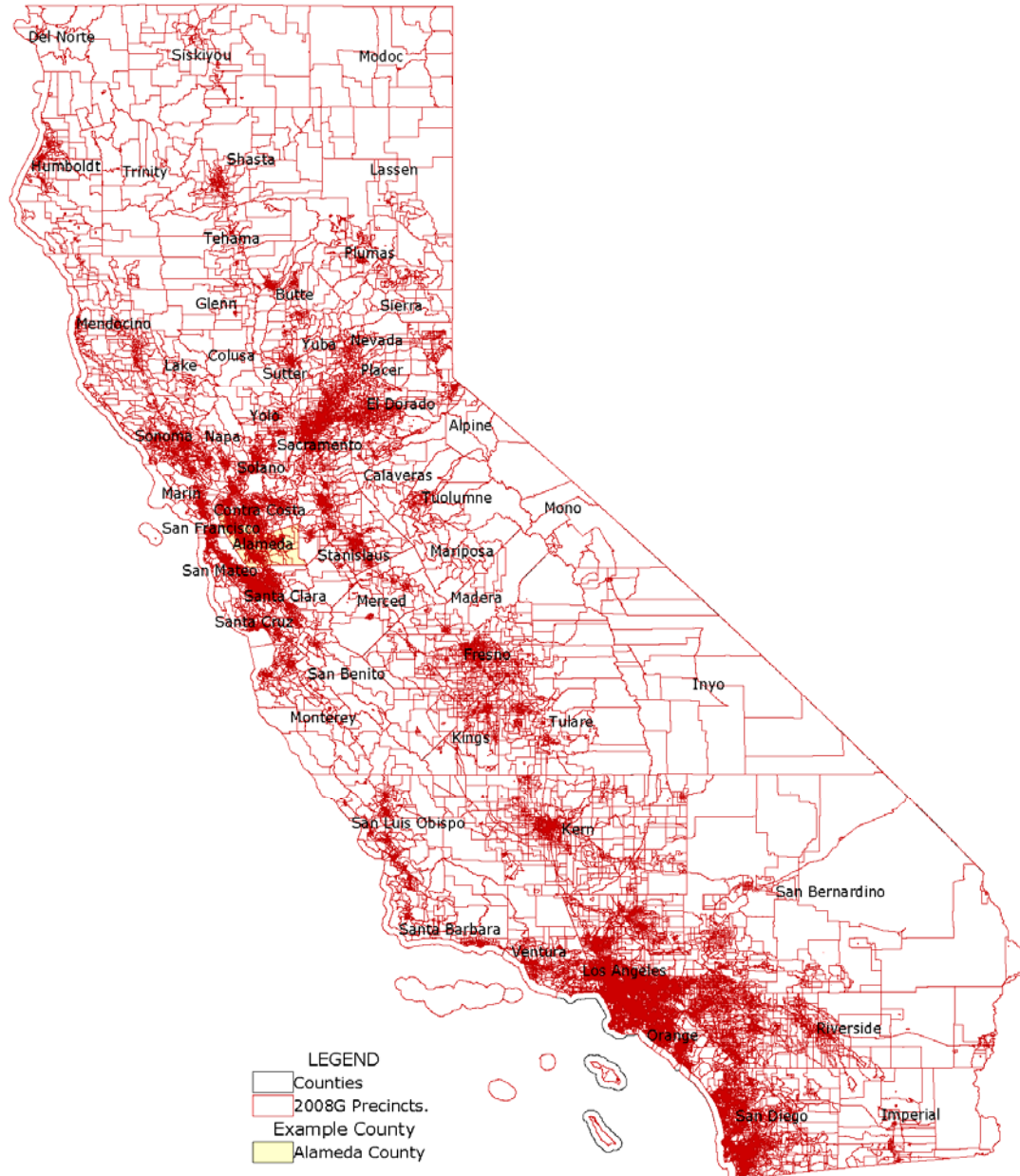
- Smallest unit of analysis for reporting of electoral data.
- Many precincts change with each election**

## **Electoral geography that must be redistricted:**

- Assembly, Senate, and Congressional districts
- City Council and County Board of Supervisor districts
- Board of Equalization districts
- County Hospital Board of Trustees districts, Community College districts, Water districts, Transportation districts, Mosquito Abatement districts, etc.

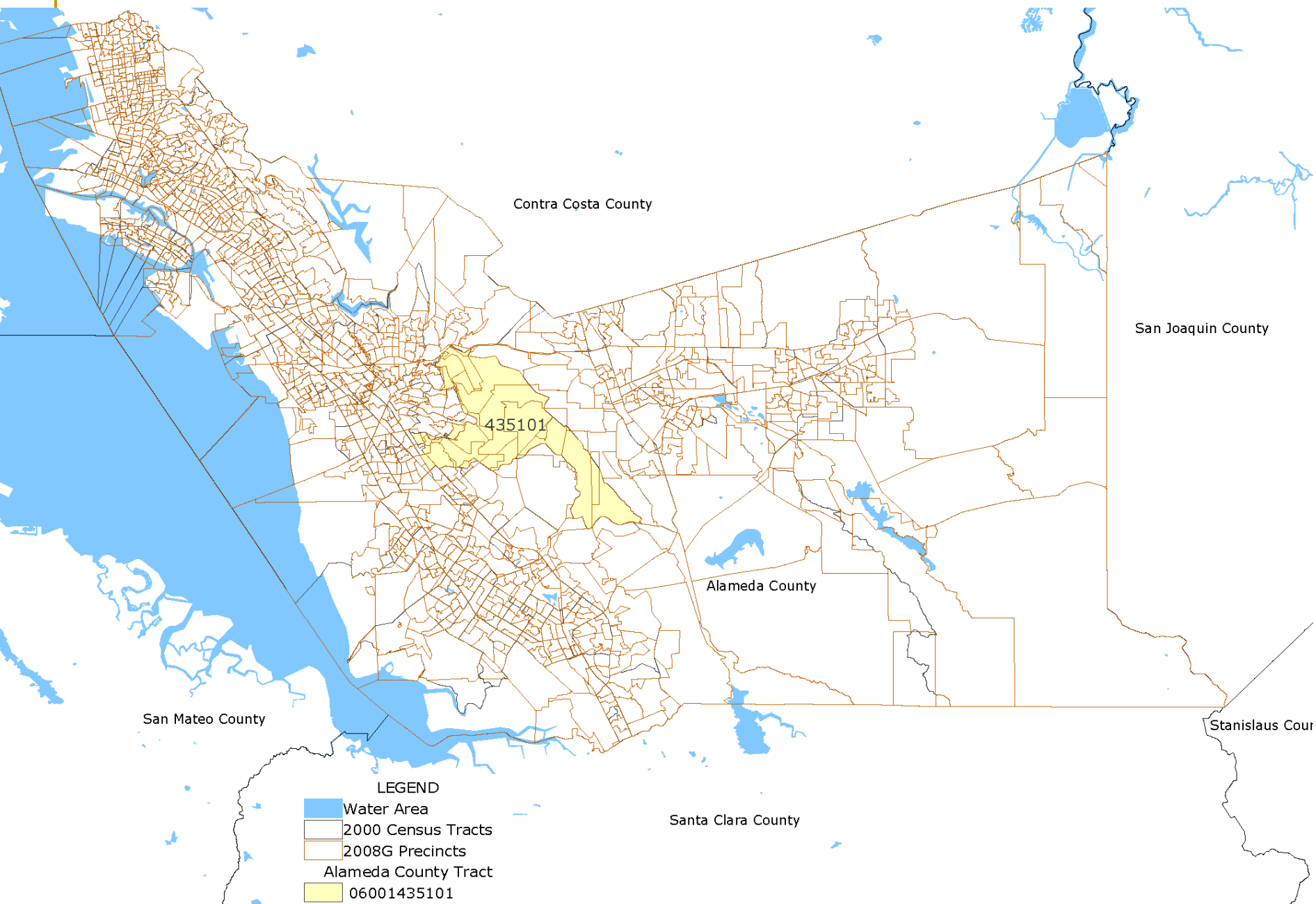
# 2008 California General Election

## 62,404 Precincts in the State



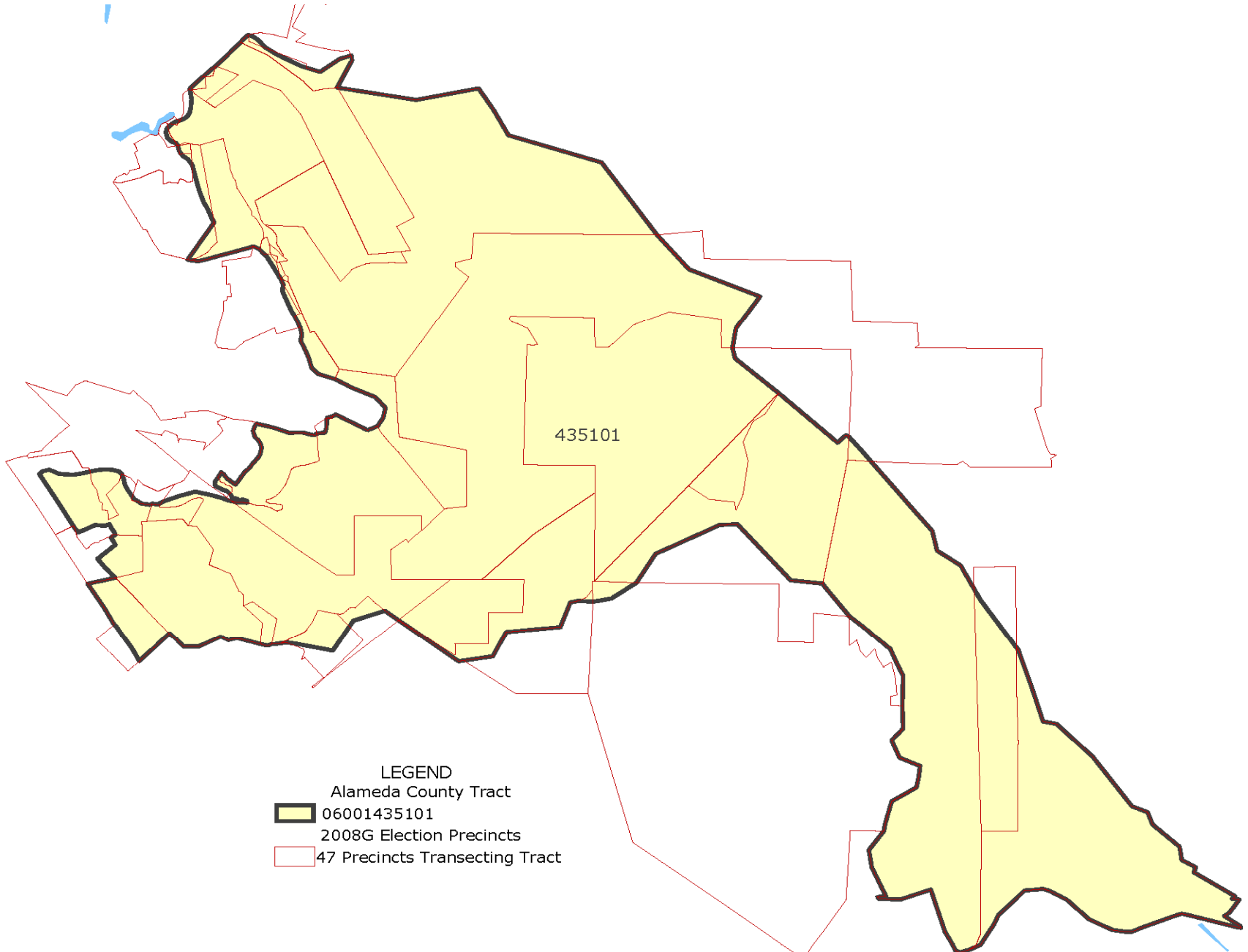
# Alameda County, California

## 2008 General Election Precincts (1,504 in county)



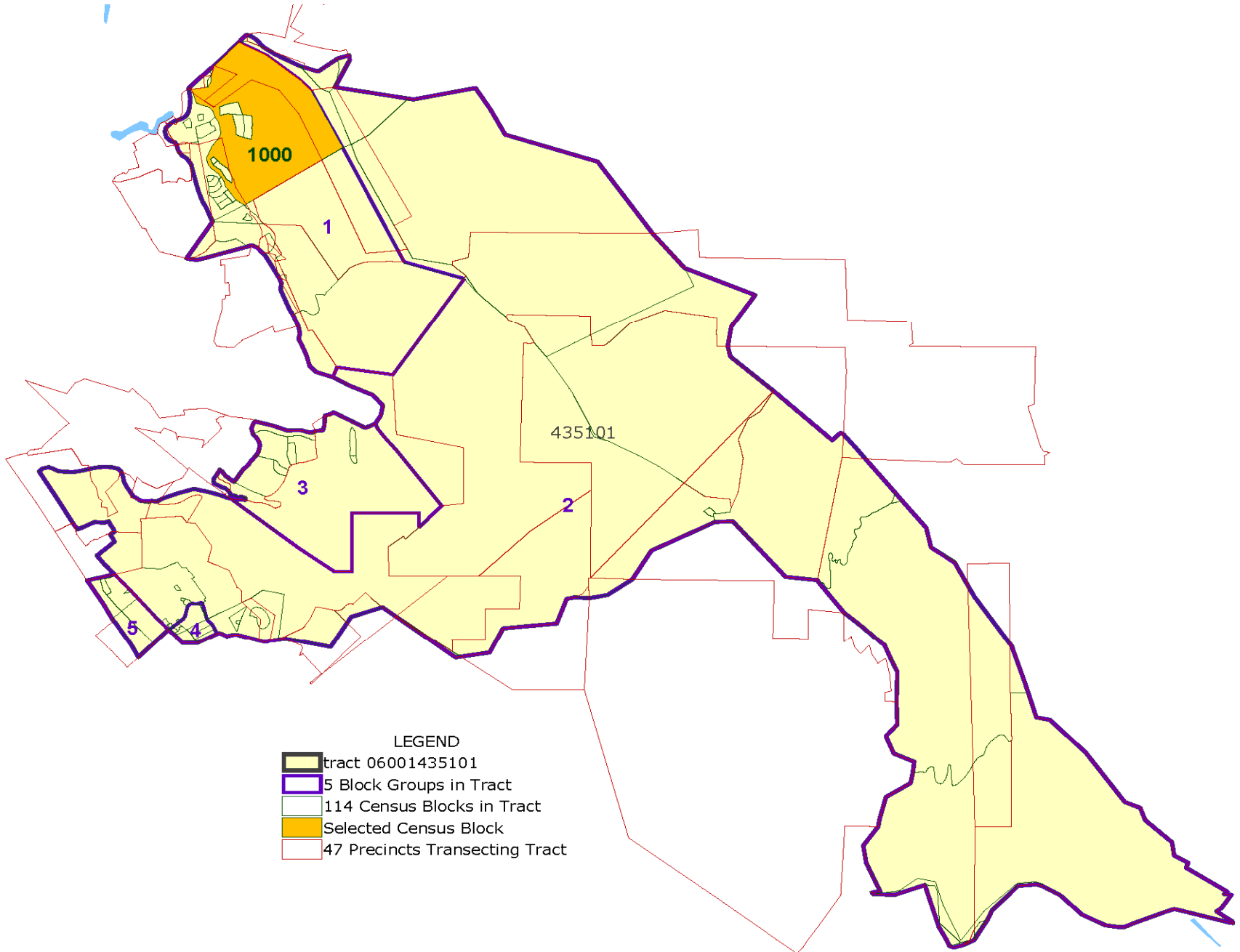
# Alameda County, California

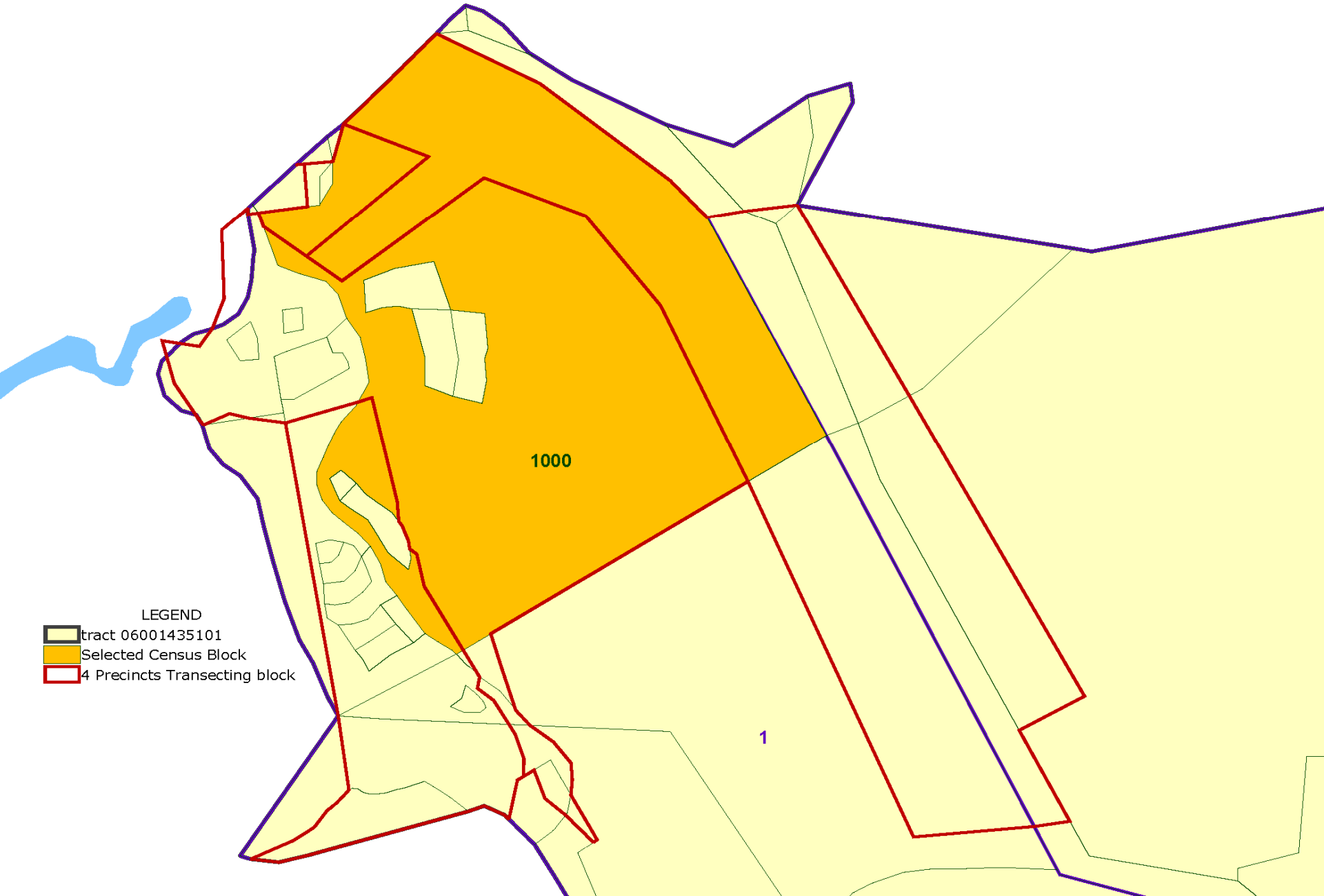
2008G Precincts that are contained or partially contained in 2000 Census Tract 435101



# Alameda County, California

2000 Census Tract 435101





LEGEND

- tract 06001435101
- Selected Census Block
- 4 Precincts Transecting block

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# Data and reporting geography

- PI94-171
  - Census block (constant for 10 years)
- Statements of Vote (SoV)
  - Voting precinct (frequent changes)
- Statements of Registration (SoR)
  - Registration files: individual level data



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# SoV & SoR

- SoV variables:
  - Total Vote
  - Votes for Races and Propositions
- SoR variables:
  - Total Registration
  - Party ID
  - Sex/Gender
  - Age
  - Cycles Registered
  - Race/Ethnicity – surname matched

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# Data Complexities:

- Task: build dataset comparable on same unit of analysis over time ... available for redistricting (2011)
- Why is this difficult?
  - Election results reporting geography changes frequently (precincts)
- What's the solution?
  - Answer: census blocks

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# The Statewide Database

- The State of California's Redistricting Database
- History
- Data Collection:
  - Census
  - Registrars of Voters/County Clerks

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# A Quick Overview of the Statewide Database (SWDB)

The Database includes:

- I. Census & Electoral Data
- II. Census & Electoral Geography
- III. Conversion files
  
- IV. Data Reports & Maps
- V. Redistricting & Census News and Court case archive
- VI Redistricting Research

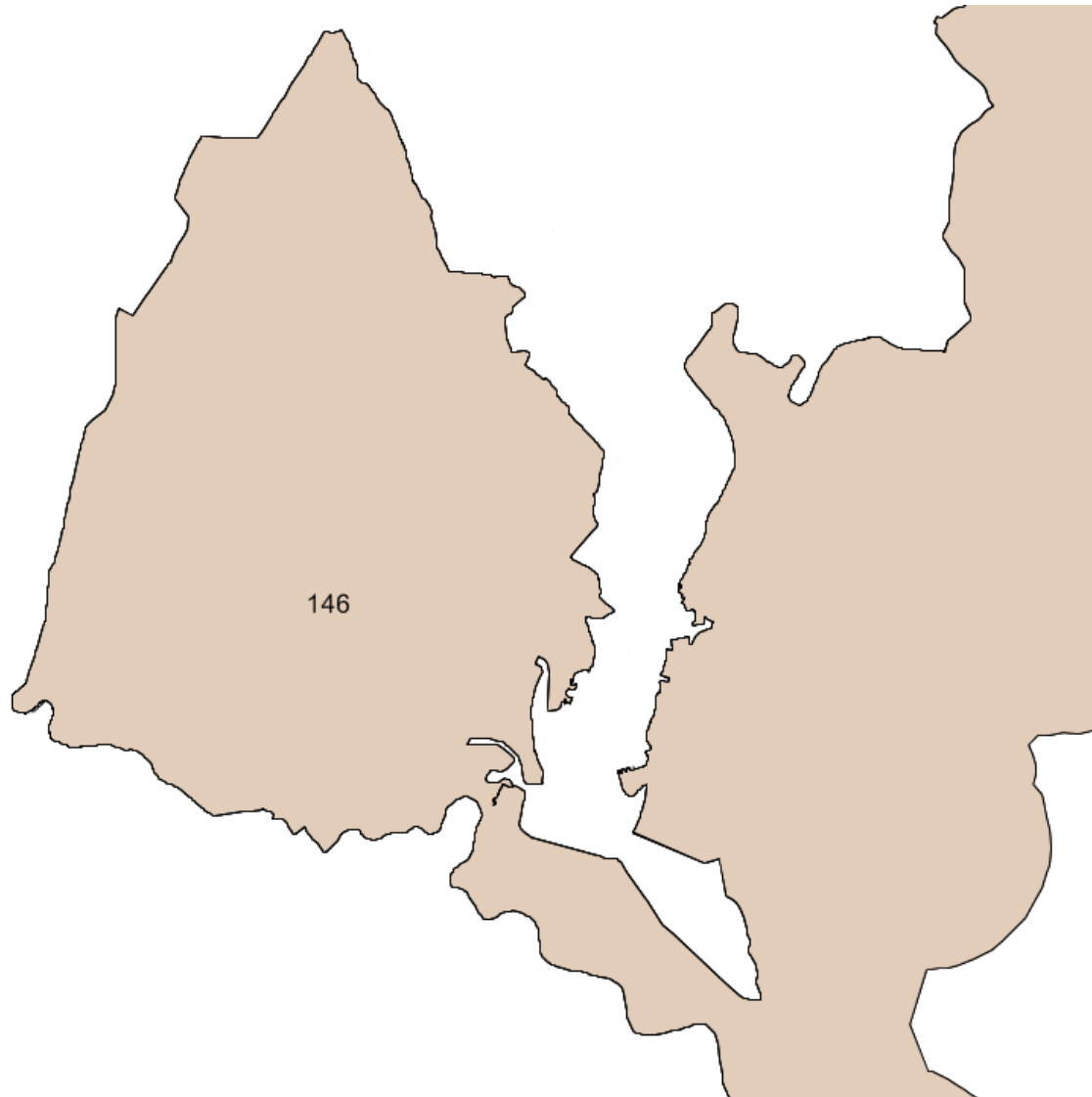
<http://swdb.berkeley.edu>

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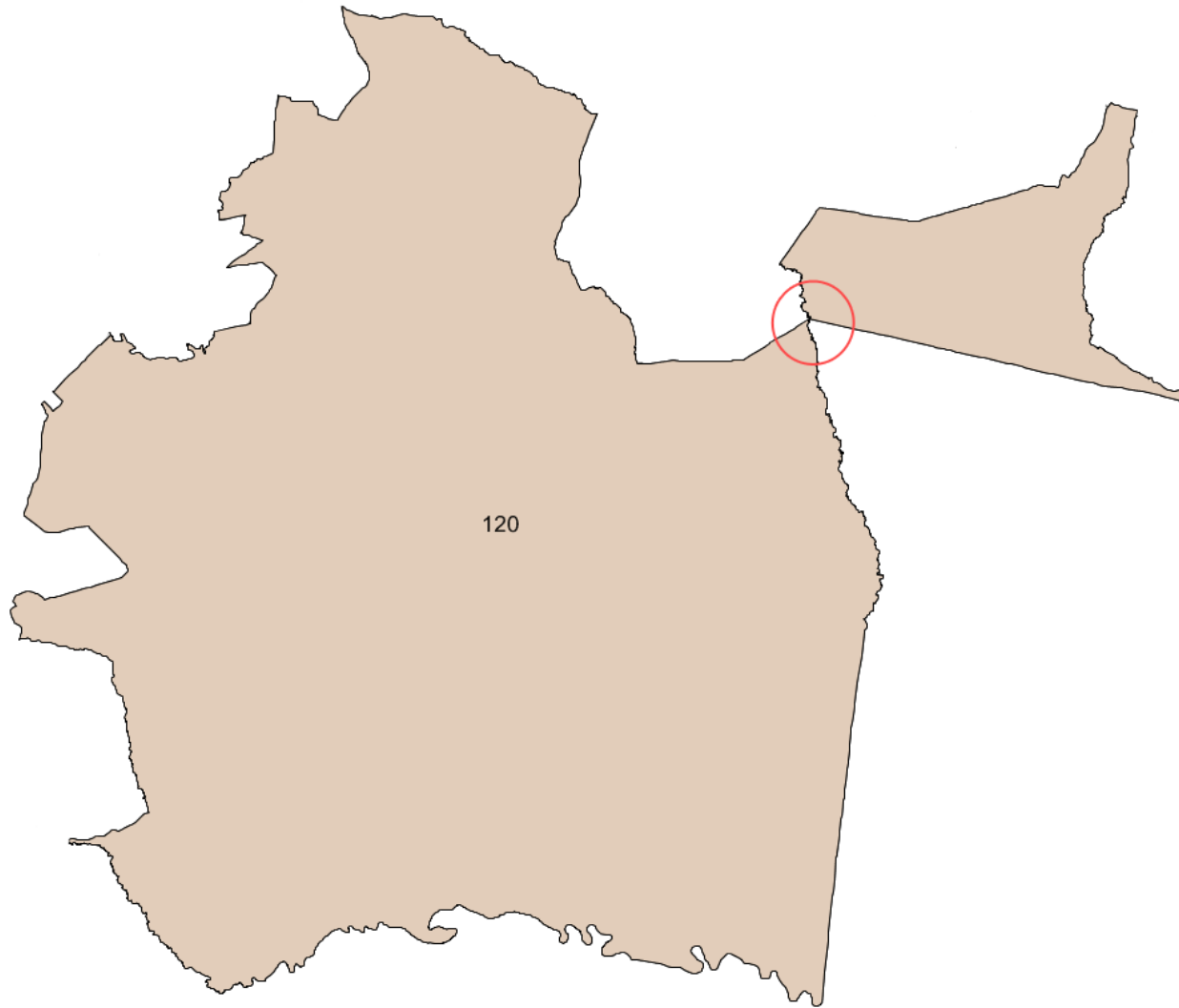
# Contiguity:

- Definition: A district in which all parts are connected to each other
  - in other words:
- A district in which one may travel from any location to any other location without crossing the district boundary

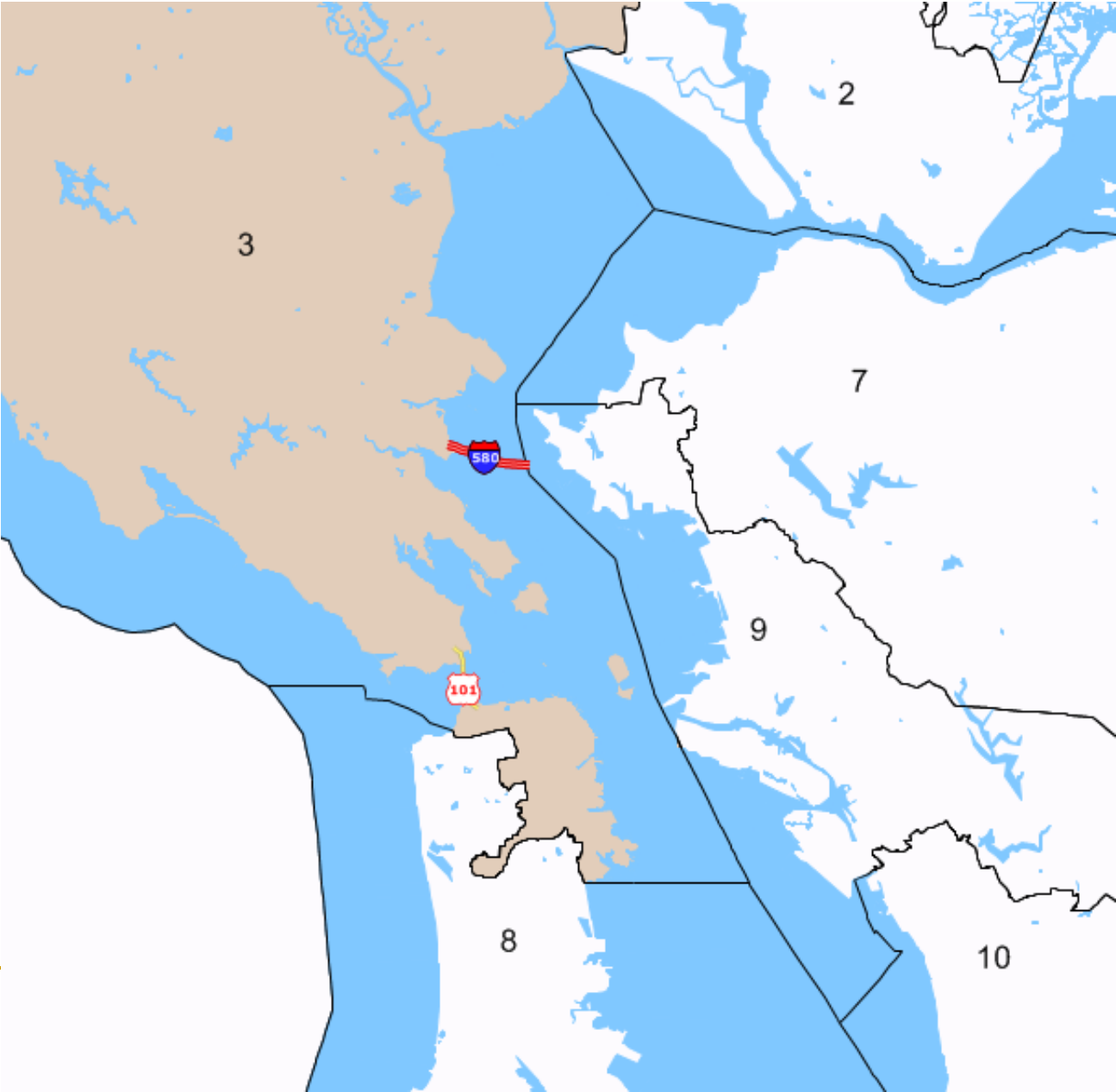
# Land Contiguity



# Point Contiguity

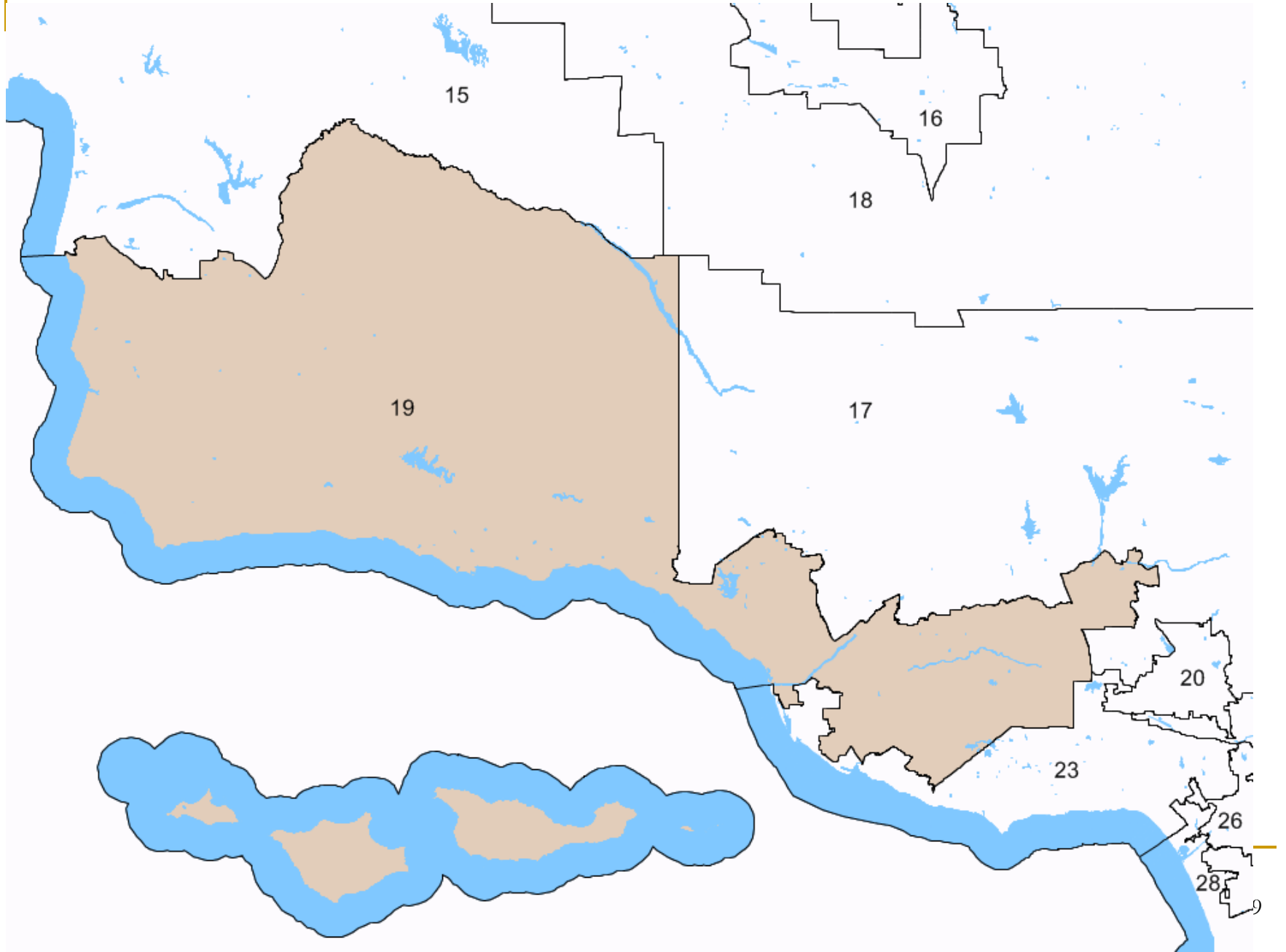


# Contiguity





# Water Contiguity



# Water Contiguity



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# Criteria for which data are not easily available:

## Communities of Interest:

What is a Community of Interest? It depends...  
Group of people with specific common interest  
("actual shared interests" Miller v Johnson, 1995)  
Can be defined geographically

## What are they NOT?

**In CA State Redistricting:** Communities of interest shall not include relationships with political parties, incumbents, or political candidates

**In SF:** no limitation in charter

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## Community of Interest definitions may include:

- Organizing around schools, school districts
- Transportation hubs
- Community Centers
- Dog parks
  
- If race/ethnicity are raised, it may summarize:
  - Shared experiences
  - Access (or lack of) to education
  - Higher number of kids per household
  - Younger overall population

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## Communities of Interest continued:

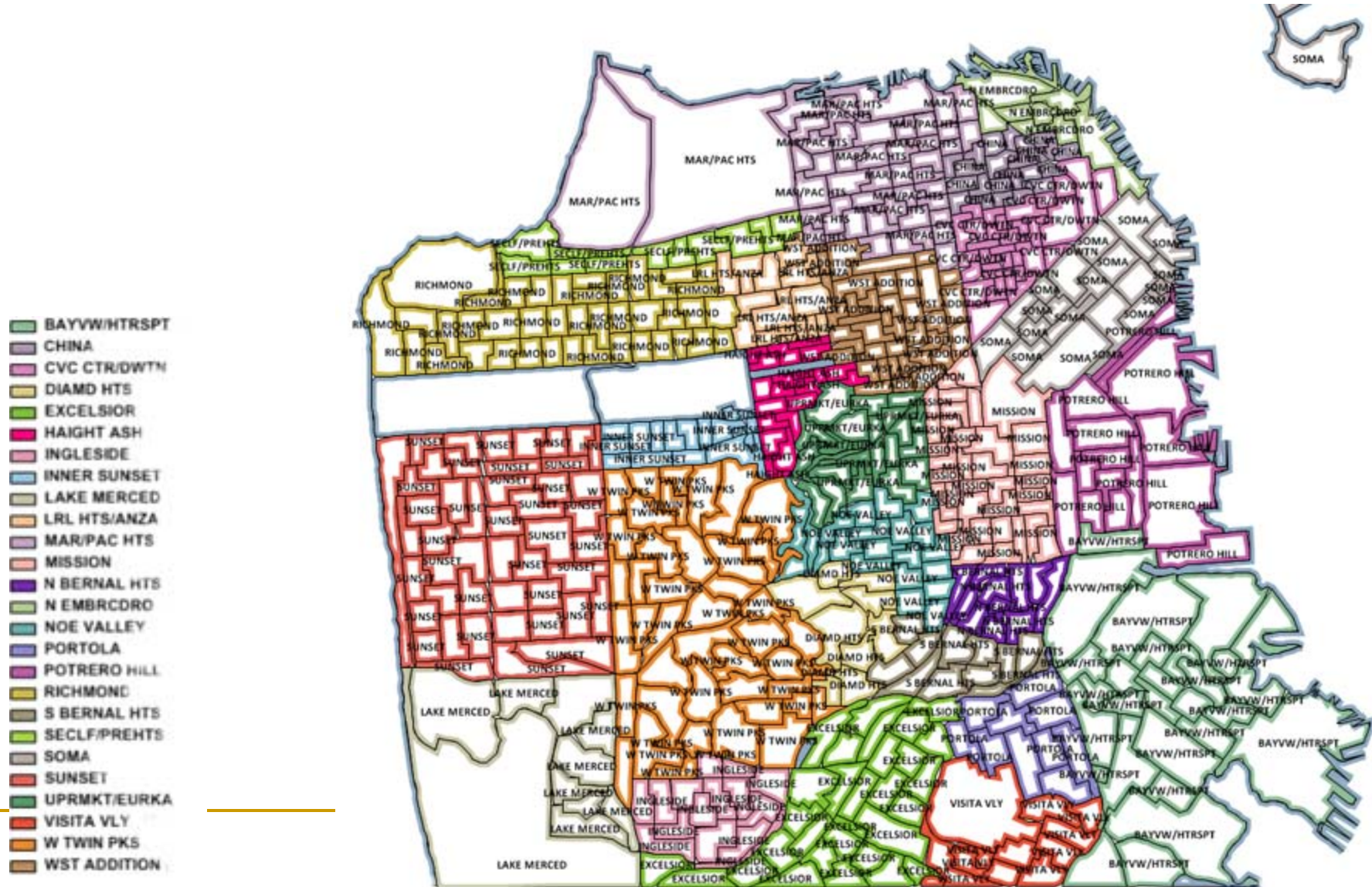
- Defining them top-down versus bottom-up
- Big difference here! (variables etc.)
  - Race/Ethnicity (SCOTUS cases: stereotyping)
- Defining Cols may be especially important within the API group: multi/pan-ethnic populations

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# Criteria for which data are not easily available:

- Neighborhoods:
- Vary in size
- Varying Definitions (Planning, DoE, feedback from community?)
- “Recognized neighborhoods” – which ones will the taskforce use?

# The 26 DOE Neighborhoods

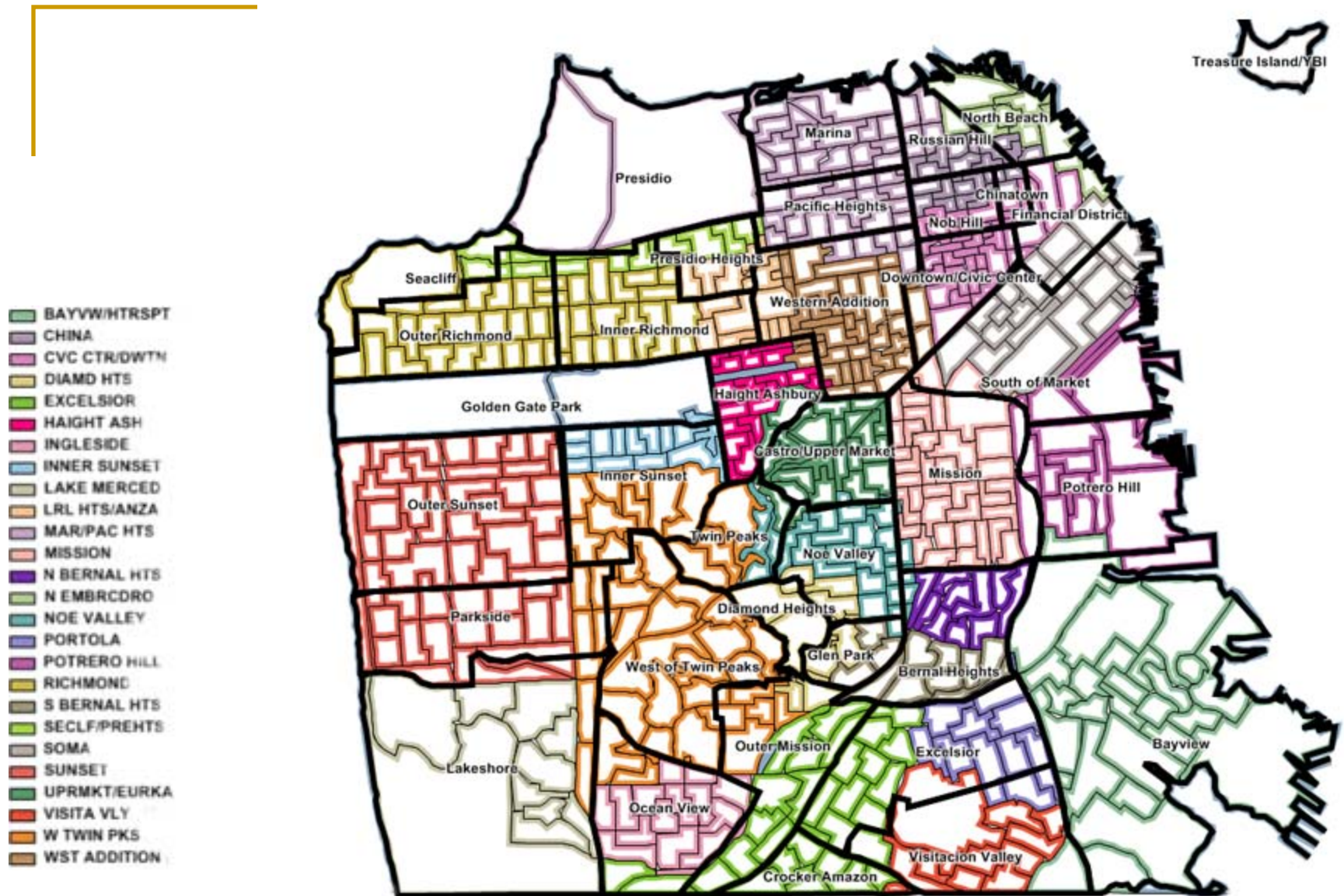


# The 37 Planning Neighborhoods





# Overlay of the 37 Planning neighborhoods (black lines) & the 26 DOE delineated neighborhoods (colored areas)

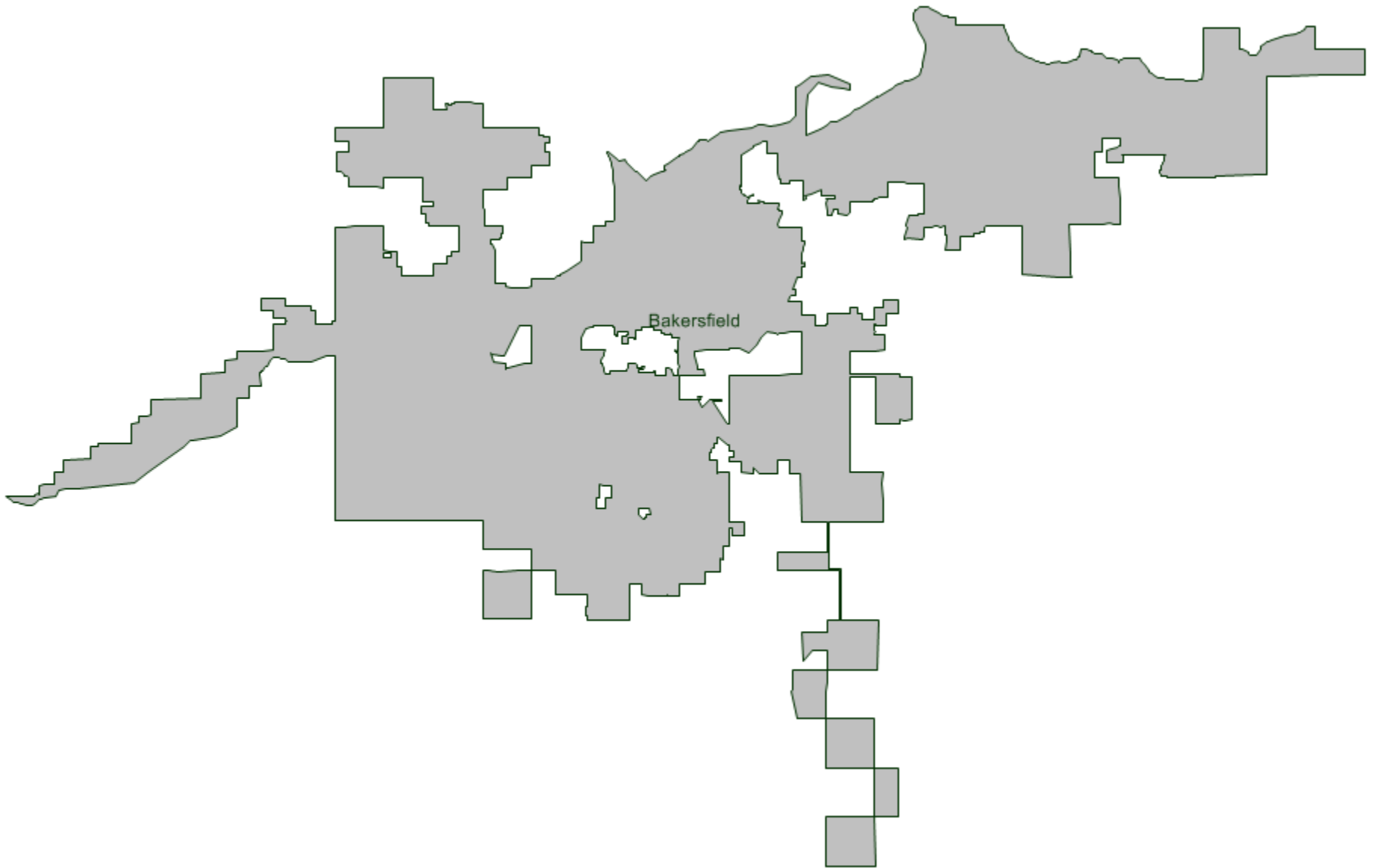


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# Compactness:

- Addresses the geography of the district
- Many different measures developed
- “eyeball approach” “appearances do matter”
  - (Shaw v Reno)
- Assumed to “guard against all types of gerrymandering” “drastic departures from compactness are a signal that something may be amiss”
  - (Karcher v. Daggett)

Is this compact? Is it contiguous?



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## Redistricting Criteria and Data used:

Equal Population – PL94-171

Compliance with Federal Law (VRA) – PL94-171, SOR, SOV

Contiguity – Census Geography

Preserve Communities of Interest – Public Testimony,  
Data/Geography submitted by Public

Preserve recognized Neighborhoods – Data/Geography submitted  
by City/County, Public Testimony

Compactness – Census Geography

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Are there other criteria the task force would like to use?

- Business districts?
- Any other criterion?

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# Public Participation and Outreach

- Importance of having a public process
- How can people participate?
- Accepting public testimony, maps, data
  
- Website with Educational Materials
- Educational workshops throughout the city

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# Draft Components of an Educational Workshop

General:

Time frame: 1 1/2 to 2 hours? (longer if necessary?)

Accessible location with parking/close to public transit

Interpreters?

Wall maps of current districts with data (over/under)?

Handouts:

Current districts with data

Redistricting Criteria to be used

Timeline?

How to participate, resources etc.

Form for public testimony for those that don't want to speak in public

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# Draft Components of an Educational Workshop

cont.

Presentation:

15 -30 min presentation on:

- redistricting in general
- criteria applicable to the Sf BoS redistricting

What the Task Force needs from the Public

Outline of how submission of public testimony would be most useful (i.e. outline of how to document a community of interest, etc)



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# Considerations:

Public testimony?

How long may people speak?

Will there be feedback from the task force?

If questions are asked, will anyone respond?

Note taking?

GIS analyst to show geography being discussed?

Timeline