

CITY OF LATHROP GENERAL PLAN UPDATE

Environmental Justice Outreach Summary

July 2019



Prepared for: City of Lathrop CA General Plan Update



Prepared by: De Novo Planning Group

DE NOVO PLANNING GROUP

A LAND USE PLANNING, DESIGN, AND ENVIRONMENTAL FIRM

INTRODUCTION

The City of Lathrop initiated their General Plan Update process in late 2017 and began a multifaceted outreach program to engage community members. The outreach program for this project is intended to be inclusive, educational, and designed to facilitate a meaningful conversation with the Lathrop community about the issues and opportunities that are most important to the community. A series of three Visioning Workshops, and an online survey were conducted to provide opportunities for community members to discuss their vision for the future of Lathrop. During these workshops issues related to transportation and mobility, land use and community design priorities, and other relevant topics, such as Environmental Justice we raised by workshop participants.

Due to the importance of local Environmental Justice (EJ) issues, the City of Lathrop in an effort to continue to involve and engage the community on local issues of importance, held a standalone workshop focusing specifically on EJ issues in Lathrop. This report summarizes the public's participation and input received during the General Plan Update's Environmental Justice Workshop conducted on June 27th 2019.

BACKGROUND

In 2016, the State Legislature passed Senate Bill 1000 (SB-1000) requiring cities and counties with disadvantaged communities to incorporate environmental justice policies into their General Plans. Cities like Lathrop must identify disadvantaged communities and work to reduce health risks specific to these communities by outlining policies and programs within the General Plan relating to:

- Pollution Exposure and Air Quality
- Public Facilities
- Food Access
- Safe and Sanitary Homes
- Physical Activity
- "Civil" or Community Engagement
- Improvements and Programs

For additional information on initial processes for identifying disadvantaged communities and environmental topics within Lathrop see Appendix C for CalEnviroScreen 3.0 Data and Additional Materials.



ENVIRONMENTAL JUSTICE WORKSHOP PURPOSE AND OUTREACH OBJECTIVES:

The purpose of this workshop is to give participants an overview of state requirements, best practices in planning, and provide opportunities to participate in land use map and policy development through identification of issues areas and potential policy solutions to ensure an environmentally equitable community.

Outreach Objectives:

- Engage a broad spectrum of the community members
- Engage key stakeholders to perpetuate long-term involvement
- Establish a greater connection between the General Plan and current planning issues
- Educate the public on the City's existing conditions, and the General Plan Update process
- Receive community feedback on key approaches to guide the General Plan's goal/policy development for Environmental Justice (EJ) issues.
- Get on-the-ground feedback of problem areas that may be disproportionally impacting the community.

ENVIRONMENTAL JUSTICE WORKSHOP ACTIVITY SUMMARY:

Activity - Issues and Policy Solutions

As a group participants discussed specific issues impacting Disadvantaged Communities in Lathrop, and identified potential policy solutions that address identified issues. The participants were then provided a worksheet to memorialize their thoughts and ideas and rank several EJ topics and their importance within the City of Lathrop.

The worksheet included several key issues areas and included the following prompt:

As a group please discuss the specific issues impacting Disadvantaged Communities in Lathrop, and potential policy solutions that address identified issues.

Environmental Justice Issues:

What environmental issues may be impacting Disadvantaged Communities in Lathrop that you feel should to be addressed in the General Plan Update? The worksheet includes several key issues areas, but please add any other issues you feel are relevant.

Pollution Exposure and Air Quality

Issue Areas	Level of Importance in Lathrop	Possible Policy Solutions
Pollution Exposure and Air Quality	1	pentitivity other party to bone schools cheeced by Robic Arthritations as Changes of other Robies for everyone affected. Declary my san have fine I have to Bodice Politicisms
Water Quality and Safe Drinking Water	1	Meeting Tunctimes of topocting Transparent laborating thin rates of alling Bisnesses not dumping toxino into Sallumeou
Lack of Public Facilities (parks, libraries, cultural centers, (1886); etc.) Schael 5 (Uhipal Center	1	Schalls-Lethorp Should be here three and district, three Standarders of Schools and developments should previous hereaf for schools property of schools
Lack of Access to Healthy Foods	2	Action like food. Sit down food. From hy Friendly Lestinghants (statemy states) (community consideration in control others)
Availability of Safe and Sanitary Housing (cates (consumble) Service 5	1	Miles having for separas. Make nitroidable healing -law income tousing
Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)	3	
"Civil" or Community Engagement	1	Make advanch Isothicutens Different modes or Communities. (community Unional Wastel Armes (Mode accepte times for acidents) * Steeping Communities for Country I Para with Uther Machinet (Information) #
Improvements and Programs that address the needs of Disadvantaged Communities	1	Coursing I Community Advoicey I versions I some such
Other Issues Youth Activities Farnsly Activities		Borney Actionity Senters such Shart parks, whome play facility
seal se community service lenses		Wic offices cal-fresh voterans Historia ble building seems office for heuropeonies



- Water quality and safe drinking water
- Lack of Public Facilities (parks, libraries, cultural centers, schools, etc.)
- Lack of access to healthy foods
- Availability of Safe and Sanitary Homes
- Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)
- "Civil" or Community Engagement
- Improvements and Programs that address the needs of Disadvantaged Communities

Policy Solutions:

What policy solutions should the General Plan include to address these issues?

Example:

Issue:

Not enough opportunities for physical activity in certain neighborhoods within the city.

Policy Solutions:

- Prioritize the development of new parks and recreational facilities in areas currently underserved.
- Encourage active transportation improvements and programs that support safe bicycle and pedestrian travel such as: complete streets policies, safe routes to schools etc.
- Expand youth sports programs and activities aimed at underserved communities.

Common themes expressed during the Workshop are summarized and presented below. Full results from Issues and Policy Solutions Activity are included within Appendix A.

As shown below Pollution Exposure and Air Quality, Water Quality and Safe Drinking Water, and Improvements and Programs that address the needs of Disadvantaged Communities received the highest combined rankings (all totaling 5). Other important group priorities included "Civil" or Community Engagement with a total score of 6, and Availability of Safe and Sanitary Housing with a total score of 7. Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.) was ranked as the least important topic of all topic areas ranked with a combined score of 11.

Table 1: Issues and Policy Solutions Activity Summary

Table 1: Issues and Polic	Level of Importance	
Issue Areas	in Lathrop (Rankings by Group) 1= Very Important 2=Somewhat Important 3= Not Important. (Total)	Possible Policy Solutions (Identified by Workshop Participants)
Pollution Exposure and Air Quality	2 1 1 (5)	 Encourage citezens to use public transportation. Consider environmental repercussions along with revenues. Protect private residential from exposure of diesel trucks, trains, and air pollution from truck routes. Consider separating roadways for truck trips and ensure sound walls are provided. If impacts from these sources cannot be mitigated the city of Lathrop shall be required to purchase all affected propreties. Include proximity requirments for STAA routes from resident's schools churches. Ensure public notifications foe all affected residents if changes to STAA routes are proposed. Require developers to pay their fair share to reduce pollutants. Ensure land use compatibility near residential areas.
Water Quality and Safe Drinking Water	2 1 1 1 (5)	 Ensure all city water wells meet state standards. if wells fail to meet water standards wells should be decommissioned. Continue to use modern technology to ensure al wells meet state and federal drinking water standards. Ensure transparent reporting and public notification of water quallity is available in a timely manner. Ensure local business comply with state and federal standards related to toxic contaminate disposal.
Lack of Public Facilities (parks, libraries, cultural centers, schools, etc.)	2 3 3 1 (9)	 Ensure safe routes to schools are available to students. Pursue the use of caged pedestrian walkovers to increase safety and accessibility to schools. Lathrop should pursue having its own school district and increase the number of local elementary schools in the city. Ensure new developments pay for increased school needs it creates.
Lack of Access to Healthy Foods	2 3 2 2 (9)	 Support nutrient dense choices options throughout the community, and discourage fast food and liquor retailors. Support additional sit down and family restaurants in Lathrop. Pursue additional grocery stores to locate within Lathrop and particularly in underserved areas Support opportunities for community gardens in the central areas of the city.

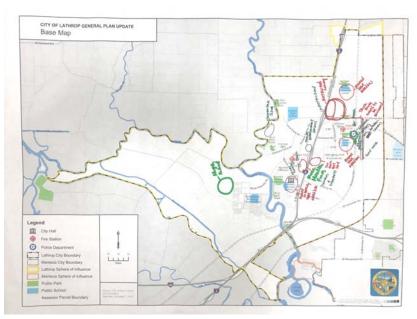
Availability of Safe and Sanitary Housing Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)	2 1 3 1 (7) 2 3 3 3 (11)	 Ensure protections are in place for existing residents. Increase the supply of affordable housing opportunities and housing for seniors.
"Civil" or Community Engagement	2 1 2 1 (6)	 Ensure residents are noticed for any type of development that has impacts caused by development. Adopt notification policies for residents affected by projects including STAA routes and transportation improvement projects. Notifications should be mailed to residents prior to public hearing and provide residents adequate time for review. Enhance public participation through community outreach. Enhance community participation by having meetings at more accessible times for working people. Later times could accommodate those who commute home from the bay area. Include community members in committees formed from long range planning efforts.
Improvements and Programs that address the needs of Disadvantaged Communities	2 1 1 1 (5)	 We will become disadvantaged by truck pollutants, circulation and vehicle impacts to our health. Pursue funding sources and grant opportunities that benefit disadvantaged communities. Enhance and pursue community programs related to counselling, advocacy, veteran and senior services. Improvements for family activities including opportunities for indoor recreational facilities, parks, community centers. Ensure nonprofits and programs such as WIC, CalFresh, and Veterans etc. have affordable palaces to build or operate.
Other Issues	1 1 NA NA	 Lack of City Revenues – pursue greater retail and commercial revenues to fund needed improvements that benefit disadvantaged communities. East Lathrop needs attention- Prioritize investments and opportunities to enhance the East Lathrop area for local residents. Ensure the voices of Lathrop residents are considered and integrated. Ensure flood protections for Lathrop residents.

Activity - Opportunity Area Mapping:

The second activity of Workshop asked participants to review large-scale maps of the City and highlight areas that need special focused attention as part of the General Plan Update.

As a group, participants were asked to use colored markers to identify problem areas and issues, and provide suggested solutions or improvement to support Disadvantaged Communities and community equity in Lathrop.

Following an instruction guide, the small groups used colored markers to identify special types of areas. The instructions guide used by meeting



participants is included below and copies of completed maps are included in Appendix B. After working on the maps, each table reported back to the entire group summarizing their key ideas.

The mapping activity utilized the following mapping color key:

Red – Specific issue areas within the city (please use brief notes on the map to identify specific issues and locations).

Green – Specific improvements and solutions needed to correct the identified problems (please provide brief notes as to the type of improvements and the general areas in need).

Black – Other ideas and notes related to Disadvantaged Communities and Environmental Justice within Lathrop that you feel are important to the General Plan Update.

Participants were encouraged to draw anywhere on the provided maps and provide notes and write additional details on the map to refined their input and ideas.

Mapping Results (Common Themes):

Common themes expressed during the Workshop are summarized and presented below. Full results from Mapping Activity are included within Appendix B.

- Opportunities for investment and revitalization of the city proper and east Lathrop areas.
 Revitalization should include housing improvements, additional services (health, entertainment, and personal) and senior services. Revitalize these areas with local businesses with small town feel.
- More healthy food options, and services in city proper and east Lathrop areas.
- More family friendly entertainment options.
- Improved truck routes that reduce impacts on local neighborhoods.
- Opportunities for additional schools within the city.
- Improvements in city proper, and east Lathrop related to STAA routes.
- Street and housing improvements in city proper Lathrop neighborhoods is needed
- Improved connectivity and street improvements for city proper residents
- Opportunities to form CFD to fund needed improvements in the city proper area to help revitalize and rejuvenate neighborhoods and areas.
- Better transportation safety and connectivity for city proper and east Lathrop communities.

Full results from this mapping activity are included within Appendix B.



NEXT STEPS

Community input serves as the foundation for the City of Lathrop's General Plan Update. We appreciate your time and ideas. The General Plan update effort will continue to involve numerous opportunities for the public to learn about the project and provide their input.

Input received from the community during the EJ workshop will help define how the City and the General Plan should address key issues, opportunities, and challenges that are most important to Lathrop. Additionally, City Staff, the consultant team, and the City's General Plan Technical Steering/Advisory Committee will continue to use this information as well as other future milestone reports to evaluate priorities and develop goals, policies, and actions that reflect the community's needs and vision for the future.

For information on how to stay involved, and view project documents, please visit: www.Lathrop.GeneralPlan.org or contact the City of Lathrop:

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Appendix A: Issues and Policy Solutions Activity Results



GENERAL PLAN UPDATE

Issues and Policy Solutions Activity Instructions

As a group please discuss the specific issues impacting Disadvantaged Communities in Lathrop, and potential policy solutions that address identified issues.

Environmental Justice Issues:

What environmental issues may be impacting Disadvantaged Communities in Lathrop that you feel should to be addressed in the General Plan Update? The worksheet includes several key issues areas, but please add any other issues you feel are relevant.

- Pollution Exposure and Air Quality
- Water quality and safe drinking water
- Lack of Public Facilities (parks, libraries, cultural centers, schools, etc.)
- Lack of access to healthy foods
- Availability of Safe and Sanitary Homes
- Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)
- "Civil" or Community Engagement
- Improvements and Programs that address the needs of Disadvantaged Communities

Policy Solutions:

What policy solutions should the General Plan include to address these issues?

Example:

- Issue:
 - · Not enough opportunities for physical activity in certain neighborhoods within the city.
- Policy Solutions:
 - Prioritize the development of new parks and recreational facilities in areas currently underserved.
 - Encourage active transportation improvements and programs that support safe bicycle and pedestrian travel such as: complete streets policies, safe routes to schools etc.
 - · Expand youth sports programs and activities aimed at underserved communities.

Issue Areas	Level of Importance	Possible Policy Solutions
Pollution Exposure and Air Quality	in Lathrop	As we mave forward, environmental repercusions should be also considered, along we revenues,
Water Quality and Safe Drinking Water	3	along w/ revenues,
Lack of Public Facilities (parks, libraries, cultural centers, schools, etc.)	,62	*
Lack of Access to Healthy Foods	52	- meal food, notinent dense, less fast food & liquer.
Availability of Safe and Sanitary Housing	32	
Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)	72	
Civil" or Community ingagement	12	
mprovements and Programs nat address the needs of isadvantaged Communities	42	
ther Issues		Lack of revenues. (Retail/Commercial) # solves Tissues above!
Very Important Somewhat Important Not Important		- Lathrop needs help



Issue Areas	Level of Importance in Lathrop	Possible Policy Solutions
Pollution Exposure and Air Quality	1	Currently the City of Lathrop does not have a policy that process private residents from the exposure of diesel trucks, protects private residents, air pollution from the STAA Truck powers diesel train pollutars, air pollution from the STAA Truck powers include raise, vibratron, and Sastety issues. Policy must be understood include raise, vibratron, and Sastety issues. Policy must be untigated. Separate to purchase all associated professions the city of Lathrop shall be required to purchase all associated professions.
Water Quality and Safe Drinking Water	1	It wells do not meat (tute Satisty Standards then abundar) decommission wells. (i.e. well #21). Not impact exerting fesidents with wells.
Lack of Public Facilities (parks, libraries, cultural centers, schools, etc.)	3	Sake route to schools; proteoted padastrious and known (lage) for translate all schools. &
Lack of Access to Healthy Foods	3	
Availability of Safe and Sanitary Housing	1	be mut protection of existing recordences.
Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)	3	
"Civil" or Community Engagement	1	Notices by City for any impacts to all residents impacted by any type of Levelopment. Adopt interception policies for affected assiduals (ie. road widening, truck and STAA designation), in writing—anited to each individual resident, prior to public hearingle nough time to review
Improvements and Programs that address the needs of Disadvantaged Communities	1	ux will become disadvantaged by the truck pollution circulation and vehicle impacts to our health and
Other Issues	1	The intering to have our voices heard is intigated. Flooding will be impacted.
1= Very Important 2= Somewhat Important 3= Not Important		Ray & Chris Mendes 18401 5. Me Kindy Water, CA 45377 Mach wile 18387 Mary Weding a 215 W. Lathred 204. 40 3.



Issue Areas	Level of Importance	Possible Policy Solutions
Pollution Exposure and Air Quality	in Lathrop	Encourge citizens to use Public tronsportation.
Water Quality and Safe Drinking Water	1	Continue the city to Use modern technology to keep own water within state of Federal level.
Lack of Public Facilities (parks, libraries, cultural centers, schools, etc.)	3	
Lack of Access to Healthy Foods	2	
Availability of Safe and Sanitary Housing	3	
Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)	3	
"Civil" or Community Engagement	2	
mprovements and Programs that address the needs of Disadvantaged Communities	1	Hive a grant writer to get money for our commuties to address this need.
Other Issues		
= Very Important = Somewhat Important = Not Important		Para Pari dida

Issue Areas	Level of Importance	Possible Policy Solutions
Pollution Exposure and Air Quality	in Lathrop	proportions on broximity to homes /schools/church No Rublic Notifications of Changes of STAA Roules For everyone affected. Developents my than their fair 5 have to reduce Pollutourts
Water Quality and Safe Drinking Water	1	Meeting Timelines of Reporting Transpapent Reporting High rates of billing Businesses not dumping toxino into Sal/water
Lack of Public Facilities (parks, libraries, cultural centers, schools, etc.) >hools (u\fuel (enfer	1	Schools-Lathrop Should bus have there own district. More Elementary Schools NOW developments should proude money for schools Property idesignated for schools
Lack of Access to Healthy Foods	2	Accessible food. Sit down food. Family Friendly Lostaveants. Grovery stores. (ommunity Gardens in contral areas.
Availability of Safe and Sanitary Housing Lestan Communities Seniors	1	More affordable howing - low income housing
Physical Activity Opportunities (parks, sidewalks, bike lanes, open space, sports programs, etc.)	3	
"Civil" or Community Engagement	1	More outreach Notifications Different modes of Communities. Community Linsons. Varied times (More accesible times for residents) * Steering Committee for General Plans with Citizen residents. (Independent) *
Improvements and Programs that address the needs of Disadvantaged Communities	1	Counseling 1 community Advocacy veterans some servi
Other Issues Youth Activities Family Activities Local to Community source Clemens		Family Activity lenters such State parks, indoor play facility Wic offices cal-fresh veterans Afforda ble building summer office for Non-property



GENERAL PLAN UPDATE

Supplemental Form for Issue/Policy Input

ssue Area:	
Possible Policy Solutions: Notify CMS dured to Change fronting must be no	Riva ways all residents
Developers pay fair & measures to protect yas if changes to STAA	share protections (mitrogation sidents from noise sounds worth oute & must provide sound with
Industrial Student	WI FOR TURK!
If in red zone more c	imprehinser Studies
protect saferrates man road way for	to school - Lathrop Rol

Appendix B: Map Activity Results



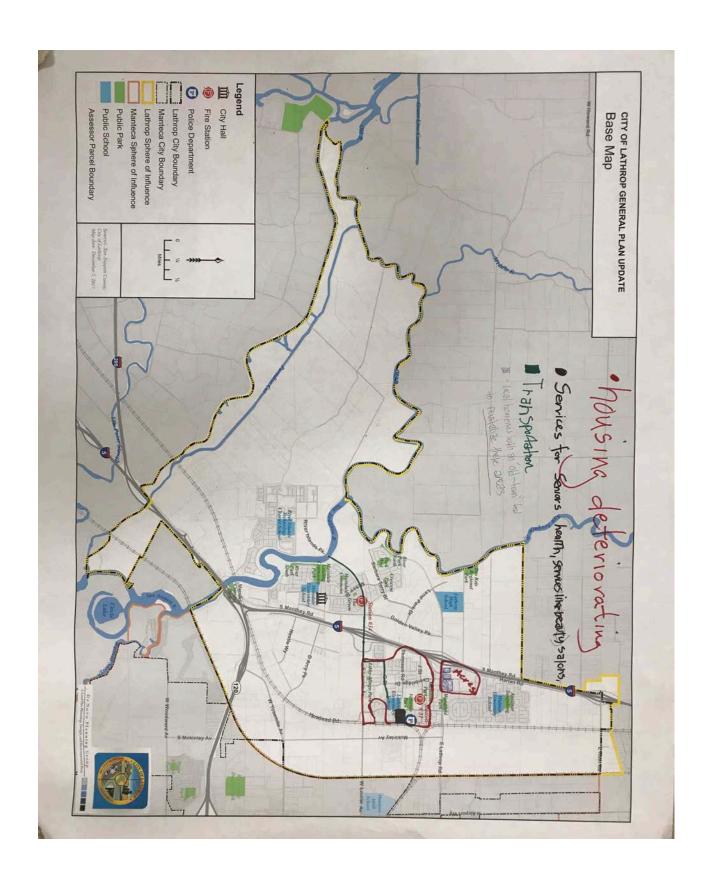
Map Activity Instructions

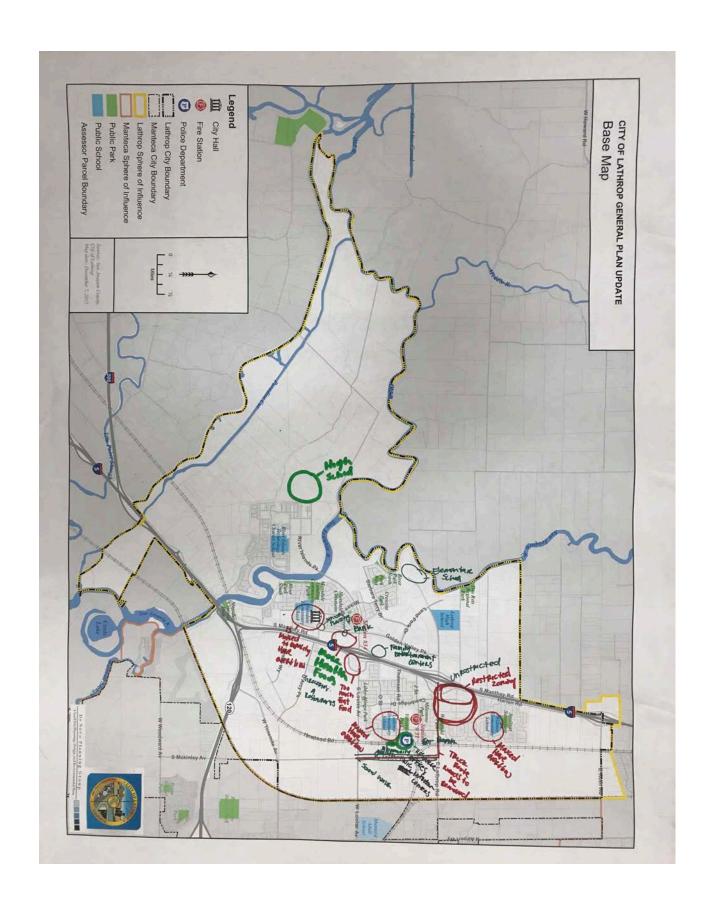
As a group, use the colored markers to identify problem areas and issues, and provide suggested solutions or improvement to support Disadvantaged Communities and community equity in Lathrop.

Please use following colors:

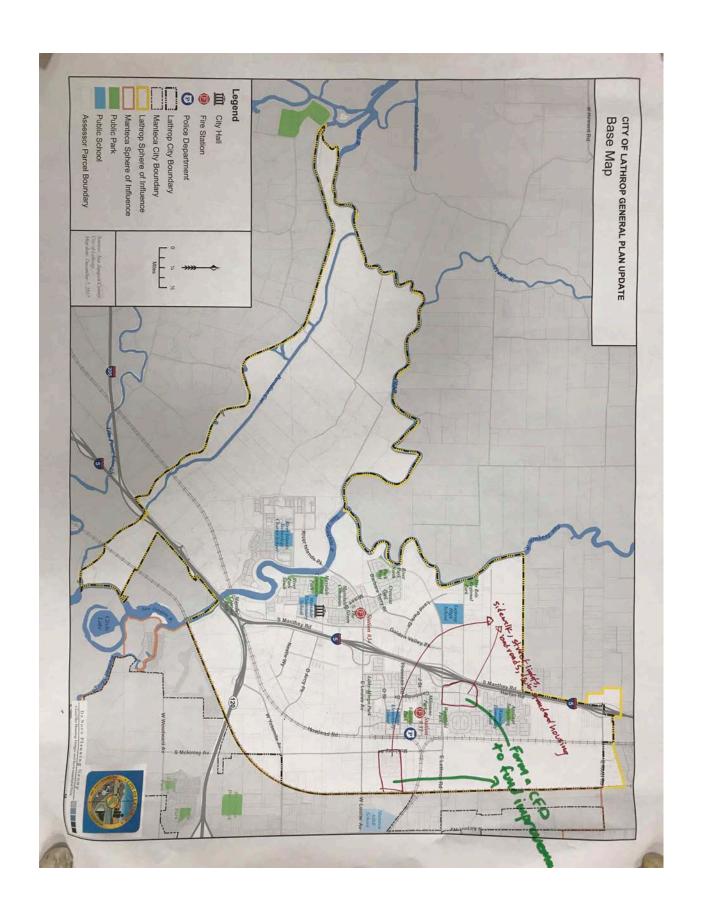
- Red Specific issue areas within the city (please use brief notes on the map to identify specific issues and locations).
- Green Specific improvements and solutions needed to correct the identified problems (please provide brief notes as to the type of improvements and the general areas in need).
- Black Other ideas and notes related to Disadvantaged Communities and Environmental Justice within Lathrop that you feel are important to the General Plan Update.

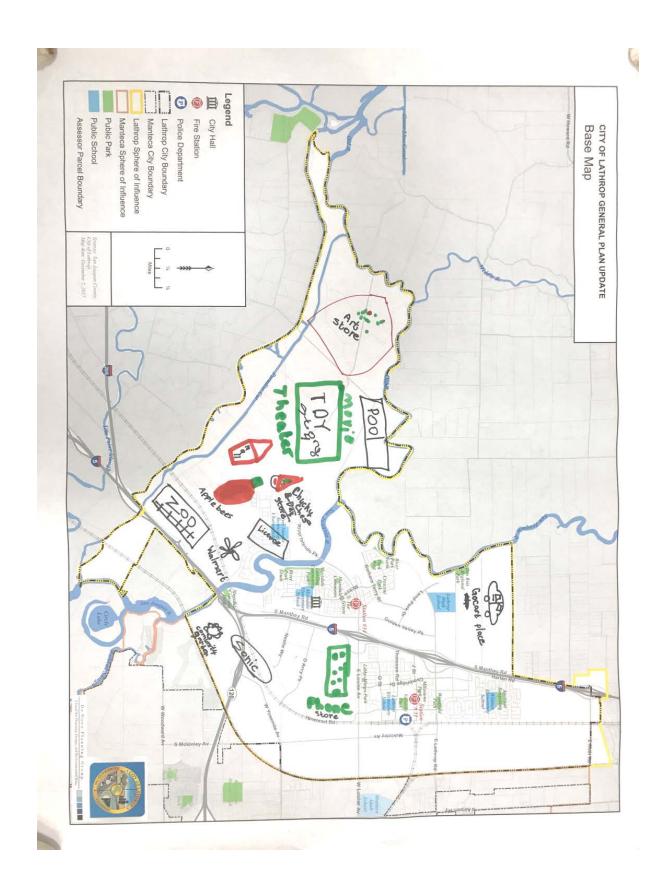
Feel free to draw anywhere and provide notes and write additional details on the map.











Census Tract: 6077005129

Population:	6,006	Population:	3,582
CalEnviroScreen 3.0 Percentile:	95-100% scores)	CalEnviroScreen 3.0 Percentile:	90-95%
Pollution Burden Percentile:		Pollution Burden Percentile:	0.4
Tondani Bardeni erecitare.	100	D Ch	94
Population Characteristics		Population Characteristics	
Percentile:	79	rercentile:	79
	**		
Ozone:	65	Ozone:	65
PM 2.5:	82	PM 2.5:	82
Diesel:	41	Diesel:	64
Pesticides:	92	Pesticides:	30
Toxic Releases:	62	Toxic Releases:	62
Traffic:	71	Traffic:	64
Drinking Water:	99	Drinking Water:	44
Cleanups:	92	Cleanups:	29
Groundwater Threats:		Groundwater Threats:	
	100		72
Hazardous Waste:	95	Hazardous Waste:	82
Impaired Water:	90	Impaired Water:	76
Solid Waste:	95	Solid Waste:	83
Asthma:	75	Asthma:	87
Low Birth Weight:	82	Low Birth Weight:	23
Cardiovascular Rate:	20	Cardiovascular Rate:	
	80		96
Education:	59	Education:	75
Linguistic Isolation:	72	Linguistic Isolation:	66
Poverty:	52	Poverty:	63
Unemployment:	66	Unemployment:	84
Housing Burden:	54	Housing Burden:	66



Population:	4,829	Population:	6,765
CalEnviroScreen 3.0 Percentile:		CalEnviroScreen 3.0 Percentile:	
	90-95%		80-85%
Pollution Burden Percentile:		Pollution Burden Percentile:	
	98		99
Population Characteristics		Population Characteristics	
Percentile:		Percentile:	
	70		49
Ozone:	69	Ozone:	69
PM 2.5:	82	PM 2.5:	66
Diesel:	47	Diesel:	31
Pesticides:	96	Pesticides:	84
Toxic Releases:	58	Toxic Releases:	50
Traffic:	69	Traffic:	73
Drinking Water:	88	Drinking Water:	79
Cleanups:	90	Cleanups:	93
Groundwater Threats:		Groundwater Threats:	
	66		99
Hazardous Waste:	43	Hazardous Waste:	88
Impaired Water:	76	Impaired Water:	90
Solid Waste:	37	Solid Waste:	85
Asthma:	83	Asthma:	62
Low Birth Weight:	43	Low Birth Weight:	41
Cardiovascular Rate:		Cardiovascular Rate:	
	90		61
Education:	52	Education:	64
Linquistic Isolation:	53	Linguistic Isolation:	42
Poverty:	50	Poverty:	45
Unemployment:	66	Unemployment:	63
Housing Rurden	40	Housing Burden:	7



Census Tract: 6077005130

Population:	5,510	Population:	3,186
CalEnviroScreen 3.0 Percentile:		CalEnviroScreen 3.0 Percentile:	
	90-95%		75-80%
Pollution Burden Percentile:		Pollution Burden Percentile:	
	93		86
Population Characteristics		Population Characteristics	
Percentile:		Percentile:	7725
	83		64
Ozone:	61	Ozone:	65
PM 2.5:	82	PM 2.5:	82
Diesel:	64	Diesel:	64
Pesticides:	67	Pesticides:	20
Toxic Releases:	62	Toxic Releases:	63
Traffic:	81	Traffic:	15
Drinking Water:	55	Drinking Water:	44
Cleanups:	71	Cleanups:	85
Groundwater Threats:		Groundwater Threats:	
	81	X TO PER	94
Hazardous Waste:	9	Hazardous Waste:	89
Impaired Water:	76	Impaired Water:	0
Solid Waste:	0	Solid Waste:	80
Asthma:	87	Asthma:	87
Low Birth Weight:	92	Low Birth Weight:	19
Cardiovascular Rate:		Cardiovascular Rate:	
	96	100 100 100 100 100 100 100 100 100 100	96
Education:	69	Education:	69
Linguistic Isolation:	38	Linguistic Isolation:	79
Poverty:	47	Poverty:	60
Unemployment:	78	Unemployment:	40
Housing Burden:	30	Housing Burden:	7



Census Tract: 6077003803

Population:	5,281	
CalEnviroScreen 3.0 Percentile:	90-95%	
Pollution Burden Percentile:	100	
Population Characteristics	100	
Percentile:	61	
Ozone:	61	
PM 2.5:	82	
Diesel:	35	
Pesticides:	92	
Toxic Releases:	60	
Traffic:	60	
Drinking Water:	100	
Cleanups:	87	
Groundwater Threats:		
	98	
Hazardous Waste:	77	
Impaired Water:	97	
Solid Waste:	96	
Asthma:	32	
Low Birth Weight:	69	
Cardiovascular Rate:		
	15	
Education:	84	
Linguistic Isolation:	54	
Poverty:	85	
Unemployment:	85	
Housing Burden:	69	

Drinking Water Contaminants

Most drinking water in California meets requirements for health and safety. However, the water we drink sometimes becomes contaminated with chemicals or bacteria. Both natural and human sources can contaminate drinking water. Natural sources can be found in rocks and soil or come from fires. Human sources include factories, sewage, and runoff from farms. Poor communities and people in rural areas are exposed to contaminants in their drinking water more often than people in other parts of the state.

Why is this indicator included in CalEnviroScreen?

- Numerous chemical and bacterial contaminants are routinely detected in the drinking water in California.
- Nitrate from fertilizer or animal manure can leach into groundwater and contaminate wells. Nitrate can cause a blood condition in infants called blue baby syndrome (methemoglobinemia) and may cause birth defects and miscarriages.
- Arsenic, a common contaminant, occurs naturally in some rocks and soil and is often found in groundwater in California. Arsenic can cause cancer.

How do we measure drinking water contaminants in CalEnviroScreen 3.0?



- The indicator combines information about 13 contaminants and 2 types of water quality violations that are sometimes found when drinking water samples are tested.
- We calculated average concentrations for the contaminants in each water system.
- To calculate the metric, we matched up the water quality calculation with drinking water system boundaries.
- A complete description of the Drinking Water Contaminants indicator can be found in the CalEnviroScreen 3.0 report.

More information on the drinking water indicator:

- Methodology for a Statewide Drinking Water Contaminant Indicator
- Drinking Water results by contaminant (Microsoft Excel Spreadsheet): Average concentrations
 and percentile scores for each contaminant used to calculate the overall drinking water indicator
 by census tract.
- Drinking water service boundaries were extracted from the California Environmental Health Tracking Program's Water Boundary Tool.

Where can I find more information on drinking water quality?

- State Water Resources Control Board: My Water Quality
- U.S. Environmental Protection Agency (USEPA): Water on Tap

Ozone

- Ozone is among the most widespread and significant air pollution health threats in California and is one of the US Environmental Protection Agency's six commonly found "criteria" air pollutants.
- Ozone can cause lung irritation, inflammation, and worsening of existing chronic health conditions, even at low levels of exposure.
- Children are most sensitive to the effects of ozone exposure. The elderly and people who spend a lot of time outdoors are also sensitive.
- Studies have shown that ozone can increase asthma emergency room visits among children and can increase mortality, especially in the elderly, women, and African Americans.
- Ozone levels are typically highest in the afternoon and on hot days.

What measure is used to evaluate ozone in CalEnviroScreen 3.0?

• The California Air Resources Board maintains air monitoring data for ozone at a large number of air monitoring stations across the state.

- Daily maximum 8-hour ozone concentrations were extracted from the air monitors for 2012-2013.
- The mean of the summer months (May-October) was calculated by averaging across the three years.
- A spatial model was created with the air monitoring data to estimate ozone concentrations for each census tract within 50 km of an air monitoring station.
- For census tracts futher than 50 km of an air monitor, the ozone value of the nearest monitor was used.
- A complete description of the Ozone indicator is contained in the CalEnviroScreen 3.0 report.

Air Quality: PM2.5

Particulate matter, or PM2.5, is very small particles in air that are 2.5 micrometers (about 1 tenthousandth of an inch) or less in diameter. This is less than the thickness of a human hair. Particulate matter, one of six U.S. EPA criteria air pollutants, is a mixture that can include organic chemicals, dust, soot and metals. These particles can come from cars and trucks, factories, wood burning, and other activities.

What measure is used in CalEnviroScreen 3.0 to evaluate PM 2.5?

- The California Air Resources Board measures PM2.5 concentrations from air monitoring stations around the state
- Quarterly means were extracted from the air monitors for 2012-2014 and a mean was calculated by averaging across the three years.
- A spatial model was created with the air monitoring data to estimate PM2.5 concentrations for each census tract within 50 km of an air monitoring station.
- For census tracts further than 50 km of an air monitor, satellite observations were used to assign a PM 2.5 concentration.
- A complete description of the PM 2.5 indicator can be found in the <u>CalEnviroScreen 3.0 report</u>.

Diesel Particulate Matter

Exhaust from trucks, buses, trains, ships, and other equipment with diesel engines contains a mixture of gases and solid particles. These solid particles are known as diesel particulate matter (diesel PM). Diesel PM contains hundreds of different chemicals. Many of these are harmful to health. The highest levels of diesel PM are near ports, rail yards and freeways. People are exposed to diesel PM from breathing air containing diesel exhaust.

- People living and working in cities and industrial areas and near heavy truck or train traffic are most likely to come in contact with diesel PM.
- The very small particles of diesel PM can reach deep into the lung, where they can contribute to a range of health problems. These include irritation to the eyes, throat and nose, heart and lung disease, and lung cancer.
- Children and the elderly are especially vulnerable to the effects of diesel PM.



How is diesel particulate matter measured in CalEnviroScreen 3.0?

- The California Air Resources Board (ARB) collects estimates of <u>diesel PM emissions</u> from many sources
- The indicator uses <u>ARB data</u> on emissions from on-road (trucks and buses) and off-road (ships and trains, for example) sources.
- Diesel emissions are available at a 4x4km grid statewide. The gridded emissions are converted to census tracts.
- Adjustments to diesel PM emissions from idling trucks in Mexico at the U.S. border crossings were also accounted for.

Pesticide Use

Pesticides are chemicals used to control insects, weeds, and plant or animal diseases. Over 1000 pesticides are approved for use in California. They are applied to fields by air, by farm machinery, or by workers on the ground.

Why is this indicator included in CalEnviroScreen?

- Farmworker families and people who live near agricultural fields can be exposed to pesticides, both outdoors and inside homes.
- Studies have found that people living in agricultural areas of California have higher amounts of pesticides in their bodies than other people.
- Exposure to high levels of some pesticides can cause illness immediately or conditions such as birth defects or cancer later in life.

How is pesticide use measured in CalEnviroScreen 3.0?

- The California Department of Pesticide Regulation keeps a record of where and when agricultural pesticides are used.
- CalEnviroScreen includes the most toxic pesticides that people may be exposed to that are used in California agriculture.
- The indicator adds up the <u>number of pounds per square mile</u> of the select <u>70 pesticide active</u> ingredients for the years 2012-2014.
- The indicator only includes pesticies used on agricultural commodities and does not include agricultural use such as golf courses or other types of uses like in the home.

Toxic Releases from Facilities

Facilities that make or use toxic chemicals can release these chemicals into the air. Information is available on the amount of chemicals released for over 500 chemicals for large facilities in the United States. People of color and low income Californians are more likely to live in areas with higher toxic chemical releases.

Why is this indicator included in CalEnviroScreen?

• Chemicals given off by facilities are sometimes detected in the air of nearby communities.



• People living near facilities may breathe contaminated air regularly or if contaminants are released during an accident.

How are toxic releases from facilities measured in CalEnviroScreen 3.0?

- The U.S. Environmental Protection Agency (US EPA) provides <u>public information</u> on the amount of chemicals released into the environment from many facilities.
- The US EPA used information on these chemical releases to <u>estimate</u> where they may be spreading in the air for the years 2011-2013.
- These estimates take into account weather conditions and the landscape around the facilities. Some chemicals are more toxic than others, which is taken into account in the estimate.
- Emissions from facilities in Mexico near the US-Mexico border were also accounted for in the indicator

Traffic Density

California has the biggest network of freeways in the country. Its cities are known for heavy traffic. Traffic density is a measure of the number of vehicles on the roads in an area. Non-whites, Latinos, low income people, and people who speak a language other than English often live in or near areas with high traffic.

Why is this indicator included in CalEnviroScreen?

- While California has strict vehicle-emissions standards, exhaust from cars and trucks is the main source of air pollution in much of the state.
- Major roads and highways can bring air pollutants and noise into nearby neighborhoods.
- Exhaust fumes contain toxic chemicals that can damage DNA, cause cancer, make breathing difficult, and cause low weight and premature births.
- Children who live or go to schools near busy roads have higher rates of asthma and other lung diseases than children in areas farther from roads.

What measure is used in CalEnviroScreen 3.0 to evaluate traffic density?

- The indicator uses information on the amount of traffic on major as well as some local roads and the length of the roads in or near each census tract.
- Traffic density is calculated by dividing the traffic volumes by the total road length for the year 2013.

Cleanup Sites

Cleanup sites are places that are contaminated with harmful chemicals and need to be cleaned up by the property owners or government. People living near these sites are more likely to be exposed to chemicals from the sites than people living further away. Some studies have shown that neighborhoods with cleanup sites are generally poorer and have more people of color than other neighborhoods.

- Chemicals in the buildings, soil or water at cleanup sites can move into nearby communities through the air or by movement of water.
- The land may take many years or decades to clean up, reducing possible benefits to the community.
- Scientists have found toxic metals in house dust and pesticides in the blood of people who live near contaminated sites.

How are cleanup sites measured in CalEnviroScreen 3.0?

- The Department of Toxic Substances Control keeps track of cleanups of contaminated sites in California.
- The indicator combines the <u>sites</u> in or near each census tract. This combination takes into account the type of site it is and how close it is to where people may live.

Groundwater Threats

Hazardous chemicals are often stored in containers on land or in underground storage tanks. Leaks from these containers and tanks can contaminate soil and pollute groundwater. Common pollutants of soil and groundwater include gasoline and diesel fuel from gas stations, as well as solvents, heavy metals and pesticides. The land and groundwater may take many years to clean up. Man-made ponds containing water produced from oil and gas activities may also contain pollutants.

Why is this indicator included in CalEnviroScreen?

- Leaking tanks can expose people to contaminated soil and air.
- People who live near contaminated groundwater may be exposed to chemicals moving from the soil into the air inside their homes.
- Some cancer-causing chemicals from cleanup sites have been found in drinking water supplies in California.

How are groundwater threats measured in CalEnviroScreen 3.0?

- The State Water Resources Control Board maintains a database of places where groundwater may be threatened by certain sources of pollution.
- The scores for sites that threaten groundwater quality are added together for each census tract.
- The score is based on information about the type of site and how close it is to neighborhoods where people live.

Hazardous Waste Generators and Facilities

Waste created by different commercial or industrial activity contains chemicals that may be dangerous or harmful to health. Only certain regulated facilities are allowed to treat, store or dispose of this type of waste. These facilities are not the same as cleanup sites. Hazardous waste includes a range of different types of waste. It can include used automotive oil as well as highly toxic waste materials produced by factories and businesses. Studies have found that hazardous waste facilities are often located near poorer neighborhoods and communities of color.



Why is this indicator included in CalEnviroScreen?

- Hazardous waste is transported from businesses that generate waste to permitted facilities for recycling, treatment, storage or disposal.
- Contamination of air, water and soil near waste generators and facilities can harm the environment as well as people.

How are hazardous waste generators and facilities measured in CalEnviroScreen?

- The Department of Toxic Substances Control maintains information on where hazardous waste is generated and the facilities that handle it.
- The indicator adds up the number of permitted <u>hazardous waste facilities</u> and <u>hazardous waste</u> generators in each census tract.
- Only large generators and generators of <u>RCRA waste</u> were included.
- The score is based also based on how close it is to neighborhoods where people live.

Impaired Water Bodies

Streams, rivers and lakes are used for recreation and fishing and may provide water for drinking or agriculture. When water is contaminated by pollutants, the water bodies are considered impaired. These impairments are related to the amount of pollution that has occurred in or near the water body. Groups such as tribal or low income communities may depend on fish, aquatic plants and wildlife in nearby water bodies more than the general population.

Why is this indicator included in CalEnviroScreen?

- Impairments can prevent recreational and other uses of the water body.
- Water pollution can harm wildlife habitats and change the number and types of plants and animals in the environment.
- When fish and shellfish are contaminated, people who eat them can be exposed to toxic substances.

How do we measure impairments to bodies of water in CalEnviroScreen 3.0?

- The State Water Resources Control Board maintains information on water bodies in California that are impaired by pollutants.
- The indicator combines the number of pollutants in <u>all water bodies designated as impaired</u> in each census tract.

Solid Waste Sites and Facilities

Solid waste facilities are places where household garbage and other types of waste are collected, processed, or stored. These include landfills, transfer stations, and composting facilities. The waste can come from homes, industry or commercial sources. Most of these operations require permits. The communities near solid waste facilities are usually home to poor and minority residents.



- Regulated facilities as well as illegal sites that do not follow the law can harm the environment and expose people to hazardous chemicals.
- Solid waste facilities can release toxic gases into the air, even after they are closed.
- Chemicals in waste can leach into the soil around the facility. These chemicals may eventually pose a health risk to people nearby.
- Composting, recycling and waste treatment facilities may produce odors, attract pests, and increase local truck traffic.

How are solid waste sites and facilities measured in CalEnviroScreen?

- CalRecycle maintains information on solid waste facilities in California.
- Each <u>solid waste facility</u> was given a value based on its type, how much waste it handles, and whether there were violations. Closed, illegal, and abandoned disposal sites were also included.
- The values for all the solid waste facilities in or near each census tract were added together. This takes into account how close the facilities are to where people live.

Asthma

Asthma is a disease that affects the lungs and makes it hard to breathe. Symptoms include breathlessness, wheezing, coughing, and chest tightness. The causes of asthma are unknown but genetic and environmental factors can be involved. Five million Californians have been diagnosed with asthma at some point in their lives. Asthma is the most common long-term disease in children. African Americans and people with low incomes visit hospitals for asthma more often than other groups.

Why is this indicator included in CalEnviroScreen?

- Outdoor air pollution can trigger asthma attacks or make asthma worse.
- People with asthma can be especially susceptible to pneumonia, flu and other illnesses.

How is asthma measured in CalEnviroScreen 3.0?

- There are different ways of measuring the rate of asthma in California. These include asthma prevalence (the number of people living with asthma), emergency department visits for asthma symptoms, and deaths from asthma.
- The <u>California Office of Statewide Health Planning and Development</u> collects information on emergency department visits and hospitalizations from different causes in California.
- Asthma emergency department data are currently the best available way of describing differences in asthma across the state at the census tract scale.
- The indicator is the number of <u>asthma emergency department visits</u> per 10,000 people for the years 2011-2013.

Low Birth Weight Infants

Babies who weigh less than about five and a half pounds (2500 grams) at birth are considered low birth weight. Many factors, including poor nutrition, lack of prenatal care, stress and smoking by the mother, can increase the risk of having a low birth-weight baby.

Why is this indicator included in CalEnviroScreen?

- Living in a neighborhood where there is violence or poverty, or where health care and healthy food are not available, can increase the chance of low birth weight.
- Mothers who are exposed to pollution from traffic, industry or agriculture are more likely to bear low weight babies.
- Low birth weight babies may develop asthma or other chronic diseases later in life, and they are more likely to die as infants than babies who weigh more.

How do we measure low birth weight in CalEnviroScreen 3.0?

• The <u>California Department of Public Health</u> collects information on where low birth weight infants are born in California.



• The indicator is the percentage of low weight births, averaged over a sever-year period (2006-2012).

Cardiovascular Disease

Cardiovascular disease refers to conditions that involve blocked or narrowed blood vessels that can lead to a heart attack or other heart problems. Heart attack is the most common cardiovascular event. Although many people survive and return to normal life after a heart attack, quality of life and long-term survival may be reduced, and these people are more prone to future cardiovascular events. There are many risk factors for developing cardiovascular disease including diet, lack of exercise, smoking and exposure to air pollution.

Why is this indicator included in CalEnviroScreen?

- People with preexisting heart disease or a previous heart attack may respond differently to the effects of pollution than people without heart disease.
- Short-term exposure to outdoor air pollution following a heart attack has been shown to increase the risk of death. Long-term exposure to air pollution may also result in premature death for people with a previous heart attack.
- The effects of air pollution may also be greater in the elderly and people with other preexisting health conditions.

How is cardiovascular disease measured in CalEnviroScreen 3.0?

- There are different ways of measuring cardiovascular disease in California. These include its
 prevalence (the number of people living with cardiovascular disease), emergency department
 visits for cardiovascular events such as heart attack, or deaths from heart attack.
- The <u>California Office of Statewide Health Planning and Development</u> collects information on emergency department visits and hospitalizations from different causes in California.
- Emergency department visits for heart attacks are currently the best available way of describing
 differences in cardiovascular disease across the state at the census tract scale. Due to a lack of
 data on the prevalence of cardiovascular disease, emergency department visits for heart attacks
 was selected as a good indicator of cardiovascular disease.
- The indicator is the number of <u>heart attack emergency department visits</u> per 10,000 people for the years 2011-2013.

Educational Attainment

Educational attainment is the highest level of education a person has completed. People with more education usually earn more than people with less education. In California, 19 percent of adults over 25 do not have a high school degree, compared to 14 percent for the United States.

- People with more education are more likely to have better health and live longer.
- Studies have found that communities of more educated people are less polluted.



• Adults with less education have more pollution-related health problems. They are more likely to die from the effects of air pollution.

What measure is used in CalEnviroScreen 3.0 to evaluate educational attainment?

- The US Census Bureau's <u>American Community Survey</u> maintains information on the rates of educational attainment across different areas in California.
- The indicator is the percent of the population over age 25 with less than a high school education.
- The data are from the years 2011-2015.

Linguistic Isolation

Linguistic isolation is a term used by the US Census Bureau for limited English speaking households. More than 40 percent of Californians speak a language other than English at home. About half of those do not speak English well or at all.

Why is this indicator included in CalEnviroScreen?

- Californians speak more than 40 different languages at home.
- Adults who are not able to speak English well often have trouble talking to the people who
 provide social services and medical care. As a result, they might not get the health care and
 information they need.
- Linguistically isolated households may not hear or understand important information when there is an emergency like an accidental chemical release or spill.

How is linguistic isolation measured in CalEnviroScreen 3.0?

- The US Census Bureau's <u>American Community Survey</u> maintains information on the rate of linguistic isolation in different areas in California.
- The indicator is the percent of limited speaking households, which are households where no one over age 14 speaks English well.
- The data are from the years 2011-2015.

Poverty

The US Census Bureau determines the <u>Federal Poverty Level</u> each year. The poverty level is based on the size of the household and the ages of family members. If a person or family's total income before taxes is less than the poverty level, the person or family are considered in poverty.

- Members of poor communities are more likely to be exposed to pollution and to suffer from health effects as a result of that exposure than residents of richer communities.
- Income can affect health when people cannot afford healthy living and working conditions, nutritious food and necessary medical care.
- Poor communities are often located in areas with high levels of pollution.



 Poverty can cause stress that weakens the immune system and causes people to become ill from pollution.

How do we measure poverty in CalEnviroScreen 3.0?

- The US Census Bureau's <u>American Community Survey</u> maintains information on the rate of poverty in different areas in California.
- The indicator is the percent of the population with incomes less than <u>two times the federal</u> poverty level.
- The data are from the years 2011-2015.

Unemployment

The US Census Bureau counts people who are over 16 years old, out of work and able to work as unemployed. It does not include students, active duty military, retired people or people who have stopped looking for work.

Why is this indicator included in CalEnviroScreen?

- People who are unemployed may have no health insurance or medical care.
- Poor health can make it hard for someone to find work or to remain in a job.
- Stress from long-term unemployment can lead to chronic illnesses, such as heart disease, and can shorten a person's life.

How do we measure unemployment in CalEnviroScreen 3.0?

- The US Census Bureau's <u>American Community Survey</u> maintains information on the rate of unemployment in different areas in California.
- The indicator is the percent of the population over the age of 16 that is unemployed and eligible for the labor force.
- The data are from the years 2011-2015.

Housing Burden

Housing burdened low income households are households that are both low income and highly burdened by housings costs. California has very high housing costs relative to much of the country, which can make it hard for many to afford housing. Households with lower incomes may spend a larger proportion of their income on housing and may suffer from housing-induced poverty.

- Housing affordability is an important determinant of health and well-being. Residents of low-income households with high housing costs may suffer adverse health impacts.
- The fraction of low-income households paying more than 50 percent of their income on housing is on the rise.



• The housing burden indicator takes into account the regional cost of living for both homeowners and renters and includes the cost of utilities.

How is housing burden measured in CalEnviroScreen?

- Data from the Housing and Urban Development (HUD) <u>Comprehensive Housing Affordability</u>
 <u>Strategy (CHAS)</u> is used for the indicator. CHAS data is a special analysis of US Census Bureau data.
- The indicator is the percent of households in a census tract that are both low income (making less than 80% of their <u>county's median family income</u>) and severely burdened by housing costs (paying greater than 50% of their income for housing costs).
- The data represent the years 2009-2013.