

MADISON ELEMENTAR Y

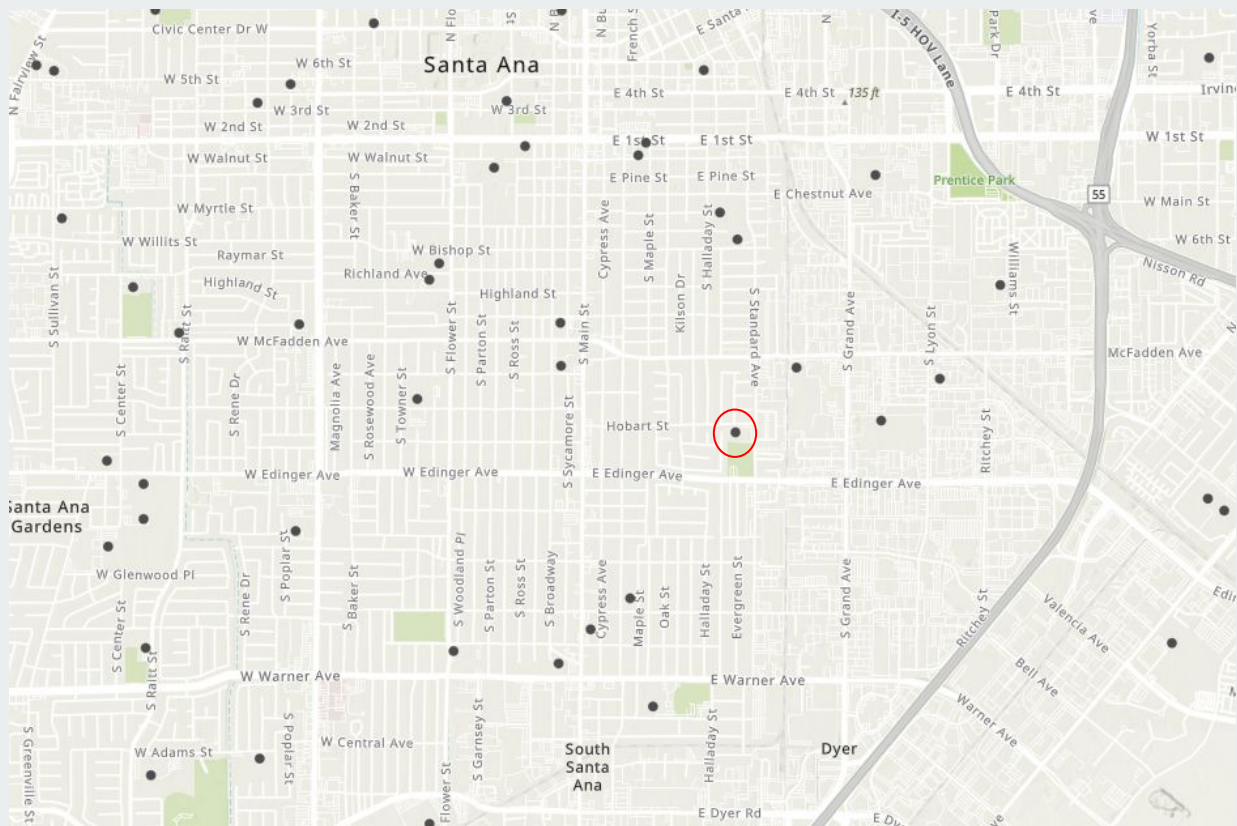
ORANGE COUNTY
CALIFORNIA, USA

ECOED CASE STUDY
CLIMATE CHANGE AND
ENVIRONMENTAL JUSTICE
PROGRAM (CCEJP)



INTRODUCTION

Focal School Location



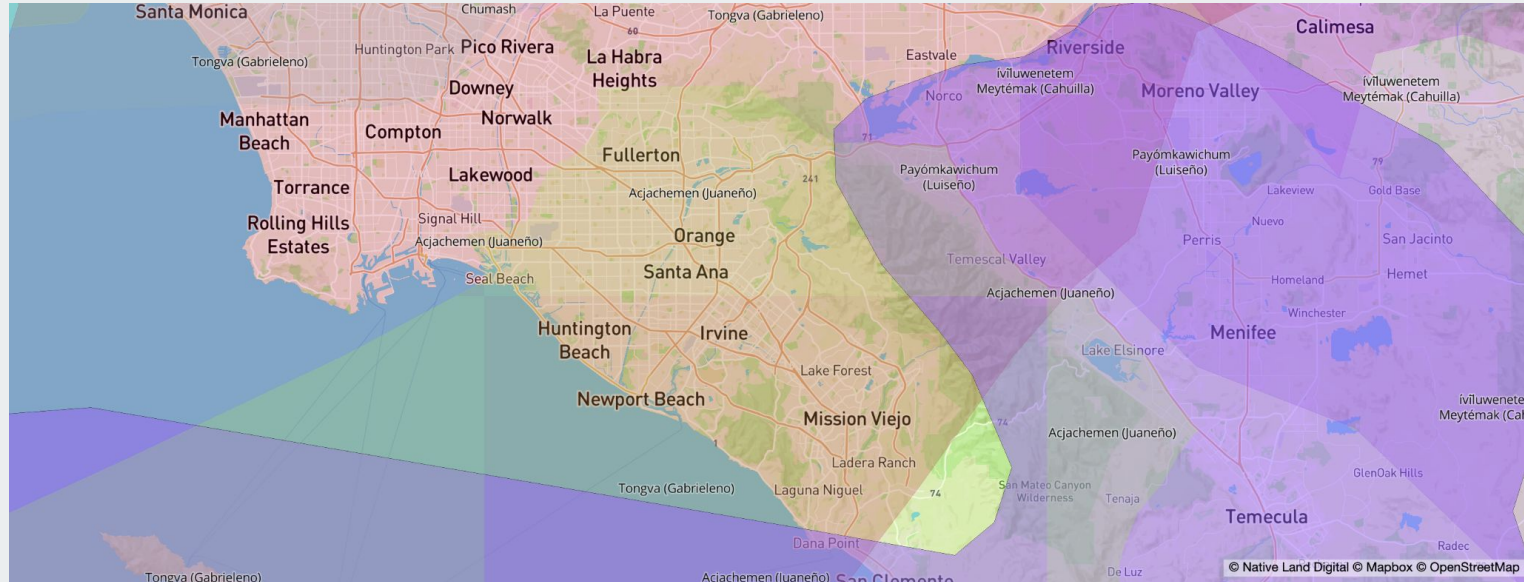
Caption: Our case study will focus on Madison Elementary, which is located in Santa Ana in Orange County. The school serves 989 students, 96% of whom are Latino/a.

Source: <https://arcgis/zsfrD>

Geographic Context

SECTION 1: MEDIA, SETTING & ASSETS

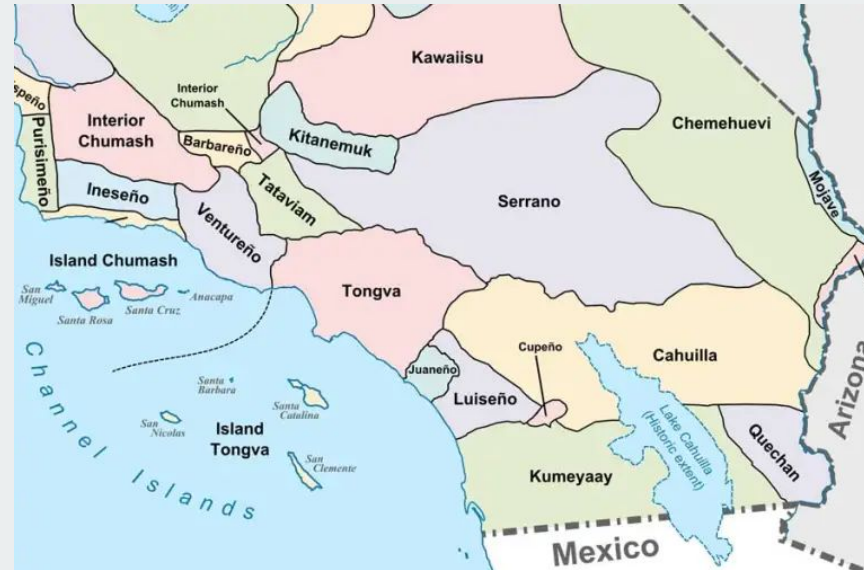
Native Land Acknowledgement – Luis F



Caption: This figure shows unceded land belonging to the Tongva and the Acjachemen Tribes in Orange County. It's important to note their presence because Native American tribes like the Tongva and Acjachemen, are environmental stakeholders in our community and they don't have federal recognition which is important.

Source: <https://native-land.ca/>

Native Representations of Land – Bella



This map shows the Southern California indigenous lands prior to colonization, Madison elementary was located in the Tongva village.

Source: <https://native-land.ca/maps/territories/tongva-gabrieleno/>

Setting Photograph (Evelyn)



Caption: Madison Park is right next to Madison Elementary, our school of interest. It's a popular park for people in the area. The Madison Park neighborhood is within the Industrial Corridor which has a lot of air pollution and contact with harmful substances.

Source:

<https://web.archive.org/web/20161029095039/http://www.panoramio.com/photo/109612366>

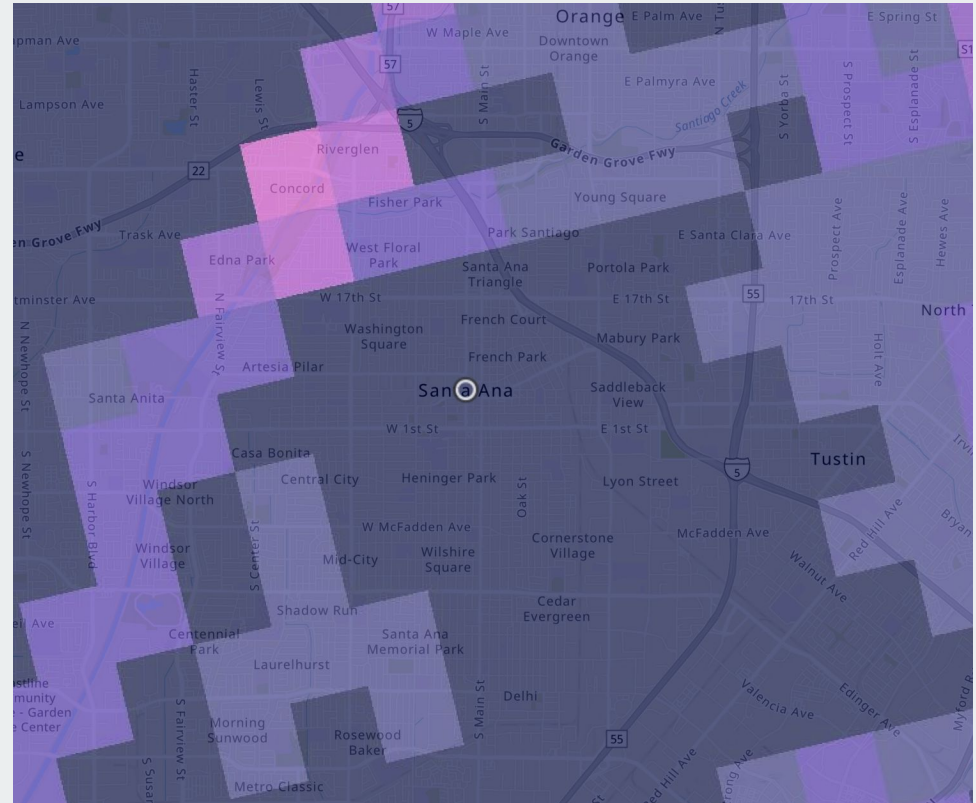
Natural Resources and Biodiversity Photograph

Biodiversity Map - Valeria

Caption :The species on the map shows how many different kinds of plants and animals live in each area. Higher numbers mean more rare or endangered species are likely to be found there.

Source:

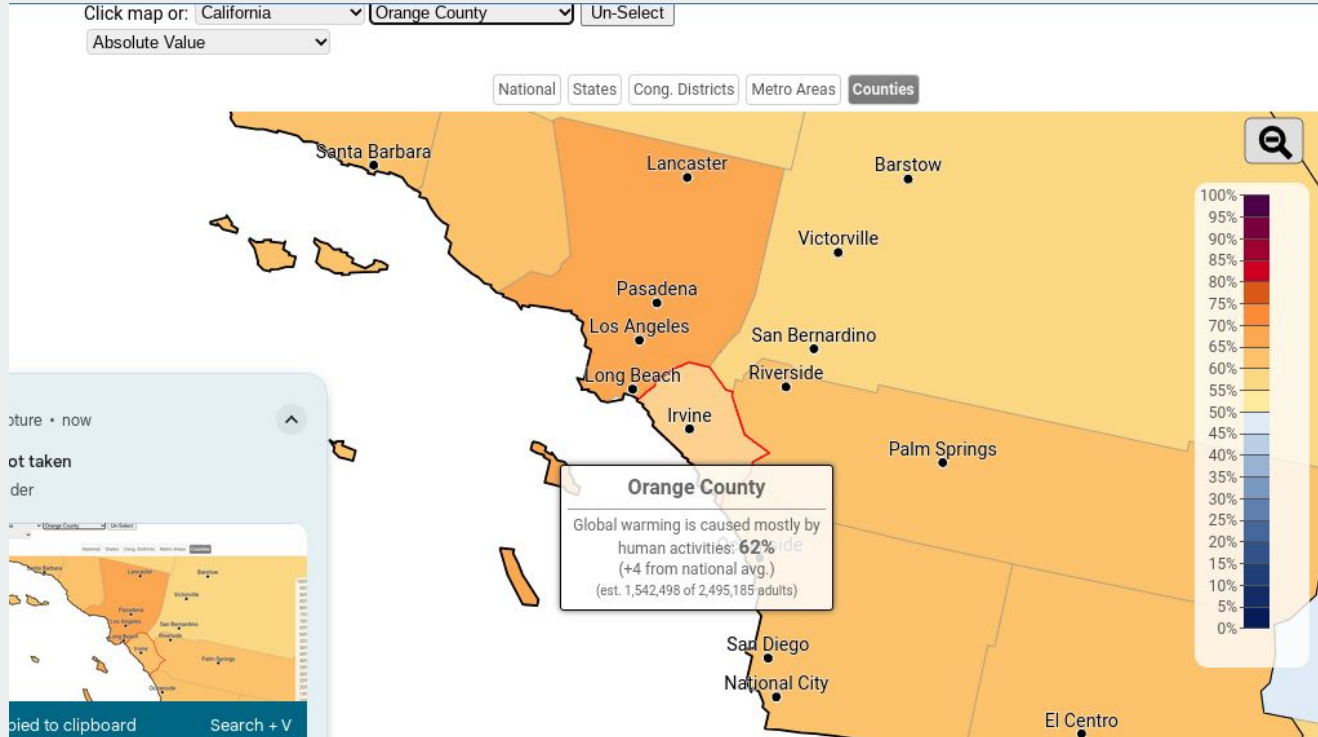
https://ucirvine.maps.arcgis.com/apps/instant/imageryviewer/index.html?appid=02f8371dd63146b8b390c11757c60b74&primaryLayerId=18a4339b168-layer-2&primaryLayerRenderer=SR_ALL¢er=-117.8999;33.8341&level=9



Crops Map

2020 Presidential Election Results

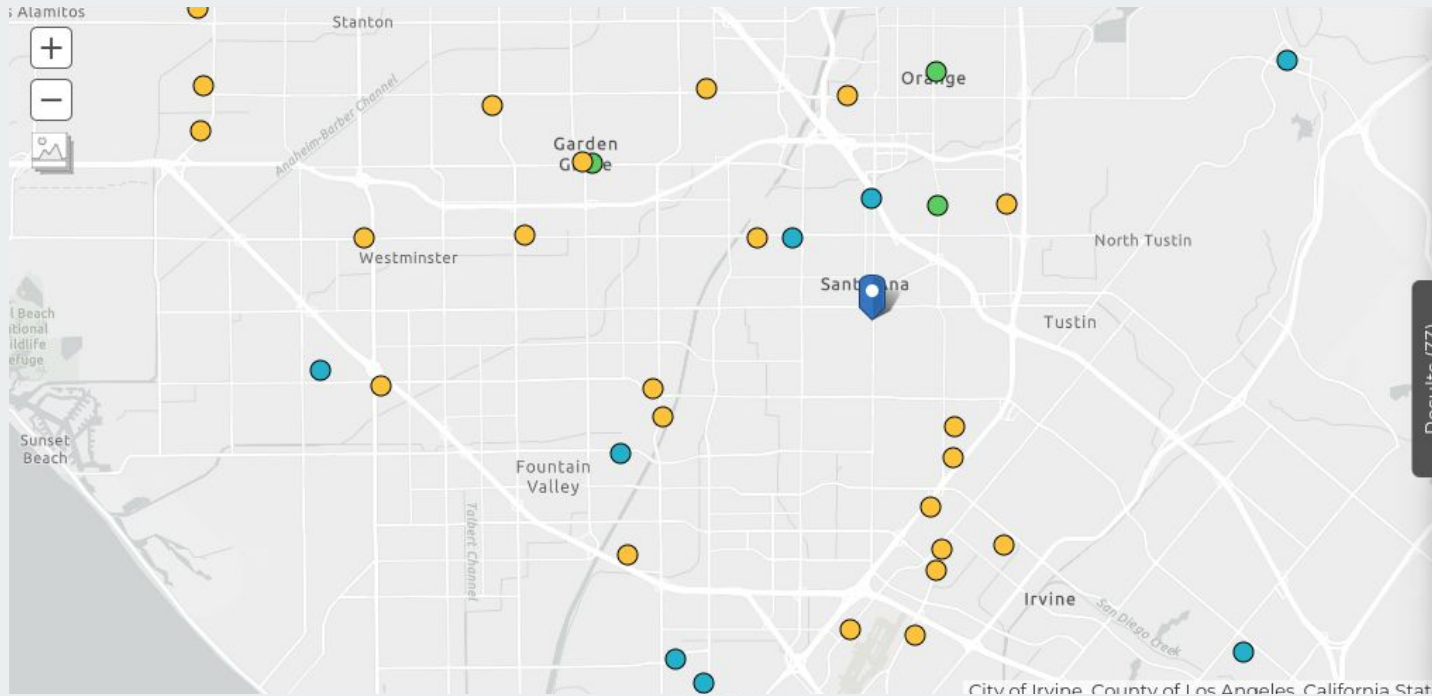
Yale Climate Change Opinion Map – Allen C



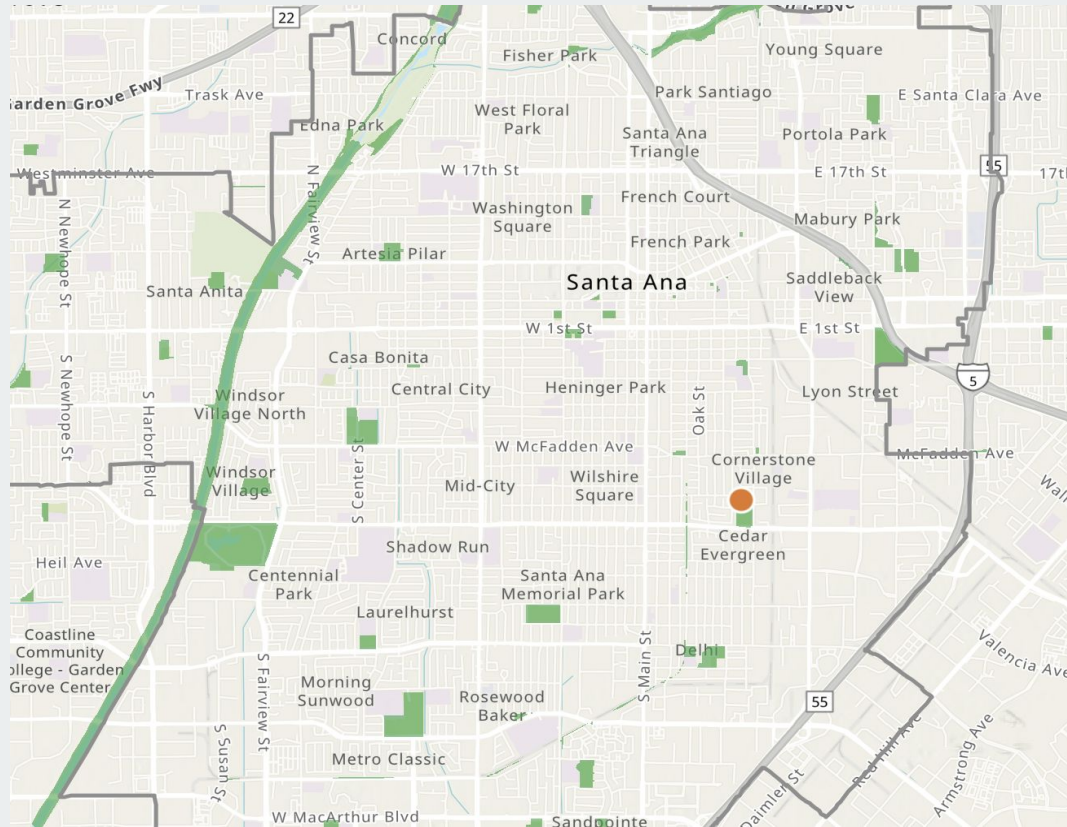
Caption: This map shows the percentage of people in a county who believe that global warming is caused by humans. climate change is caused by 62% of human activities in Orange County, which is higher than the national average (58%) but lower than the California average (64%).

Higher Education Map – briana

Not many public schools in the area. Most schools are private.



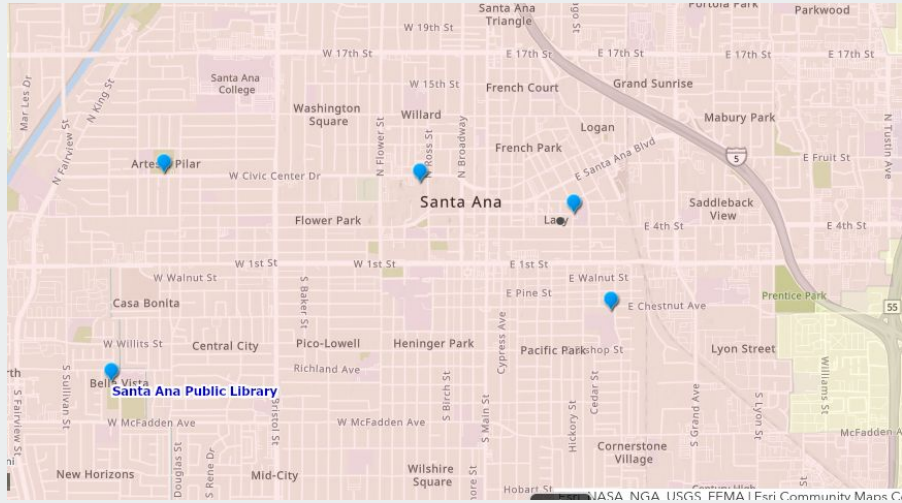
Playgrounds Map-Ariana



Caption: This Map it showcases that there is some greenland near Madison Elementary School named, “Madison Park.”

Source: <https://parkserve.tpl.org/mapping/index.html>

Libraries Map-Karen

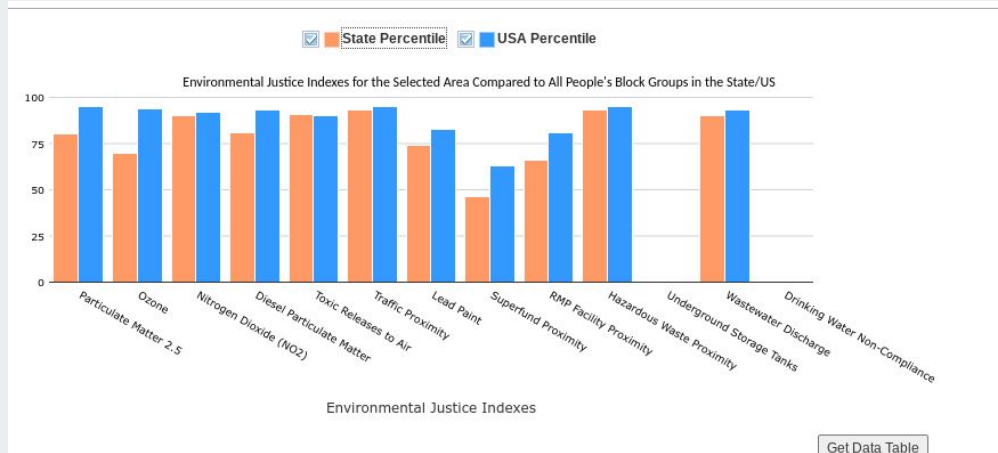


This Map show all the 6 different types of libraries spread around Santa Ana. Starting off with Santa Anas Public library, Garfield Community Center, Roosevelt-Walker Community Center, El Salvador Community Center, Jerome Teenspace And newhope Library Learning Center. Based on this map it is show that there are no nearby libraries in the further south of Santa Ana making libraries not accessible to nearby neighborhoods in the further south area.

<https://castatelibrary.maps.arcgis.com/apps/webappviewer/index.html?id=0cb00b3ff0774122969f3b3b1cbcbef4>

SECTION 2: HAZARDS

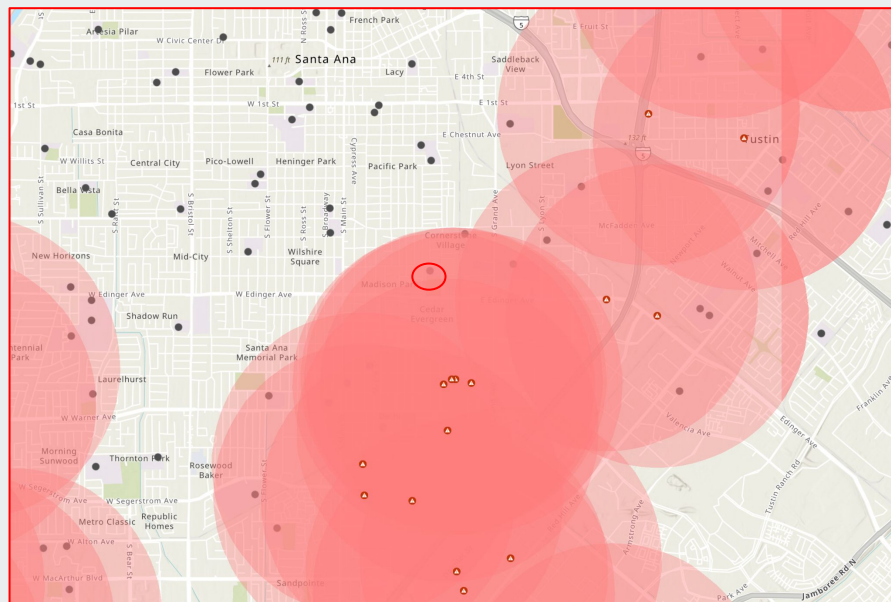
EJScreen Indexes– Karen



Santa Ana residents have extremely high exposure to many hazards such as hazardous waste being in a 95th percentile. Water Waste discharge in a 93th percentile. And PM 2.5 also in a 95th percentile compared to the rest of the country Santa Ana is one of the cities with high hazard levels.

<https://ejscreen.epa.gov/mapper/>

Fenceline Zones – bella



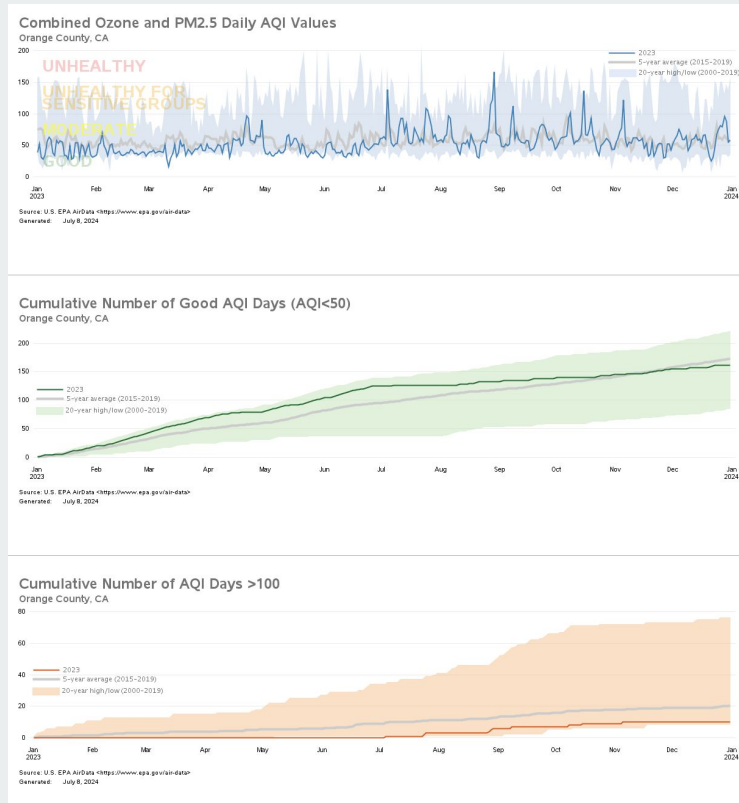
Madison Elementary is associated with 4 CalARP facilities the closest being less than a mile away. Three of the facilities are Gallade Chemical and one is Embee processing.

Source:

https://experience.arcgis.com/experience/9f4da24d17434e64a46a1d29b44b6c0b/page/Fast-Disasters/?draft=true&org=ucrvine#data_s=id%3AdataSource_5-CalARP_Facility_1_Mile_Buffers_1269%3A55

RMP Facility Proximity

Daily Air Quality Tracker Luis F



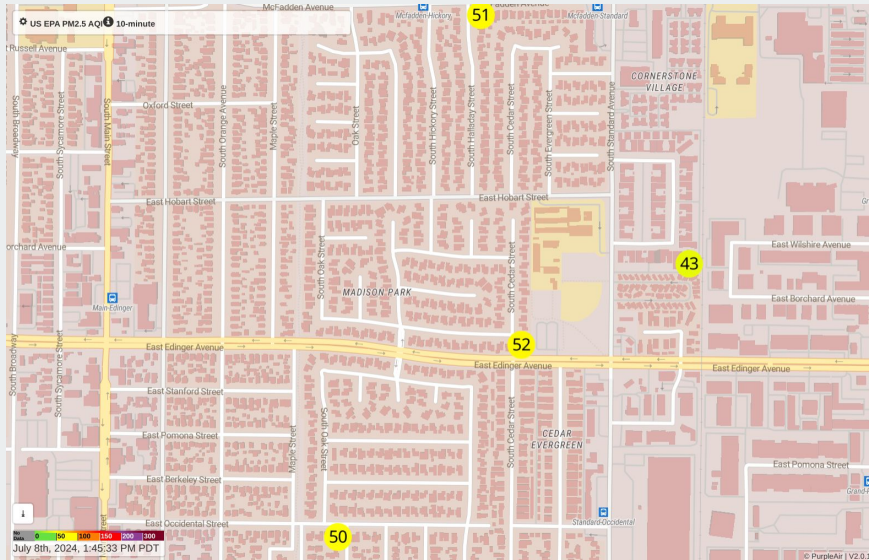
Caption: Orange County has had a consistent rate of being in the Highs for sensitive groups and Moderate groups in 2023.

Source:

<https://www.epa.gov/outdoor-air-quality-data/air-data-daily-air-quality-tracker>

Government Air Quality Monitors

Purple Air Quality Monitors - Evelyn



Caption: There are four purple air monitors close to Madison Elementary. They show that the air quality is currently acceptable with most being in the 40's and 50's.

Source: <https://map.purpleair.com/>

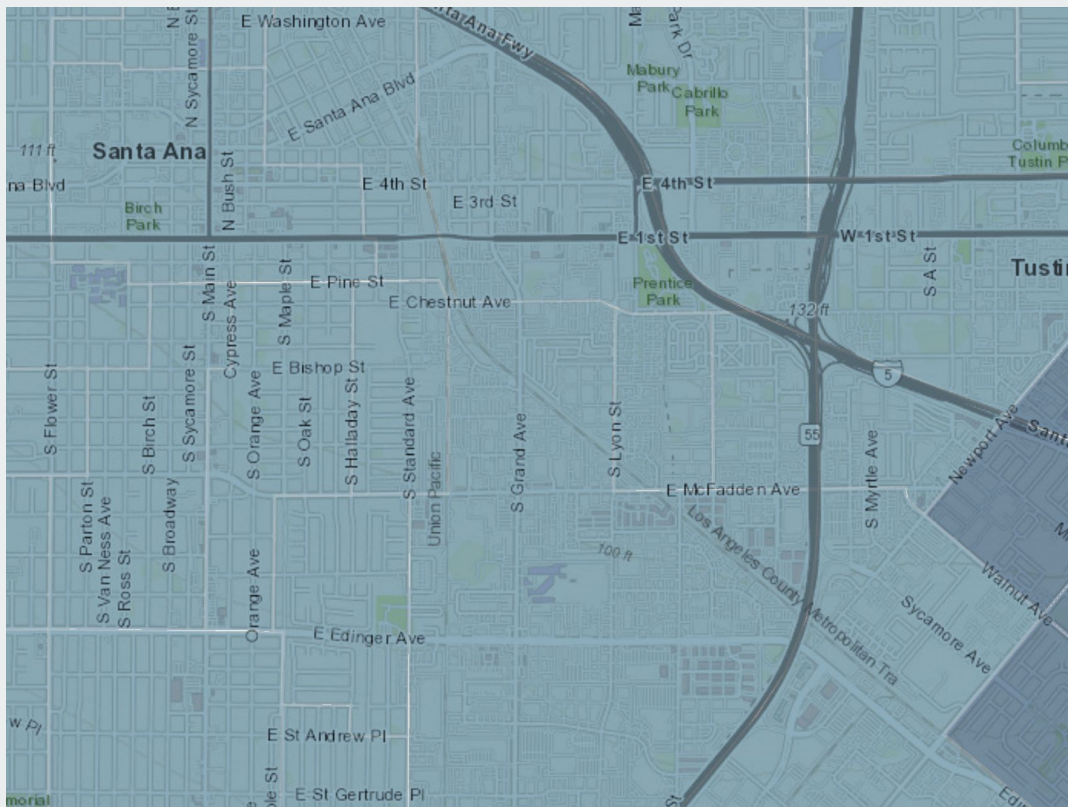
CalEnviroScreen Score

Particulate Matter 2.5 (PM2.5) Exposure

Ozone Exposure - Valeria

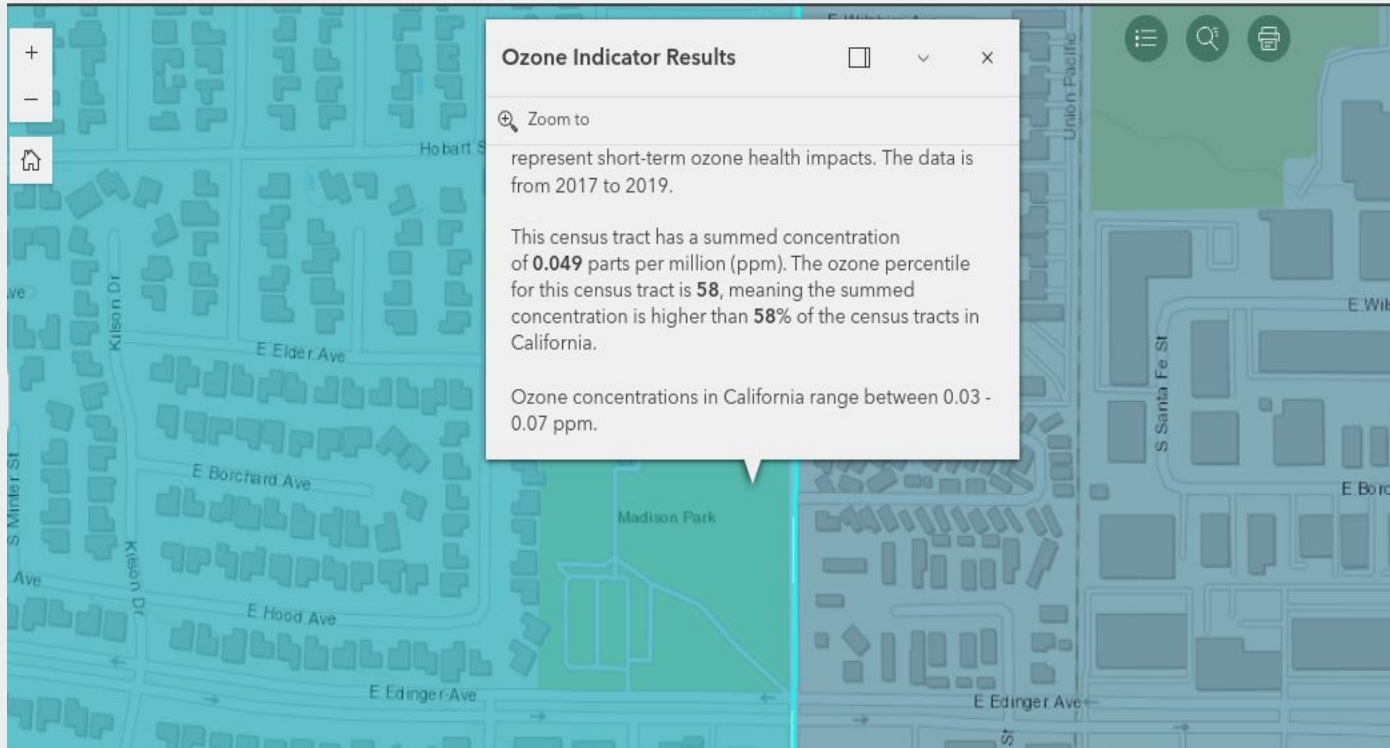
Caption: Madison Elementary is in an area that ranks around the middle (58th percentile) in California for how much ozone is in the air

Source: <https://experience.arcgis.com/experience/e5953d89038431dbf4f22ab9abfe40d/>



Diesel PM Exposure

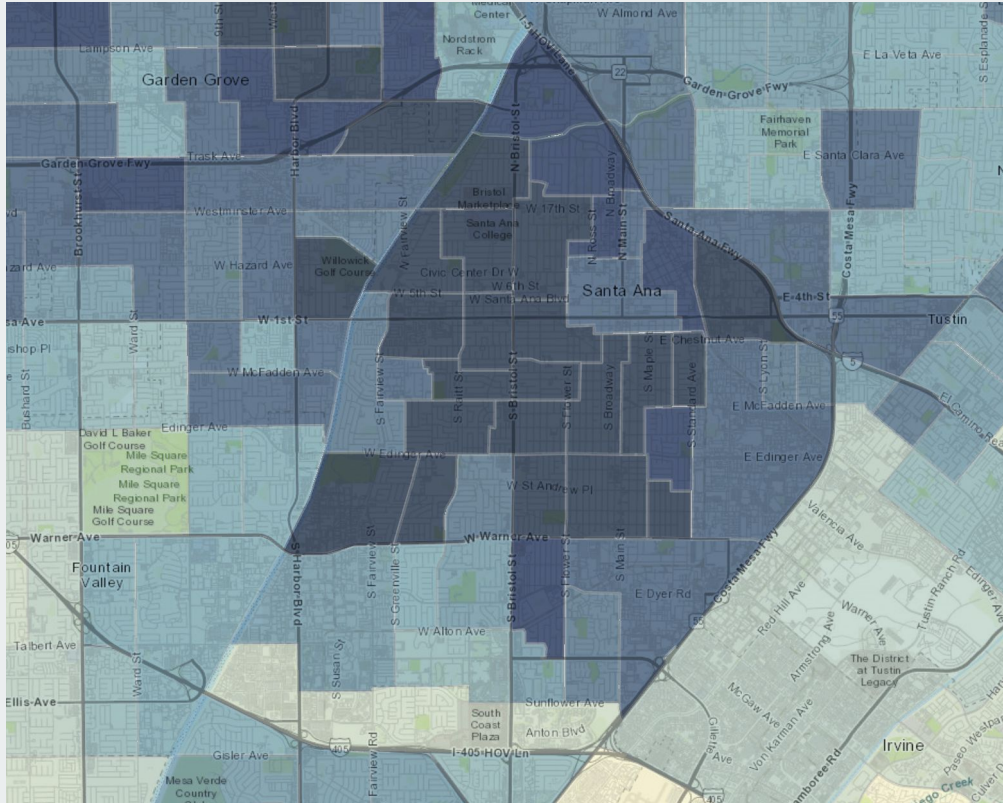
Drinking Water Contaminants – Allen C



Caption:

The drinking water contaminant percentile is 46, meaning it is higher than 46% of the census tracts in California.

Childhood Lead Exposure: Ariana

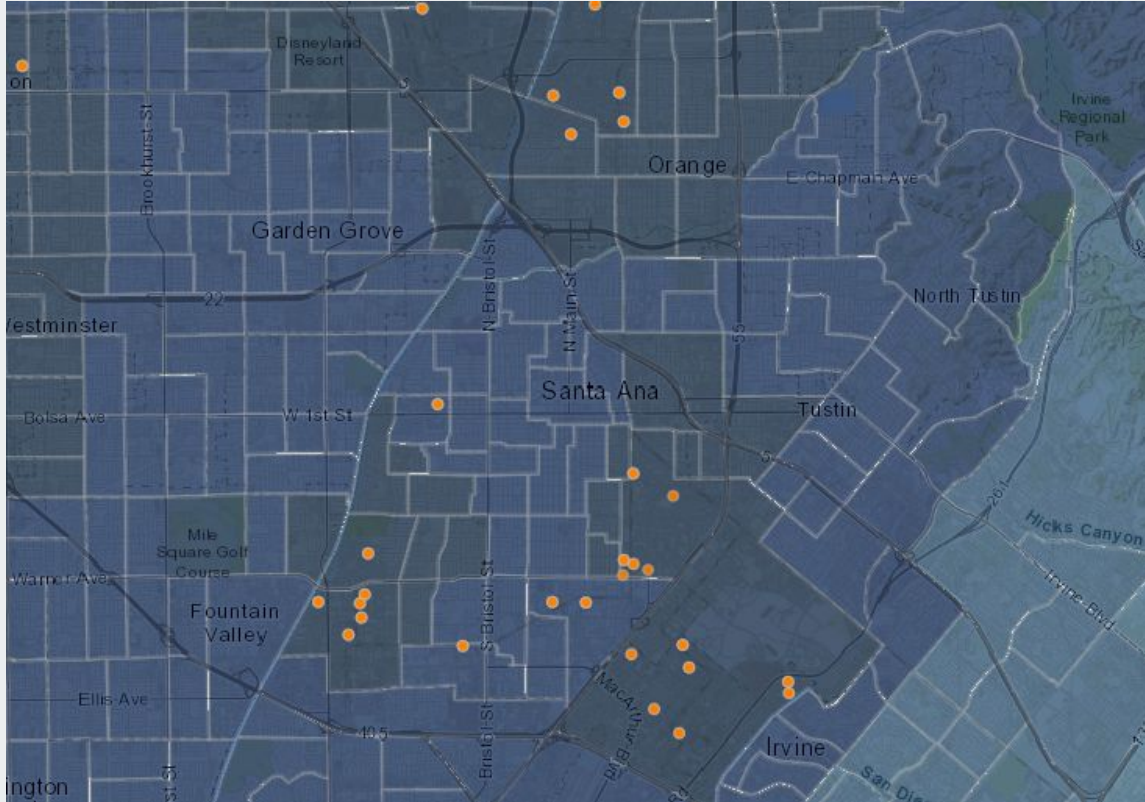


Caption: This map shows us the amount of lead being exposed in Madison Elementary which is about 87 percentile.

Source: <https://experience.arcgis.com/experience/ed5953d89038431dbf4f22ab9abfe40d/>

Pesticide Exposure

Toxic Release Index (TRI)-Briana



Toxic Releases Indicator Results

Zoom to

over 2017 to 2019.

The toxic release indicator scores range from 0 to 96,985.

The score for this census tract is **4,555.18**. The toxic release percentile for this census tract is **91**, meaning it is higher than **91%** of the census tracts in California.

For further information on the types and amounts of releases in the vicinity of this census tract search the Toxic Release Inventory map.

The madison park neighborhood is the

Traffic Impacts

Cleanup Sites

Groundwater Threats

Hazardous Waste

Impaired Waters

Solid Waste Sites

Superfund Sites

Traffic Proximity

Current Climate Disasters

Wildfire Risk and Historic Wildfires

Extreme Heat Projections

Drought Projections

Historic Droughts

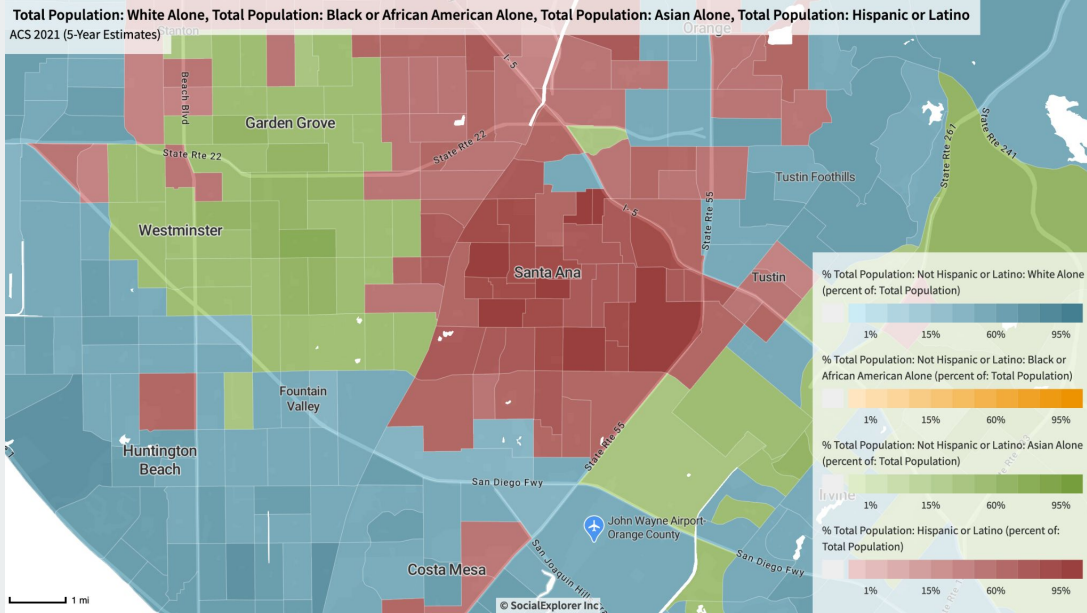
Flood Risk

Sea Level Rise

**SECTION 3:
STAKEHOLDERS
&
VULNERABILITIE**

California Healthy Places Index

Racial Demographics Luis F



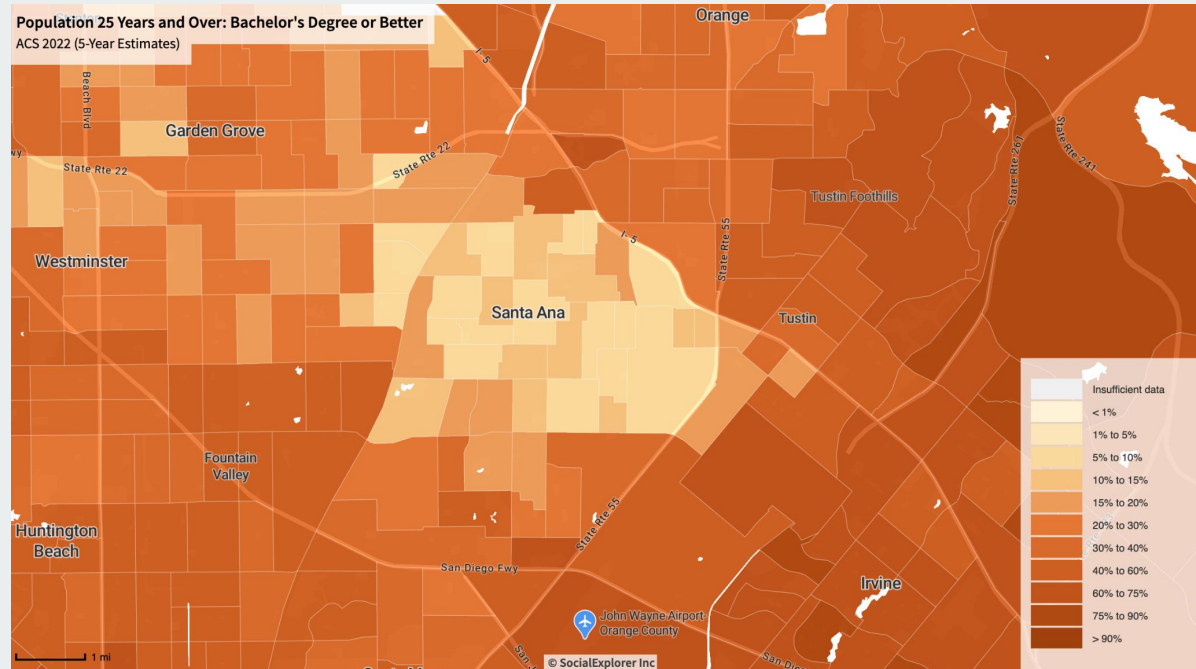
Caption: Madison Park is in the 94% latino percentile

Educational Attainment-Valeria

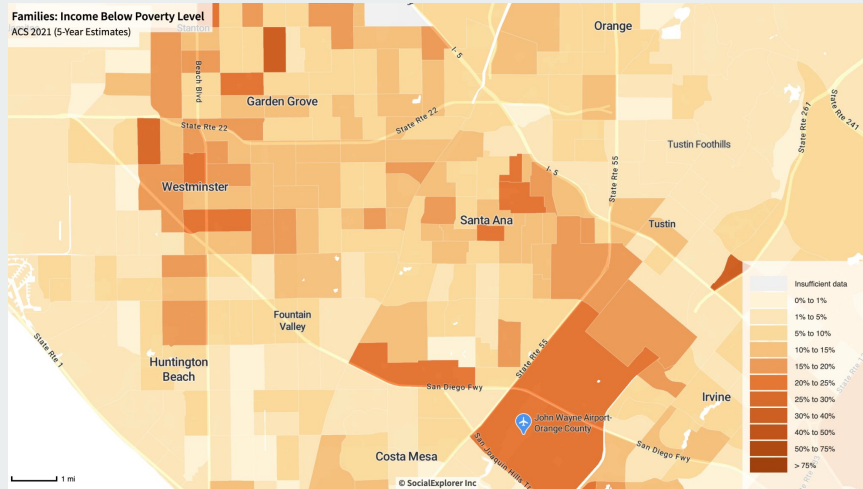
Caption: Santa Ana overall has 8% of the population that has graduated with a bachelor's or higher. Which means that Santa Ana has areas with fewer people who have gone to college compared to other places in the Los Angeles region.

Source

:<https://codap.concord.org/release/s/latest/static/dg/en/cert/index.html>
*shared=<https://cfm-shared.concord.org/cUfWRpfOE3EjPJPJSdla/file.json>



Poverty - Evelyn



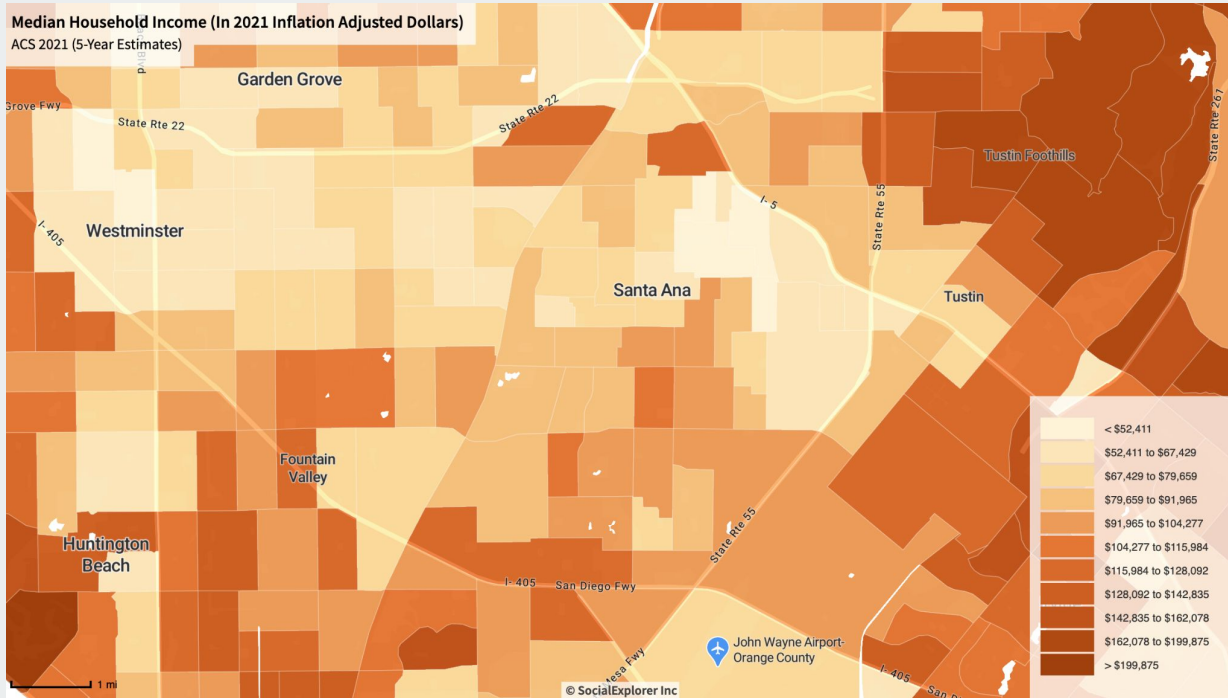
Caption: In the Madison Park area, 12% of the population is considered living in poverty.

Source:

https://codap.concord.org/releases/latest/static/dg/en/cert/index.html*shared=https://*cfm-shared.concord.org/cUfwRpfOE3EjPJPJSDl/a/file.json

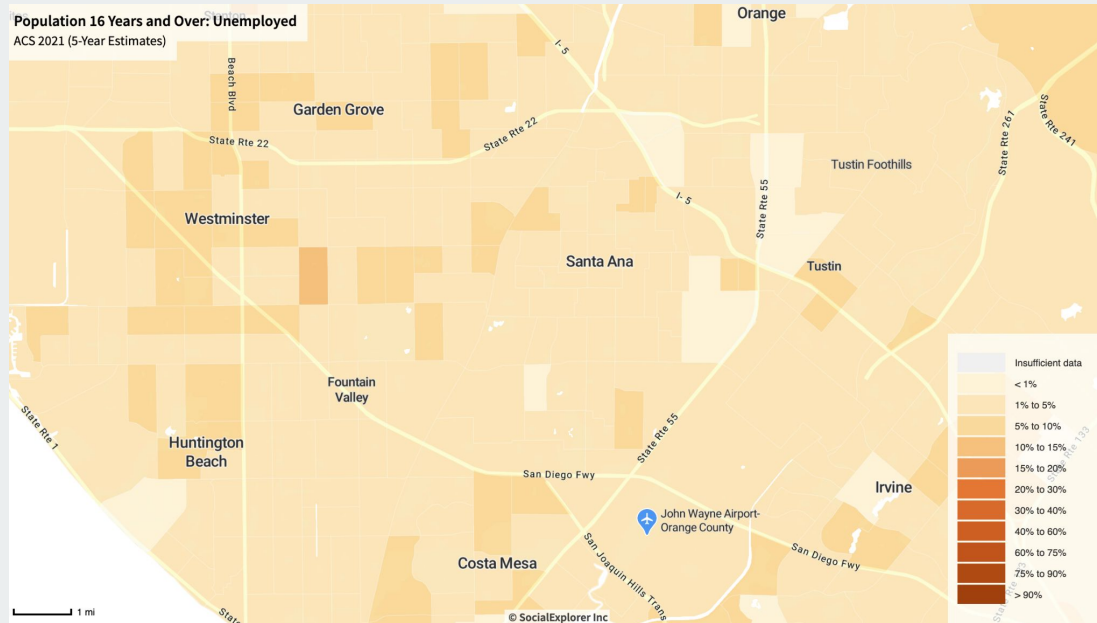
Linguistic Isolation

Income - Briana



77,000 is the median salary

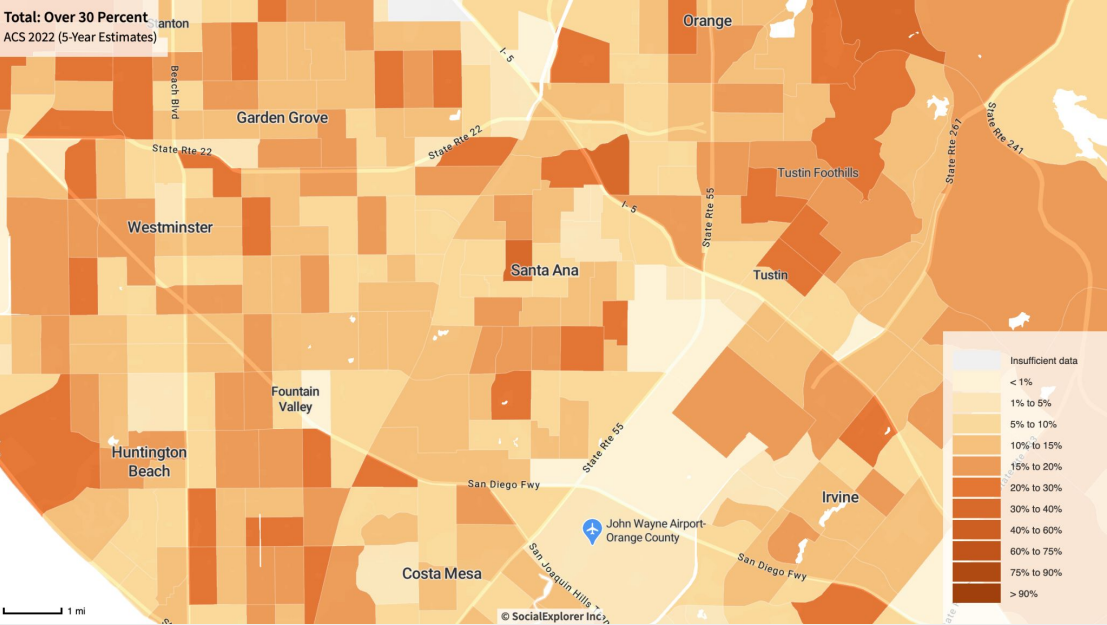
Unemployment - Bella



3% of people from the Madison Park Area are unemployed.

Source:

Rent Burden - Allen C



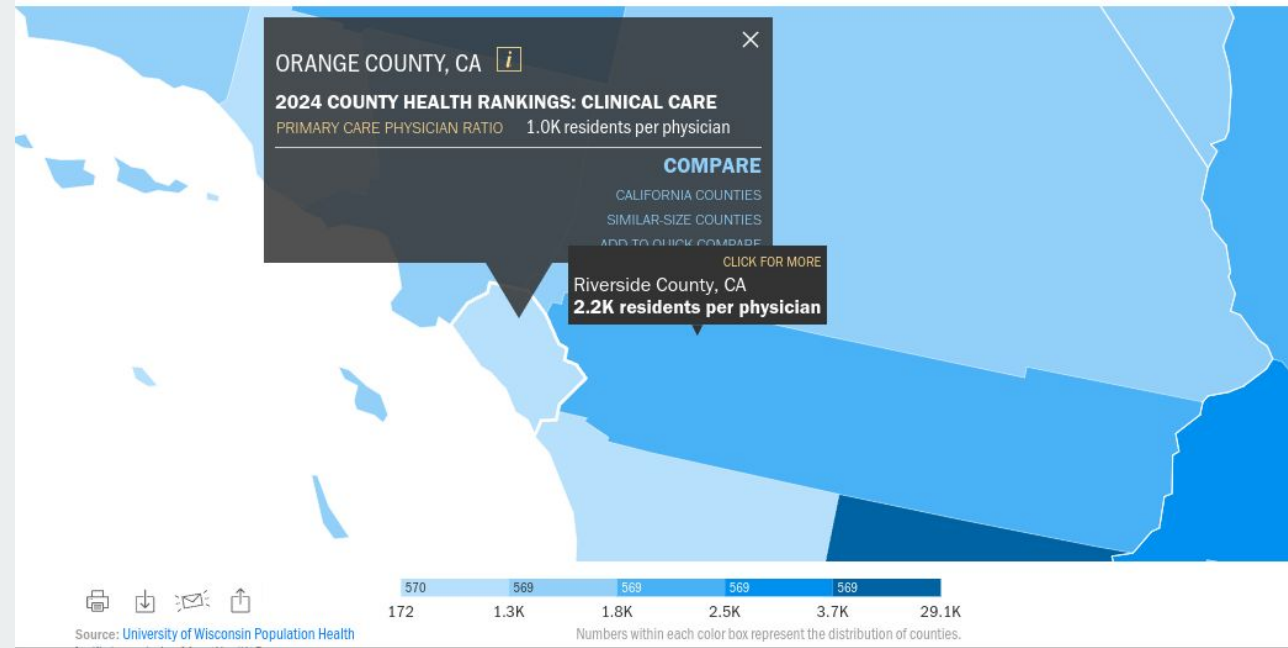
Caption: 20% in Madison pay 30% of their paycheck.

Internet Access

Vehicle Access

Health Insurance

Physician to Patient Ratio–Ariana



Caption: This map showcases that in 2024, Orange County's primary care physician Ratio is about 1.0K residents per physician.

source: <https://ce.naco.org/?dset=County%20Health%20Rankings%203A%20Clinical%20Care&ind=Primary%20Care%20Physician%20Ratio>

Healthcare Facilities

Tree Cover Map

ParkScore Map

Native Peoples-Karen



These images were taken in an event the native acjachemen hosted to honor their ancestors. This event was made to support mother earth and all life as they create a large scale “huma” artwork with hundreds of like-hearted people. This event was to unite indigenous elders from the Acjachemen Nation and various other california tribes in a act of love and reverence for our planet.

<https://www.jbmian.com/past-events.html#/>

Social Groups - Bella



Santa Ana holds several traditional values in regards to their hispanic culture. The pinatas shown in the photo are used during celebrations where kids break it while singing a song.

Source:

<https://commons.wikimedia.org/w/index.php?search=Santa+Ana+culture&title=Special:MediaSearch&go=Go&type=image>