

SAN GABRIEL VALLEY

FAST DISASTER
CASE STUDY



ENVIRONMENTAL INJUSTICE
Fall 2021

GROUP SGV

AUTHORS

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ABOUT

This case study report was developed by students at the University of California, Irvine for the undergraduate class, “Environmental Injustice”, taught by Kim Fortun, Kaitlyn Rabach, Prerna Srigyan, Maggie Woodruff and Margaret Tebbe for the Department of Anthropology, Fall 2021. The University of California, Irvine is on the ancestral homelands of the Tongva and Acjachemen nations.

COVER

Image of the Hill Brother Chemical Company located in Industry, CA. They are a leading chemical supplier that is within a mile of multiple schools and has the potential of causing harm to the students and people who work there. This image in particular displays one of the chemicals they distribute, ammonia, which when exposed to high amounts of it, can negatively impact human health.

<https://www.hillbrothers.com/ammonia/>

(Screenshot by Sophia Zajic, October 20, 2021)

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Do you consent to having your name listed as an author on the published case study?

Name	Publish? (Y or N)
Elizabeth Kondo	Y
Kayleigh Ott	Y
Jazmín Romero	Y
Evelyn Tapia	Y
Shani Trieu	Y
Sophia Zajic	Y

BIOGRAPHICAL STATEMENT

Elizabeth Kondo, is a third-year transfer student at the University of California, Irvine majoring in Biological Sciences. She grew up in the San Fernando Valley and in the South Bay as an only child hoping to be the first in her family to earn a Bachelor's degree. Her goal for the future is to attend medical school and specialize in trauma surgery while continuing to advocate for environmental justice.

PHOTO



Kayleigh Ott is a first-year student at the University of California Irvine majoring in Environmental Science and Policy and doubling in Political Science. She is from Goodyear Arizona in which she directed drives for the Southwest Advocacy Center, helping domestic abuse victims. She seeks to get politically involved in changing the environment and continue her research.



Jazmín Romero is a first-year Earth System Science major with a double major in Environmental Science and Policy at the University of California, Irvine. They are a first-generation student, becoming the first to pursue higher level education in their family and are a proud resident of the SGV. She actively educates herself and advocates for environmental and political injustice within her community, through a student-led organization. They seek to continue their education to bring positive change in their community and others surrounding.



Evelyn Tapia is a first-year undeclared student at the University of California, Irvine. She Grew up in San Diego, and is a first-generation student attending college from her mother's side. She's very passionate about Environmental justice and hopes to become an activist on the side.



Shani Trieu is a first-year student at the University of California, Irvine majoring in Cognitive Science. Born from the San Gabriel Valley, she is a first-generation student pursuing higher education. She hopes to be able to bridge her learnings about environmental racism and its connections to many medical issues for people of color in low-socioeconomic communities.



Sophia Zajic is a first-year undeclared student at the University of California, Irvine. She grew up in Massachusetts and is aiming to further her education regarding environmental injustice and the impacts of climate change. She is considering a major within the STEM field and hopes to apply what she learns about the environment to her future.



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INTRODUCTION

This case study report focuses on “worst case” scenarios for release of toxic chemicals in the San Gabriel Valley. The report addresses a series of ten questions (Fig. 2) that draw out local details in a manner that encourages comparison with other places. The research has been done quickly (within the constraints of a quarter-long undergraduate class) so is limited to and points to the need for further research and community engagement. The goal is to help build both a body of research on environmental injustice and a network of researchers ready to help conceptualize and implement next-generation environmental protections.

In environmental policy, a “worst case scenario” refers to the potential for catastrophic, fast, often explosive disaster at industrial facilities that handle more than a certain (“threshold”) amount of extremely hazardous substances. Provisions of the US Clean Air Act require companies to submit worst case scenarios for their facilities to the Environmental Protection Agency (EPA). The information provided isn’t fully online because of concerns that it could be useful to terrorists. This makes it particularly important that researchers, residents, workers, media, local officials and emergency managers work together to ensure that risks are understood, managed and continually reduced.

Historically Disadvantaged Communities	Structural inequalities between members of more advantaged and more disadvantaged population groups. Used to describe the status of population groups that were prevented from participating in some or all aspects of the collective life of individual societies .
Vulnerability Zones	An estimate made by a facility under EPA's Risk Management Planning program of the maximum possible area where people could be harmed by a worst-case release of certain toxic or flammable chemicals.
Fenceline Zones	Places where chances are highest for death or injury after a chemical accident.
Environmental Sacrifice Zones	Often "fenceline communities" of low-income and people of color, or "hot spots" of chemical pollution where residents live immediately adjacent to heavily polluted industries or military bases.
Health Disparities	A particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage.
Environmental Racism	The disproportionate impact of environmental hazards on people of color.

ENVIRONMENTAL INJUSTICE CASE STUDY FRAMEWORK

1. What is the setting of this case? What are its assets?
2. What environmental health threats (from explosions, everyday pollution, climate change, etc) are there in this setting?
3. What intersecting factors -- social, cultural, political, technological, ecological -- contribute to environmental health vulnerability and injustice in this setting?
4. Who are stakeholders, what are their characteristics, and what are their perceptions of the problems?
5. What have different stakeholder groups done (or not done) in response to the problems in this case?
6. How have environmental problems in this setting been reported by media, environmental groups, companies and government agencies?
7. What local actions would reduce environmental vulnerability and injustice in this setting?
8. What extra-local actions (at state, national or international levels) would reduce environmental vulnerability and injustice in this setting and similar settings?
9. What kinds of data and research would be useful in efforts to characterize and address environmental threats in this setting and similar settings?
10. What, in your view, is ethically wrong or unjust in this case?

Figure 1. This is the analytic framework that guided research for this case study.

In this research, “worse case scenarios” are considered “fast disasters” to contrast them with the “slow disaster” of everyday pollution. It needs to be emphasized however, that even though fast disasters erupt in a dramatic way – often with an explosion or gas cloud that requires an emergency response -- this doesn’t mean that fast disasters occur suddenly. Investigations have shown that all fast disasters have a deep backstory: they

were years in the making. These backstories need to be documented to understand where things went wrong and where changes could prevent future disasters.

A 2014 report by the Center for Effective Government mapped the proximity of high-risk chemical facilities in California to schools and found that 49 percent of P-12 students attend a school within the vulnerability zone of a high risk chemical facility (Center for Effective Government 2014).

This report focuses on Azusa, the City of Industry and El Monte, all cities within the San Gabriel Valley, the native homelands of the Tongva Tribe (also known as Gabrielino-Tongva Tribe).



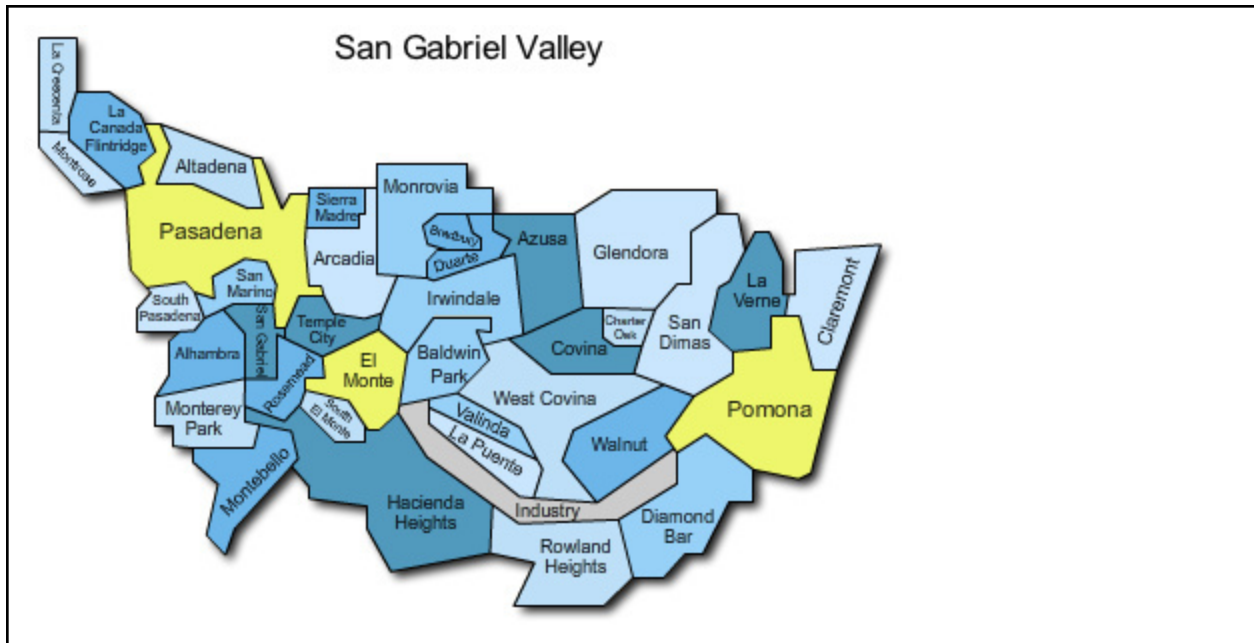


Figure 2. Map of all counties in California
<https://geology.com/county-map/california.shtml>
<https://archive.kpcc.org/blogs/politics/2013/11/22/15262/five-san-gabriel-valley-cities-explore-fire-service/>

NATIVE PEOPLE OF THIS PLACE



Map Courtesy of Timara Lotah Link

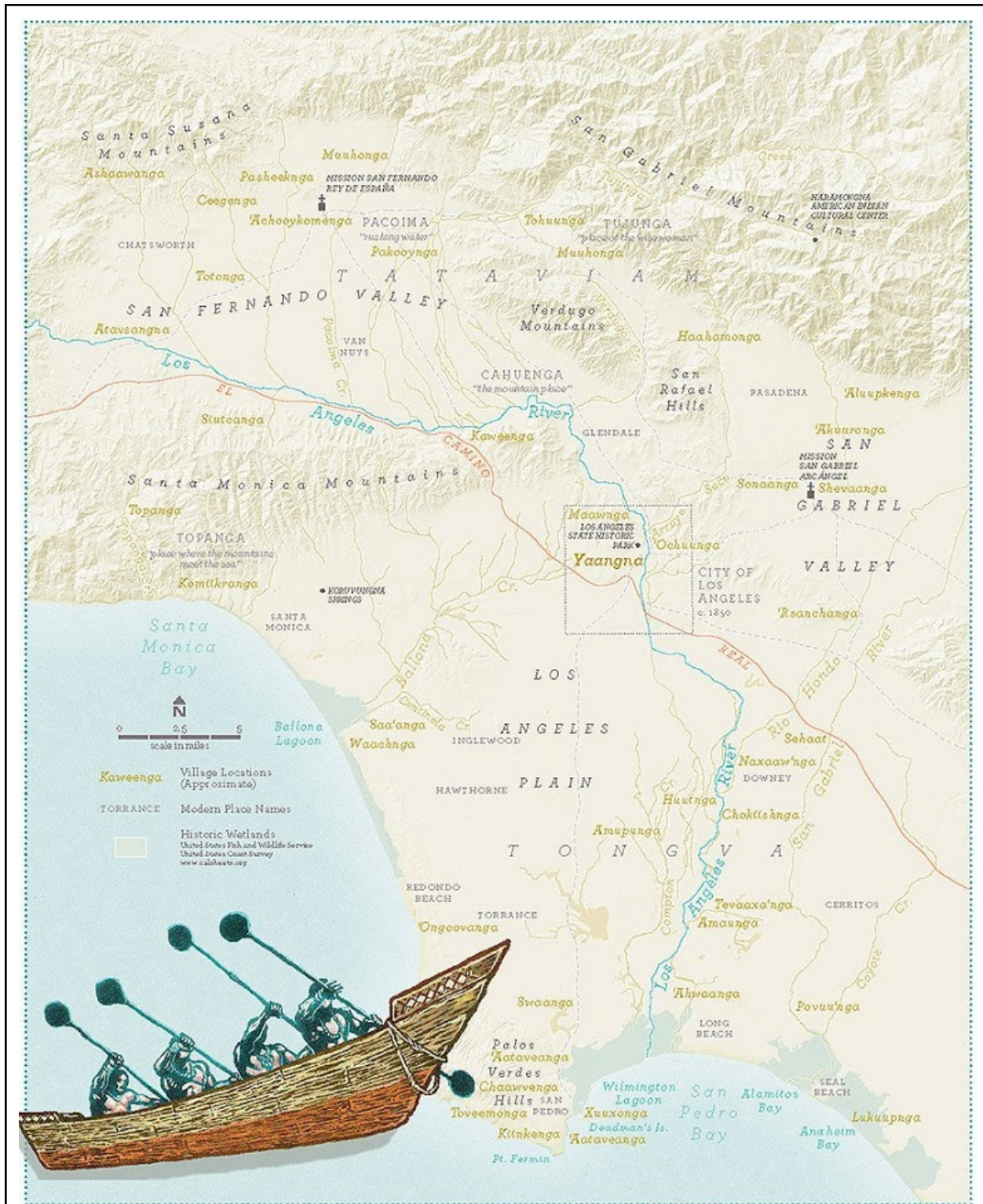


Figure 3. Map of Native Lands in California. Indigenous nations include the Gabrielino/Tongva. (<https://www.pinterest.com/pin/17521886037355556/>)

<https://mila.ss.ucla.edu/>

1. COMMUNITY ASSETS & SETTING

Diverse Community Descriptions

Jazmín Romero

When fully examining the environmental injustice within a community, or in this case, multiple -- Azusa, City of Industry and El Monte, it is best to consider the setting itself and their assets.

Azusa City is one of the many cities that make up the San Gabriel Valley. With a population of an estimated 49,974 people, according to the census recorded on July 1, 2021. Statistically, Azusa consists of 1.1% for White Non-Hispanic residents, 8.5% for Black residents, 16.0% for Hispanic or Latino residents, 5.8% for American Indian residents, 16.5% for other race residents, 11.7% for two or more races residents, allowing it to become a diverse community.

In addition to population descriptions, the estimated household income of 2019 was \$72,981 while estimated households include the following: "Estimated median house or condo value in 2019: \$462,533; Mean prices in 2019: all housing units: \$833,732; detached houses: \$888,338; townhouses or other attached units: \$624,673; in 2-unit structures: \$891,472; in 3-to-4-unit structures: \$665,482; in 5-or-more-unit structures:

\$701,572; mobile homes: \$147,351; occupied boats, rvs, vans, etc.: \$212,705". Estimated cost for household payments sets the cost of living index to be high (136.1), much higher than the U.S. average (100).

Azusa City sits at the foot of the San Gabriel Valley in Los Angeles county, located at least 20 miles east of downtown Los Angeles. But because the city is located at the entrance to the San Gabriel Canyon, Azusa has been given its nickname "*The Canyon City*" which can be seen scattered throughout the city on street signs. In addition to sitting at the foot of the San Gabriel Valley, Azusa can also be found along the historic Route 66.

The Canyon City is notorious for its wildfires but although many health disparities are not linked to its disaster, wildfires, many residents fall as victims to asthma. Asthma is not the only health disparity that residents become familiar with. Many also become diagnosed with diabetes, colon cancer, breast cancer, lung cancer, chronic obstructive pulmonary disease, and cardiovascular disease. Also found within Azusa's data, 38% of adults (persons 18 years of age and over) meet the recommended guidelines for physical activity and 26% of adults (persons 18 years of age and over) are obese, thus allowing its health index to reach 18.5 (lowest) to 67.6 (highest).

Although there is not much found on the City of Industry due to its small population (estimated 373 people as of 2019), their health index reaches 18 (lowest) to 51.3 (highest), most likely due to the fact that the city is mainly populated with business corporations, power plants and warehouses.

El Monte, a city known as *The End of the Santa Fe Trail*, holds a population of 115, 487 as of July 1, 2019. El Monte, which means "the mountain" or "the mount", falls between the San Gabriel and Rio Honda Rivers. With an estimated household income of \$50, 829 as of 2019, the mean prices of housing units are the following: all housing units: \$602,059;

detached houses: \$685,252; townhouses or other attached units: \$480,533; in 5-or-more-unit structures: \$572,505; mobile homes: \$58,013. This then results in El Monte's cost of living index to be *very high* (145.3) compared to the U.S. average (100). It also may be important to know that there are members of El Monte's community that live in poverty. Those who live in poverty are statistically described in percentages as 16.3% (12.4% for White Non-Hispanic residents, 47.2% for Black residents, 18.2% for Hispanic or Latino residents, 24.6% for American Indian residents, 5.5% for Native Hawaiian and other Pacific Islander residents, 12.9% for other race residents, 22.8% for two or more races residents).

All three communities -- Azusa, the City of Industry and El Monte hold assets that include their state officials, political assets, law firms, and emergency notifications. Since 1992, the County Department of Public Works has taken responsibility to overlook water quality and contamination within the city of Azusa (Azusa's reservoir and rivers). The Los Angeles County Department of Public Works has also developed a plan that works towards the removal of 57% of the slit created at the bottom of the river, to control floods and support their resident's overall health. An organization created by a group of concerned parents called the *East Valley Organization*, attend city council meetings to express their concerns and advocate for environmental justice on the streets of the city, in order to educate and receive more support from their community. Their work did not satisfy their values so as further action the *East Valley Organization* composed their own meetings, discussing new and innovative ways to advocate for water clean-up and environmental justice within their own community. A law firm established by Rose, Klein & Marias filed a lawsuit depicting that the groundwater in the San Gabriel Valley posed a major threat to its resident's health. This allowed for the five main water companies responsible for the water damage but advanced research in the area, collecting evidence on the illnesses that may have transpired through the contamination. In addition to these assets, the California Preparedness Platform was developed in order to showcase

important and relevant information in real time. Information mentioned on the site are any emergencies regarding the weather, hazard awareness and because of the ongoing pandemic -- COVID-19. Azusa, the City of Industry and El Monte are all accessible on the site and easily navigated through the search, with all hazards displayed for awareness of individuals of that community. It is important to note that, "In El Monte, over one-third of adults have no health insurance---a rate that is 50% higher than in LA County as a whole and 7.4% of children have no health insurance---a rate that is slightly higher than LA County (where 7.0% of children have no health insurance).", thus making El Monte hold the lowest level of health index with 2.5 (lowest) and 41 (highest).



Figure 4. Above are photographs (from top to bottom) of the Azusa Downstation, City of

Industry Distribution Center and the El Monte upper level railway station. Given high levels of pollution from vehicle traffic throughout Los Angeles County and the San Gabriel Valley, public transportation options are especially important, due to most residents falling short in income, and need to be extended in the future.

(Screenshots by Jazmín Romero, October 15, 2021.

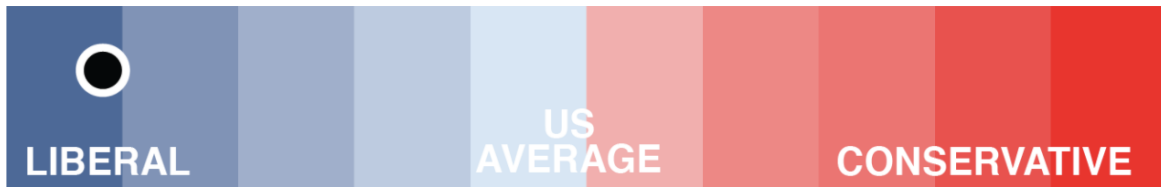
Azusa: https://commons.wikimedia.org/wiki/File:Azusa_Downtown_Station_1.jpg

Industry: <https://www.stgusa.com/locations/california/city-of-industry/>

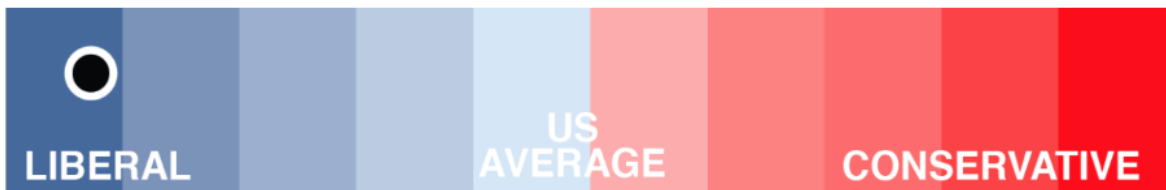
El Monte:

[https://commons.wikimedia.org/wiki/File:El_Monte_upper_level_platform_\(8172830330\).jpg](https://commons.wikimedia.org/wiki/File:El_Monte_upper_level_platform_(8172830330).jpg))

Azusa, CA is Strongly liberal



Industry, CA is Strongly liberal



El Monte, CA is Very liberal

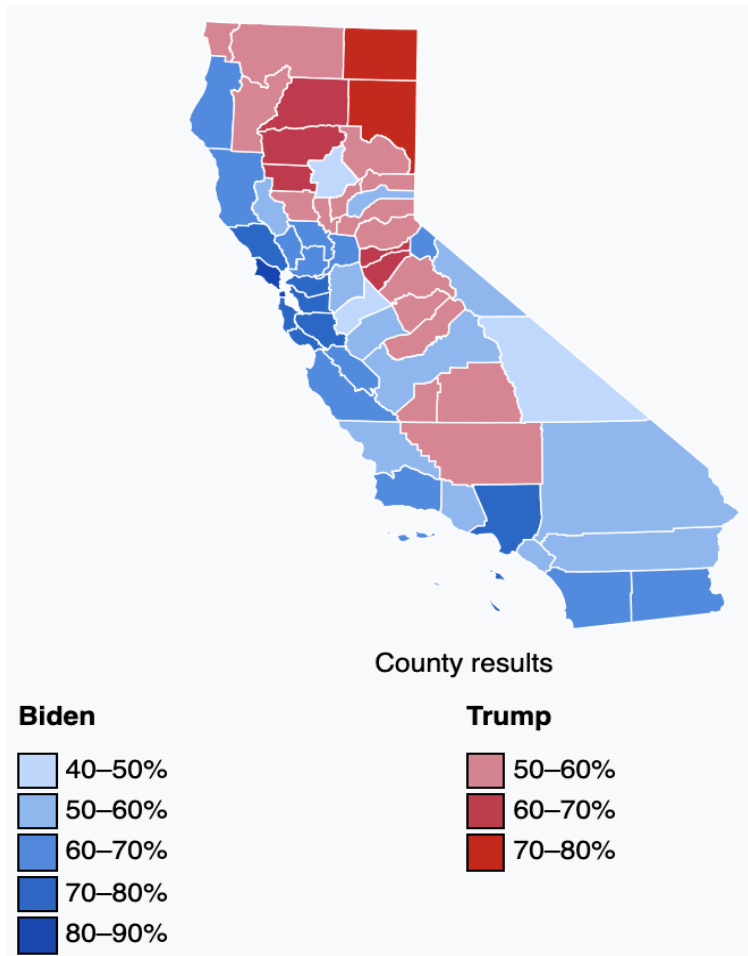
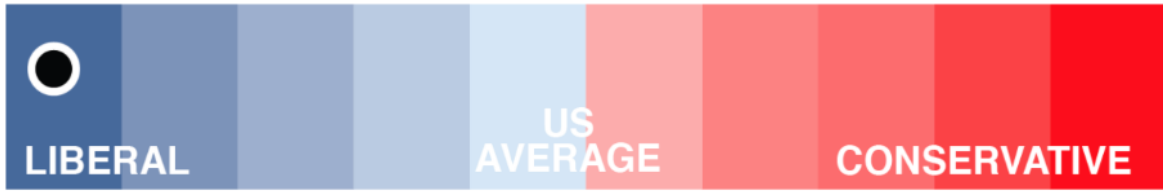


Figure 5. These are screenshots of the political party outcome of the past presidential election. The cities demonstrated within the San Gabriel Valley are Azusa, the City of Industry, and El Monte. Given the statistical reports, all three cities are strongly liberal, leaning (blue) toward Democratic Presidential Candidate, Joe Biden. (Screenshots by Jazmín Romero, October 15th, 2021.)

Azusa: <https://www.bestplaces.net/voting/city/california/azusa>
Industry: <https://www.bestplaces.net/voting/city/california/industry>
El Monte: https://www.bestplaces.net/voting/city/california/el_monte

2. FAST DISASTER & OTHER ENVIRONMENTAL THREATS

Danger Zones

Elizabeth Kondo

One of the major threats that the residents of San Gabriel Valley face are the threat of RMP facilities. Some examples include Canyon Chlorination Facility, Monrovia Nursery Company, Norman Fox & Co., Hill Brothers Chemical Co., The Vons Companies El Monte Distribution Center, and Thrifty PayLess Inc.

Canyon Chlorination Facility purifies water using chlorine which is a compound that can be harmful to the environment and cause adverse health effects. It is located in Azusa and three elementary schools are within a mile radius (“The Right To Know Network, n.d.) Monrovia Nursery Company is a nursery and distributes fertilizer which can contaminate groundwater. It is located in Azusa as well and five schools are within a mile radius (“Grow Beautifully”, n.d). Norman Fox & Co is a manufacturer and distributor of specialty chemicals which could possibly cause health problems such as cancer and birth defects if exposed. It is located in the City of Industry and the closest school is about two miles away

(“Home”, n.d.). The Hill Brothers Chemical Co. is also a manufacturer and distributor of chemicals which can lead to pollutants that can be inhaled or ingested, but targets the industrial and construction markets. It is also located in the City of Industry and three schools are within a mile radius (“Hill Brothers Chemical Co. - Supplying the Western US.”, 2020).

Another fast disaster threat includes earthquakes which is no surprise as a majority of California sits along a major faultline known as the San Andreas Fault and contains hundreds of smaller faults. The San Gabriel Valley specifically has a 75% likelihood of a major earthquake, 7.0 or higher, from occurring (“CEA - California Earthquake Risk Map & Faults by County”, n.d.). This can be especially devastating if it were to occur right off the coast because the state sits along the Pacific Ocean and is vulnerable to tsunamis.

RMP FACILITIES		
Facility (with link)	Zip + City	Schools and hospitals within a mile-radius
Canyon Chlorination Facility https://rtk.rjifuture.org/rmp/facility/100000054059	Azusa, CA 91702	Victor Hodge Elementary School (0.4 mi.), Longfellow Elementary School (0.8 mi.), Dalton Elementary School (1.3 mi.)
Monrovia Nursery Company https://www.monrovia.com/	Azusa, CA 91702	Dalton Elementary School (0.8 mi.), St. Frances of Rome School (0.9 mi.), Citrus College (0.7 mi.), Azusa Pacific University (1.0 mi.), Charles H. Lee Elementary School (1.2 mi.)
Norman, Fox & Co. http://www.norfoxchem.com/	City of Industry, 91746	Palm Elementary School (1.8 mi.)

Hill Brothers Chemical Co. https://www.hillbrothers.com/	City of Industry CA, 91745	Palm Elementary School (1.3 mi.), Los Altos High School (1.2 mi.), Palm Canyon School (0.7 mi.)
The Vons Companies, El Monte Distribution Center https://rtk.rjifuture.org/rmp/facility/100000110248	El Monte, CA 91731	Rio Vista Elementary School (1.3 mi.), Gidley Elementary School (0.5 mi.), Santa Anita Convalescent Hospital (1.3 mi.), Shirpser Elementary School (0.7 mi.), Charles E. Gidley School (0.5 mi.)
Thrifty PayLess, Inc. https://rtk.rjifuture.org/rmp/facility/100000182679	El Monte, CA 91731	Savannah Elementary School (1.4 mi.), Potrero School (1.5 mi.), Cortada Elementary School (1.4 mi.), Rosemead School District (1.0 mi.)

Figure 6. This chart shows six RMP facilities in the San Gabriel Valley documented in the Right-to-Know Network’s Risk Management Plan (RMP) Database. (Screenshot by Elizabeth Kondo, October 15, 2021.

https://rtk.rjifuture.org/rmp/location_search/search_by_location/?city=&county=Los+Angeles&state=CA)

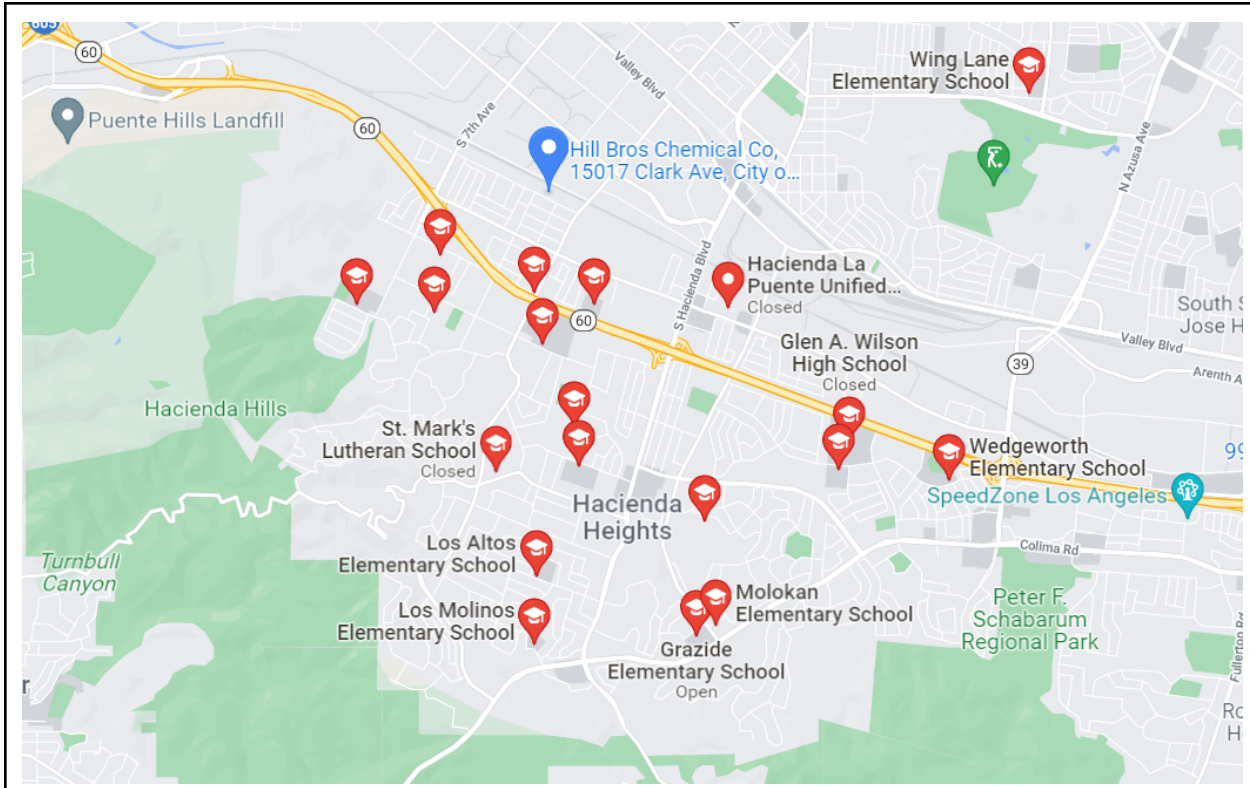


Figure 7. This map reveals the close proximity of multiple schools to the Hill Brothers Chemical Co. in the City of Industry, CA located in San Gabriel Valley. Map created October 14, 2021. RMP facility information from the Right-To-Know Network RMP Database. (Screenshot by Sophia Zajic, October 14, 2021 <https://www.google.com/maps/search/schools/@34.0039864,-117.9621501,13.09z/data=!4m8!2m7!3m6!1sschools!2sHill+Bros+Chemical+Co,+15017+Clark+Ave,+City+of+Industry,+CA+91745!3s0x80c2d6866b139043:0xf3fbf9cbc28f0e4f!4m2!1d-117.9765507!2d34.019722>).

Explore Reports

City Industry city, CALIFORNIA, EPA Region 9 (Population: 235)

Environmental Indicators

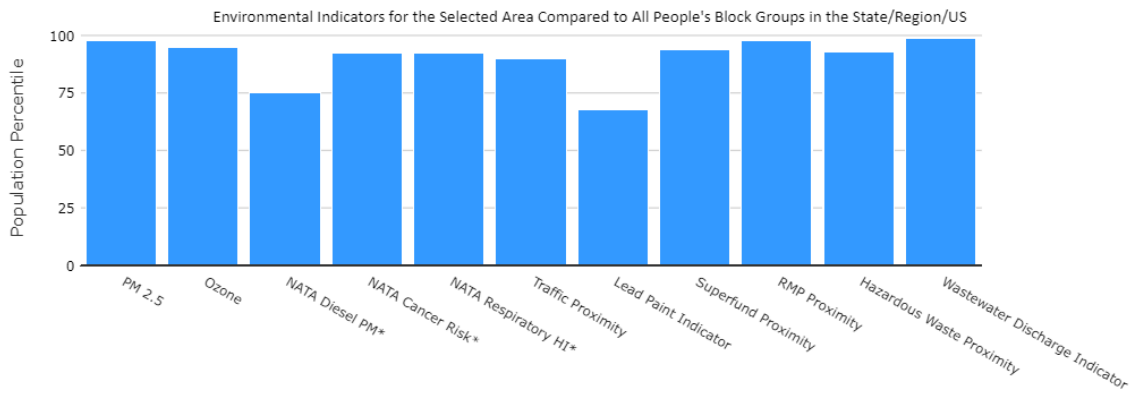
Demographic Indicators

EJ Indexes

[Unselect All]

- PM 2.5
- NATA Cancer Risk
- Lead Paint Indicator
- Hazardous Waste Proximity
- Ozone
- NATA Respiratory HI
- Superfund Proximity
- Wastewater Discharge Indicator
- NATA Diesel PM
- Traffic Proximity
- RMP Proximity

State Percentile
 Regional Percentile
 USA Percentile



Environmental Indicators

(*A mid-point of the percentile range is used to chart each of NATA parameters.)

Explore Reports

City Azusa city, CALIFORNIA, EPA Region 9 (Population: 47,775)

Environmental Indicators

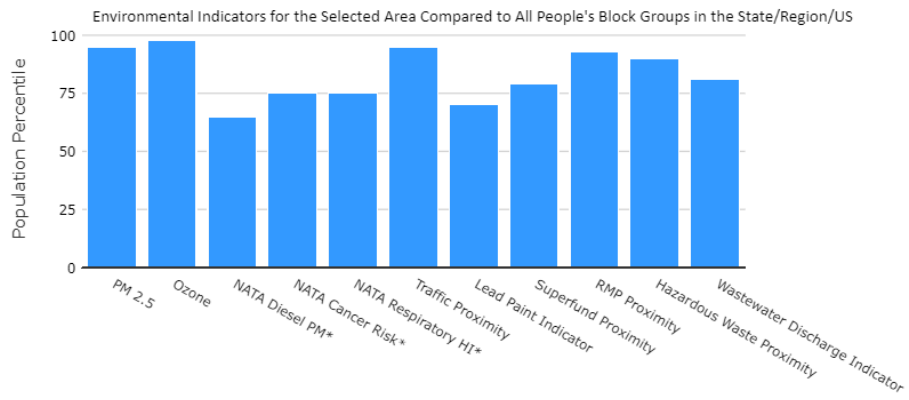
Demographic Indicators

EJ Indexes

[Unselect All]

- PM 2.5
- NATA Cancer Risk
- Lead Paint Indicator
- Hazardous Waste Proximity
- Ozone
- NATA Respiratory HI
- Superfund Proximity
- Wastewater Discharge Indicator
- NATA Diesel PM
- Traffic Proximity
- RMP Proximity

State Percentile
 Regional Percentile
 USA Percentile



Environmental Indicators
 (*A mid-point of the percentile range is used to chart each of NATA parameters.)

Explore Reports

City El Monte city, CALIFORNIA, EPA Region 9 (Population: 116,280)

Environmental Indicators

Demographic Indicators

EJ Indexes

[Unselect All]

- PM 2.5
- NATA Cancer Risk
- Lead Paint Indicator
- Hazardous Waste Proximity
- Ozone
- NATA Respiratory HI
- Superfund Proximity
- Wastewater Discharge Indicator
- NATA Diesel PM
- Traffic Proximity
- RMP Proximity

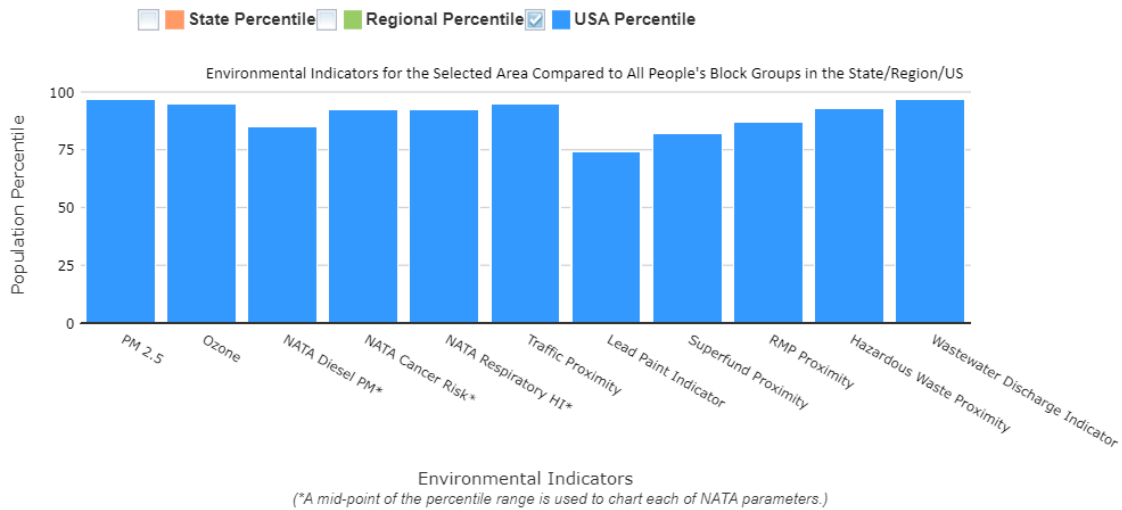


Figure 8. These three charts show the percentage of population in proximity to RMP facilities in three cities located in the San Gabriel Valley. All three cities have a high percentile with El Monte at 80%, Azusa at 90%, and Industry at 95%. (Screenshot by Sophia Zajic, October 14, 2021. <https://www.epa.gov/ejscreen>)

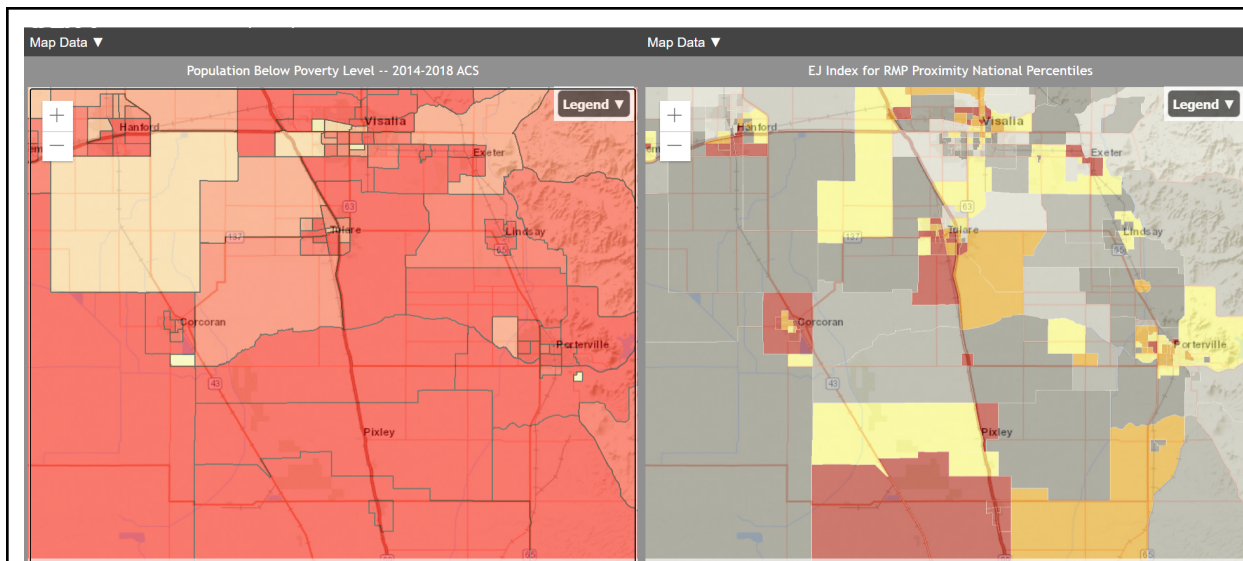


Figure 9. This visualization uses two EJScreen maps for CA to compare, RMP proximity (right) and income poverty population level (left) (<https://ejscreen.epa.gov/mapper/comparemapper.html>)



Figure 10. Hill Brothers Chemical Co., City of Industry.

(<https://www.hillbrothers.com/products/>)



Figure 11. The Vons Companies, El Monte Distribution Center.
(<https://www.gettyimages.co.uk/detail/news-photo/truck-exits-the-vons-a-subsiary-of-safeway-inc-el-monte-news-photo/173765132>)

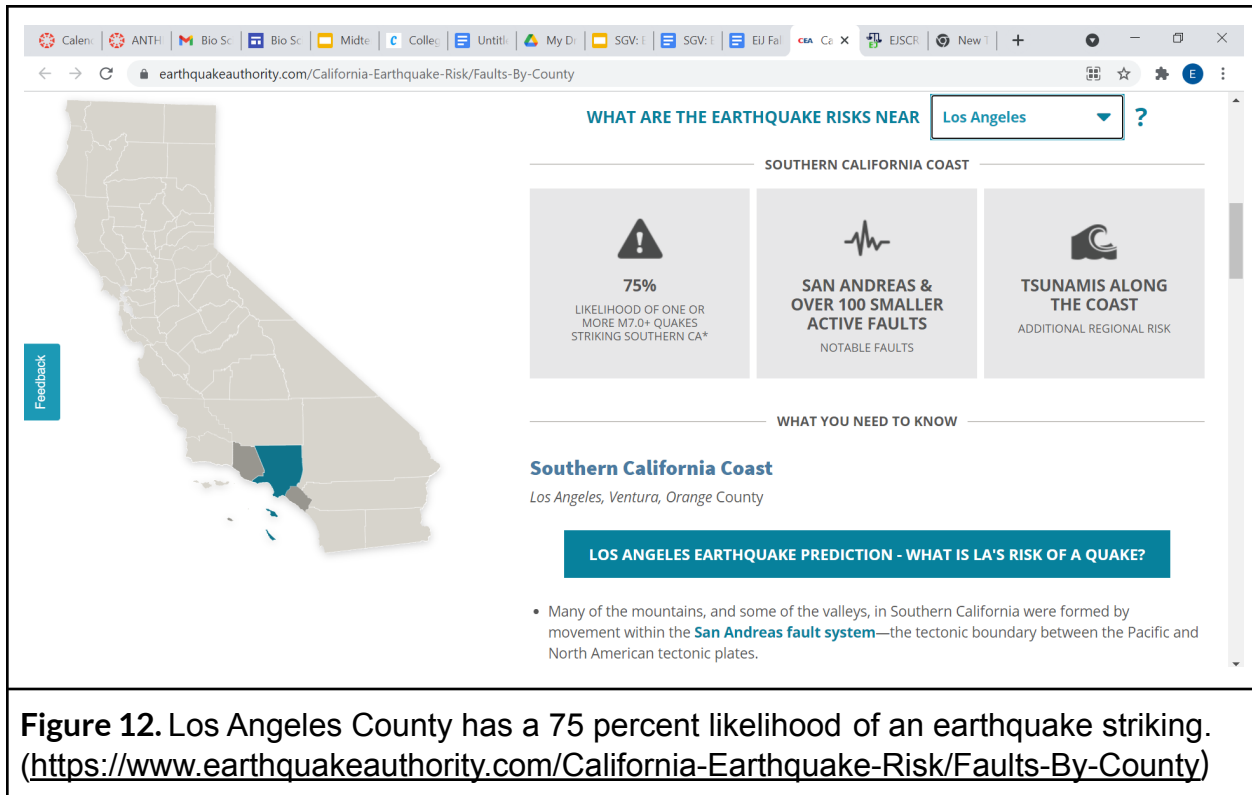


Figure 12. Los Angeles County has a 75 percent likelihood of an earthquake striking. (<https://www.earthquakeauthority.com/California-Earthquake-Risk/Faults-By-County>)

3. COMPOUND VULNERABILITIES

BIPOC, Higher Education, Poverty, Transportation

Shani Trieu

In the San Gabriel Valley, a majority of the population are black, indigenous people of color (BIPOC). In comparison to the 56.5% of BIPOC within the Los Angeles County, there is a 72.8% population of BIPOC solely within the SGV community (Figure 14ab). Simply being a BIPOC makes them more vulnerable to environmental racism as the large corporations view BIPOC and low income communities, like the SGV, as the “path of least resistance because they have fewer resources and political clout to oppose the siting of unwanted facilities” (Erickson 2016). This mentality that large businesses and corporations have is the reason why environmental racism and injustice occurs as the main purpose of these large corporations is simply to make profit at the expense of BIPOC and low-income communities. With a majority minority community population, there are various intersecting factors that arise due to the large population of minorities within Azusa, El Monte, and Industry (Figure 14c).

Higher education is a privilege that not everyone is able to receive, especially for BIPOC residents from low-socioeconomic backgrounds. In Los Angeles county, approximately 66.1% of the population received a bachelor's degree or higher (CA Healthy Place Index,

2021). In comparison, only 24.2% of the SGV's population received a four-year degree (Figure 13b). Looking specifically at our 3 cities, we notice how there are differences between the percentages. In Azusa, 32.6% received a bachelors. In El Monte, 18.29% received a bachelors. In Industry, 45.03% received a bachelors. (Figure 13a). While in comparison to SGV as a whole, Azusa and Industry seem to be doing better in pursuing higher education, both cities are still well below the percentage of the LA county population with a bachelor's degree or higher.

For the majority in Azusa, El Monte, and Industry who never received a higher education, that lack of education only sets out to harm the residents and their families. Without an education, these residents are often not knowledgeable about the hazards in their community as they are often more concerned about making ends meet, rather than being concerned about the environment. Additionally, the low education attainment levels in the SGV creates a community of uninformed residents who simply do not know better. While the lack of education is not the resident's fault, it is a factor which local governments should be aware of in order to ensure that the information about these potential "worst case scenarios" and ways to protect themselves and their families are easily accessible. Without a college degree in the 21st century, the job opportunities are very slim. On top of only being able to find minimum wage jobs, residents without a college degree are often stuck in the lower economic class as their main concern everyday is to simply put food on the table, pay for rent, electricity, water, and etc.

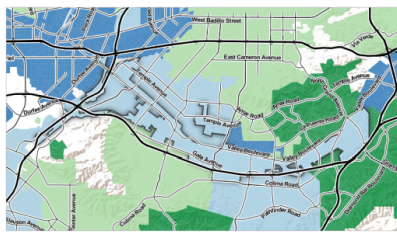
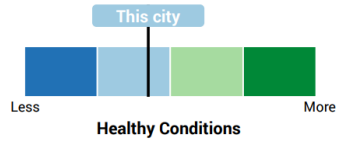
Poverty is defined as a state or condition in which a person or community lacks the financial resources and essentials for a minimum standard of living (Chen, 2021). Within the entire San Gabriel Valley in 2009, 10.2% of all households "had their incomes fall below the poverty level in the 12 months prior" (Cooper and Sedgwick 2014). As we look specifically into Azusa, El Monte, and Industry, we notice how the poverty levels vary in these cities, despite being within the same community of the SGV. According to the US

Census Bureau, within the entire Los Angeles county, 13.4% of the population lives in poverty (U.S. Census Bureau QuickFacts 2021). As we look specifically at the 3 cities within the SGV we notice that in Azusa 14.2% of the population lives in poverty, in El Monte 16.3% of its population lives in poverty, and in Industry 5.5% of its population lives in poverty (City-Data.com 2019). Simply looking at Azusa and El Monte, there is already a larger population that lives in poverty in comparison to the whole LA county. While the fact that the city of Industry appears to have a smaller level of its population in poverty, the city itself is considerably smaller in comparison to Azusa and El Monte as a whole. However, if we were to look at the poverty levels using the U.S Census Bureau, there would only be information for Azusa and El Monte, the bigger city of the 3 we are discussing in this case study. The fact that the city of Industry does not have any statistical information in the U.S. Census Bureau, a government operated organization, only further emphasizes the fact that the SGV, a community within the Los Angeles county where the majority are people of color, is often overlooked and disregarded. Those who are in poverty are more likely to live in hazardous areas, possibly in fenceline zones, which are not as well protected. Additionally, the homes (or lack thereof) of residents living in poverty may often not be as structurally secure and safe as those in the middle class or wealthy top 10%. Their socioeconomic status creates more hazards for them as they do not have the financial ability to invest in building a better home for their safety as they are constantly concerned about simply making ends meet. Living in poverty the residents of Azusa, El Monte, and Industry are in a more dangerous position as they may have limited or no access to the internet, where a majority of information is now available, limited or no access to healthcare, limited or no access to transportation and many more factors.

In the case of a “worst case scenario”, many would assume that the best solution would be to evacuate the premises. For many, that option is readily available. They have a car, if not multiple vehicles that they can use to evacuate in order to protect themselves and their family. For the residents of Azusa, 41.17% have access to an automobile, in El Monte,

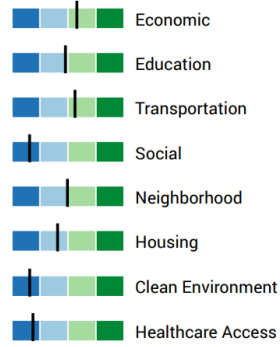
11.84%, and in Industry, 54.54%. While the percentage seems pretty high for Azusa and Industry in comparison to El Monte, it still conveys how not everyone within the community, 100% of the residents within the city, has access to a vehicle. With still such a large part of the community without access to an automobile, they rely on public transportation. Without readily available access to a source of transportation, the residents are at a higher risk of being harmed by these fast disasters, should it occur, as they have no means of evacuating. During an emergency, the chances that a bus driver would be going around and picking people up is very slim to none, as they are also residents within the community and thus have their own families to be concerned with.

HPI SCORE:
42.5
Percentile

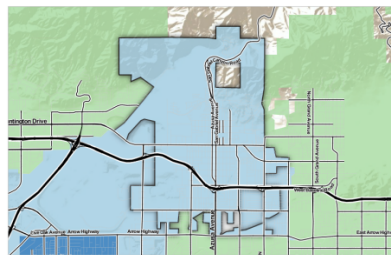
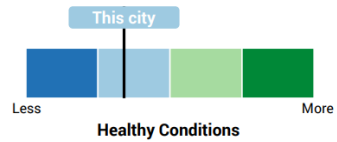


City: Industry

Policy Action Areas



HPI SCORE:
34.1
Percentile



City: Azusa

Policy Action Areas

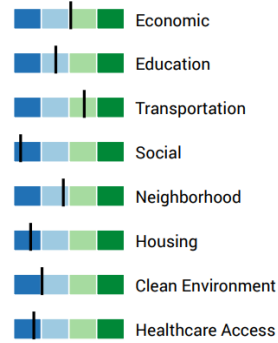


Figure 13a: California Healthy Place Index (HPI) quantifies the HPI between the three cities. Industry is in the 42.5 percentile, Azusa is in the 34.1 percentile, and El Monte is in the 12.1 percentile. If you reference the graphs on the right for each city, you are able to see the differences in percentile for each category among the three cities. (Screenshot by Shani Trieu, October 15, 2021. [California Healthy Places Index](#))

Education

- **24.2%** of residents 25 and older have a four-year degree. The neighborhood with the highest rate is **San Marino**, and the neighborhood with the lowest rate is **South El Monte**.

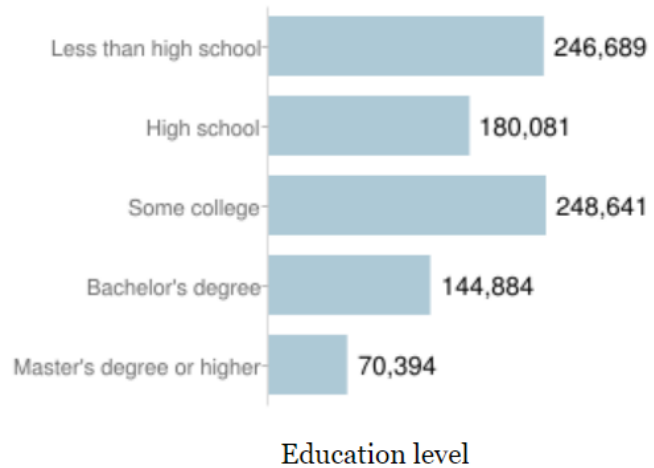
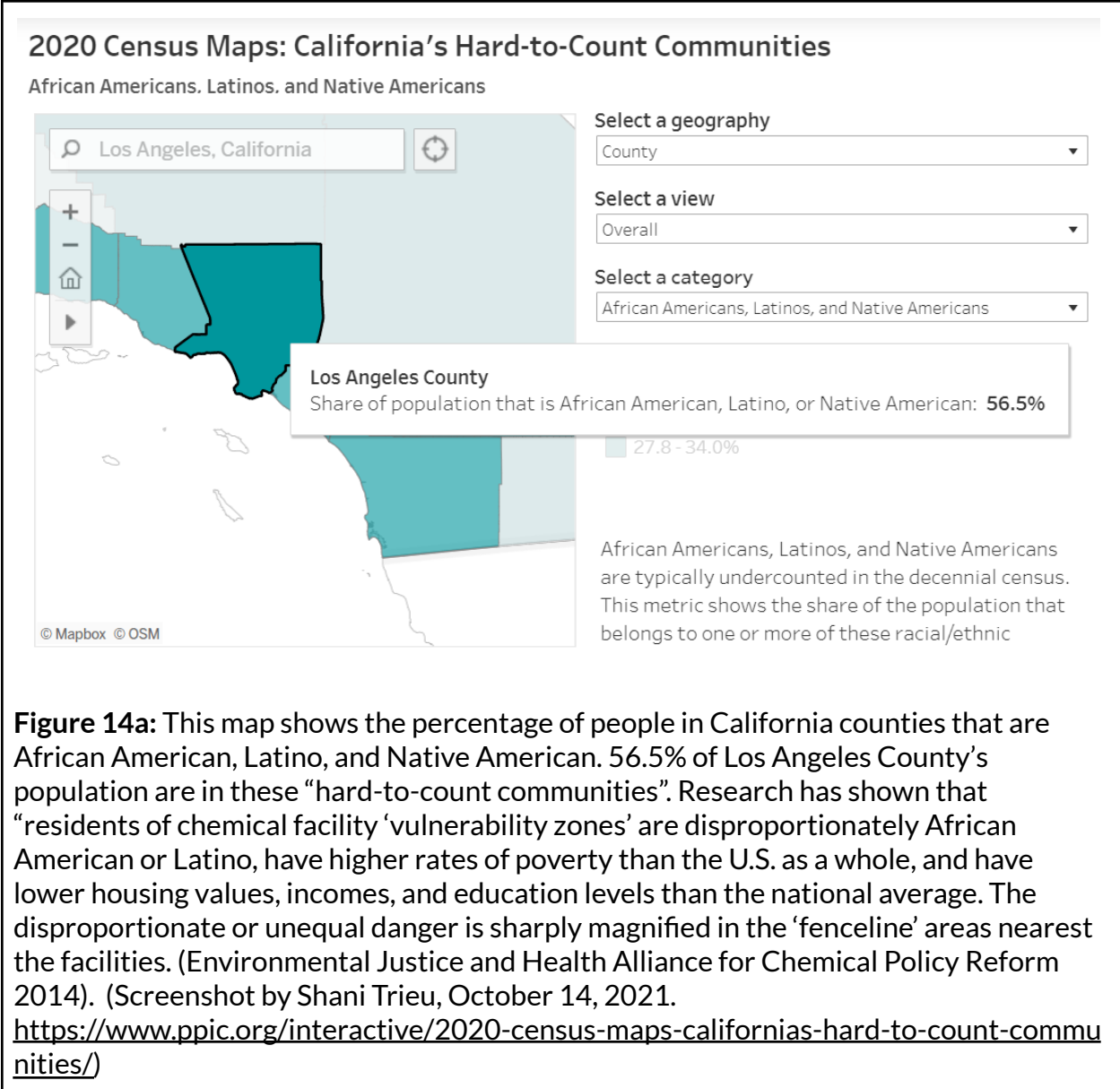


Figure 13b: The LA Times mapped The San Gabriel Valley and calculated the percentage of education level for the various education levels. 24.2% of the SGV population have a four-year degree. (Screenshot by Shani Trieu, October 20, 2021. <http://maps.latimes.com/neighborhoods/region/san-gabriel-valley/#income>)



Ethnicity

- The most diverse neighborhood is **Ramona**, and the least diverse neighborhood is **Irwindale**.

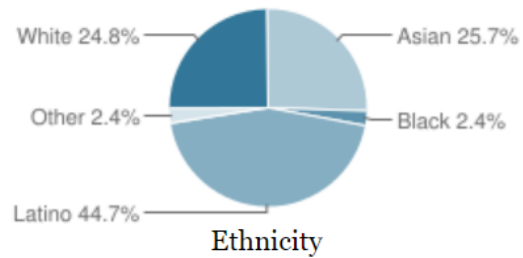


Figure 14b Caption: The LA Times mapped The San Gabriel Valley and calculated the percentage of each demographic. Within the SGV, there is a 44.7% Latino population, 2.4% Black population, and 25.7% Asian population which totals to a 72.8% population of people of color.

Image Source:

<http://maps.latimes.com/neighborhoods/region/san-gabriel-valley/#income>

(Screenshot by Shani Trieu, October 20, 2021)

Race and Hispanic Origin	El Monte city, California	Azusa city, California
Population estimates, July 1, 2019, (V2019)	115,487	49,974
PEOPLE		
Race and Hispanic Origin		
White alone, percent	38.8%	53.3%
Black or African American alone, percent (a)	0.6%	3.5%
American Indian and Alaska Native alone, percent (a)	0.9%	1.2%
Asian alone, percent (a)	28.8%	12.9%
Native Hawaiian and Other Pacific Islander alone, percent (a)	0.8%	0.2%
Two or More Races, percent	3.3%	6.0%
Hispanic or Latino, percent (b)	65.7%	63.1%
White alone, not Hispanic or Latino, percent	3.6%	19.1%

Figure 14c Caption: The Census compares the demographic between the two cities of El Monte and Azusa during 2010-2019, as it shows that the African American, American Indian, and Latino population within El Monte is 67.2% whereas within in Azusa it is 67.8%. This resource does not have the demographic for the City of Industry. The comparison between the two cities versus the entire LA county demonstrates how cities within the SGV have a large population of African Americans, American Indians, and Latinos. (Screenshot by Shani Trieu, October 17, 2021).

<https://www.ppic.org/interactive/2020-census-maps-californias-hard-to-count-communities/>

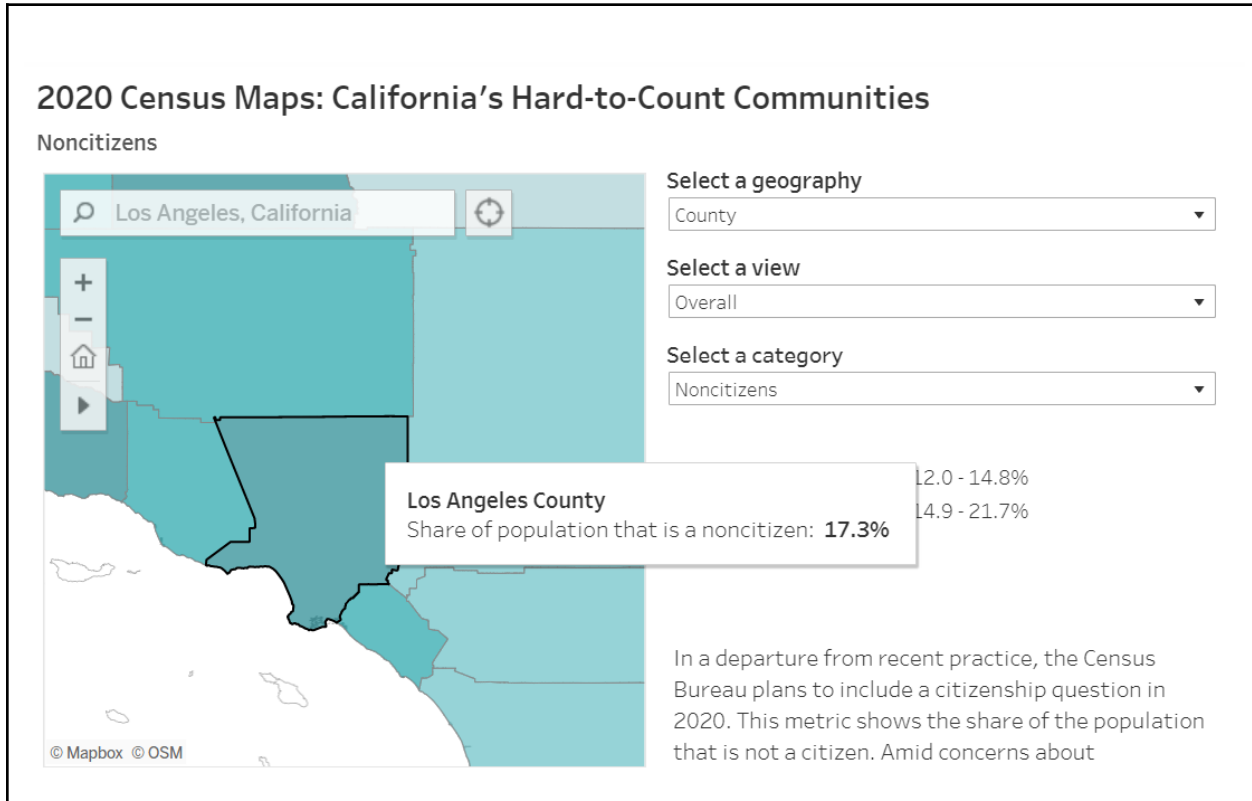


Figure 15. This map shows the percentage of people in California counties who are “non-citizens.” It is likely that noncitizens are particularly vulnerable in chemical disasters because of linguistic isolation, avoidance of government officials, and many other factors in the Los Angeles County, noncitizens are shown to be 17.3% of the population.

We were unable to find statistics for the number of noncitizens within the 3 chosen cities. (Screenshot by Shani Trieu, October 14, 2021.

<https://www.ppic.org/interactive/2020-census-maps-californias-hard-to-count-communities/>

2020 Census Maps: California's Hard-to-Count Communities

High-speed internet connections

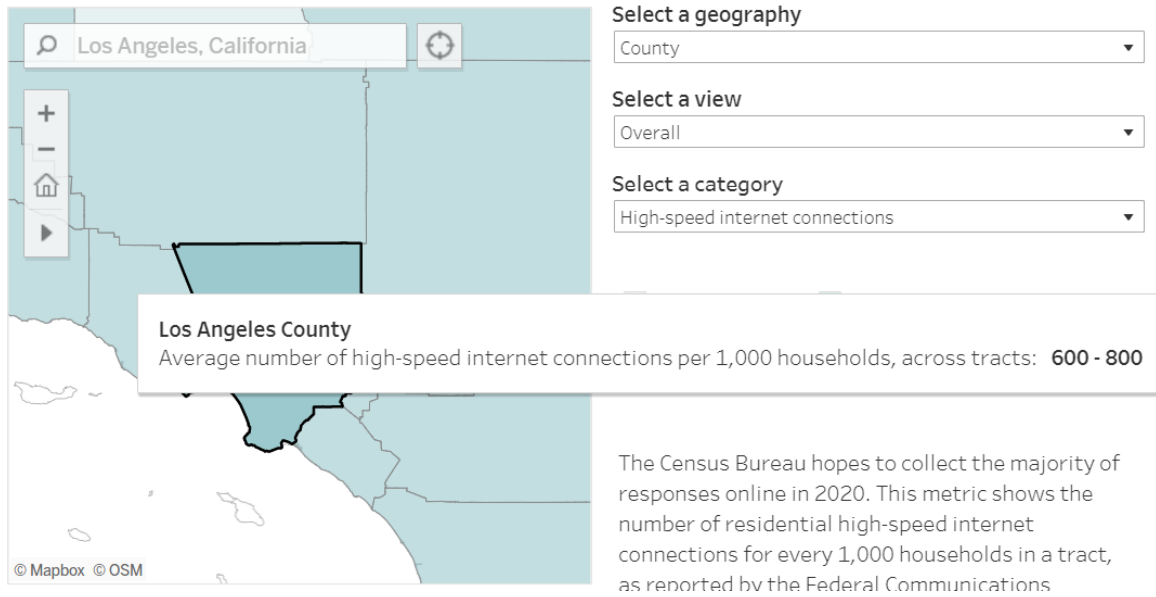


Figure 16. The map shows the percentage of people in California counties without high speed Internet connections according to the US Federal Communications Commission. The data and visualization does not account for mobile data or non-residential connections. Without good Internet connections people will have limited access to chemical disaster risk information both before and during a disaster, undermining both safety and possibilities for citizen activism to reduce risks. In the Los Angeles County, there is a moderate level of Internet connectivity: 600 - 800 per 1,000 households. (Screenshot by Shani Trieu, October 14, 2021. <https://www.ppic.org/interactive/2020-census-maps-californias-hard-to-count-communities/>)

4. STAKEHOLDER ANALYSIS

The Impacted and the Influencers

Sophia Zajic

Stakeholders are individuals, groups, or organizations that have been impacted by, or influence a problem or project. For the San Gabriel Valley, there are a multitude of stakeholders involved or impacted by pollution and water contamination. Included are concerned citizens living in the valley that are negatively impacted by the pollution they are exposed to every day. These are parents, children, pastors, and business people (Scauzillo 2018). When they became aware that their drinking water was contaminated, they had the concern and initiative to attend the meetings addressing the issue and used their voices and actions to march the streets (Scauzillo 2018). But when compared to large corporations, they lack money and status to go up against them. The same can be said for all the homeowners of the San Gabriel Valley who were affected by water companies knowingly contaminating their water (Rose, Klein & Marias 2021). So even though they are passionate about solving the problem and helping their community, they are unable to because they are just everyday citizens. If they were searching for relief, they would have to “appeal to larger governmental bodies for relief,” not their City Hall, which makes addressing the problem much more difficult than it should be, or as Steve Scauzillo puts it, “can be like finding Alice in Wonderland down the rabbit hole” (Scauzillo 2016).

Fortunately, there are some stakeholders willing to help, like the law firm Rose, Klein & Marias. Representing 1000 people, they filed a lawsuit in the Los Angeles Superior Court for contaminated groundwater in twelve cities in the SGV (Rose, Klein & Marias 2021). A law firm with 80 years of experience has more influence and power to bring attention to the problem than the citizens who live and experience the consequences of careless companies. This unfortunately should not be the case. Citizens should be able to voice their concerns directly to their City Hall when companies are compromising their health and safety.

Another stakeholder that grew to have a large influence over the Valley is the Active San Gabriel Valley, or Active SGV, a local non profit organization who had the knowledge to be concerned and focus on “mobility, climate, and health and wellness in underserved communities” (Diaz 2020). This includes the city of El Monte which is regarded as one of the “top five worst pollution burdened sites in California” (Diaz 2020). They first started off as a small group of multiracial people from different parts of the San Gabriel Valley. Through a Facebook page that those who had access to the internet could find out about, their organization grew and got the attention of UCLA and Energy Coalition to do a study on indoor air quality. So while they are not a large corporation who can tackle the industries who create the problem directly, they can make changes within their community to improve their health and climate.

An example of a large corporate power jeopardizing the health of people is the LA County Metropolitan Transportation, or the Metro. In 2016 the agency had a \$5.6 billion budget to open two new rail extensions (Scauzillo 2016). One of them would go from east Pasadena to Azusa, both cities located in the Valley, which would result in trains “zipping by more local streets than in the past 65 years” (Scauzillo 2016). This could result in a large increase of pollution, affecting the people living near the rail line extension. Agencies

like the Metro have the influence and power to build large projects like this that will affect thousands of people negatively, and the victims are unable to prevent it from happening.

5. STAKEHOLDER ACTIONS

Economic Progress or Environmental Annihilation

Kayleigh Ott

Stakeholder management is considered, from all viewpoints, to be extremely important to the outcome of a project or resolution. The authoritative status of Stakeholders' gives them public credibility, a sense of urgency and the ability to impose their ideas on any public matter. The identification of stakeholders is crucial, and when their influence is measured, we can better understand their impact on the project and if adequate management took place.

In 1979, it was discovered that San Gabriel Valley's aquifers had been contaminated with toxic chemicals. Following the news of this contamination, the Environmental Protection Agency was stunned. Never had they seen such a large contamination, and after identifying the water companies responsible for this catastrophe, it came to their attention that they are not the only stakeholder who has a say in this clean-up process. It was brought to their attention that residents had more of a say than thought, "He said the cleanup has cost the EPA, the water agencies, the nation's taxpayers and the parties responsible for the contamination about \$500 million so far — five years shy of 30. And the Water Quality Authority, since 1993, has removed more than 50 percent of the total contaminants from the basin"(Scauzillo 2018). Thus, financial investment was needed and

it was essential for stakeholders to understand how they could contribute to this. In 1993, bipartisan support unimaginable in today's Congress took place. Members of Congress came together and decided to support this proposal, "Two members of Congress, Rep. David Dreier, a Republican from Covina, and Sen. Barbara Boxer, a Democrat, came together to sponsor legislation that seeded the Water Quality Authority, which has been running cleanup plants since 1993"(Scauzillo 2018). This sponsorship was necessary in gaining the funds needed to make a dent in these contaminated basins.

In addition to these governmental agencies actions upon this fast disaster, one of the most riveting actions was the development of the East Valley Organization (EVO). Ensuing the 25th-anniversary party of the Main San Gabriel Basin Water Quality Authority, a group of concerned parents and citizens of the valley realized that they must do more. They quickly assembled the East Valley Organization, advocating and pushing the government for clean water. This public engagement is crucial in a democratic nation and often gets larger agencies to listen. Some Members of the EVO even went further to work towards other injustices and partnered with the UFW, due to their success in San Gabriel Valley.

With an understanding of how critical this contamination is to the health and livelihood of residents, the law firm Rose, Klein, & Marias filed a lawsuit in 2005 at the Los Angeles County Court, going up against the five major water companies responsible for this deadly contamination. This can pose as an example of how stakeholders' actions intertwine and depend on each other. For instance, this lawsuit would not hold any stable ground without the research and information provided by the Environmental Protection Agency, "According to the EPA, dangerous levels of the VOC's Trichloroethylene (TCE), Tetrachloroethane (PCE) and Carbon Tetrachloride (CTC) were detected in San Gabriel Valley groundwater during environmental monitoring conducted by Aerojet ElectroSystems near their Azusa facility in 1997"(Rose, Klein, & Marias 2021). Establishing specific chemicals seeping into the groundwater, allows for sufficient

evidence to sue these five water companies. Major leeway was made by Rose, Klein & Marias. In addition to the initial promised compensation to those who have become ill due to the drinking water, the plaintiffs are also demanding for property damage compensation and consistent medical monitoring of those living close to the contaminated water. Due to the urgency of this stakeholder, this lawsuit was resolved in 2006.

While these actions have proven themselves to be beneficial to this fast disaster clean-up, there are also contradictory actions doing quite the opposite. Often stakeholders in such a large position of power, like the LA County Metropolitan Transportation, tend to favor the economy over the well-being of the environment and earthlings. In 2016 the Metro had a \$5.6 billion budget that would open two new rail extensions, one of them going through the San Gabriel Valley that would result in passenger trains “zipping by more local streets than in the past 65 years” (Scauzillo 2016). The LA Metros’ expansion proposal exemplifies the complete lack of consideration for the residents of San Gabriel Valley and their respective health. When major stakeholders do not take vital action towards a presented plan or environmental disaster, it becomes a lot more difficult to rectify. It is increasingly clear, by the actions of today’s stakeholders, the government holds the economy on a higher pedestal than the health and quality of life of earthlings. But when will these major corporations and stakeholders understand that this is no longer economic progress, rather the biological annihilation of our earth.

It is essential in present day work to analyze and quantify the contribution of these stakeholders actions to the success of the overall project or movement. After all, these are ultimately the groups, businesses, and people holding the largest “stake” in the outcome of a disaster or proposal.

6. ROLE OF MEDIA AND BIG ENVIRONMENTAL ORGANIZATIONS

Not Prioritized Enough

Evelyn Tapia

Media today plays a huge role in society, yet it lacks information regarding fast disasters and problems that occur in places such as the San Gabriel Valley. We must take advantage of it and use it as a foundation to bring awareness to San Gabriel Valley which is located in Southern California. According to the American Lung Association, Southern California falls under the worst air quality in the nation, causing many health problems for individuals as small as toddlers to seniors. Some examples of the health complications are asthma, shortness of breath, cancer which is very very common in the SGV, demesia and alzheimers. There isn't much media about what's really going on with San Gabriel Valley. There are some organizations who are trying their best to help out by speaking out on behalf of the issue. On behalf of the city and community health profiles by the Los Angeles county department of public health. They did studies and came up with data that shows just how affected the people were. The infographic has information related to Health care which is a huge issue because most of the population in SGV is low income, and can't

afford it. There's just too much that they have to worry about that they forget to prioritize their health. Going a little further into this situation because the health of the people is the main aspect being harmed. Take into consideration The homeless. They're just as exposed if not way more. Higher stakeholders need to take action in helping their community because this isn't something that was caused by the people in the community but instead by the higher stakeholders that decided to put these plant factories and facilities so close to living residents knowing very well the affects it would have on the residents living there. Wikipedia doesn't have much information regarding San Gabriel Valley, and fast disasters. I did come across some local media that represent news regarding San Gabriel Valley. Such as The Los Angeles Times and the San Gabriel Valley Tribune. I didn't find any organizations that focused on fast disasters within San Gabriel Valley. The emergency management department does give us examples of fast disasters that have or can happen within the Los Angeles Zone where San Gabriel valley is located. Some examples that came up are Wildfires, floods, landslides,hurricanes and earthquakes. Other than this source I couldn't find media regarding fast disasters within San Gabriel Valley.

7. RECOMMENDED LOCAL ACTIONS

Call-Em-Local

Jazmín Romero & Shani Trieu

Certain regions among the San Gabriel Valley are notorious for their natural disasters... just take a look at Azusa City which recently had a brush fire on September 6, 2021 -- a warm and dry Labor Day. But because these cities, Azusa, the City of Industry and El Monte are prone to environmental disasters, worst-case simulation exercises are put in place, or are currently in the works, to ensure the safety of the future.

Uncontrollable wildfires which release severe heat and poisonous gases that are much more dangerous than the flames, leave the communities of their victims completely destroyed. This is most seen within the City of Azusa, *The Canyon City*. Since wildfires occur frequently and annually, city officials from Azusa encouraged their residents to follow the recommendations by the Los Angeles Fire Department titled, 'Ready. Set. Go.'. The 'Ready. Set. Go's program is designed to walk residents through the steps to ensure that they are completely prepared for the case of an approaching wildfire, which occurs at an increasing rate in the state of California.

Being “Ready” for a wildfire begins with maintaining an adequate defensible space around your home. Residents are encouraged to follow the City of Los Angeles brush clearance requirements, which are constantly updated each season. A defensible space is an area created around your home that is free of vegetation, thus allowing the corresponding fire department to place firefighters between your home and the approaching wildfire flames. In addition, cities, much like Azusa that are wildfire hotspots encourage residents to utilize fire-resistant building materials. Creating a wildfire action plan which includes an evacuation plan for your home and family, assembling an emergency supply kit for every individual in your household and collecting important information of contact and the initial evacuation plan is what emphasizes the importance of ‘Set.’ within the program. Ultimately the very end of the evacuation plan is ‘Go.’ If there is available time, residents are told to review their wildfire action plan, load their emergency supply kit into their vehicle and be ready to evacuate for a quick exit. This is so that the moment an evacuation order is issued, residents may GO! Not all wildfires affect the residential areas, though. Many, if not all commercial and industrial corporations have protocols set in place to ensure everyone’s safety.

The City of Industry, a city with a population of 373 (estimated record as of 2019) is majority made up of commercial, industrial and business establishments. Restrictions must be set in place to reduce emissions from vehicles (if utilized) through new standards as well as addressing indoor air pollution. It seems that there is not much local action taken place so the youth and other individuals are encouraged to tackle the issue themselves, to enforce policies that hold commercial, industrial and business establishments responsible for their part in disturbing the environment and its residents. With public education workshops and advocacy, residents can become more “green” and convince there to be a power-site of renewable energy and climate-friendly resources in buildings throughout the city, alongside closely monitoring the amount of air pollutants

and greenhouse gases emitted from establishments.

For the good majority of the residents living within the SGV, many live near and around many chemical plants. As shown in Figure 6 (above), there are various chemical plants that reside very close to many schools in their respective cities. The fact that there are numerous plants near multiple schools, where there are children from elementary school to university, conveys how there are many residents that lie near the high risk industrial facilities.

One way in which the city government can take action to protect the safety of their residents is to prevent chemical plants from being allowed to have their plants near residential areas. When residents are educated on the risks that the large businesses are placing upon them, it spurs them to act for their communities benefit. In the article “Critics Fight El Monte Valley Sand Mine”, it expresses how the citizens of El Monte “passionately called on county leaders, who will ultimately vote on the project, to reject it” (Allyn 2018). By calling out how it is the county leaders who will decide if the large corporations are able to do what they want, simply addresses how the local leaders are not doing everything they can to protect their community as there are other factors that motivate the local leaders to make these decisions.

Additionally, if these community leaders wish to still allow these large businesses to open up plants and facilities which places the residents at risk, they should take action to ensure that the residents who live within the fenceline zones are able to leave, if they so wish. In the article, “Home buyouts: a tool for mitigation or recovery?”, the authors explain that “Home buyout programs are typically funded by the federal government and implemented by local agencies” (Binder, Greer, and Zavar 2019). Though implementing the home buyout program, would involve both the federal government and local government, it is a possible solution that could positively impact and benefit the residents that live in the fenceline communities.

8. RECOMMENDED EXTRA-LOCAL ACTIONS

Laws for Environmental Justice

Elizabeth Kondo & Evelyn Tapia

California is infamous for its wild fires and it only seems to get worse every year. As the state continues to suffer from a drought it makes it much more susceptible to a fire starting with so much combustible material around. In fact, the “10 largest fires...have occurred since 2000” which further proves that there is a correlation between global warming and worsening wildfires (Pierre-Louie and Schwartz, 2021). It doesn't help that in the attempt to prevent wildfires, people have only made the situation worse by preventing land that would have naturally burned from burning which eventually accumulates into an even bigger problem when a fire does eventually start. To help reduce the risk of fires the State of California passed Senate Bill 901. SB 901 of 2018 requires that companies implement fire prevention plans and upgrade equipment to prevent work accidents that might result in fatalities or fires (Kuhn, 2018) It also gives monetary incentives to landowners to remove dead brush and reduce their use of fossil fuels. This law will hopefully encourage community members and landowners to take a more environmental stance when operating their businesses to prevent natural disasters, like wildfires, from getting bigger and out of control.

Specifically in the San Gabriel Valley residents are not only needing to worry about the possibility of a wildfire devastating their homes since they live within close proximity to the San Gabriel Mountains, a major fuel source for fires, but also about possibly being cooked alive just walking down the street. It has been determined that “denser, lower-income communities, such as El Monte” are susceptible to a phenomenon known as heat islands which are “areas of concrete and asphalt that have few shade trees and radiate heat” with recorded to be 10 to 20 degrees hotter than their surroundings (Scauzillo, 2017). The city of El Monte has been found to have a “5 percent tree canopy – compared to an average tree canopy rate of around 37 percent for Los Angeles County” (Scauzillo, 2017). This can cause widespread heat stroke that can endanger the lives of residents and possibly even lead to death if people are not able to move to a cooler area or get proper medical attention in time. A woman by the name of Claire Robinson, managing director of a non-profit, has already worked to plant trees, build bioswales, and build parks in El Monte in an attempt to combat this man-made phenomenon that is only being exacerbated by climate change. At a 3 day conference hosted by the Council for Watershed Health, environmental groups and city planners came up with an action plan that includes “local cities, nonprofits and corporations working with cities across the world to collaborate on how to adapt to global warming”. The hope is that by these extra-local actions, these fast hazards can be reduced in the San Gabriel Valley.

Information shared with cities and communities about fast disasters and living near plant facilities is not prioritized enough. In August 2017, Hurricane Harvey and Irma hit the southern United states. The impact that these two hurricanes caused was devastating to the people, destroying buildings, flooding communities and most importantly taking lives. Many weren't aware but the same flood- waters that people were swimming in carried toxic chemicals from industrial facilities also impacted by the hurricanes. After the Harvey rains, a plant that manufactures organic peroxides used in plastics and rubber, was fully submerged under water 6 feet. Water entered that plant's backup generators causing the

power to cut off the refrigeration system that kept the plants chemicals at a safe, non-flammable temperature. Because it was not at the correct temperature needed the chemicals exploded sending 40-foot plumes of toxic chemicals into the air and flood-waters. The people who inhaled these thick fumes collapsed and had very complicated health problems as a result. The State of California needs to make sure that information regarding chemical risks is provided to anyone and everyone. Planning and preparing for fast disasters needs to be a main priority. This is where state and federal governments must provide resources to fund the enforcement.

This brings us to our next point. Demanding the Federal state to create laws regarding emergency evacuation plans and drills for the residents who live in high disaster areas. SGV is located in Los Angeles which is high for earthquakes, wildfires, flooding, mudslides and chemical emergencies. The Purpose of an emergency plan is to have the communities evacuate safely and sharply, Saving as many lives as possible. The first couple things that should be taken into consideration are the type of disaster. How dangerous it really is and where is this taking place? Having safe spots and destinations away from water and trees would be useful. When the emergency plan has been finalized it should be distributed everywhere in the state no matter if the area is not as impacted by disasters. Places that should have this emergency plan are schools, workplaces, churches, hotels and amusement parks.

9. RECOMMENDATIONS FOR FUTURE RESEARCH

Understanding Different Perspectives

Kayleigh Ott & Sophia Zajic

Addressing environmental hazards and threats has become something way too familiar and something we must strategically categorize to resolve. The data and research gathered by the EPA when monitoring the groundwater in San Gabriel Valley can prove useful when monitoring water quality in all different areas. When you gather the number of certain chemicals in the water you can infer their toxicity towards human health. This is supported when Scauzillo states, “No one knew how to clean up pollution that seeped into the water table from aerospace and industrial companies for nearly a half-decade. And

people were worried about what they were drinking before the discovery was made.” (Scauzillo 2018). Characterizing the toxicity and health hazards these chemicals pose is our next step in fighting water contamination. On top of this, finding information on the facilities and their emissions was difficult to find, including any disasters that occurred, especially in a city like Industry where the population is less than 200. In settings facing similar hazards to San Gabriel Valley, this research is helpful when publicizing the severity of health hazards as the community is aware of what health problems they should be wary of.

When it comes to addressing these kinds of environmental hazards that do not have much information to begin with, a qualitative study is a great way of gaining more information through observations, interviews, and focus groups. So in relation to the monitoring of water quality and characterizing the toxicity and health hazards of the chemicals contaminating people’s drinking water, we have come up with a Qualitative Research Proposal to identify the problem and find a solution. Our research question would be: Why would water companies and their workers knowingly distribute contaminated water to the residents of the San Gabriel Valley if it could potentially have harmful effects on the residents drinking it? The social groups we would study and interact with are the five water companies determined by Rose, Klein & Marias of being responsible for the water contamination which are “Suburban Water Systems, San Gabriel Valley Water Co., Southwest Water Co. and California Domestic Water Co.” Possible people we could interact with are assistants, supervisors, technicians, water operators, and managers. To gain access to the social groups we could go directly to their main office but most likely have to go through some privacy protections to talk to them. As an example, the main office for SouthWest Water Company in California is in Covina and their address can be found on their website. Using participant observation, we could directly ask the workers of these water companies if they were aware of the water contamination and why they would allow it. This would enable us to gain their perspective. In-depth interviewing with

the employees of these companies would be very useful in answering our research question. Possible questions could include, “When were you first made aware that the company you work for contaminates resident’s drinking water?” “If you knew of the situation, did you ever think to say something to the residents or express concern to your superior?” With questions and interviews like this, we can gain more information directly from their mouths. We could also use focus groups that would help us identify the ideas and what is expected from these groups of people. Our focus groups could be the victims whose water was contaminated, and the perpetrators who contaminated their water. This would help us gain insight on both sides of the problem. All this qualitative research could be useful for organizations advocating for clean water to obtain the perspective of water companies.

10. INJUSTICE ANALYSIS

The Classic Case of Environmental Injustice

Jazmín Romero & Shani Trieu

In moments in which an environmental disaster occurs, much like a wildfire, health risks are on the line. In Azusa City, where wildfires are notorious, it has been found that considering the wildfires, many residents suffer from asthma and lung cancer deaths. Statistics demonstrate that 34.9 lung cancer deaths occur annually per 100,000 populations as well those who are diagnosed with asthma are 7% made up of children, ages 17 and younger. These statistics are set aside from the other health conditions residents may encounter. These conditions include but are not limited to low levels of physical activity, obesity, diagnosed diabetes, reported colon cancer, breast cancer, lung cancer, chronic obstructive pulmonary disease, cardiovascular disease and diagnosed asthma.

In addition to Azusa City, El Monte's residents suffer from many health disparities such as obesity, coronary heart diseases, type 2 diabetes, cancer (unknown type), hypertension, strokes, asthma and other chronic illnesses, diabetes, heart disease and reported low levels of physical activity. It must be taken into account that in addition to the El Monte health disparities, over one-third of the adult population does not have health insurance nor does 7.4% of children obtain insurance.

Despite economic status, equal medical care should be ensured for the residents of these communities since they are at such high risk to natural disasters and health conditions, which in most cases, result from said natural disasters. Not only should there be an equal share of care, but residents must no longer be blind to statistics. Statistics of their health rates should be easily accessible, open and honestly public in order to prevent further economic injustice. For our unhoused neighbors suffering from economic injustice, not being able to afford or receive health care is tragic. Many residents of the community suggest that the city take upon further action in order to take care of all residents, regardless of economic and housing status.

As we discuss specifically about the reproductive injustices that occur for pregnant women, we need to consider various aspects. In El Monte, we are able to find the 4 people who are a part of the Local Emergency Planning Committee; however, there is a gender injustice as there is only 1 woman and 3 men on that committee (Planning Commission). The fact that there is only 1 woman on the committee and we are unable to know if she is a mother and thus we are unable to determine if parents, specifically representatives for pregnant woman, are adequately represented within the committee. With the uncertainty of whether parents are adequately represented within the El Monte Planning Committee, a suggestion for that committee is to recruit more members of various ages and professions. By having adequate parents, adequate scientists, adequate students, etc. it provides the committee with more perspectives when trying to create these emergency plans and ensuring it is executed to the best of their ability. In comparison however, for the city of Azusa and Industry, there is no resource to see who is on the committee, let alone if there is a committee in those cities. For those two cities, it is crucial that their local government seeks to create a committee of their own as the regulations for El Monte may not be applicable to the city of Industry or Azusa.

As we look into the various chemical plants within Azusa, El Monte, and Industry, we will notice many of the same chemicals that are being released into the environment for the residents to breathe in on a daily basis. In Azusa, the Canyon Chlorification Facility

releases gas chlorine that was liquified by pressure and the Monrovia Nursery Company releases chlorine gas and aqueous ammonia vapors and potentially releases methyl bromide gas. While chlorine does not have too many studies about its effects on pregnant women, there has been “increased incidences of urinary tract defects, preterm delivery, and low birth weight have been reported” (Exposure to Chlorine 2017). Similarly for ammonia, there have been “no published studies on the effects of exposure to ammonia in human pregnancy” (Exposure to Ammonia 2017). Lastly, for methyl bromide, it is once again stated that “limited data available on the effects of exposure to methyl bromide on pregnancy and the unborn child” (Compendium of Chemical 2019).

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