



UC IRVINE | ENVIRONMENTAL INJUSTICE | FALL 2019

EL SEGUNDO

FAST DISASTER CASE STUDY | GROUP 3

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ANTHRO 25A: Environmental Injustice

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Fig 1: Location of El Segundo in Los Angeles County, California. Wikipedia. Retrieved October 26, 2019, from https://en.wikipedia.org/wiki/El_Segundo,_California

1. What is the setting of this case?

El Segundo, California, in Los Angeles county, is 3 miles W of Hawthorne, California and 13 miles SW of Los Angeles, California. El Segundo is part of the surrounding Los Angeles - Long Beach metro area. (City Facts 2019). The El Segundo area was initially a part of Rancho San Pedro. It later came to be known as El Rancho Sausal Redondo, or the "Round Willow Patch Ranch." The place got its current name in 1911, when it was the site of the 'el segundo' or 'the second' Standard Oil refinery on the West Coast. The oil refinery remains to date, the most prominent feature of the city. El Segundo was officially incorporated on January 18, 1917. El Segundo, California gets 14 inches of rain, on average, per year. On average, there are 278 sunny days per year in El Segundo. Households in El Segundo, CA have a median annual income of \$92,942, which is more than the median annual income of \$60,336 across the entire United States. This is in comparison to a median income of \$91,623 in 2016, which represents a 1.44% annual growth. (City of El Segundo, California 2019)

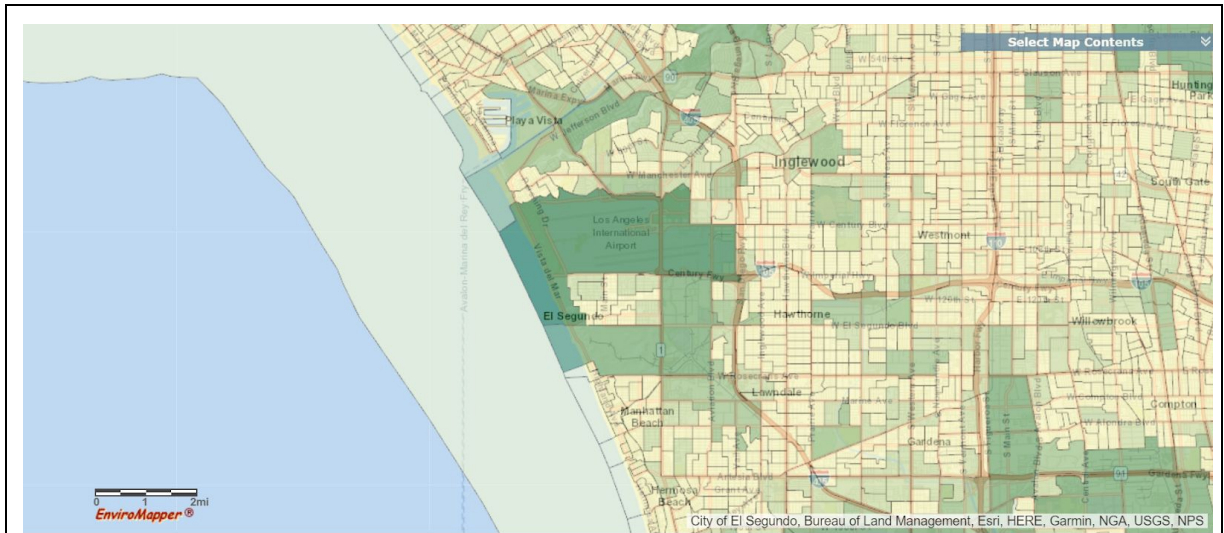
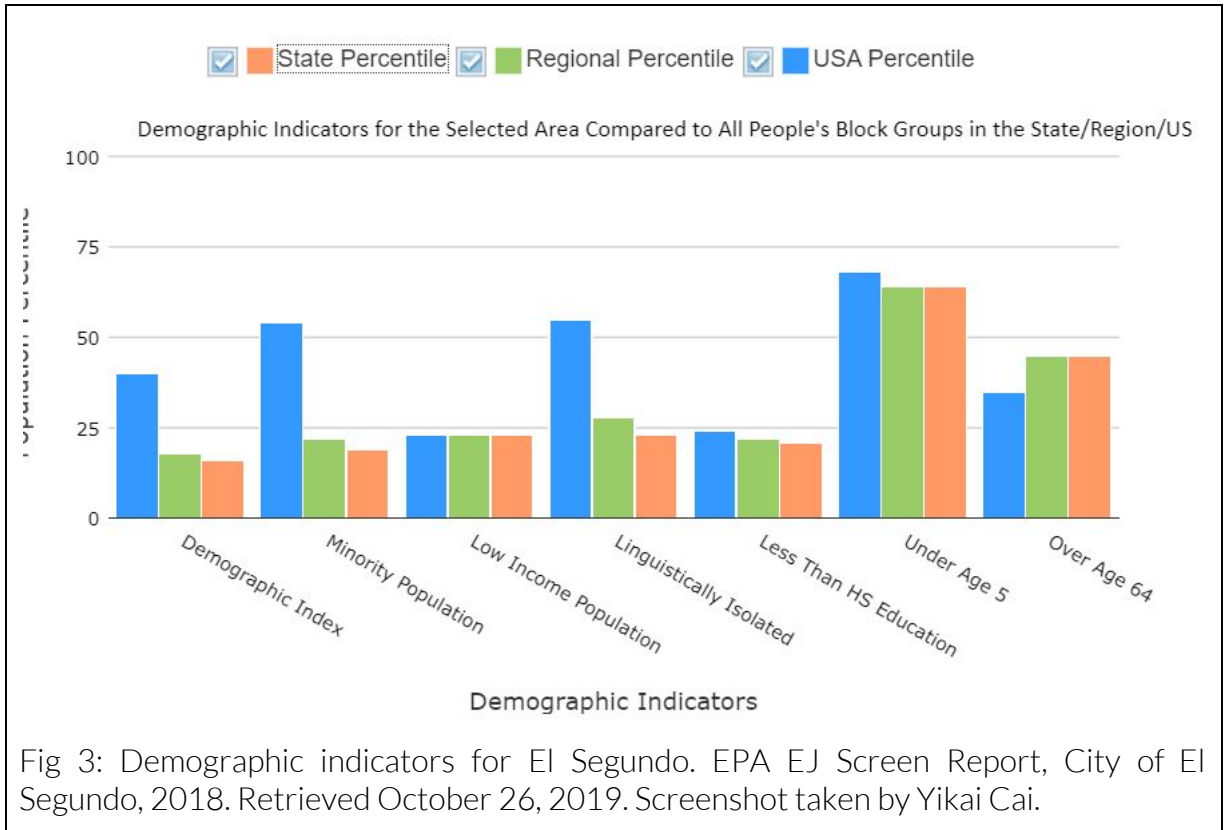


Fig 2: Selected area for the City of El Segundo. EPA EJ Screen Report, *City of El Segundo*, 2018. Retrieved October 26, 2019. Screenshot taken by Yikai Cai.

As for the demographics, the estimated population of El Segundo is 16,719, of which 50.9% are female and 49.1% are male. (US Census Bureau 2018) Residents are mostly White (75.9%), followed by Asian (9%), and African American (1.7%) (US Census Bureau 2019). The name “El Segundo” was adopted in 1911 when Chevron built its second refinery, El Segundo, which is Spanish for "The Second". This refinery is controversial for receiving significant quantities of their crude oil from the Amazon region of South America - more than 5,000 barrels per day.



A map generated with the CalEnviroScreen 3.0 (Fig. 2) further points to several census tracts in El Segundo that rank between 81 and 100% according to the tools' indicators. The map therefore visualizes the distribution and stratification of environmental stressors in the city, which affects downtown areas as well as oil refinery around the port.

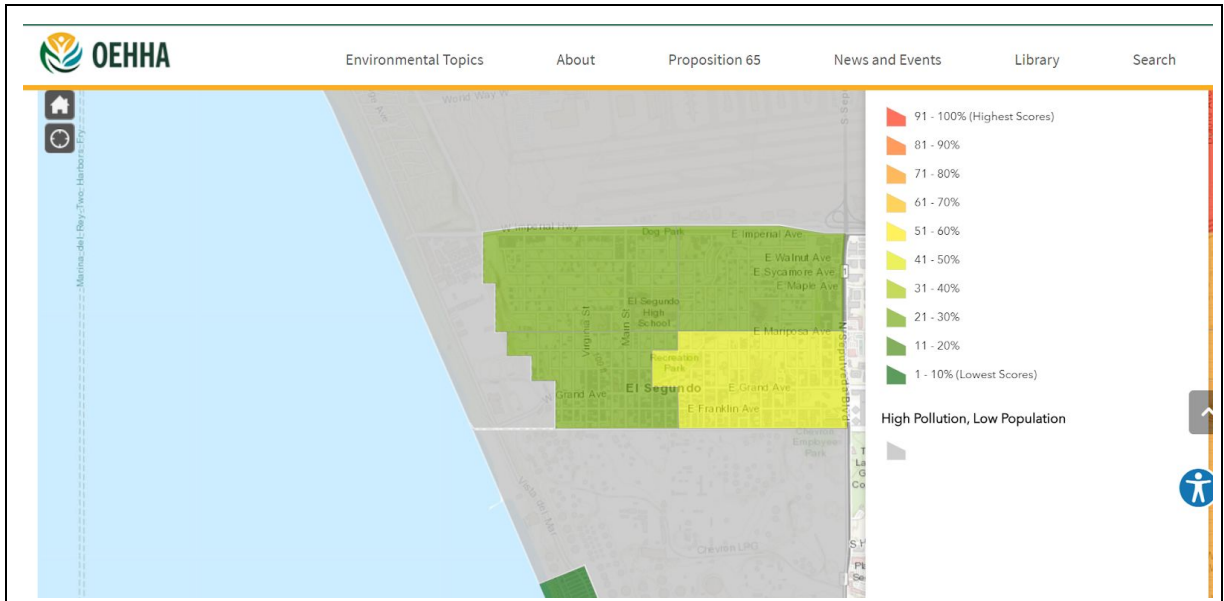


Fig 4: High scoring census tracts in El Segundo, CalEnviro Screen 3.0, 2019. Retrieved October 26, 2019. Screenshot taken by Yikai Cai. Together, the data indicates El Segundo status as medium-income city with many factories. Along with many young age of the overall population, El Segundo has lower pollution than most other cities around Los Angeles. Also, most people in El Segundo have higher education level, since this city is a relatively new city.

2. What environmental threats from *worse case scenarios* are there in this setting? What data is available to characterize worse case scenario potential? What other environmental hazards are there in this setting? [Jose Corpus]

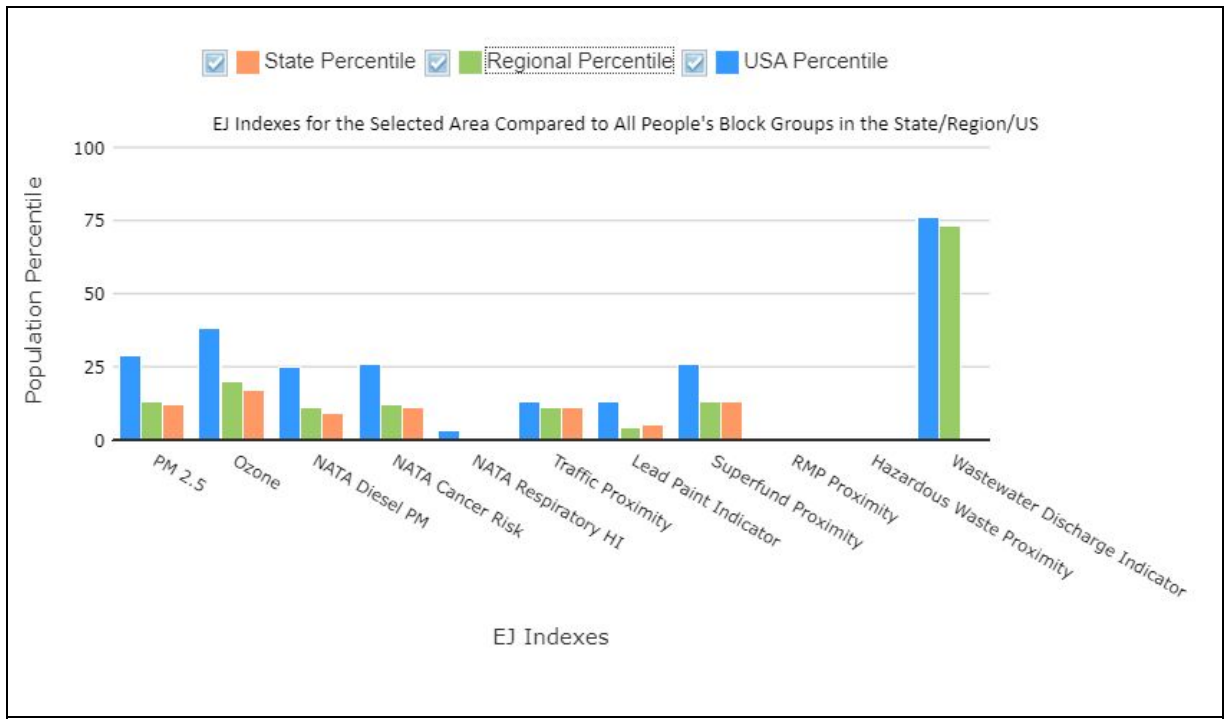


Fig 5: EJ Indexes for El Segundo, CA. EPA EJ Screen Report, El Segundo, 2019. Retrieved October 26, 2019. Screenshot taken by Jose Corpus.

For the City of El Segundo in California, the worst case scenario would have to involve the Chevron Refinery at the heart of the city. Though the EJ Screen reports shows us very little of the potential hazard with the refinery in El Segundo (as seen in the unavailability of the RMP Proximity and Hazardous Waste Proximity), information about the dangers of the refinery can be explored through other means. For example, the EPA reported that the area around the Chevron refinery is, “likely to be in at least one RMP facility’s vulnerable zone” (EPA 2019). The Chevron oil refinery at El Segundo just so happens to also be the second most productive oil refinery in California at, “269,000 barrels of oil per day” (California Energy Commission 2019). Thus, a major threat to this facility and its’ 16,929 residents is the release of harmful chemicals (Data USA 2019). This facility most notably releases approximately 397,000 pounds of chemicals into the air surrounding El Segundo with 58% of this being Ammonia (EPA 2018). Ammonia, when exposed to high amounts, can cause severe irritation and, “immediate burning of the nose, throat, and respiratory tract (healthy.ny.gov 2004). Additionally, another 1.4 million pounds of nitrate compounds are dumped into nearby water sources (EPA 2018). This type of waste is detrimental to both humans and the environment because the presence of nitrate compounds in drinking water can cause Methemoglobinemia, the inability for your blood to carry oxygen (McCasland et. al.

2012). As for the environment, excess amounts of nitrate compounds can cause algal blooms which can, “decrease the oxygen that fish and other aquatic life need to survive” (EPA 2018). In other words, this type of algal blooms can kill surrounding ecosystems. Overall, the worst case scenario for the Chevron oil refinery would be the destruction of surrounding ecosystems and health complications for the surrounding residents. However, these effects are more associated to a slow disaster. From the fast disaster perspective, a massive fire of the Chevron refinery in El Segundo can cause severe causes of chemical pneumonia, and air pollution amongst its thousands of residents. With El Segundo’s air quality index at 134 and the average US quality being at 74, a fire at this massive refinery would be detrimental to the surrounding organisms. By breathing in such polluted air, this can cause cancer (AMFS 2019) or Chemical pneumonia, an after effect of breathing in burning oil which can cause, “Cough producing blood or frothy pink matter in saliva, nausea, abdominal pain, or chest pain” (emedicinehealth.com). Overall, in the event of a fire at the El Segundo refinery, all organisms in the surrounding area will become a victim of carcinogenic compounds permeating the air and become targets of chemical pneumonia.

3. What factors -- social, cultural, political, technological, ecological -- contribute to environmental health vulnerability and injustice in this setting? [Kenneth Kong]

Factors that contribute to the injustice and health vulnerability in El Segundo include political, environmental, and cultural reasons. For example, one of the reasons why communities like El Segundo are stuck in an environmentally unsafe region is that politicians like State Assembly representative Mike Gipson have been the recipient of many gifts and monetary donations from the oil industry (Morris 2017). In fact Pacific Standard says that: “Lobbying reports show that, from the time he was elected in 2014 through 2016, Gipson accepted meals and lodging valued at \$4,585—the highest dollar amount in the California legislature for that period—from the Western States Petroleum Association-” (Morris 2017). Naturally this means that Gipson has been lobbying hard for the oil industry and opposes bills dedicated to clean energy etc. Of course, this means that he won’t be actually representing the voices of the people in El Segundo, but rather the companies in the WSPA and for their cause instead. This makes it much harder to improve upon the existing pollution conditions that affect the community.

Many of the communities that are affected, like El Segundo, are mostly comprised of immigrants and low-income people that don't speak English as their first language. As a result, they need someone to represent them. Unfortunately, it seems as though their State Assembly representative has been bought by the oil companies. They also don't speak out against the conditions they face and brush it off instead because they fear that they will face deportation or other forms of retribution (Morris 2017). They'd rather suffer detrimental health situations that could lead to long-term complications including cancer and asthma. This makes it very easy for pollution regulators to dismiss any concerns the community may have and continue on with business. Companies will simply walk over the concerns of citizens because as long as no one knows what is happening then it would be much cheaper to not change anything.

Other than the socio-political factors, the environmental state of El Segundo also plays a big part in its health vulnerability. The location of the community is in a basin so the air circulation is not strong enough to clear the air of pollution particles. The emissions from cars, trucks, and the LAX airport produce an unhealthy amount of microparticles due to it being adjacent to numerous highways and LAX. Jet takeoffs from LAX can travel downwind up to ten miles and can make their way into peoples' bloodstreams, causing circulation complications (CBS 2014). The EPA's CalEnviroScreen also measures the PM 2.5 (tiny particulate matter) level of El Segundo to be 82, toxic releases at 73, and hazardous waste at 94, with the worst conditions being at 100 (EPA 2018). There are also many companies next to El Segundo like Chevron, which don't properly dispose of their waste and instead contaminate the environment around their facilities.



Fig. 6: Nurse Pedora Keo and her son Vincent Rol. Vincent suffers from serious asthma and his life is threatened by fossil fuel pollution. Retrieved Oct 26, 2019. Photo courtesy of Ted Catanzaro/Pacific Standard.

4. Who are the stakeholders, what are their characteristics, and what are their perceptions of the problems? [Aida Recinos Ibarra]

Stakeholders can be people or groups as big as companies or even as small as workers. Stakeholders all have a quality that can help them in this situation or hinder. Stakeholders also may have something to gain from this situation. Stakeholders in this particular instance are Chevron, the EPA, workers at Chevron, residents of El Segundo, as well as environmental organizations such as the Coalition for a Safe Environment which is a nonprofit organization which is dedicated to environmental justice in the area of Los Angeles.

Chevron is an oil company which spends millions of dollars on lobbying in fact in 2017 Chevron was named as one of “the top four spenders on lobbying in California” (Morris

2017). Chevron's main interest is in monetary gain, and business. The fact that Chevron has millions of dollars, is what helps them get what they want. Chevron has proven several times that they do not clearly prioritize the safety of their residents, workers, or even the quality of the air. The workers at Chevron are stakeholders as well in these fast disasters would probably affect them first since they work very closely with these machines and chemicals.. Another characteristic these workers have is that they may not have any voice in what goes on surrounding decisions in these refineries. However they do have the power to unionize. This can be seen in the past year when the Chevron refinery in El Segundo was fined for "allegedly not ensuring employee participation by experienced operators, maintenance workers and engineers in a temporary pump evaluation process" (United Steelworkers 2018). These recent allegations demonstrate that by not having the workers participate in the evaluation process, Chevron does not care about the safety nor the input of workers who work with these machines every day.

The EPA, or the Environmental Protection Agency, is also a major stakeholder in this situation in that they highly value human health and the environment. The EPA has a large amount of legal power when it comes to the environment, in that they are in charge of enforcing environmental laws through "civil or criminal enforcement action against violators of environmental laws" (EPA 2018). Other stakeholders in these instances are residents, although most residents in El Segundo have health care coverage, they are a serious stakeholder in the case of a fast disaster. If say a generator were to blow up, then not only workers would be in danger but also residents in the vicinity. In fact Jesse Marquez, executive director from the Coalition of Environmental for a Safe environment says that El Segundo is the "third largest source of air pollution in southern California" and that living next to any refinery puts its' residents at risk for respiratory problems (Dreezen 2008). This statement alone shows that environmental organizations are not in agreement with refineries such as the one in El Segundo being right next to residents.



Fig 7: A photo of the Chevron refinery in El Segundo is shown right next to residents homes. Courtesy of Getty Images

5. What have different stakeholder groups done (or not done) in response to the problems in this case? [Jacqueline Salazar Romo]

Several stakeholders have shown to become lightly involved in trying to remediate their self image in the wake of environmental Chevron, the major corporation involved in contributing to the pollution in El Segundo, California, is a major stakeholder whose environmental impact on the community is undeniable. On their website specific to the city, Chevron's El Segundo Refinery cites themselves to be "one of the few industrial facilities in the Los Angeles Basin to operate its own wastewater treatment facility under federal permit;" the Initiatives page goes on to elaborate on their plan of action, stating that "Chevron's El Segundo Refinery built a Cogeneration facility that provides all of the electrical and steam power... [and] a Regenerative Thermal Oxidizer plant that controls both odors and hydrocarbon emissions" with the intention of having an energy efficiency increase and reducing air emissions. Additionally, they cite the South Coast

Air Quality Management District as their designated weekly inspector, adding that "Petroleum refining is one of the most heavily regulated industries in the world" (Chevron 2019). The Chevron facility in El Segundo additionally claims that in 17 years, their collective emissions have cut by approximately half. Something that I believe is ethically unjust in this particular case is the origins of El Segundo having been based on its corporate power.

El Segundo is a city that cites itself to be the aerospace capital of the world and a leading beacon of innovation and corporate advancement in California. Apart from the growing business with promising financial prospects, there are a total of fifteen Fortune 500 companies cited on the El Segundo Business website, and among these notable corporations headquartered or producing there are names like Boeing and Mattel, which can, to some extent, be cited as major polluters. El Segundo is a city that prides itself of its business acumen. Another factor that damages El Segundo environmentally is its proximity to Los Angeles, and consequently its state in the Los Angeles County. While its location provides for lucrative means and economic advancement in the face of increasing industrialization, many of these facilities produce major pollutants and waste that is harming the El Segundo life quality. Factors like these, traffic congestion, and carbon emissions are clear contributors to harmful natural impact happening in El Segundo, but despite these environmental damages, few companies have taken direct accountability or begin initiatives to better the environment in the local area.



Fig. 8: Szekely, Pedro. Chevron's El Segundo refinery (photographer caption: "A few blocks from my house is the El Segundo Chevron oil refinery. Three police cars came while I was taking this photograph. They were very nice, and given that I was outside the premises, there is nothing illegal about it"). Dec 1, 2007. Courtesy of Wikimedia Commons.

6. How have big media outlets and environmental organizations covered environmental problems related to worse case scenarios in this setting? [Alexandra Vasquez]

When it comes to reporting environmental issues in El Segundo, California, the media has done a somewhat decent job. The Chevron refinery, the largest refinery on the west coast, has had a couple of fires and flare-ups. News articles such as the Los Angeles Times have done a good job of reporting fires and unusual activities such as black smoke coming from the refinery. For example, on September 17, 2018, reports of a massive

plume of smoke rose above the city of El Segundo (Shyong 2018). That same morning, the Los Angeles Times came out with an article reporting the plume of smoke and what had caused it. In another article, the Los Angeles Times reported the unhealthy air quality from a fire at the Chevron oil refinery (Fry 2017). They reported that the plumes of black smoke were blowing toward residential areas and that residents should close their windows. Overall this news source does a good job when it comes to reporting fires and potential health hazards in the El Segundo area.

Local news outlets such as the El Segundo Herald on the other hand, do not do a good job of reporting negative articles about the Chevron oil refinery. I noticed that the Herald Publications local newspaper focuses on mostly the positive aspects of the Chevron oil refinery. After searching the newspaper website, I realized that it was easier for me to find a 2017 article that talks about Chevron's charity work than what it was to find an article that talks about the fires that have happened more recently in 2018. The Chevron article in this newspaper praised Chevron for donating \$500,000 to the STEM programs in the El Segundo community (Herald Publications 2017).

Not only that but, national environmental groups do not seem to express concerns on this worst-scenario oil refinery. For example, Greenpeace, the largest environmental organization in the world, has no media coverage of this issue at all. Furthermore, local environmental groups like Grades of Green do not seem to cover the environmental concerns of the Chevron refinery either. The lack of media coverage surrounding this refinery is astonishing. Even those who report the issues that happen, do not report the devastating consequences that come with having an oil refinery of that size near the El Segundo residential area. The media should focus on the possibility of a worst-case scenario and the long term consequences of breathing in the fumes from the Chevron refinery.



Fig 9: The Chevron fire on Oct. 2017 that led the media to alert the public of unhealthy air quality. Retrieved on October 25, 2019. Screenshot taken by Alexandra Vasquez.

7. What local actions would reduce environmental vulnerability and injustice related to fast disaster in this setting? [Jose Velasco]

Action plans outlined by a committee range from conservation of energy and water, waste reduction, address global warming, improve transportation options to reduce the risks to human health. Although implementation of these action plans may be difficult due to funds limitation and initiation by the state. The goal for the city is to sustainable and live in a safer community. The Council said, “This Environmental Action Plan outlines first steps towards achieving a more “green” and sustainable community. To reinforce the city’s commitment to environmental stewardship, the Environmental Subcommittee recommends the implementation of this plan and for staff to monitor its progress.” (El Segundo Environmental Council). Successful implementation of an environmental action plan will ensure that the city improves its current environmental issues while preserving the health for future generations. Reduction of carbon footprint is the overall goal because many pollutants are thought to cause health related issues. The disaster prevent are environmental health hazard and many of the actions provided include renewable energy sources, reduction landfill, increase plant production and public transportation improvement.

One of the major issues relating to this topic are oil drilling and refinery in this community. Oil refineries convert crude oil, coal, or natural gases into fuel. Air is polluted by up to 100 pollutants emitted from equipment at refineries. Land is polluted by the large amount of harmful waste from refineries which needs to be dumped. Water is polluted by the fallout from air pollution and by refineries discharging chemical pollutants into waterways. Many of the gases emitted by refineries are harmful to humans, and can cause permanent damage and even death. They can cause respiratory problems (such as asthma, coughing, chest pain, choking, and bronchitis), skin irritations, nausea, eye problems, headaches, birth defects, leukaemia, and cancers. As said by Groundwork, “ Fossil-fuel combustion by-products are the world’s most significant threat to children’s health and future and are major contributors to global inequality and environmental injustice. No country is spared, however: even high-income countries, especially low-income communities and communities of color within them, are experiencing impacts of fossil fuel-related pollution, climate change and resultant widening inequality and environmental injustice.” (Groundwork). Expert groups have found solutions such as seizing this opportunity, citing policies and initiatives that have been effective. Perrera proposed, “Local actions that can be done by citi zens are shifting to clean modes of power generation such as prioritizing rapid urban transit, walking and cycling networks in cities as well as rail inter-urban freight and passenger travel; shifting from heavy-duty diesel vehicles to low-emission vehicles and fuels, including fuels with reduced sulfur content.” (Perrera 2017).

Chevron El Segundo, Calif. Refinery is on a list of incidents reported in the United States on Oct. 25 2019. Alternative local actions include to take action with industry and government to make refinery operations safe and clean. Call a community meeting, ask for the company to provide details of all accidents, fires, explosions, and worker injuries at the plant recruit technical or legal experts or talking to your local political representatives or counsellors. An example of an environmental group action, “The group, a nonprofit run by a former EPA enforcement chief, as well as Environmental Advocates, a San Francisco-based environmental law firm, and the Huntington Park-based advocacy group Communities for a Better Environment, delivered a notice of intent to sue to Phillips 66 on Wednesday” (Phillips 2019). They are accusing it of years of mismanaging hazardous waste that could pose a health risk to people living near its Wilmington and Carson facilities. With the usage of data and other information, solutions can be provided. A ruling claims, “The EPA is also working on a database to track the monitoring data in order to better communicate the testing results with the public. Administrator Gina McCarthy describes this database as a “neighborhood watch” for refinery air pollution. If emissions are detected, refineries are required to

take corrective action, but the rule also includes incentives for refineries to fix problems immediately, before they result in leaks and excess emissions” (Fox 2015). The rule makes commitment to public reporting and transparency, with incentives for refineries to fix pollution issues quickly to create meaningful change.



Fig 10: Dr. William Burke seen with his wife, Mrs. Yvonne Brathwaite Burke, and friends at the Taste of Soul in the Crenshaw District Photo credit: Jack Chin, South Coast Air Quality Management District. This conference aimed to strengthen SCAQMD’s relationship with stakeholders in environmental justice communities by encouraging more residents to get involved and to be optimistic about the positive results that their activism can bring to their communities.

8. What extra-local actions (at state, national or international levels) would reduce environmental vulnerability and injustice related to fast disaster in this setting and similar settings? [Aida Recinos]

One extra-local action at the state level that would reduce environmental vulnerability would be a statewide enforcement of regulations on oil refineries inspired by the Board of the Bay Area Management District which has been in effect since 2017. These new regulations “require finding and fixing equipment leaks and clean-up of refinery equipment” (Sierra Club 2016). This would not only have oil refineries in El Segundo and vicinities across California constantly under check but this would hopefully help reduce the amount of pollution, leaks, or even explosions from happening and reduce the risk to residents. Another extra local action which would reduce environmental vulnerability and injustice would be to have a statewide or even nationwide law which requires corporations such as Chevron to report accidents at oil refineries, and constant surveillance by the state of levels of harmful chemicals being released, this would cause these corporations to pay attention to these levels in order to avoid being fined for violating laws such as when Chevron got fined for “failing to immediately report the accidental release of hydrogen sulfide”(Hernandez 2018). By having stricter enforcement of reporting accidents and releases, these companies would be forced to be more cautious of the conditions which the oil refineries are in, as well as try to avoid these accidents.



Fig 11 : Protestors fighting raising awareness for Chevron polluting the Amazon forest. Credit: Samuel Oakford, amazonwatch.org

9. What kinds of data and research would be useful in efforts to characterize and address environmental threats (related to fast disaster, pollution and climate change) in this setting and similar settings? [Jose Velasco]

The rule makes commitment to public reporting and transparency, with incentives for refineries to fix pollution issues quickly to create meaningful change. The Public Works Department said, “We will complete a study calculating the amount of greenhouse gas emitted from city facilities and city operations for use as a gauge to plan future reductions that meet or exceed the action goal.” (El Segundo Environmental Council). In order to reduce greenhouse gas emissions, research and data are important tools that could create evidence useful for passing towards a bill that would force business

officials to lower emission levels. In order to find how pollution affects human health, it would clinical observation experiments could help study this issue. A study says, "In particular, research is needed to better understand the chemical and physical properties of complex air pollutant mixtures, and to use new observations provided by satellites, advanced in situ measurement techniques, and distributed micro monitoring networks, coupled with models, to better characterize air pollution exposure for epidemiological and toxicological research, and to better quantify the effects of specific source sectors and mitigation strategies " (West 2016). To better understand the link between air pollution and health, research is needed in order to address environmental threats relation to pollution. Action plans needed include switching to non-polluting energy sources, public transportation, redesign industrial landfill and improvement on oil refinery drill sites. I believe that through legislation and bills, data could be useful to keep refinery sites away from communities and instead taken to sites of low population to continue for production needed for daily life.

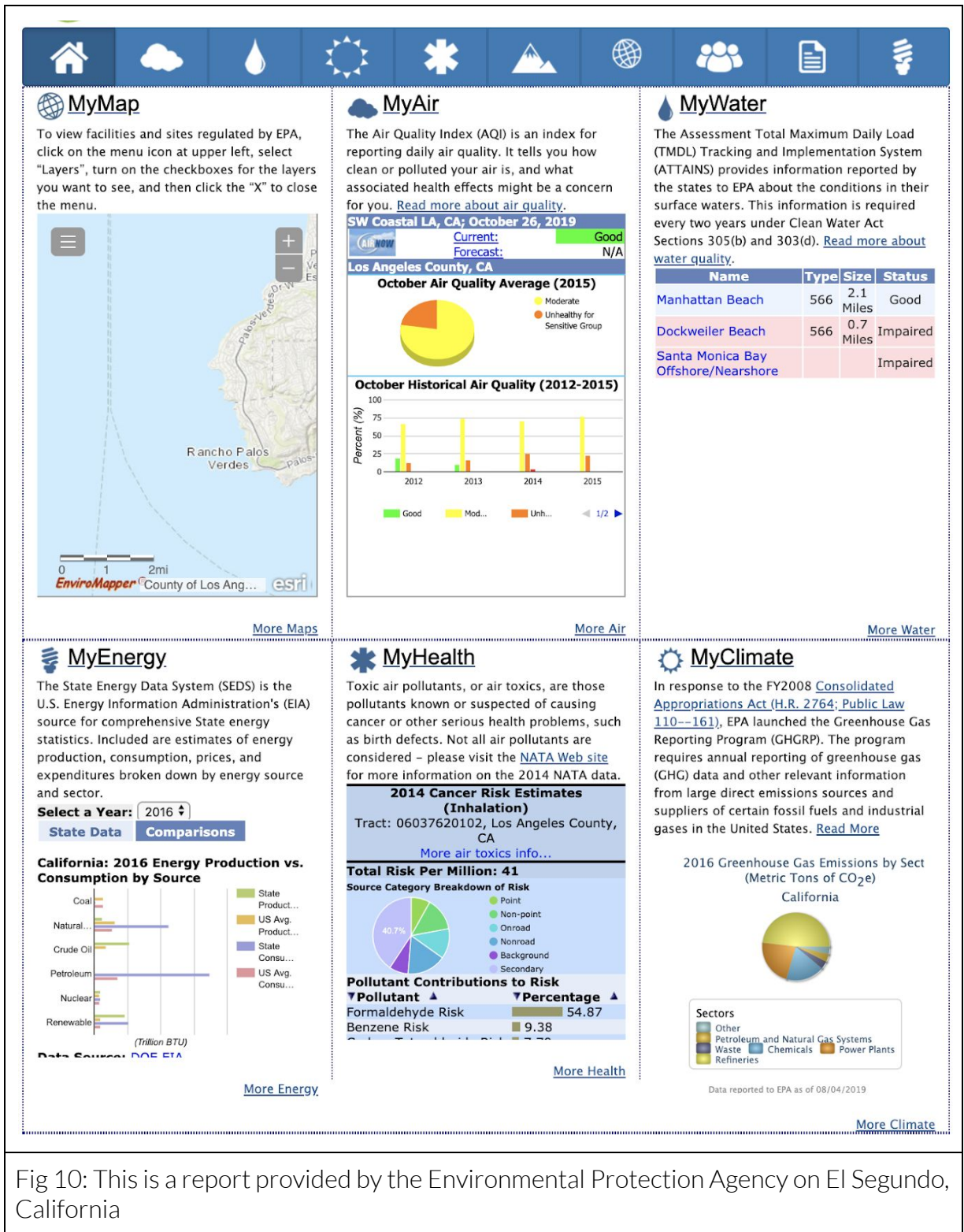


Fig 10: This is a report provided by the Environmental Protection Agency on El Segundo, California

**10. What, in your view, is ethically wrong or unjust in this case?
[Alexandra Vasquez & Aida Recinos]**

What is unjust in this situation is that companies like Chevron go out of their way to try to keep a positive image and in doing so they omit information. When seeking employees their website states that their environment ensures injury and incident-free operations, zero safety incidents, and zero environmental incidents. It is unjust that their website can make these statements and offer no proof. Their website makes the company seem as if no possible worst-case scenarios can happen to their employees and the residential areas surrounding their refinery. They make bold claims such as, "fumes are not hazardous at all" but do not provide any research or evidence to support these claims. The Chevron in El Segundo, CA website states that they are working on a new environmental management system. This management system states, "New projects must avoid continuous gas flaring and venting and must incorporate reinjection of recycled water where feasible" (Chevron 2019.) This shows that their company is not as environmentally friendly as they make it out to be to the public when fires occur in the refinery. In September 2018, an enormous plume of black smoke came from the refinery and into the city of El Segundo, CA. When asked the Chevron company stated that it was not hazardous at all. Rather than lying the corporation should be honest and talk about the dangers that the El Segundo residents are exposed to through this refinery.

Another thing that we find unjust is that people in the communities in El Segundo are dealing with health problems because of corporations such as Chevron. The residents of not only El Segundo but also of nearby cities have to deal with the consequences of the air pollution such as "Linares, 42, lives in a two-bedroom apartment on East Sandison Street in Wilmington with her partner; her 20-year-old son from a previous union; and two younger sons, both of whom have asthma"(Morris 2017). Although these people live in Wilmington, this is a perfect example of how residents not just in El Segundo but all over the South Bay Area are negatively impacted by refineries. It is almost as if these companies value profit over people's health



Fig 11: Fire at the Chevron Oil Refinery on 10/17/17. Credit: Gil Levas (NewsChopper4).

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APPENDIX

You Submitted

Address:

324 W El Segundo Blvd
El Segundo, CA 90245

Important Information on Latitude/Longitude:

Latitude is the distance of a facility north or south of the equator measured in degrees. Longitude is the distance of a facility east or west of prime meridian measured in degrees.

The facility latitude and longitude values were obtained from EPA's Facility Registry and may reflect corrections to the latitude and longitude submitted by the facility.

Facility latitude and longitude used by VZIS may not duplicate the latitude and longitude used by the facility during the preparation of their Consequence Analysis. Some facilities may have used points that reflect the chemical storage area of their facility. EPA used the latitude/longitude points in EPA's Facility Registry to standardize VZIS operation.

RMP facility information used for this search was last updated in September 2019.

Because websites use various methods and data sources to determine latitude/longitude values, values may differ among websites.

Latitude:	Longitude:
33.915852	-118.419006

Results:

The EPA's Vulnerable Zone Indicator System shows that the location you submitted is **likely to be** in at least one RMP facility's vulnerable zone.

Local Emergency Planning Committees (LEPCs) are your community's chemical safety experts!

LEPCs develop and review your community's chemical emergency response plan and collect annual chemical inventory reports from facilities with your LEPC to learn more about chemicals in your community! To find out which RMP facilities may affect the above location, you can:

Note: Due to formatting differences in some web based Internet E-mail accounts (such as Hotmail) you may not be able to access the hyperlinks below by clicking on them directly. If you first experience problems with the hyperlinks when you click on them, try cutting and the full hyperlink (URL) into the "address" field of your web browser and press "enter", which should take you directly to the website.

Contact your Local Emergency Planning Committee

(LEPC): <https://www.epa.gov/epcra/local-emergency-planning-committees>

1.

COMMUNITY FAST FACTS SKETCH	
Fast Disaster Community: El Segundo	
<i>Setting the scene</i> Conduct a "quick" Google search for fast facts about your community: What is the landscape? How densely populated? Main industries? Overall wealth of the region? Brief history? Find quick resources/articles about the community: Recent news? What are the environmental groups? Environmental News? Community vulnerabilities?	
Google Search	News Resources
Fast Facts: 66% White 16% Hispanic Main Industries: Chevron Boeing Hyperion Sewage Treatment plant NRG Energy, Inc. (Power Plant) Median Household Income \$92,942 News "West Basin <u>re-opens</u> El Segundo Water Recycling Facility" Community Vulnerabilities: Surging Seas	Links: https://www.dailybreeze.com/2018/04/03/environmentalists-blast-epa-for-inaction-on-rule-update-intended-to-bolster-refinery-safety/ Income https://datausa.io/profile/geo/el-segundo-ca/#economy Water https://www.waterworld.com/municipal/wastewater/reuse-recycling/article/14068288/west-basin-reopens-el-segundo-water-recycling-facility https://riskfinder.climatecentral.org/place/el-segundo.ca.us?comparisonType=place&forecastType=NOAA2017_int_p50&impact

II.

CHOOSING A COMMUNITY SKETCH		
Resources: Who's in Danger? /// California Fact Sheet /// CalEnviroScreen 3.0		
Questions to Consider:	Community 1: El Segundo	Community 2: Commerce
Does the community's Wikipedia page give any clues to worse case scenarios? Are there hazardous industries? (Look in the economy section)	Yes, Oil, Power Plants,	No
Are there local environmental groups in this community? (Possible search term: environmental justice)	The Grades of Green, which encourages and teaches students to care for the environment.	
According to the EPA , is this location likely to be in at least 1 RMP vulnerability zone?		
What is the RMP potential in EPA EJ Screen?		
Is the community listed in either of these resources? Who's in Danger? (starting on page 59) /// California Fact Sheet	Yes Vulnerability Zones El Segundo Generating Station NRG Energy, Inc. CA Los Angeles County	

	El Segundo Electric Power generation Ammonia (conc. *20%) 0.20 25	
<i>According to the American Lung Association, is the community's state of air rating?</i>	Grade : F (El Segundo Air Quality Index) Moderate (77.4 %) Unhealthy for sensitive group (22.6 %)	
Once you have chosen your community, please list your community/group number HERE		

III

STAKEHOLDER SKETCH		
<p>In this sketch, list different kinds of social actors -- "stakeholders" in governance parlance -- and the forces that enable and disable them. Sometimes stakeholders will be distinguished by their class position, place of residence, ethnicity or expertise. In some cases, it is important to splice groups usually seen as one: recognizing the way gender and generation makes a difference, for example. List the stakeholders down the middle. In the left column, list catalysts -- things (money, honorable reputation, etc) that enable that group of people to get what they want. In the right column, list corrosions -- things that undermine their ability to get what they want (lack of money or status, youth, gender, poor organizational skills). In filling it all in, you create a quick map of power dynamics.</p>		
catalysts	"stakeholders"	corrosions
Money	Chevron	public safety
Money	Boeing	public safety
Power to Organize	Workers at Plants	Lack of Status
Many people	Residents	Lack of Money / Status
Legal power	EPA	the Public
Moral Justice	Earth Justice	Big Corporations
Money	LAX	the Public
Legal power	City Govt.	the Public
Moral justice	United Steel Workers	Big corporations
Money	Western States Petroleum Association	Environmentalists

ABOUT THE AUTHORS

Jose Corpus is currently a Second Year Student at the University of California, Irvine. He is currently studying Biological Science at this institute and interning at his schools' sports medicine department. He is interested in the effects of poverty on the health of the people. Jose aspires to be a professional in the healthcare industry as a medical oncologist or Physician's Assistant and wants to help people in any way he can. After going to graduate school for his career, he hopes to stay in the Southern California area and work to better the lives of his patients, family members, and overall those around him.



Jose Velasco is a second year Biological Science student at UC Irvine, interested in the effects of toxins on the human body. Jose has an interest in the field of dentistry and hopes to own a practice in an area of low income.



Alexandra Vasquez is a first-year Psychology student under the School of Social Sciences at the University of California, Irvine. She is interested in mental health disorders and homelessness specifically in low-income communities where the residents mostly consist of people of color. She aspires to become a clinical psychologist and later come back to her hometown, Compton, California, where people with most mental health disorders are abandoned and left with no choice but to live on the streets. She hopes to be able to eliminate the negative stigma associated with mental health disorders in communities



where mental health is not seen as important or valid.

Aida is a fifth year student majoring in Anthropology and Psychology and Social Behavior at the University of California, Irvine. Aida has a wide variety of interests such as environmental anthropology, child psychology, medical anthropology, as well as cultural psychology. After college, Aida plans on getting her Masters in Clinical Psychology and becoming a Child Psychologist where her fields of study will help her understand her clients better.



Jacqueline Salazar Romo is a first-year undergraduate student at the University of California, Irvine. Originating from an agriculturally centric background, she is interested in the environment and its effects upon California field workers. As a first-generation Mexican immigrant from a low-income community, Jacqueline has experienced the sociocultural and economic implications of field work firsthand, and she seeks environmental justice through pacifist activism and research.



Kenneth Kong is a first-year undergraduate Physics major attending the University of California, Irvine. He is interested in the consequences of oceanic pollution and climate change. He hopes to be able to reduce the negative impact society has on the environment.

