

appendix a

Community and Stakeholder Engagement Reports

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ATTACHMENTS

- A1. Round 1 Presentations
- A2. Round 2 Presentations
- A3. Round 3 Presentations

Round 1: Community Survey, Stakeholder Group Meetings, and Public Workshops (May 2021)

Prepared for: City of Oxnard
Prepared by: ESA with Kearns & West

Round 1 Engagement Summary

The first round of stakeholder and community engagement for the City of Oxnard Climate Action and Adaptation Plan (CAAP) was conducted throughout May 2021, including a community survey, and public workshops. Activities included:

- A community survey posted during the month of May; 133 responses were received;

- Six stakeholder group meetings held between May 3 and May 10; and

- Two public workshops (conducted in both English and Spanish) were held on May 17 (20 participants) and May 22 (40 participants).

The purpose of these engagement efforts was to identify the climate change impacts of most concern to the community and to gather ideas about the best ways to reduce greenhouse gases (GHGs) in the community. These engagement efforts helped identify climate impacts of concern in the Community Vulnerability Assessment, and to identify effective CAAP strategies and actions for improving community resilience and reducing greenhouse gas emissions. Detailed summaries of these engagement efforts are provided below and included in Community Survey Results. A copy of the presentation is provided in the appendix as Attachment A1.

In general, these community engagement efforts to date demonstrate a strong interest in strategies and solutions that are equitable, with the benefits distributed fairly and in a manner that does not put vulnerable communities at further risk. Participants expressed interest in strategies that target particularly vulnerable populations such as renters and residents in older housing stock, and farm workers. Additionally, the workshops and public survey indicated a need for public education regarding climate change impacts.

Across all community engagement efforts (community survey, public workshops, and stakeholder group meetings) the three climate change impacts of greatest concern to the participants were extreme heat, drought, and air pollution (wildfire smoke in particular).

With regards to extreme heat, public workshop participants highlighted the issue of access to air conditioning as a top concern, with Oxnard's historically temperate coastal climate becoming hotter, and with the City's limited tree canopy and extensive paved surfaces exacerbating conditions on extremely hot days. At the stakeholder group meeting, participants identified hotter days and prolonged heat impacts as particularly impacting farm workers (especially given other health risks they face in the fields), indoor workers in facilities not equipped with air conditioning, and the elderly.

With regards to drought, public workshop participants expressed concern that climate change impacts (especially drought) could negatively impact local agricultural production. Stakeholder group participants were particularly concerned about water supply disruptions and drought impacts on Oxnard, with negative consequences for local agriculture, industry, and jobs. Participants also expressed concern regarding the potential for prolonged droughts to increase food prices.

Regarding wildfire smoke and air pollution, public workshop participants were concerned that rising temperatures could worsen air pollution, with impacts to public health. Stakeholder group participants were concerned that smoke and worsening air quality from hotter weather are impacting farmworkers and intensifying health impacts for those with underlying health conditions like asthma, especially in disadvantaged communities.

Across all forms of engagement, participants expressed concern about climate change affecting the most vulnerable populations in the community who have higher sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. The public workshop identified a need to include undocumented community members and indigenous communities in conversations about climate change and program implementation. Additional vulnerable populations identified through the engagement activities include:

- Farmworkers/outdoor workers
- Indoor warehouse workers
- Manufacturing workers
- Individuals with physical or mental disabilities
- Individuals without access to air conditioning
- Residents in communities that are disproportionately impacted by COVID-19 and particularly vulnerable to the impacts of climate change
- Unhoused individuals
- Elderly community members
- Coastal residents
- Children
- Low-income community members

With regards to what the City and community can do to adapt to climate change, the following actions received support across all forms of engagement:

- Protect outdoor workers during days of extreme heat and poor air quality
- Identify and assisting vulnerable individuals during extreme climate events
- Plant more shade trees, encouraging green infrastructure, cool roofs and pavements
- Increase the reliability of the electrical grid
- Promote water conservation, groundwater management
- Consider groundwater contamination in water supply planning
- Establish resilience hubs

Establish partnerships with homeowner associations to encourage transition to native and drought-tolerant landscapes. Partner with Chumash Indigenous tribes to gather input on native plant use.

With regards to what the City and community can do to reduce the GHG emissions that cause climate change, the public survey indicated the greatest level of support for the following actions:

- Locate and design new development to promote walking and reduce driving
- Provide safer routes and paths for cyclists and pedestrians
- Plant more trees
- Install more rooftop solar power systems throughout the community
- Increase recycling

Participants at the workshops and stakeholder groups were also supportive of those actions, as well as the following:

- Require higher energy efficiency in new constructions and retrofits through “reach codes” and through community development block grants for residential units in underserved communities
- Install microgrids with energy storage
- Expand solar panels on municipal buildings
- Support electric vehicles by expanding charging options; electrify the City fleet
- Improve the City transit system and encourage housing development along transit corridors
- Conserve water
- Focus on industrial and commercial waste reduction
- Reduce barriers to composting - ideas included neighborhood composting and organics collection
- Explore single-use plastic and Styrofoam

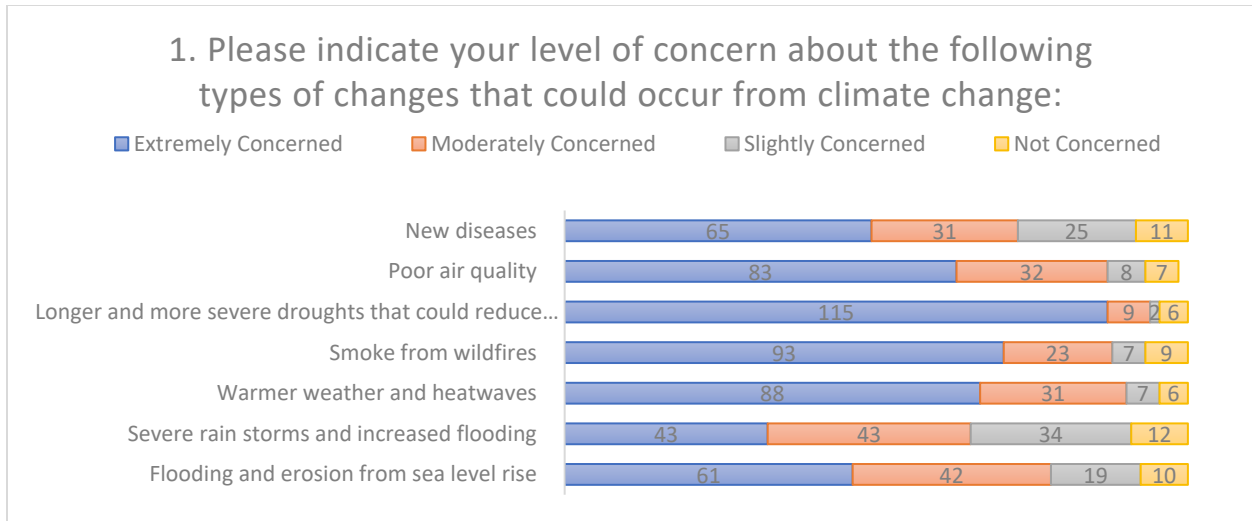
Community Survey Results

The community survey was posted during the month of May 2021, and 133 responses were received. The survey included 13 questions.

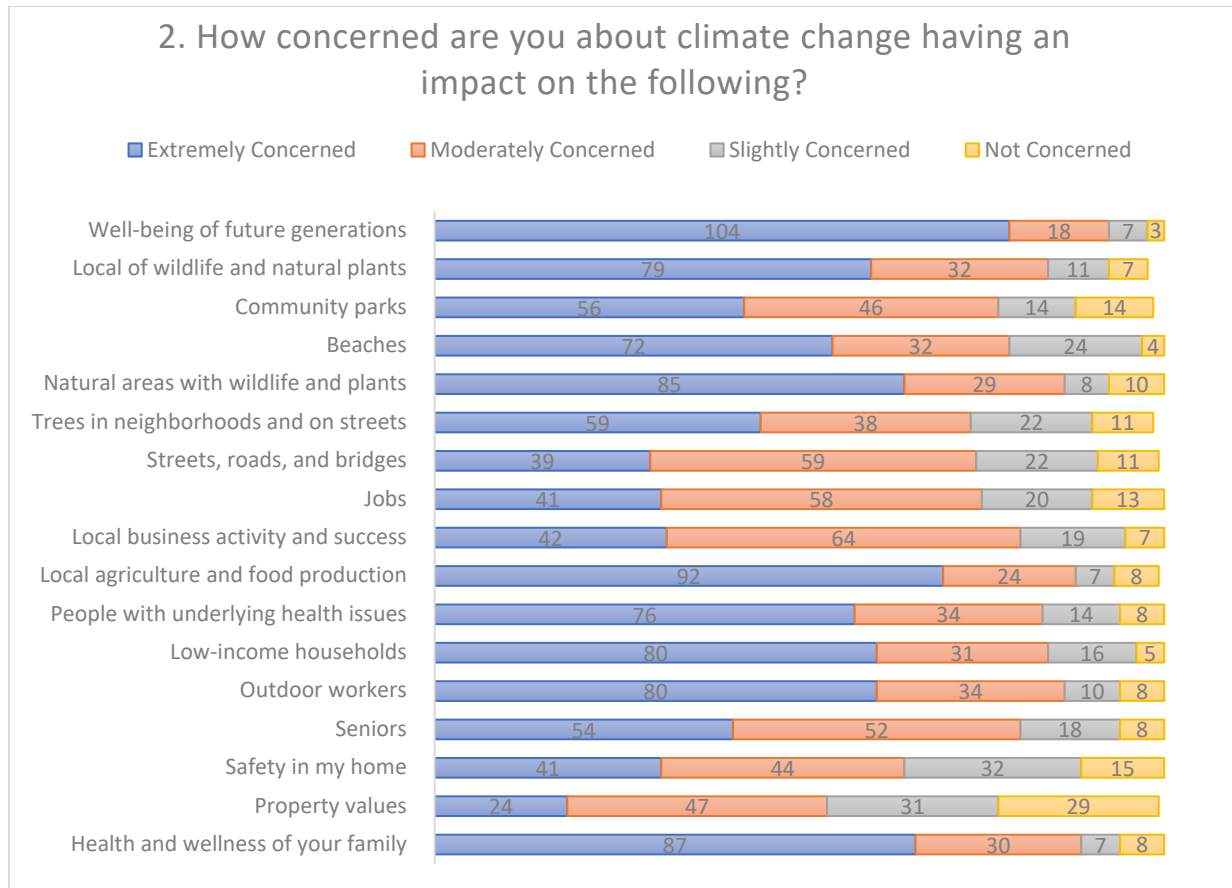
Out of the 133 survey respondents, 37% live and own a home in Oxnard, 17% of respondents live and rent a home in Oxnard, 26% work in Oxnard, and 6% own a business in Oxnard.

Respondents indicated that they are most concerned with the following effects of climate change:

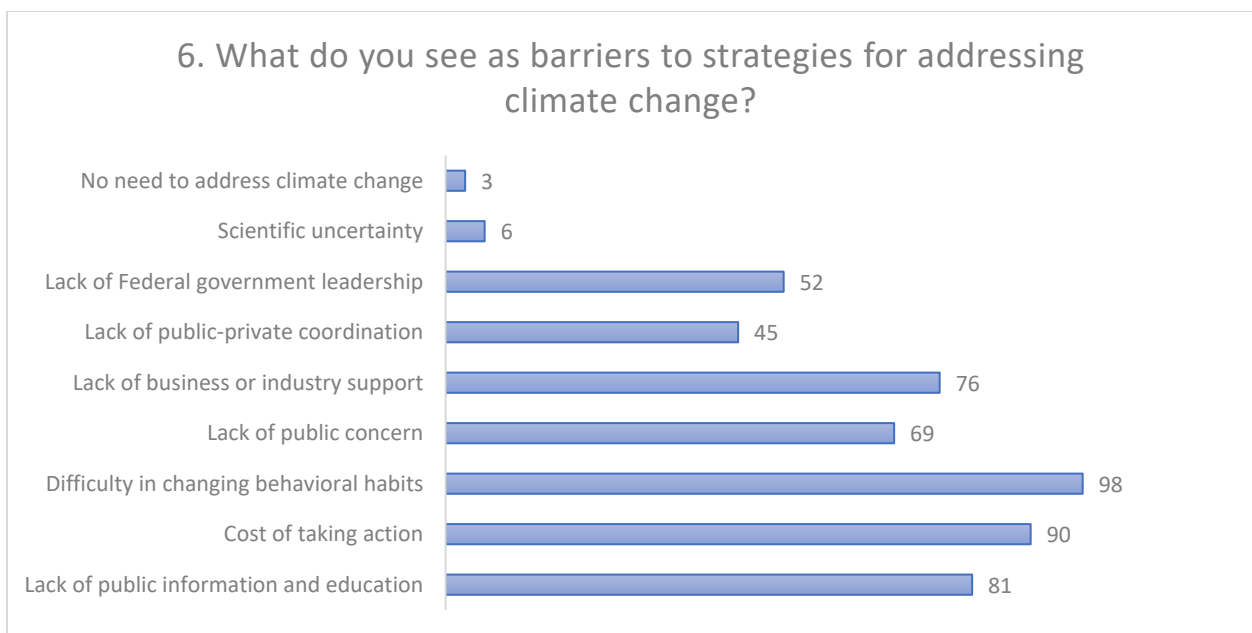
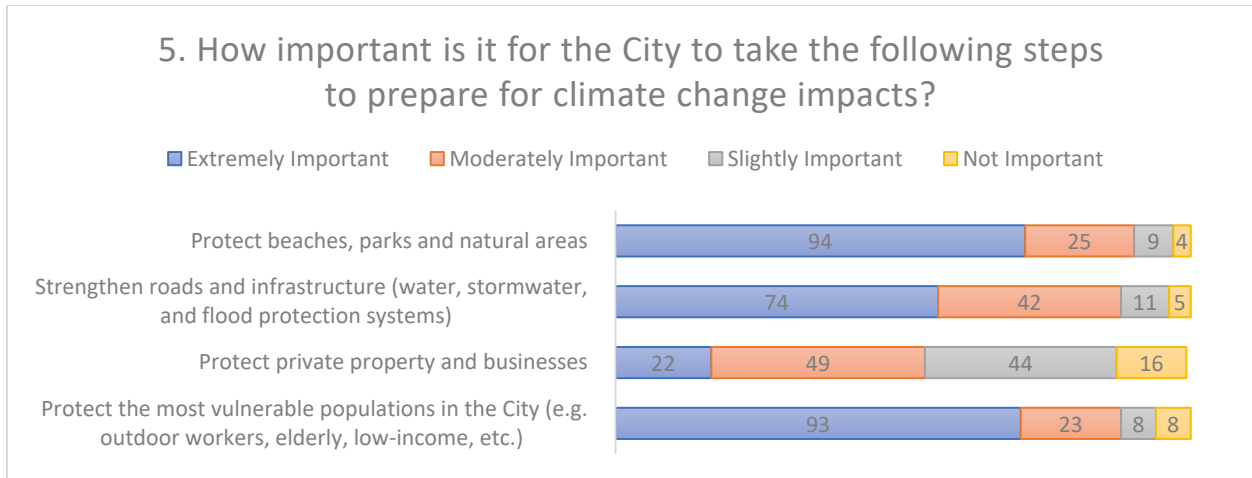
- Longer and more severe droughts
- Smoke from wildfires; poor air quality
- Warmer weather and more-extreme heat days



The survey results indicate that the community is most concerned about climate change effects on the well-being of future generations, local agriculture and food production, the health and wellness of families, communities and vulnerable populations, as well as beaches and other natural areas.

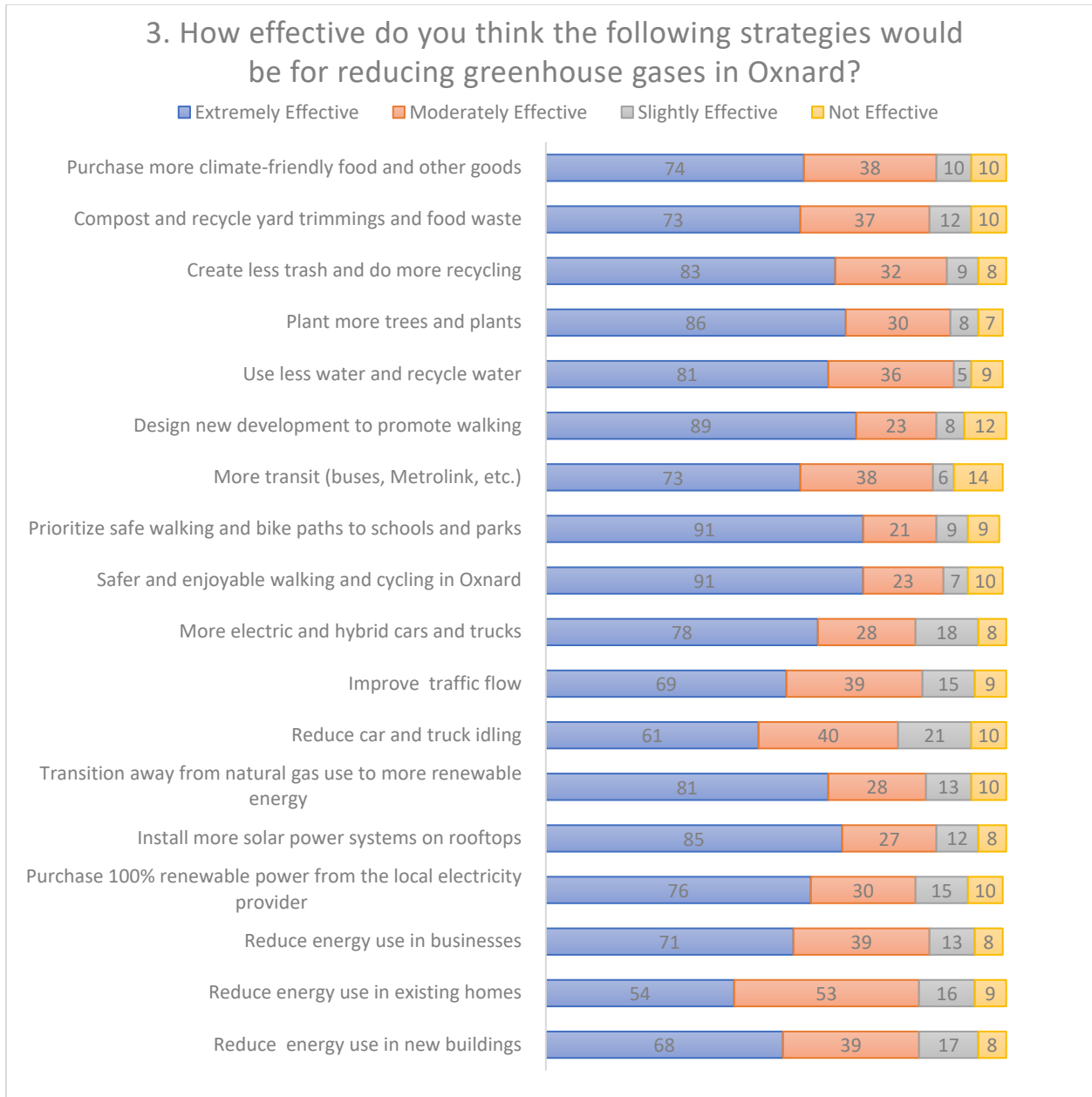


Survey respondents indicated that protecting natural areas (such as beaches, parks, and other natural areas) and protecting the most vulnerable populations should be priorities for the City when preparing for climate change impacts. Survey respondents identified the difficulty in changing behavioral habits and the lack of public information and education as key barriers to adapting to climate change.



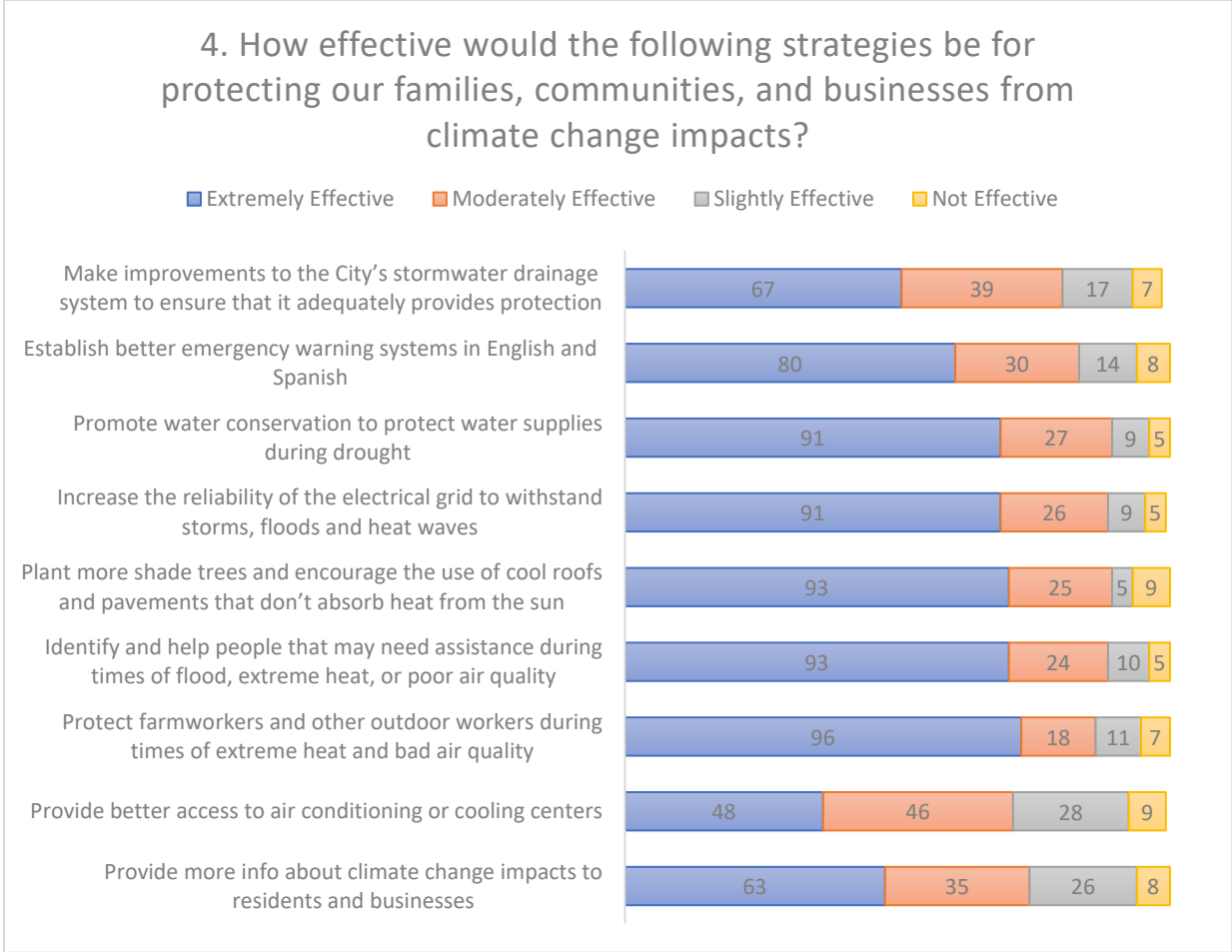
When asked about effective strategies to reduce greenhouse gas emissions, survey results indicated the greatest level of support for:

- Locating and designing new development to promote walking and reduce driving
- Prioritizing safer walking and bike paths.
- Planting more trees
- Installing more rooftop solar power systems
- Recycling more



When asked about strategies that would be effective in protecting communities from climate change impacts, the survey results indicate the greatest level of support for the following strategies:

- Protecting outdoor workers during times of extreme heat or bad air quality;
- Identifying and helping individuals during extreme climate events;
- Planting more shade trees and encouraging the use of cool roofs and pavements;
- Increasing the reliability of the electrical grid;
- Promoting water conservation; and
- Establishing better emergency warning systems in English and Spanish.



The remainder of the survey questions were designed to gather demographic information regarding how long respondents have lived in Oxnard, the district they live in, and their age.

Round 2: Stakeholder Group Meetings (January 26 and 27, 2022)

Prepared for: City of Oxnard
Prepared by: ESA with Kearns & West

Round 2 Engagement Summary

In January 2022, the City of Oxnard conducted a series of virtual meetings to discuss specific questions with key stakeholder groups (“discussion groups”) as part of the second round of community engagement for preparing the Climate Action and Adaptation Plan. The discussion groups were organized by interests and included representatives from local organizations, agencies, other community leaders, and city staff. This report documents the meeting process and provides a synthesis of the discussion themes. Presentation slides used during the meetings are located in the appendix as Attachment A2.

Engagement Objectives

The intent of holding smaller meetings with stakeholder groups with similar interests was to tap into their local knowledge and understanding of community needs and perspectives, draw upon professional expertise, and to have focused, deeper discussions on key topic areas. Specific objectives included (1) Gathering input on community vulnerabilities to climate change and potential strategies to address vulnerability; and (2) improving understanding of community experience with climate change hazards and social vulnerability and equity.

Meeting Schedule, Format, and Participants

The table below summarizes the schedule and focus for each virtual meeting with between four and thirteen community leaders attending each one. Invitations were made via a direct email from the City’s Climate Action and Adaptation Plan project manager.

TABLE A-1 Virtual Meeting Schedule and Interest Focus

DATE	STAKEHOLDER GROUP
Wednesday January 26, 2022	Environmental Organizations
	Local Businesses and Commerce
Thursday January 27, 2022	Utilities, Franchises and Agency Representatives
	Community-Based Organizations, Education and Health Care
	Multiple City of Oxnard Departments

The five meetings, conducted virtually due to COVID-19 social distancing requirements, generally followed the same 2-hour format. After roundtable introductions, the meetings progressed sequentially with the project

consultants sharing information and the participants responding with their perspectives and input on the following topics:

What is Equity and Social Vulnerability and what that means for climate change adaptation in the City of Oxnard.

Climate change hazards expected in Oxnard and who in the community might be more vulnerable to the impacts resulting from those hazards.

Climate change adaptation strategies that the City may consider implementing to address hazards and reduce vulnerabilities.

See Attachment A2 for the presentation slides that provided the framework for these discussions.

Discussion Themes

The following sections provide a synthesis of the reoccurring themes communicated by participants during these discussions. Meeting notes with greater detail about individual participants' perspectives have been distributed to the City of Oxnard project team and consultants.

General Findings from Stakeholder Engagement Round 2

Community members and stakeholders identified the following general concerns and priorities:

Prioritize the most vulnerable groups, particularly outdoor workers

Public education and awareness is critical

Consider economic feasibility of adaptation strategies and cost-benefits during prioritization for implementation

Resilience hubs/Cooling centers should be accessible and able to serve for all/as many hazards possible

Collaborate with local/regional partners

Equity and Social Vulnerability

STAKEHOLDER COMMENTS AND QUESTIONS ON EQUITY AND SOCIAL VULNERABILITY

Vulnerable Community Indicators Chart

- How do these indicators stand up against CalEnviroScreen 4.0 indicators? (ESA staff clarified that the figure and map used data from both CES 4.0 and CA HPI)
- Has this analysis has been done at a regional scale? What is the diversity of vulnerability within the region not just across the state? Suggestion to look at the Ventura and Santa Barbara regions, as opposed to an analysis relative to the state.
- Groups asked for clarification on the tree canopy indicator. (Response: the indicator refers to a lack of tree canopy.)
- Groups asked for clarification on the Park Access indicator. (Response: this indicator refers to a lack of Park Access.)
- What indicators contribute to differences in vulnerability for the tracts along the 101 corridor?

- Group asked for clarification on the “75%” emphasized on the figure. (ESA staff answered question)
- Using averaging can skew data (vulnerable community indicators chart)
- Using Non-white as an indicator seems insensitive and too broad of a generalization. Using this as a descriptor of vulnerability is not very clear
- The number of uninsured adults is concerning.
- Are the first three indicators (asthma, cardiovascular disease, low birth weight) getting equal weight?
- Active Commuting and Automobile Access indicators appear a bit low. Suggestion to consider safety of non-vehicle travel (thinking about high rates of pedestrian and bicyclist injuries and deaths).
- Concerns on vehicle accessibility during evacuations
- There are significant levels of elevated pollutants during wildfires

Social Vulnerability Map

- Map generally looks accurate based on lived/work experience and in terms of where most city services (PW) are offered. It could be labeled more specific to get a better sense of location (add map labels)
- Generally, south Oxnard has higher density and poverty (consistent with map)
- Automobile Access looks appropriate. One suggestion is to expand on access
- Would be helpful to know what the vulnerabilities are in certain areas, especially in areas that are less intuitive. (in reference to social vulnerabilities map). E.g., One of the areas mostly consists of retail

Outdoor Workers and Farm Workers

- Create resiliency for outdoor workers
- Maintain ability for farm workers to live in places with resources but work on farms
- Oxnard farm industry is large. Need resources to continue to make food in climate change
- Look into Ag. Tech program at Oxnard College
- Agricultural workers have the least access to EV. Infrastructure is a barrier to entry into using these technologies
- Addressing health needs ranks up higher than other issues like field workers?

STRATEGIES TO CONSIDER FOR EQUITY AND SOCIAL VULNERABILITY

Oxnard needs to prepare for climate immigration and can position itself as a place for people shifting. Consider how recently people have come and what industry they are attracted to

Higher quality housing – renting vs owning

- Consider construction dates
- Consider how ownership affects installation, double windows, and other home features

Would be helpful to know what indicators are high within the most vulnerable tracts. Include a description for those tracts in the CAP, why they show up as most vulnerable and what indicators are highest.

Potential missing indicators to include in Social Vulnerability and Indicators Chart:

- A direct measure of air pollution
- pesticide exposure
- immigration status (may be captured in other indicators)
- Homeless individuals
- An indicator related to non-vehicle travel safety. E.g., Cyclists. Expand on other access-related indicators
- The Eastern area near freeway does not seem accurate – not as highly vulnerable in terms of density. This is the area directly west of Camarillo airport on the map. This tract stands out.

General/Multiple Hazards

COMMENTS AND QUESTIONS

The following ideas and themes heard in the stakeholder meetings pertain to multiple hazards:

Evacuation Routes

- Evacuation routes are necessary but evacuation to where? Evacuation routes are also dependent on the hazard and location. How are evac routes being evaluated? Having certain areas of accessibility, evac routes, we need to be sure that they aren't promoted and then that's actually where other hazards are. How do evac routes work individually by hazard and during events with various hazards? Before deciding on what an evac route is, have to ensure that that route is actually safe, comfortable, accessible etc. sometimes it's safer to shelter in place, there are a lot of factors involved.
- Potential evacuation routes need to be assessed to ensure the right routes are designated and that they are safe and accessible for all potential impacts
- Consider feasible routes for dead-end areas
- Provide clear and easy signage for evacuation routes; Provide messaging at bus stops and onboard.
- Work with local and regional transit operators

Implement an Early Warning System & Public Education Campaign

- Have early warning system for flooding and all other threats, including traffic and other local issues
- Problem is until conditions occur, we don't know what the conditions are
- Provide a public education program as part of this to enhance public awareness and inform on early warning systems. Public education and awareness is critical, this should be a priority component of the early warning system strategy.
 - Provide education/awareness to hazards and what could warrant early notification. Needs to include information/emphasis on how weather conditions are changing
 - Emphasize how future events are likely to be very different from what the community has historically known/experienced.

- Include automated signs, community signage, and notification of precursor events as well. Basic signage (e.g., put out signs in relevant areas “this area is prone to flooding”). Have signage/information provided by other partners such as transit operators.
- Have a program that warns people through texting
 - Info regarding the Farmworker wildfire smoke alert systems, <http://www.vcapcd.org/smoke/index.htm>
 - Consider expanding this to reach all outdoor workers
- GCTD is able to provide messaging through their onboard alert system to transit riders.
- Consider a joint alert system between air pollution control district and Ventura County’s Ag district targeted at farmworkers. Outdoor workers should be included or have a program for heat events, air quality events, and others.
- Info regarding the Farmworker wildfire smoke alert systems, <http://www.vcapcd.org/smoke/index.htm>
- Tie County’s existing programs for heat event alerts for other hazards. County has to provide access to shade because of outdoor workers, program has hydration (water, Gatorades), shade locations citywide, and send out text warning about heat events and to hydrate and seek shade during certain times of the day. The program is for employees, particularly drivers and those working out in the field. Could look to integrate other outdoor workers or mobile workers. Program has been in place for several years. Other cities have also implemented similar programs, particularly in the inland empire. Could become a community-oriented program.

Public Education Campaign

- Need a campaign on public education, more than just pamphlets. Include info on being able to recognize hazards and impacts.
- Working closely with senior centers, outdoor workers
- Information should be in a multilingual capacity
- Work through senior orgs, farmworker associations and others
- Oxnard could focus on capacity building – conversations on how to structure adaptation going forward
 - Have identified many opportunities but Oxnard can challenge itself to build on capacity building and mobilize
 - Community needs a bigger role
 - There needs to be a “Change” component
- CEC organized a series of roundtables in 2019-2021 to address issues related to climate resilience and adaptation for Santa Barbara County. This helped frame an intersectional, interdisciplinary community vision for climate resilience and adaptation for Santa Barbara County by identifying potential actions and strategies. The report and other information can be found here: Climate Resilience Roundtables — Community Environmental Council (cecsb.org).

Resilience Hubs

- Have a program that provides hubs for heat events (access shade in heat events, provides hydrations, shade, city sends text to community to warn of heat events)
- Resilience hub looks more like distribution centers than shelter. Though for extreme heat, it should be shelter as most important.
- Cooling Centers
 - Provide cooling centers near agriculture areas where those working outside are vulnerable
 - Collaborate with schools for facilities that can serve as a cooling center
 - Collaborate with the County to identify potential public facilities
- Research Resilience Hub models in SoCal (project in Boyle heights piloted by Climate Resolve with a resilience hub partner, so the school and city itself does not have to do the full investment)
- Participant shared info on Clean Power Alliance, which will be putting resilience hubs in every member jurisdiction which is mentioned in their Local Programs Strategic Plan. Program includes a clean back up power for essential facilities, which will target installing back-up battery storage energy at essential community facilities, such as fire stations and community centers, that can act as a resilience hub, in each of Clean Power Alliance's member agencies. Participant asked if CPA has approached the City of Oxnard about this yet.
- Partner with schools for resilience hubs so there is a partnering investment and it's a natural place to provide shelter and care for vulnerable groups, like children. Vehicle charging units incorporated into school fleets could be another strategy. Encourage/incentive more youth participation in community programs and activities.
- What would the needs and expectations be for a location to serve as a community hub?
- Participant commented they would like to see these hubs on a microgrid for resiliency – meaning renewables with battery backup. Backup power will be important in case of shut offs
- Resilience hubs will cost money that could be used for other projects, e.g., protected bike lanes that could help reduce vehicle miles travelled and associated emissions. There are other competing interests/projects/funds. (ESA staff noted that resilience hubs are designed for multiple hazards, including heat, smoke, air pollution and more. There is state funding being made available within the next year earmarked specifically for these kinds of projects, so it helps reduce competition for funds for various community projects.)
- County of Santa Barbara recently received grant funding from PG&E to create resilience hubs in North County to serve as safe refuges in case of climate-related emergencies. Participant provided an article written by the Santa Maria Times for reference.

Potential Locations for Hub

- Resilience hub locations should be based on accessibility
- Libraries and community centers as potential locations for hubs
- It's likely that outdoor workers may be placed further away from central hubs. There should be locations that are accessible by various groups.

Drought

COMMENTS AND QUESTIONS

Adaptation Strategies

- Adaptation Strategy #2 (Continue to expand community water recycling programs)
 - Important to maintain existing programs
 - Are there any barriers with being able to expand the use of recycled water facilities?
 - What is the highest and best use of recycled water in the City?
 - These programs are not for residential uses. Clarify on language
 - Instead focus on generating new water
 - Programs shared:
 - Oxnard's GREAT program – combines wastewater recycling and reuse; groundwater injection, storage and recovery
 - One Water program is related to water enhancement. Would be beneficial to identify One Water messaging
- Adaptation strategy #3 (Use drought tolerant, native plants and alternative irrigation) – this strategy appears to be more on a policy level, seems beyond scope
- Adaptation Strategy #5 (Create programs to address food insecurity within Oxnard) – senior meal program that addresses food insecurity amongst seniors is important

Water

- Does the city currently have incentives or city programs to encourage water usage? Are city resources being used to create such programs?
- Are there studies available on where current major water usage is (or where unwanted water loss may occur)?
- Is ground water considered?
- How big are the proposed adaptation strategies? How widely applied? (in terms of percent reduction of water consumption?) (ESA staff responded that this varies depending on each program, thought the strategies are generally pretty effective. City is already very active on water conservation and water recycling programs, though there is not much on supply of water. Looking to find ways to be more efficient and have more deliberate programs, including with stormwater capture.)
- In the event there is an unexpected shortfall in water supply, we could import more water, but the cost would be a burden
- Is there a large gap between where we are in terms of water supply and where we need to be?
- There is a program where new and old water wells are being replenished and schools/students are supporting (to address some challenges)
- Water conservation website has info on waterwise landscaping, and other suggestions for water conservation.

Tree Canopy

- Are the trees that provide shade the ones that are also native and drought tolerant? Many cities are considering the balance between shading trees and drought-tolerant trees.
- There has been a decrease in large trees, lots of trees being removed and less being replanted
- Increasing urban tree canopy in city would be beneficial.
- Native plants may not be best for urban environments

Agriculture

- Underscore importance of Oxnard's contribution to national food supply
- What is going to be done about fallow fields and what does this mean for the economy?
- What is the economic impact of shifting to low water agriculture?
- Less water-intensive crops is a good priority but agriculture will still be affected. Ensuring a green transition will be critical.
- Consider pests, pesticides, new pests and pest resistance during drought.
- Shifting to less water intensive crops is not always a good idea. Should be growing things even if they are water intensive
- Food nutrition is still important
- People are vulnerable to increasing food and water cost

STRATEGIES TO CONSIDER FOR DROUGHT**Water Supply, Water Capture**

- Consider desalination strategies under the first vulnerability, water supply and quality.
- Study current major water users and facilities – review with Public Works
- City PW staff like #6 - Increase outreach to low income residents regarding City's discount water rates
- Install stormwater capture mechanisms at public facilities and urban areas where there are high impervious surfaces
- Water storage, water capture, rain garden, recycled water (supported by multiple participants)
 - Green asphalt and green concrete
 - Capitalize on rare rain events
- City is sitting on incredible opportunity in terms of location. Collaborate for a regional plan to implement projects
- Expand wastewater plant
- New Water Supply
 - The strategy regarding the recycled water program is mostly about creating new water – would want to prioritize this for new supply of water.

- Recharge aquifers – generate new supply, increase amount of drinking water. And build water credit
- Consider desalination projects or import of water as needed

Groundwater

- Groundwater impacts from drought should be mentioned under the first vulnerability (Water supply and quality)
- Highlight economic impacts of decreasing groundwater
 - Agriculture is a large part of Oxnard economy
 - Less water intensive crops
 - Green transition and just transition
- Recommend the City prioritize protections around the limited supply of groundwater. The City should pay close attention to companies wanting to extract from the Oxnard plain → this needs to be accounted for somewhere in the CAP.
 - Link for information about cyclic steam injection in Oxnard plain: <https://cfrog.org/what-we-do/advocacy-campaigns/#ending-extreme-oil-extraction>
 - Review and provide strategies for the economic impacts of decreasing allocations of groundwater, as agriculture is a huge part of Oxnard's economy.
- Prioritize analysis of sea level rise and saltwater impacts to Oxnard's groundwater. Monitoring, and understand of, these impacts is critical.

Tree Canopy

- Consider drought-tolerant plants and crops under strategy #3
- Encourage and use less water intensive crops
- Encourage and use Salt (water) tolerant crops
- Provide resources necessary for people to understand what we mean by drought/native trees and plants.
- City can improve on encouraging native, and drought-tolerant plants, particularly for private facilities

Agriculture

- Increase resiliency of local food systems
- Implement farm to school/community programs
- Expand and increase awareness of farm donations (~70% of food donations came from farms)
- Encourage an economic analysis on what shifting to less water intensive crops
 - E.g., Strawberries – use a lot of water – what does this shift look like to the economy and workforce?

Wildfire Smoke/Air Quality

COMMENTS AND QUESTIONS

Focus on these vulnerable communities for Air Quality hazards:

- Outdoor workers
- People with disabilities are more vulnerable to bad air quality
- Those who are homeless are more vulnerable to bad air quality
- Individuals with asthma and cardiovascular illness are more vulnerable

Shelters should be made available/improved for outdoor workers.

How much do we expect programs like these to have a significant impact?

What actions can be taken/prioritized to have more of an impact in reducing emissions?

How big is the impact to public health and exposure? How much do we expect programs like these to reduce exposure/increase resiliency?

Reducing VMT seems like the key to address air pollution. Suggestion to consider interventions that will reduce air pollution exposure in the near term (3–5 years). We don't know how big an impact like a resilience project can have.

Have programs that accommodate people who don't have access to a cell phone or internet

Have a power share program with nearby cities

Need to consider not only wildfires but also wind events shutting off electricity

- Also impacts to people who want to buy EV – if there's a shut off, they can't commute

The grid will be massively challenged with transitions

Outdoor workers can include persons who utilize active transportation, wait at bus stops, and engage in other types of outdoor activities.

The asthma and cardiovascular indicators are likely higher. CPA has dedicated 2 million to local programs, one of which does backup power supplies for fire stations/police stations and other locations. Also has power share program that gives power to DACs. VPA is working with Oxnard to get word out on this program. Updating power response program, which is a direct response program that gives incentives for allowing CPA to access thermostat. CPUC is having a discussion today (1/27) on net metering – still allowing solar power at affordable price for homeowners.

The Public Health Division has a dashboard and outreach program, and has done a lot of program development related to asthma, heart disease and other conditions in DACs. City should reach out to public health division for data, and to integrate programs that they already have existing in the communities.

Indoor air quality

- Consider looking at buildings that are older. Older buildings are likely to have less protection against smoke, air quality and temperatures.
- Also applicable for businesses – e.g. outdated HVAC systems.
- Consider indoor gas appliances and childhood asthma rates

STRATEGIES TO CONSIDER FOR WILDFIRE SMOKE/AIR QUALITY

Indoor buildings:

- Work with utility companies or put in ordinance of no gas appliances in new resident buildings to encourage shift to electrification
- Solar panels incentives
- Using census tracts to find older buildings – more exposed to bad air quality and smoke
 - Older buildings have lower quality HVAC qualities

Shelter available for outdoor settings

In the last few months, there have been several programs directed to youth

Extreme Heat

COMMENTS AND QUESTIONS

Farm workers/outdoor workers are most vulnerable

Heat has an impact on (power/grid) delivery systems. PPT strategies captured the effect of heat on utilities, however there are also impacts on the delivery itself. There are cascading impacts, potential cascading failures, not just at the utilities' but also during delivery process.

Organizations in area also brought up issue of extreme heat. Locations need more than just a generator. Need a complete list of requirements for generators (public works should have a list of requirements)

Housing

- Identify all housing units that need retrofits
- Reach out to housing developers and landowners to ask what they are hearing from their tenants. (We have not heard much from the facility side for housing facility.)
- Identify facilities that may have backup generators. The backups at different locations are very different. Some support more, others have significantly less capacity, etc. (Public Works upkeep fueling/maintenance for these and can provide a list of facilities)
- Public Housing
 - Public Housing units need funding and resources. Several units don't have AC (most have wall furnaces) or backup generators, impacting vulnerable tenants
 - Elevators cannot run when power goes out → seniors, mobility-impaired, and disabled individuals are vulnerable
 - Public housing units: There are total of 520 units throughout the city. 2 buildings senior buildings downtown near P St. and then 50 unit, 7 story complex. No backup generators at these. Would prioritize these facilities.
 - Heat is limited throughout housing. Some have it in living rooms. Many upstairs units do not have heat. (City staff has a list of these units)
 - Incoming HUD funding (~ 1.5 million spent per year) will focus on converting units to ADA.
 - City has a five-year plan regarding updates (window, roof, heater replacement)

Battery Storage

- Zoning codes have not caught up to the needs
- Where to locate renewables facilities that support the grid?
- What's near transmission lines and what's appropriate? Battery storage systems can help with grid reliability but may or may not be suitable for supporting renewable energy.

Extreme Heat and Schools/Education

- Idea to have cooling centers at schools.
 - Complex and lengthy process. Schools currently serve some agencies, such as the American Red Cross, and the process was difficult. Doing some kind of community cooling center may follow a similar process. Costs would need to be recovered some way for serving community members outside of school hours/school operations.
 - There is a requirement for separation, everyone that comes on campus needs to be vetted/fingerprinted, with the exception of parents.
 - Not many opportunities outside of individual classrooms for cooling centers (uncertainty on if large school rooms are air conditioned).
- Concerns for students' learning
 - Extreme heat can impact how students get to school/campus (walking)
 - Extreme heat in homes will impact learning
 - Health and welfare of students is critical– being able to access and participate in their education safely and comfortably
- Improvement projects
 - A 350M bond was recently passed to supply all classrooms within the district with AC for heat days. In process of using that funding to deal with heat days and make sure filters are in AC units to help with mitigation for COVID, infection, and air pollution.
 - School districts are in process of refurbishing ac units, started adding HVAC systems to older buildings that didn't have any. Process will finish ~2025. Trying to provide cooler rooms for children, for comfortable learning. Most classrooms have windows open generally year-round. Heat events make it very uncomfortable, even unbearable.

STRATEGIES TO CONSIDER FOR EXTREME HEAT**Flexible Schedules**

- Add strategy for more flexible scheduling for city departments, public facilities, large employers, and large businesses so people can stay home, particularly saving energy during heat events.
- Support flexible, alternative schedules, including evening schedules

Improve and Retrofit Facilities

- Identify buildings/facilities where improvements are needed. Prioritize locations in vulnerable/Disadvantaged communities

- Retrofit older buildings – consider the impact of using funds for this vs funds for building newer housing
- Seek funding opportunities (top-down) to get retrofits of existing housing especially low-income housing
- Supply all classrooms in the district with air conditioning with filters to mitigate air quality issues
- Refurbish HVAC systems
- Provide/Improve insulation
- Install heat pumps
 - TECH Clean California is offering substantial incentives direct to contractors to support the installation of heat pump technologies in existing single-family and multifamily buildings throughout gas IOU territories. 40% of program benefits will be targeted towards low-income and disadvantaged communities. Ventura County does not yet have contractors, but CEC and others are currently in discussions about getting more contractors for our area.
 - Tech Program: [California TECH Initiative – Energy Solutions \(energy-solution.com\)](https://energy-solution.com)
 - TECH Incentives: [TECH-Single-and-Multi-fam-Incentives-12072021.pdf \(energy-solution.com\)](https://energy-solution.com)

Policy, Standards, and Streamlining

- Have standards related to cooling, such as cool paving, cool paint, cooling features, etc.
- Cool pavements (supported by multiple participants); City can adapt a cool pavement requirement in public spaces
- Some new standards from the state are coming through. Ensure farm workers are being notified
- Streamline the process of provide funding to partners and collaborators
 - Concrete policies in place, an already approved plan/process by decision makers
- Permeable pavers in areas that can tolerate the traffic and capture water
- Hemp bricks allows the building to breathe
- Green roof requirements – can cool down the building
- Cool paint – less electrical needs in the building
- County GP has an Increasing Temperature section– includes things to streamline heat island effect solutions like standards and requirements associated with cool pavement and other cooling strategies. City can review/use some standards

Increase/Improve Bus Stop Shelters

- Improve comfort at bus stops. Improve shelters to also help against climate hazards.
- There are ~339 bus stops, approximately 91 of which have bus shelters. Transit Provider wants to update Bus Stop Improvement Plan to increase amount of shelters
- Ensure that local agencies can continue maintaining shelters; Prioritize stops that have higher boardings and prioritize city-owned stops/shelters (about 50% - Clear Channel owns the rest – may need collaboration).

- Ensure public transit is operating and running during shutoffs, prepare for this in advance of potential shutoffs.

Beach Access

- Take advantage of the Oxnard beaches, and proximity to beach as a natural cooling center. Improved access and routes could be an easier and less expensive way to provide this amenity and improved access could help with heat. More people taking advantage of this amenity also translates to reduced costs and energy uses for cooling facilities
- Provide/improve access to the shoreline; especially for disadvantaged.
- Provide a walking path and a biking path to the beach. Identify locations for bike/ped baths.
- Opportunity to build linear park on top of the former J street ditch (potential route to the shoreline, that could join formally divided neighborhoods along former J Street ditch and also provide walking/bike path to beach). This route could also provide connection from other south Oxnard neighborhoods to the beach as there is no current connection.
- Allow more people to live by the beach / Allow more housing near the beaches
- Provide/support programs for children and youth for visiting the beach and learning to swim. (A number of young children do not know how to swim; many people have not visited the beach, despite living in close proximity to the coast)
- Inform residents of natural cooling amenities provided by beach

Urban Greening

- Increase urban greening near farmworkers and adjacent to where farmworkers live and work
- Collaborate with the County on the countywide Tree Planting Program- target to plant 2 million trees in County by 2040, and at least 1,00 trees per year. County policy encourages participation by cities
 - County program provides a foundation for it. City can develop comprehensive tree inventory and organize stakeholders to facilitate implementation. Actions to implement this strategy should also include tasks for enabling staff capacity and accessing funds in the future
- Implement a Tree Mitigation Fund, to offset developments

New Diseases

COMMENTS AND QUESTIONS

Access to healthcare is important

Does Gold Coast health plan have much telemedicine available? This has been a major benefit for people that do have it

Economic Impacts

- Refer to as a reference: Economic Vitality aspect of general plan from Ventura County – Maybe Oxnard has something similar to ensure workforce viability and can pull in some strategies from the County's. The CAP component doesn't have as many components, so a new economic specific plan could be an endeavor to consider.

- Consider the potential economic impact of vectors, in addition to their impacts on health and jobs. Resource conservation districts are good partners for assessing economic impacts, impacts to Ag and Ag-jobs. Ventura County, where Pierce's Disease exists, affects nurseries and vineyards. Ventura County is one of the last holdouts, there's a large statewide program administered in our area to ensure the sharpshooter bug doesn't migrate north of here. Consider the lessons learned in Ventura County from existing pests.
- County GP has lots of programs working with UC extension and Resource Conservation district. Not sure if it would be the same for Oxnard, as its more focused on people/workforce and keeping people unimpacted from vectors that could impact their industry. Consider vulnerability of the workforce, in particular. Can reach out to these agencies for assistance.

Vulnerable groups

- Concern for outdoor workers and agriculture groups
- First responders are more exposed to new diseases and should be on the list of vulnerable groups.
- Naval Base
 - Pest management is a big concern at the naval base, it is a vulnerable site.
 - Candice has a contact: Valerie at NBVC. The wetland prominence in Port Hueneme also adds to the vulnerability of vectors and new diseases.

STRATEGIES TO CONSIDER FOR NEW DISEASES

Consider economic impacts study/plan

Look at bio-security workforce

- E.g., Chlorine dioxide product – lasts 90 days
- How do we create the bio- security workforce within Oxnard?

Train landscapers to identify potential breeding pools for mosquitos

Healthcare strategies

- Prioritize access to healthcare, treatment, and education/identification of pests and diseases.
- Ensure local health providers know what diseases these are and look like
- Distribution of masks, protective gear/clothing, and other PPE for protection against vectors, particularly for people working in outdoor settings.
- Provide and improve telemedicine access
- Track exposure, contract tracing could be improved
- City can support/encourage local providers to have more telemedicine programs/plans. (Participant commented that Gold Coast health plan is more fragmented than state, and it might be more helpful for city to lobby them than state plans)

Prioritize public outreach/awareness of local vectors and diseases

- Dissemination of information of diseases, pests, and vulnerabilities
- Landscape contractor training program to prevent spread of diseases

- Ensure Oxnard is participating in region efforts to adapt to new pests
- Everyone should be highly incentivized in efforts to control pests/diseases

Inland Flooding

COMMENTS AND QUESTIONS

Is the City currently working on any flood improvement projects? Would be helpful to have this information as strategies are discussed. (City staff responded that the city is working on a few improvements projects part of the CIP. Upstream improvements would be from the county and downstream may likely be from Port Hueneme.)

Not very comfortable with jumping straight to an early warning system (adaptation strategy #4). Participant suggested that in such an event, operators could work directly with the County VOC

Happy to see green infrastructure mentioned, however this needs to be more clearly defined. What specific green infrastructure strategies? Ensure that any strategies related to this can be sustainability maintained by the Public Works department

Does the data include water storage?

What do the FEMA flood categories mean? Clearly describe these in CAP/strategies. How large of depth would the flooding be for 100-yr and 500-yr flooding? How high is the risk? Describe in CAP.

VCTC has been preparing a Regional Transportation Emergency Preparedness plan with scenarios and strategies, with focus on the 101 corridor (VCTC happy to share more information on the plan). There are 1 to 2 intersections to avoid/detour from if there is significant flooding, however it has not really been an issue in the past. VCTC has not noticed much flooding issues, though if issues were to occur there are alternative routes that can be taken.

- GCTD has an MOU with all SoCal transit operators for mutual aid in case of emergency or evac or other major event. In a situation where extra vehicles may be needed for example, that could be arranged. In Oxnard, base of operations is in relatively low risk area, in northeastern side of town (off of Rice). Fleet of ~26 para transit vehicles that are wheelchair equipped and 61 full size buses. Oxnard has not experienced major flood to date or flood disruptions yet, but something to plan for.

Concerns regarding flooding

- The danger of flooding in Oxnard comes with isolation for an extended period of time
- Concern of debris coming down the river during the next flood
- Environmental concerns regarding cleaning out vegetation and river bottom

Oxnard sewage treatment plant

- The plant is not in the greatest state
- Only plant in region. If the plant were to fail, there would be a major issue regionwide. Need conversations of regional needs
- Site is extremely vulnerable to sea level rise

On Adaptation Strategy #1 (Prioritize low-impact development (LID) stormwater practices)

- Does this include the storage of water from extreme events? That can help mitigate water shortage. (ESA staff responded this typically does not include that; maybe sustainable development would be where this falls.)

On Adaptation Strategy #2 (Elevate or relocate buildings or critical infrastructure)

- Where would people need to evacuate to? Consider a sheltering or evacuation option as part of this strategy.

On Adaptation Strategy #6 (Encourage advanced coordination between transit operator to facilitate evacuations during inland flooding events)

- This be easier to implement as a strategy as there are existing partnerships with the transit providers. Transit provider could assist with notification systems and there could be a partnership for responding to certain hazards, like evacuation. Ensure accessibility to locations where accurate/timely information is provided.
- Having a single entity identified is critical
- Have local operators be active participants

On Impervious Surfaces

- Why is an area more vulnerable due to impervious surface? (Slide 27)
- When talking about how the City has impervious surfaces, also describe the extensive drainage system in place (water in the street is part of the design). Hesitate to just say “impervious surfaces” without context on urban/engineering design and drainage systems.

City Historic Flooding Points on Map

- The term “historic” may not be appropriate.
- Ensure that the data on map is accurate (are some points an anomaly? Have some been resolved?)
- Oxnard staff asked not to share historic flooding points (on inland flooding map slide) to the public. This data should be vetted/updated before the public views this as it could be a potential liability issue.
- What is being defined as historic local flooding? Staff/Project team needs to understand criteria for the points provided by Oxnard GIS. Inquire on the depth, frequency, severity, and other factors that contributed to these points. Oxnard PW staff questions the points along J Street. Exclude the points that outside Oxnard boundaries.
- In Victoria Estates neighborhood, this was more of a maintenance issue. Development had flood channels where homeowners planted and changed the flood gates that should have been clear, so that contributed to an incident. The points on the map near this neighborhood may not be accurate
- There has been lots of flooding in southern Oxnard. Most recent incident of flooding was in an area north of Oxnard high school, where the Santa Clara River flooded

STRATEGIES TO CONSIDER FOR INLAND FLOODING

Missing strategy: strategy about retrofitting and addressing older designs and buildings/infrastructure.

Need to identify facilities and locations

River corridor planning

Need to have shelter options

Consider notifying landowners and providing more education

- o Link to Resource: https://asfpm-library.s3-us-west-2.amazonaws.com/ASFPM_Pubs/ASFPM_NAI_White_Paper_2008.pdf

Sea Level Rise

COMMENTS AND QUESTIONS

Clearly define that adaptation strategy #1 (Prioritize projects near vulnerable communities) refers primarily to capital projects

Happy to see the County's coastal adaptation project referred to

There needs to be greater discussion on community risks, particularly risks related to worker safety

Explain the difference between the empirical and projected data.

SLR will affect property values and insurance rates for the people of Oxnard Shores.

Adaptation strategies don't appear to be realistic.

Need stronger development standards for SLR

What is the tradeoff on our economy vs. sea level rise accommodations? Should calibrate cost benefit of risks and strategies and projects implemented. Prioritizing vehicles traveled, that would directly harm other issues talked about today. Important to consider risks of flooding and SLR. However, since it is a 100-year to 500-year risk and seems like a few families may be affected/need evacuation, this seems less important than other hazards and priority strategies.

Consider CEQA impact on coastal zone

Related to SB 1383 implementation- A big part of this falls on solid waste/recycling focus. There are lots of operational changes and education needs to start complying. Something to consider as a potential tie in.

Concern about sea level rise, saltwater intrusion, and impacts to aquifers – this should be addressed through a strategy

There will be lots of community concerns. In other coastal areas, beach populations generally have had the time and resources to dig into these issues. However, most communities near the beaches in Oxnard don't tend to be as armored.

When talking about SLR, does that affect capacity of stormwater systems, and the ability of current systems to evacuate water? (ESA staff responded that this is a risk, and the LCP process is considering this in their process). This is also something to consider in terms of evacuation routes. Some places in the city have dead ends, and there may be some routes that can be cut off, though there are several

alternatives. Concern for the areas where there are no alternatives, where there is no accessible route or alternative. The public should be aware of these.

Do the 100-year and 500-year FEMA projections also include SLR? (ESA clarified that FEMA does not do this)

No drainage system near the shores for flooding, particularly in Oxnard Shores – this is something that needs to be addressed. Past storms have gone north. Flooding has mostly been due to stormwater. There hasn't been much problem during high tide, but concern is for inland flooding during high tides. Need to have drainage in place.

The Halaco (Superfund site) is vulnerable to SLR

- Participants expressed not hearing any discussion on this from EPA – are they involved?
- There is growing expectations on what is to be done

Missing gap: Strategies should include something for slowing coastal erosion and its effects

STRATEGIES TO CONSIDER FOR SEA LEVEL RISE

Cost-benefit analysis

Offshore reefs and water breaks

Natural solutions, including natural buffers

Coordinate with other partners, agencies, and organizations along the coast for a coastal hardening effort

Improve drainage system in Oxnard Shores

On Adaptation Strategy #4 (Provide renter's flood insurance education in the coastal zone)

- Agreement with providing more Renters insurance education
- Providing renters flood insurance is already being done as part of FEMA flood zone requirements (this is mandatory). Though this already exists, the strategy could be revised to enhance or expand insurance coverage to include sea level rise.

Addressing Community Concerns - There will be lots of resident concern regarding sea level rise

- Early engagement and communication is critical – develop communication strategy
- Inform residents of sea level rise impacts to community and vulnerability issues
- Reassure residents that the city is not trying to remove or takeaway anything (property, access), but provide information and develop strategies
 - Ventura County has a GP and CAP program related to communication with property owners, for those properties anticipated to be affected by SLR. If Oxnard feels like it's a good fit, they could utilize this information. Other areas that seem to be affected, include Miami and San Diego – utilize a cohort-based effort, where a regional collaboration works on addressing SLR. This could be another strategy to look into. See San Diego example for coordination across agencies.
- Residents also need to be aware of potential solutions and solutions that do get implemented

On Adaptation Strategy #5 (Encourage Landlords to make properties more resilient to SLR)

- Agreement on making properties more resilient to sea level rise
- Would like to see stronger language. Recommend replacing “encourage” with “require” or “incentivize.”
- Would also like to see requirement for new developments that might be in flood-prone areas. That those are up to certain level of standard in terms of flood resiliency.

On the County Climate Emergency Council

- The Council is part of a policy in the GP for DACs. Ventura County participating. DAC members are provided opportunities to participate in climate adaptation planning through the Climate Emergency Council. Participant suggested utilizing a strategy similar to this to keep the community engaged in continuing discussions. Another participant added that the Climate Emergency Council is primarily focused on GHG emissions reductions. A Citizen Advisory Group would be more appropriate - it can incorporate individuals and stakeholders of DACs and get higher level of representation from groups that may not have been heard from historically.

Round 3: Stakeholder Group Meeting and Public Workshop (May 2022)

Prepared for: City of Oxnard
Prepared by: ESA with Kearns & West

Round 3 Engagement Summary

In May 2022 the City of Oxnard conducted a third round of community engagement for the Public Draft of the Climate Action and Adaptation Plan (CAAP). The purpose of this round was to provide an overview of the Public Draft and receive input and comments from the community. There were three virtual meetings conducted:

An “office hours” meeting was held on May 9th for community members to “drop by” to receive information on the CAAP and to ask questions. This meeting was advertised on the City’s webpage.

A stakeholder meeting held on May 5, 2022, for City of Oxnard staff, directors, and stakeholders to review the CAAP and provide feedback, with invitations sent via email by the City of Oxnard’s CAAP project manager.

A community workshop held on May 14, 2022, for members of the public, conducted in both English and Spanish. The meeting was advertised via the City’s webpage.

The stakeholder and community workshop meetings generally followed the same 2-hour format, with introductions, review of community and stakeholder input to date, and an overview of the CAAP elements, including greenhouse gas emissions, climate change vulnerability and adaptation, and implementation and monitoring. Overall, there were fewer comments and feedback received in these meetings compared to earlier rounds of engagement and outreach. The input and comments received are summarized below.

General Findings from Stakeholder and Community Engagement Round 3

The Acronyms and Definitions section should be revised with language that is more understandable, using layman terms. For example, the definition for kWh is defined as one appliance using 1 kW for 1 hour, where it might be more beneficial to use 1,000 watts for 1 hour.

The City’s Planning Commission regularly hear comments about skilled tradespeople and union workers having to travel 90 minutes or longer to their job sites. There are frequent requests made for the City to address this, and to require that projects hire local and include a Project Labor Agreement. Seeing as how transportation is a major driver of greenhouse gas contributions, the CAAP should consider mandating local hiring in order to help reduce vehicle miles associated pollution that contributes to GHG emissions.

More focus is needed on transportation reductions. Transportation and associated emissions are a complex issue, and one that land-use and housing planning can help with. Existing efforts in the City, such as the Housing Element, Inclusionary Housing ordinance, high-quality transportation corridor

planning, transit planning, and the Sustainable Transportation Plan, should be aligned with the transportation strategies and reductions within the CAAP.

Past energy projects in the City are contributing to much of the City's greenhouse gas reductions, in the energy (electricity) sector.

A copy of the presentations from the May 5 and May 14 meetings are included as Attachment A3.

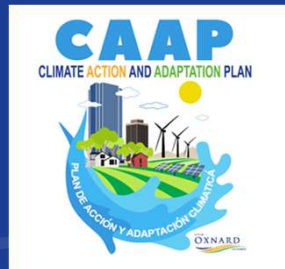
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Round 1 Presentations

Climate Action and Adaptation Plan – Public Workshops

Plan de Adaptación y Acción Climática - Talleres Públicos



May 17 and May 22, 2021



1

2

Welcome and thank you for participating!
You can participate in this meeting in English and Spanish.

¡Bienvenidos y gracias por participar! Puede participar en esta reunión en inglés y español.

2

3

Good News - This workshop is being recorded and will be posted!

Buenas noticias - Este reunión se está grabando y se publicará.

3

You are viewing Kearns & West's screen View Options

CAAP
CLIMATE ACTION AND ADAPTATION PLAN
PLAN DE ACCIÓN Y ADAPTACIÓN CLIMÁTICA
OXNARD

Kearns & West

Webinar Manager

Audio

Video

Participants/
Las Participantes

Chat/
Charla

Spanish Interpretation/
Traducan en Español

Reactions/
Reacciones

Mute
Start Video

Participants
Chat
Share Screen
Record

Interpretation
Reactions
Leave

4

Must Be Community-Driven for Success!
 ¡Debe ser impulsado por la comunidad para el éxito!

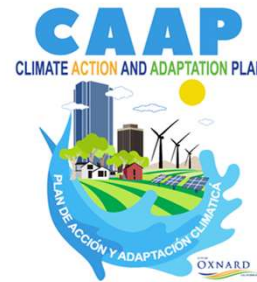
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Two Rounds of Community Engagement

- May 2021 - Online survey, meetings with community leaders and stakeholders, and public workshops
- Early Fall 2021 - Meetings with community leaders and stakeholders, and public workshops

Dos rondas de participación comunitaria

- Mayo de 2021 - encuesta digital, reuniones con líderes comunitarios y personas interesadas y talleres públicos
- Principios del otoño de 2021: reuniones con líderes comunitarios y personas interesadas, y talleres públicos



Logo design by Manny Bernal

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Purpose of Workshop

Provide information about the Climate Action and Adaptation Plan

Hear input from community on ideas, priorities, and concerns

Thank you for joining and participating in today's discussion!

Propósito del taller

Brindar información sobre el Plan de Adaptación y Acción Climática

Escuche la opinión de la comunidad sobre ideas, prioridades e inquietudes

¡Gracias por unirse y participar en la discusión de hoy!

6

Today's Workshop / Taller de hoy

7

- Welcome and Introductions
 - What is a Climate Action and Adaptation Plan?
 - Climate Change Impacts in Oxnard and Who is Vulnerable
 - Greenhouse Gases -- How Much Generated in Oxnard? How Can We Reduce?
 - Time for Completing Online Survey!
-
- Bienvenida y introducciones
 - ¿Qué es un Plan de Adaptación y Acción Climática?
 - Impactos del cambio climático en Oxnard y quién es vulnerable
 - Gases de efecto invernadero: ¿cuántos se generan en Oxnard?
 - ¿Cómo podemos reducir los gases?

7

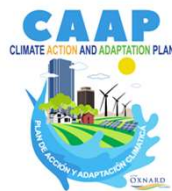
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Tips for Productive Meetings/ Consejos para reuniones productivas

9

- Actively participate – we need your input!
 - Be respectful
 - Listen for understanding
 - Stay concise to allow time for everyone
 - Have fun!
-
- Participe activamente, ¡necesitamos su opinión!
 - Ser respetuoso
 - Escuche para comprender
 - Manténgase breve para dar tiempo a todos
 - ¡Divertirse!

9



What is a Climate Action and Adaptation Plan?
¿Qué es un Plan de Adaptación y Acción Climática?

10

10

What is the Climate Action and Adaptation Plan?

- Plan for reducing City's emissions of greenhouse gases that contribute to global climate change, and for adapting to the anticipated effects of climate change.

¿Qué es el Plan de Adaptación y Acción Climática?

- Plan para reducir las emisiones de gases de efecto invernadero de la Ciudad que contribuyen al cambio climático global y para adaptarse a los efectos anticipados del cambio climático.

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Climate Action and Adaptation Plan Objectives:

- Reduce community's greenhouse gas emissions to meet or exceed reduction targets mandated by the State; and
- Enhance community resilience to a changing climate by addressing vulnerabilities and risks that are expected to occur as a result of its impacts.

Objetivos del Plan de Adaptación y Acción Climática:

- Reducir las emisiones de gases de efecto invernadero de la comunidad para cumplir o superar los objetivos de reducción exigidos por el estado; y
- Mejorar la resiliencia de la comunidad a un clima cambiante al abordar las vulnerabilidades y los riesgos que se espera que ocurran como resultado de sus impactos.

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Resilience is the capacity of any entity to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience.

Resiliencia es la capacidad de cualquier entidad para prepararse para las interrupciones, recuperarse de las conmociones y tensiones, y adaptarse y crecer a partir de una experiencia disruptiva.

13

Adaptations are actions that address the projected impacts on all aspects of community function that may result from climate change. This can include impacts related to:

- Extreme Heat, Sea Level Rise / Flood, Wildfire / Smoke, Drought, Severe Storms / Flood

Adaptaciones son acciones que abordan los impactos proyectados en todos los aspectos de la función comunitaria que pueden resultar del cambio climático.

Esto puede incluir impactos relacionados con:

- Calor extremo, Aumento / inundación del nivel del mar, Incendio forestal / humo, sequía, tormentas severas / inundaciones

14

Greenhouse gases (GHGs) are gases in Earth's atmosphere that trap heat.

Greenhouse gas reduction is a critical component of addressing climate change; reducing the greenhouse gases in our atmosphere will lessen future climate impacts and reduce the need to adapt.

Gases de efecto invernadero (GEI) son gases en la atmósfera terrestre que atrapan el calor.

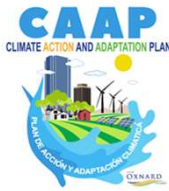
Reducción de gases de efecto invernadero es un componente crítico para abordar el cambio climático; Reducir los gases de efecto invernadero en nuestra atmósfera disminuirá los impactos climáticos futuros y reducirá la necesidad de adaptarse.

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- State law requires greenhouse gas emissions to be reduced by approximately half by the year 2030 (from 2010 levels).
- The State has also set a goal to be carbon neutral by 2045.
- The City is required to consider climate change in its community planning and City operations.
- La ley estatal requiere que las emisiones de gases de efecto invernadero se reduzcan aproximadamente a la mitad para el año 2030 (a partir de los niveles de 2010).
- El Estado también se ha fijado la meta de ser carbono neutral para 2045.
- Se requiere que la Ciudad considere el cambio climático en su planificación comunitaria y operaciones de la Ciudad.

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17



Climate Change Impacts in Oxnard and Who is Vulnerable

Impactos del cambio climático en Oxnard y quién es vulnerable

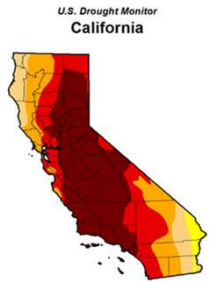
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18


Climate Change Impacts Affecting Oxnard/ Impactos del Cambio Climático Que Afectan a Oxnard

- Rising temperatures; extreme heat
- Sea level rise and coastal flooding
- More extreme droughts
- Smoke from regional wildfires; worsening air quality
- Extreme storms, wind and rain; increased flood risk

- Aumento de las temperaturas; calor extremo
- Aumento del nivel del mar e inundaciones costeras
- Sequías más extremas
- Humo de incendios forestales regionales; empeoramiento de la calidad del aire
- *Tormentas extremas, viento y lluvia; mayor riesgo de inundaciones*



U.S. Drought Monitor
California



Smoke from regional wildfires

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Climate Change Impacts Affecting Oxnard/ Impactos del Cambio Climático Que Afectan a Oxnard

19

Through a separate project, City is examining cost-effective strategies to adapt to sea level rise:

- A range of “natural” and “hard infrastructure” approaches
- Modifying or moving existing development
- Work will continue in late summer or early fall



Channel Islands Harbor Jetty

A través de un proyecto separado, la Ciudad está examinando estrategias rentables para adaptarse al aumento del nivel del mar:

- Una variedad de enfoques "naturales" y de "infraestructura física"
- Modificar o mover el desarrollo existente
- *El trabajo continuará a fines del verano o principios del otoño.*



Coastal flooding at 5th Street and Mandalay Beach Road

19

Climate Change Impacts Affecting Oxnard/ Impactos del Cambio Climático Que Afectan a Oxnard

20

Climate change will have a disproportionate impact on the disadvantaged populations in Oxnard:

- | | | |
|--------------------------|---------------------------|-------------------------------|
| • Elderly and very young | • Farmworkers | • Communities of color |
| • Low-income | • Undocumented immigrants | • Those with chronic diseases |
| • Homeless | | |

El cambio climático tendrá un impacto desproporcionado en las poblaciones desfavorecidas de Oxnard:

- | | | |
|--------------------------|------------------------------|--------------------------------------|
| • Ancianos y muy jóvenes | • Granjeros | • Comunidades de color |
| • De bajos ingresos | • Inmigrantes indocumentados | • Aquellos con enfermedades crónicas |
| • Sin hogar | | |

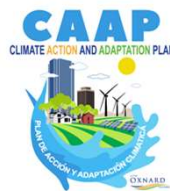
20

When you think about climate change impacts,
what concerns do you have?

Who in Oxnard will be impacted the most?

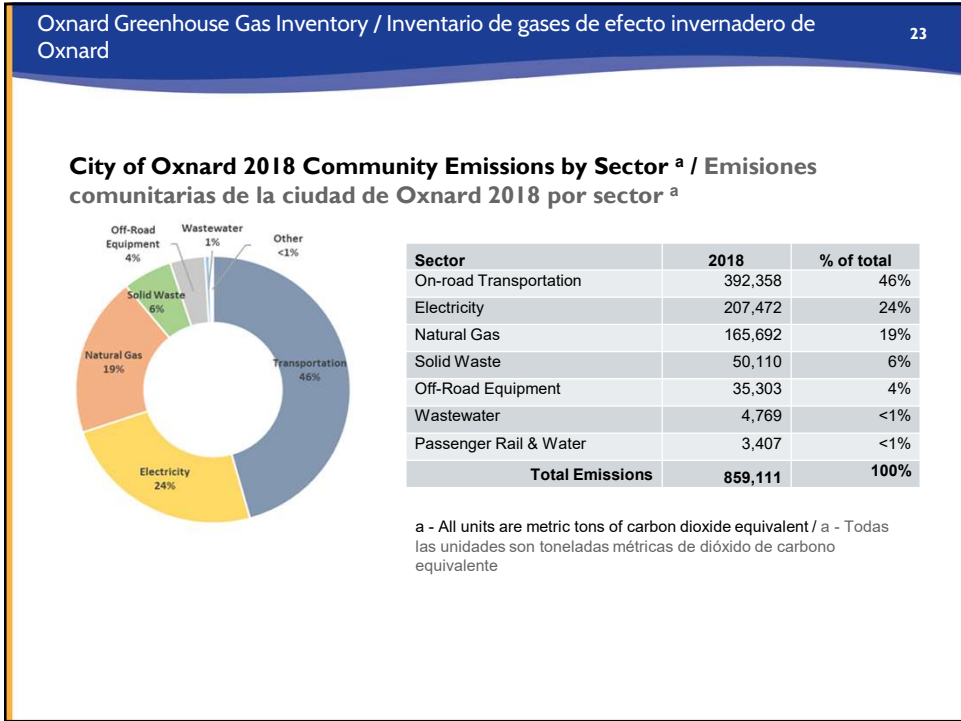
Cuando piensa en los impactos del cambio
climático, ¿qué preocupaciones tiene?
¿Quiénes en Oxnard se verán más afectados?

21



Greenhouse Gases -- How Much Generated in Oxnard? How Can We Reduce?
¿Cómo podemos reducir?

22



23

Oxnard Greenhouse Gas Inventory / Inventario de gases de efecto invernadero de Oxnard 24

2010 and 2018 Community GHG Emissions Inventories / Inventarios comunitarios de emisiones de GHG de 2010 y 2018

Sector	2010	2018	Net change	% change
On-road Transportation	431,109	392,358	-38,751	-9.0%
Electricity	252,511	207,472	-45,039	-17.8%
Natural Gas	215,922	165,692	-50,230	-23.3%
Solid Waste	48,023	50,110	2,087	4.3%
Off-Road Equipment	28,799	35,303	6,504	22.6%
Wastewater	6,432	4,769	-1,663	-25.9%
Passenger Rail	2,353	2,137	-217	-9.2%
Water	1,583	1,271	-312	-19.7%
Total Emissions	986,732	859,111	-127,620	-12.9%

^a - All units are metric tons of carbon dioxide equivalent / a - Todas las unidades son toneladas métricas de dióxido de carbono equivalente

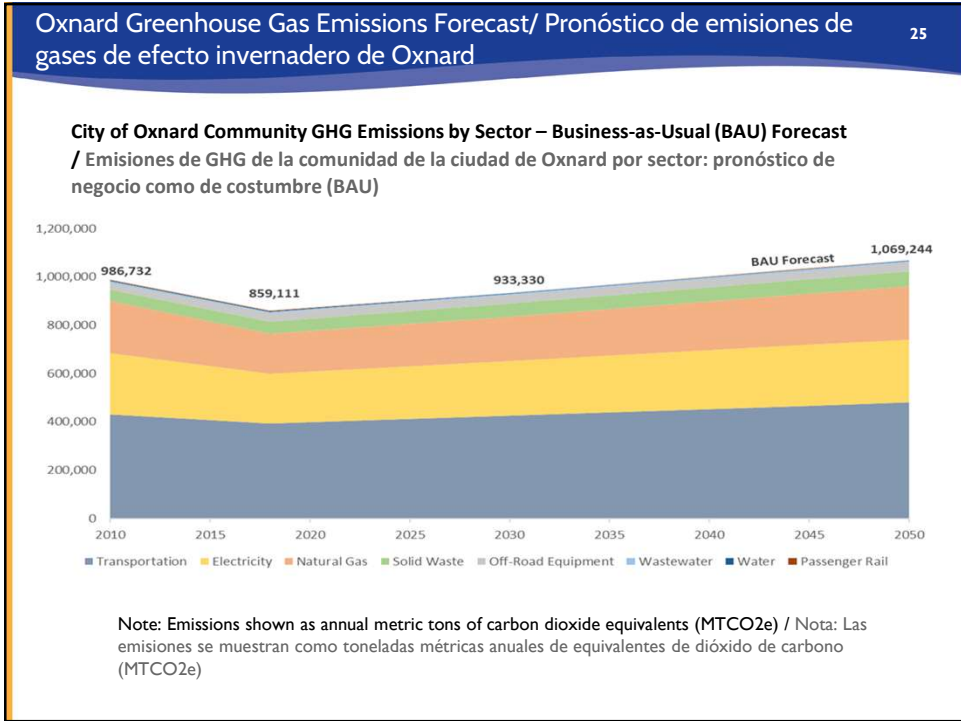
Since 2010:

- Vehicles are more fuel efficient
- Electricity is less carbon-intensive
- Community is using less energy per capita

Desde 2010:

- Vehículos son más eficientes en combustible
- Electricidad es menos intensiva en carbono
- Comunidad usa menos energía

24



25

Oxnard Greenhouse Gas Emissions Forecast/ Pronóstico de emisiones de gases de efecto invernadero de Oxnard 26

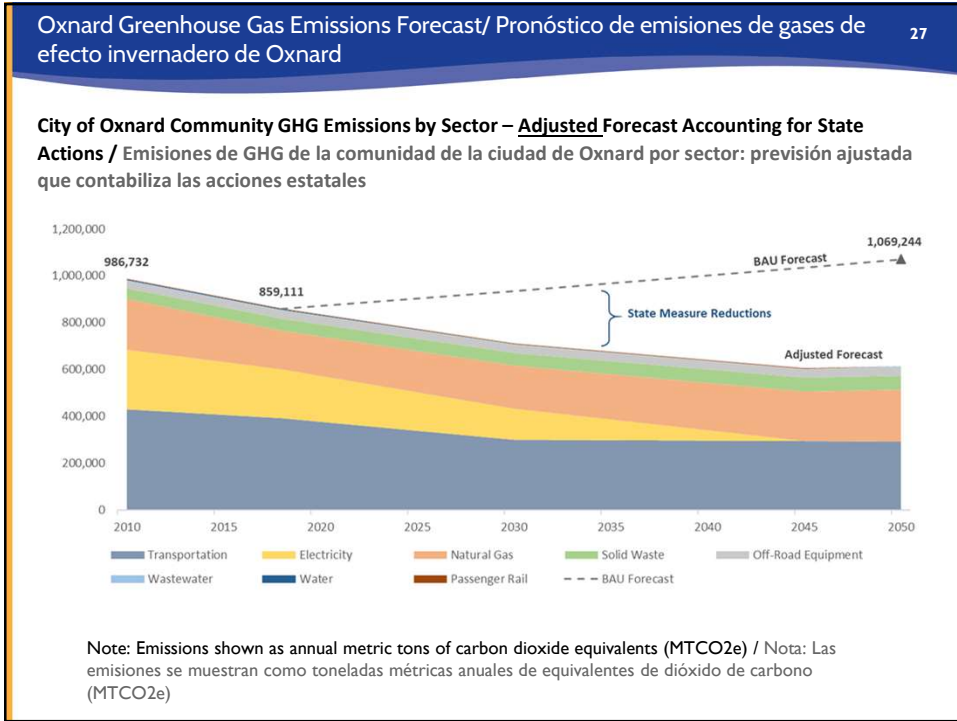
CA Standards and Mandates

- Advanced Clean Cars (more fuel efficient vehicles)
- Renewable energy
- Building energy efficiency standards
- Recycling and organic waste diversion

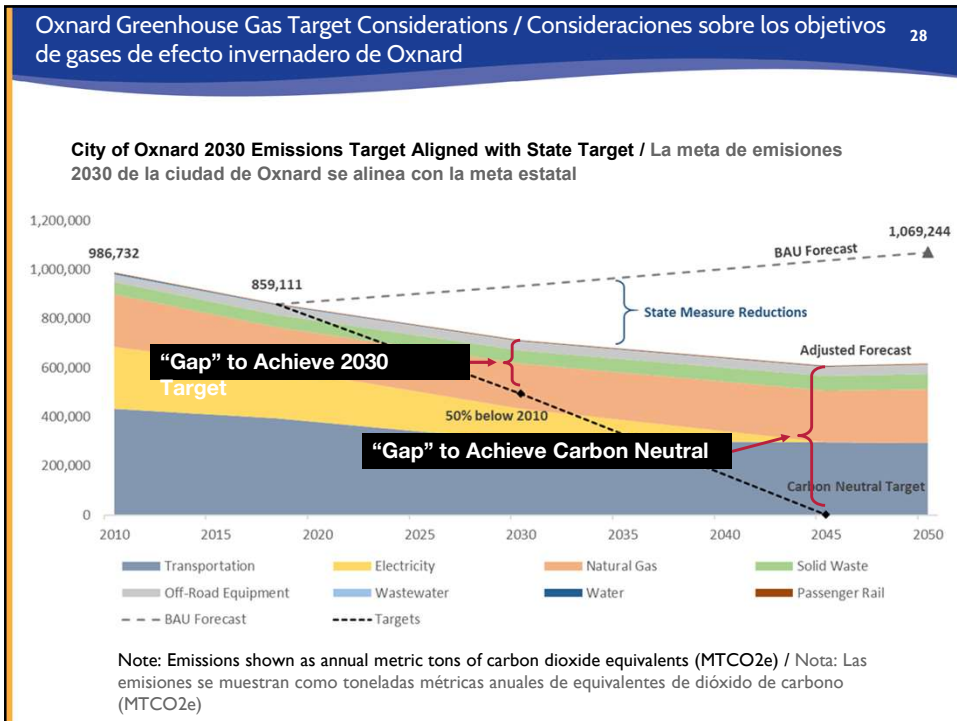
Estándares y mandatos de CA

- Autos limpios avanzados (vehículos más eficientes en combustible)
- Energía renovable
- Construyendo estándares de eficiencia energética
- Reciclaje y desvío de residuos orgánicos

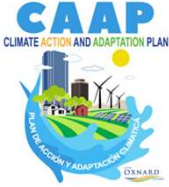
26



27



28



What Can We Do to Reduce Greenhouse Gases in Oxnard? /
 ¿Qué podemos hacer para reducir los gases de efecto invernadero en Oxnard?

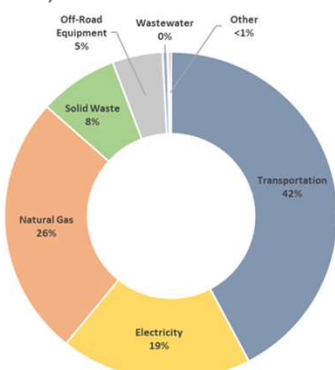
29

29

Reducing Greenhouse Gases Through Local Action / Reducir los gases de efecto invernadero 30

City of Oxnard 2030 Emissions Forecast, by Sector (After State Actions)

Pronóstico de emisiones de la Ciudad de Oxnard por sector (después de acciones del estado)



Sector	Percentage
Transportation	42%
Natural Gas	26%
Electricity	19%
Solid Waste	8%
Off-Road Equipment	5%
Wastewater	0%
Other	<1%

Biggest Opportunities for Reducing Emissions:

BUILDING ENERGY

TRANSPORTATION

SOLID WASTE

And **OTHER MEASURES** that conserve water and reduce urban heat islands

Mejores oportunidades para reducir las emisiones:

ENERGÍA DE EDIFICIOS

TRANSPORTE

BASURA

Y **OTRAS MEDIDAS** que conservan el agua y reducen las islas de calor urbanas

30

31

What are the best actions to reduce greenhouse gases
in Oxnard?

¿Cuáles son las mejores acciones para reducir los gases
de efecto invernadero en Oxnard?

Buildings - Edificios
Transportation - Transportación
Solid Waste - Basura
Other - Más

31

32

What are the best actions to reduce greenhouse
gases in Oxnard?

¿Cuáles son las mejores acciones para reducir los
gases de efecto invernadero en Oxnard?

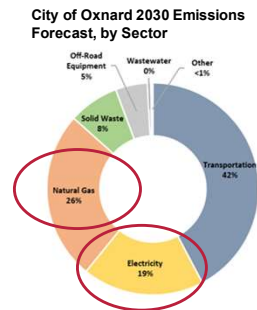
Buildings - Edificios
Transportation - Transportación
Solid Waste - Basura
Other - Más

32

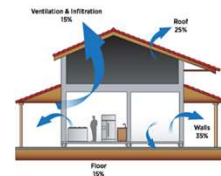
Reducing Emissions from Buildings / Reducir las emisiones de los edificios

33

- Provide more “green” electricity
 - Clean Power Alliance
 - Local rooftop solar
- Increase building energy efficiency
- Use less natural gas use (building electrification)
- Proporcionar energía renovable
 - Clean Power Alliance
 - Energía solar en el techo
- Aumentar la eficiencia energética del edificio
- Usar menos gas natural (electrificación del edificio)



CPA CLEAN POWER ALLIANCE
Locally powered energy innovation.



33

What are the best actions to reduce greenhouse gases in Oxnard?

¿Cuáles son las mejores acciones para reducir los gases de efecto invernadero en Oxnard?

Buildings -Edificios
Transportation - Transportación
Solid Waste - Basura
Other - Más

34



Reducing Greenhouse Gases from Transportation: Electrification/ Reducir los gases de efecto invernadero de transporte 35

- Install more (and faster) electric vehicle (EV) charging stations; hydrogen stations
- Require EV charging stations in new developments
- Free or discounted EV charging in city parking lots
- Provide priority parking for EVs
- New options: Electric bikes, mini vehicles

- Instalar más estaciones de carga de vehículos eléctricos; estaciones de hidrógeno
- Requerir estaciones de carga para vehículos eléctricos en nuevos desarrollos
- Carga de vehículos eléctricos gratis o con descuento en estacionamientos públicos
- Proporcionar estacionamiento para vehículos eléctricos
- Nuevas opciones: bicicletas eléctricas, mini vehículos.

City of Oxnard 2030 Emissions Forecast, by Sector

Sector	Percentage
Transportation	42%
Natural Gas	26%
Electricity	19%
Solid Waste	8%
Off-Road Equipment	5%
Wastewater	0%
Other	<1%

35



Reducing Greenhouse Gases from Transportation: Reducing Car Trips/ Reducir los gases de efecto invernadero: viajes en vehículos 36

- Improve bike and pedestrian pathways
- Improve local public transit
- Locate dense, mixed use development, near transit
- Car sharing / bike sharing
- Remote work / work from home programs

- Mejorar los caminos para ciclistas y caminos.
- Mejorar el transporte público
- Ubicar desarrollos densos de uso mixto, cerca del tránsito
- Compartir vehículo/ bicicletas
- Programas de trabajo desde casa

City of Oxnard 2030 Emissions Forecast, by Sector

Sector	Percentage
Transportation	42%
Natural Gas	26%
Electricity	19%
Solid Waste	8%
Off-Road Equipment	5%
Wastewater	0%
Other	<1%

36

What are the best actions to reduce greenhouse gases in Oxnard?

¿Cuáles son las mejores acciones para reducir los gases de efecto invernadero en Oxnard?

Buildings - Spanish
 Transportation - Spanish
Solid Waste - Basura
 Other - Mas

37

Reducing Greenhouse Gases from Solid Waste/Reducción de los gases de efecto invernadero de los residuos sólidos

- More recycling and reuse
- Keep organics out of landfills
- Better systems for collection and recovery of materials
- More education and outreach



- Más reciclaje y reutilización
- Mantenga los productos orgánicos fuera del basurero
- Mejores sistemas de recolección y recuperación de materiales
- Más educación y extensión comunitaria



38

What are the best actions to reduce greenhouse gases in Oxnard?

¿Cuáles son las mejores acciones para reducir los gases de efecto invernadero en Oxnard?

Buildings
 Transportation
 Solid Waste
Other - Mas

39

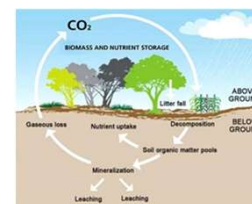
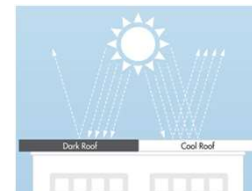
Other Important Actions that Reduce Greenhouse Gases/Acciones que reducen los gases de efecto invernadero

These measures provide important co-benefits:

- Water conservation
- Shade trees and green roofs
- Reflective roofs and pavements that reduce urban heat islands
- Farming practices that retain carbon in the soil

Estas medidas proporcionan importantes beneficios colaterales:

- Conservación del agua
- Árboles de sombra y techos verdes
- Techos y pavimentos reflectantes que reducen las islas de calor urbano
- Prácticas agrícolas que retienen carbono en la tierra



40

Stay Involved, Spread the Word/ Mantente involucrado, corre la voz

Online Community Survey

- English and Spanish
- Open until May 31st

Virtual Community Workshops

- Monday, May 17th at 6 pm
- Saturday, May 22nd at 10 am
- English and Spanish

Website

- <https://www.oxnard.org/climate-action-plan>
- Sign-up for announcements and updates!

Encuesta de comunidad en línea

- Inglés y Español
- Abierto hasta el 31 de Mayo

Taller de Comunidad Virtual

- Lunes, May 17th a las 6 PM
- Sabado, May 22nd a las 10 am
- Inglés y español

Página Electrónica

- <https://www.oxnard.org/climate-action-plan>
- Regístrese para recibir anuncios y actualizaciones!

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Time to Take the Online Survey! / ¡Es hora de realizar la encuesta en línea!

42

Enter link for the survey

<https://www.oxnard.org/climate-action-plan/>

Ingrese el enlace para la encuesta

<https://www.oxnard.org/climate-action-plan/>

Use QR Code to
access survey /
Utilice el código QR
para acceder a la
encuesta



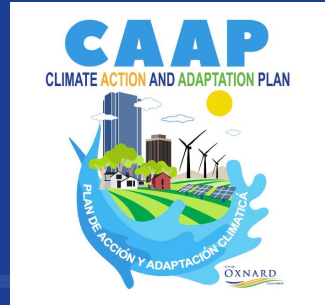
42



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Round 2 Presentations

Climate Action and Adaptation Plan – Round 2 Stakeholder Group Discussions



January 26 and January 27, 2022



1

Purpose of Meeting

2

Purpose of Stakeholder Group Discussions

1. Gather input on community vulnerabilities to climate change and potential strategies to address these vulnerabilities
2. Improve understanding of:
 - Community experience with climate change hazards, and priorities with regard to adaptation
 - Community concerns regarding equity and protecting vulnerable communities

Thank you for joining and participating in today's discussion!

2

Outline for Today's Discussion

3

- Welcome and Introductions
- Findings from First Round of Stakeholder Engagement in May
- Equity and Social Vulnerability
- Climate Change Hazards, Vulnerabilities and Adaptation Strategies:
 - i. Severe Droughts
 - ii. Wildfire Smoke and Poor Air Quality
 - iii. Extreme Heat
 - iv. New Diseases / Pests
 - v. Inland Flooding
 - vi. Sea Level Rise
- Closing Thoughts / Next Steps

3

Findings from Round 1 Engagement

4

Primary Hazards of Concern:

- Drought
- Wildfire smoke/poor air quality
- Warmer weather and heat waves
- Also concerned about: sea level rise; spread of diseases

Important to:

- Protect vulnerable populations
- Protect beaches, parks and natural areas
- Strengthen roads and infrastructure

4

Findings from Round 1 Engagement 5

Populations identified at risk

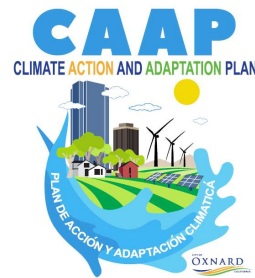
- Children
- Elderly community members
- Farmworkers/outdoor workers
- Indoor warehouse workers
- Manufacturing workers
- Individuals with physical or mental disabilities
- Individuals without access to air conditioning
- Low-income community members
- Unhoused individuals (homeless)
- Coastal residents
- Communities disproportionately impacted by COVID-19
- Undocumented community members
- Indigenous communities

5

Findings from CSPSHDC Committee Meeting 6

January 1/25 2022 Committee Meeting Summary

- Summarized stakeholder input from Round 1
- Presented recommended actions for reducing GHG emissions
- Committee support for City taking action to reduce emissions:
 - Reduce Vehicle Miles Traveled (VMT)
 - Green electricity supply
 - Improve energy efficiency of buildings/electrify buildings
 - Electrify transportation
 - Strive for zero waste

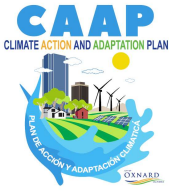


6

Key Terms 7

- ***Climate Hazards***
- ***Climate Impacts***
- ***Cascading Impacts***
- ***Vulnerability***
- ***Adaptations***
- ***Resilience***

7



The logo for the Climate Action and Adaptation Plan (CAAP) features the acronym 'CAAP' in large blue letters, with 'CLIMATE ACTION AND ADAPTATION PLAN' written below it. The central graphic depicts a stylized cityscape with buildings, wind turbines, and solar panels, all set against a background of a globe and a sun. The text 'CLIMATE ACTION AND ADAPTATION PLAN' is written in a circular path around the globe. The logo also includes the text 'MUNICIPALIDAD DE OYUNAR' and 'OYNARD'.

Equity and Social Vulnerability

8

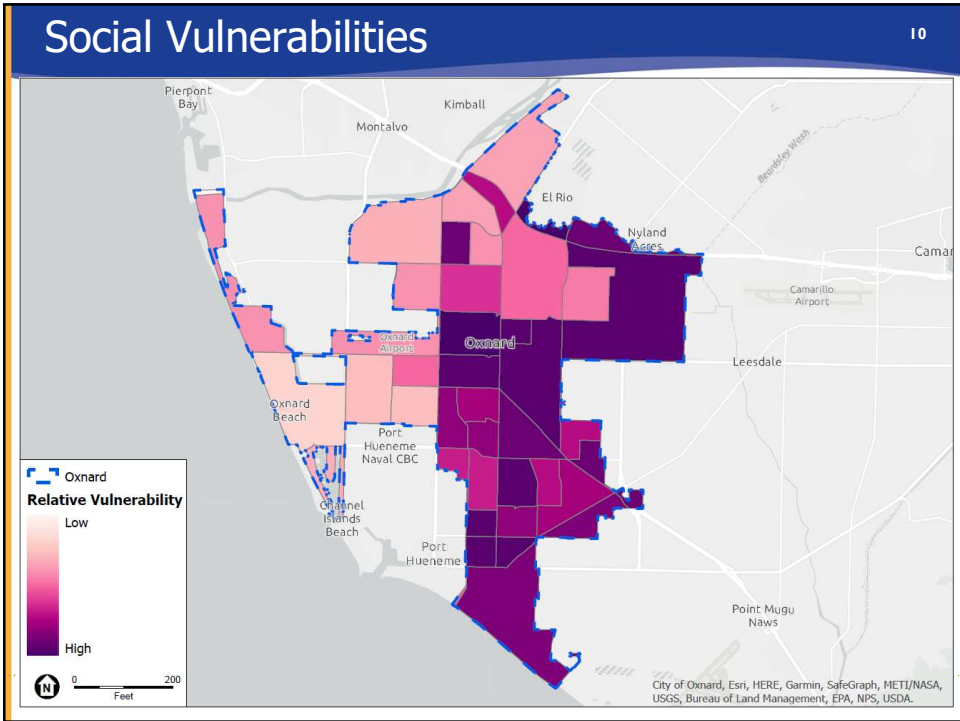
8

Equity Values

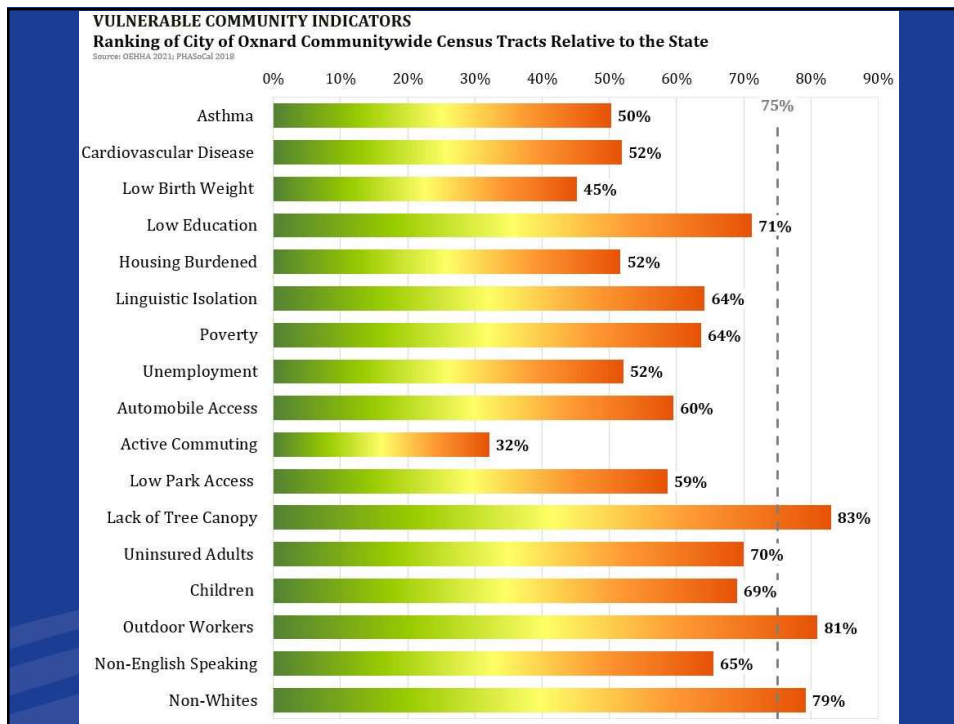
- i. Accessible and Inclusive Engagement
- ii. Inclusive Community Partnerships
- iii. Equitable Distribution of Benefits
- v. Transparency and Accountability
- vi. Prioritize Vulnerable Communities



9



10



11

Climate Change Hazards, Vulnerabilities and Priority Strategies

12

12

Impacts, Vulnerabilities and Strategies

13

The following slides are organized as follows for each hazard:

- **Hazard Impact:** identifies the impacts of the hazard
- **Hazard Vulnerabilities:** describes assets and people most vulnerable to hazard
- **Adaptation Strategies:** lists the strategies (in blue) proposed to address each vulnerability

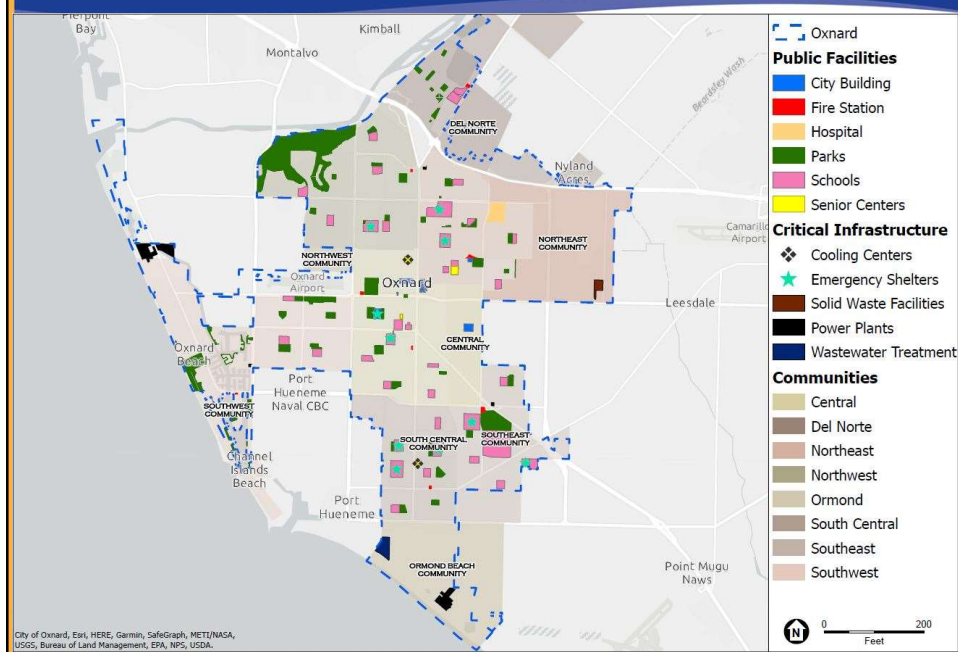
Participants will be asked to discuss the strategies:

1. Are there vulnerabilities, in your experience, that we have missed?
2. What strategies would you like to see implemented first?
3. Are there other/different strategies we should be considering?

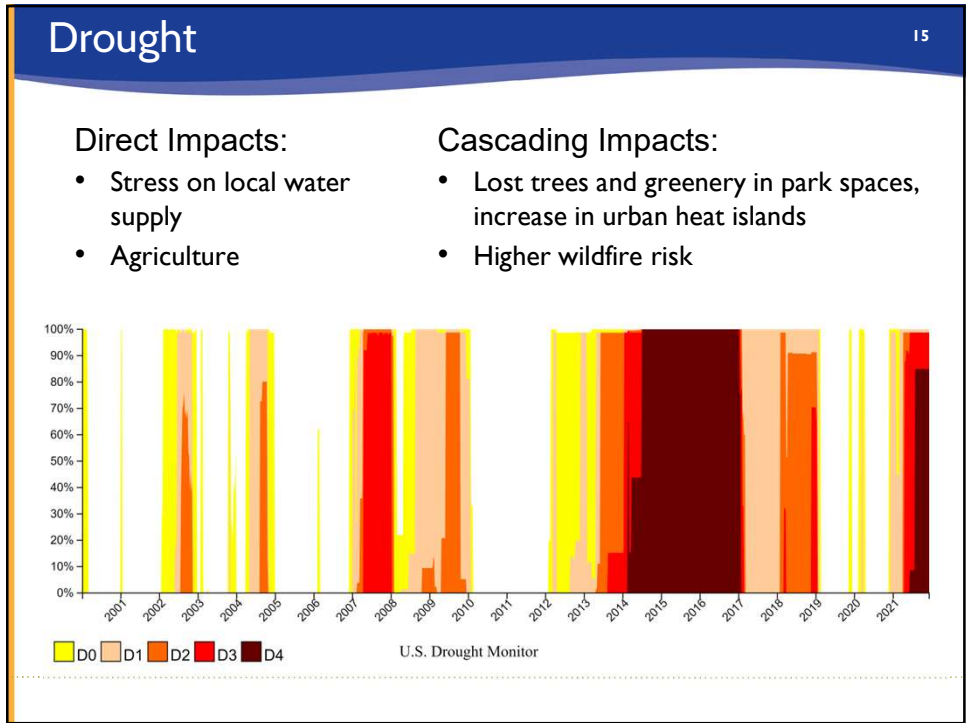
13

Critical Infrastructure

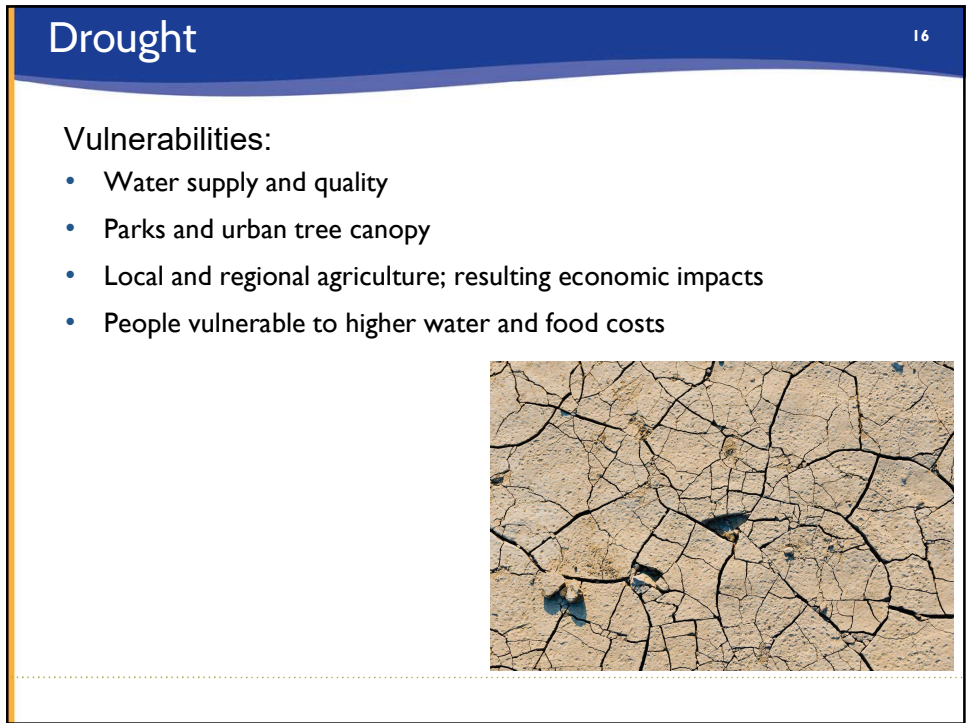
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14



15



16

Drought

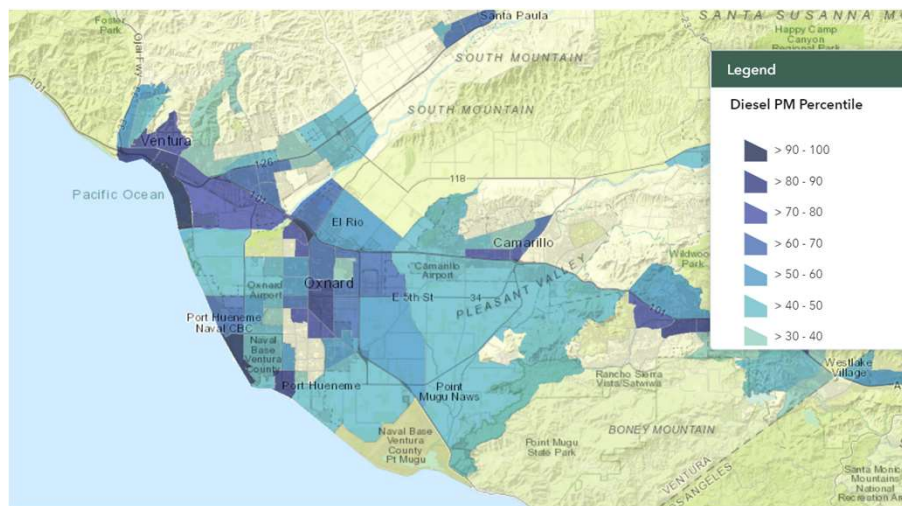
17

Vulnerabilities / Adaptation Strategies:

- Water supply and quality
 1. Continue/promote water conservation programs.
 2. Continue to expand community water recycling programs
- Parks and urban tree canopy
 3. Use drought tolerant, native plants and alternative irrigation
- Local and regional agriculture; resulting economic impacts
 4. Encourage a shift to less water intensive crops
- People vulnerable to higher water and food costs
 5. Create programs to address food insecurity within Oxnard
 6. Increase outreach to low-income residents regarding City's discount water rates

17

Wildfire Smoke/Bad Air Quality



18

18

Wildfire Smoke/Bad Air Quality

Vulnerabilities:

- Outdoor workers – exposure to poor air quality and wildfire smoke
- Children, people without health insurance, older community members, walkers and bikers



Smoke from regional wildfires

19

19

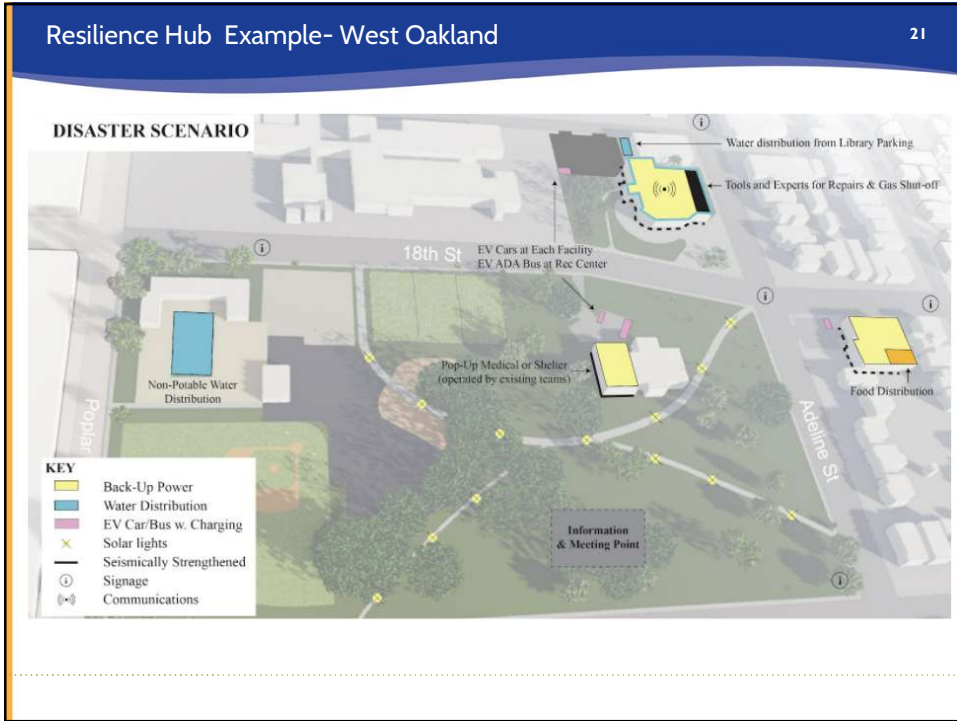
Wildfire Smoke/Bad Air Quality

Vulnerabilities / Adaptation Strategies:

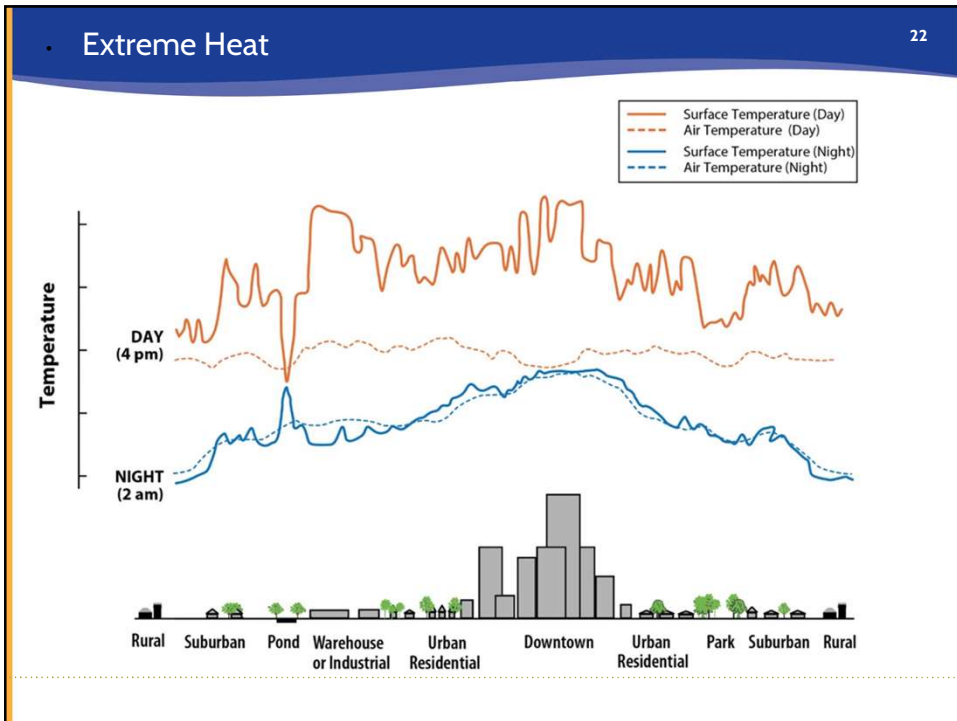
- Outdoor workers – exposure to poor air quality and wildfire smoke
 1. Promote existing hazard alert/warning system for workers
 2. Ensure Cal OSHA rules are known and enforced
- Children, people without health insurance, older community members, walkers and bikers
 3. Improve access to air filters, shelters with filtered air, or air masks
 4. Ensure accessibility of early warning systems
 5. Ensure backup power at emergency centers and cooling centers
 6. Pilot/create a resilience hub

20

20



21

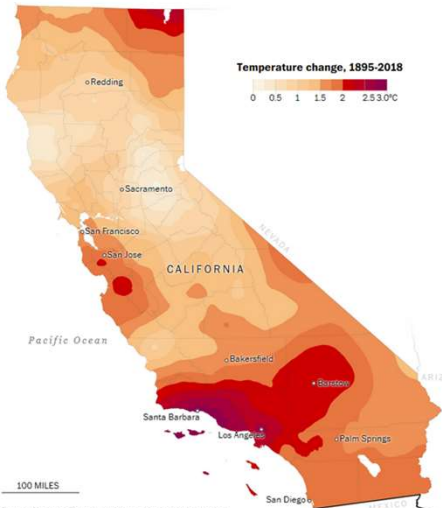


22

Extreme Heat 23

Vulnerabilities:

- Just 58% of homes have air conditioning (source: Healthy Places Index)
- Outdoor/Agriculture workers
- Strain on power supply could affect critical services
- Users of active transportation and transit
- Neighborhoods with minimal tree canopy & many impermeable surfaces



Source: National Oceanic and Atmospheric Administration

23

Extreme Heat 24

Vulnerabilities / Adaptation Strategies:

- 42% of homes without air conditioning
 1. Ensure equitable access to cooling centers, parks and shoreline
 2. Seek funding for low-income households to install heat pumps
- Outdoor/Agriculture workers
 3. Ensure enforcement of CalOSHA standards and distribution of heat training materials to prevent heat stress
- Strain on power supply could affect critical services
 4. Invest in better backup power systems and electricity storage
 5. Ensure cooling centers and public transit are operational during power outages
- Users of active transportation and transit
 6. Prioritize urban greening and shading along bike paths, near bus shelters, and along safe walking routes (e.g., safe routes to schools)
- Neighborhoods with minimal tree canopy & many impermeable surfaces
 7. Support and expand the Citywide Tree Program, Report, and Plan.
 8. Prioritize urban greening in communities that are most vulnerable

24

New Diseases/ Pests

Vulnerable Groups / Adaptive Strategies:


- Outdoor Workers
- Agricultural Community
- Individuals with Pre-Existing Conditions
- Children
- Older community members
- Individuals without health insurance

1. Disseminate information about new or more prevalent vector borne diseases
2. Identify and remedy poor drainage areas to reduce disease risk from stagnant water

VECTORS ARE SMALL ORGANISMS THAT CARRY SERIOUS DISEASES

COMMON VECTORS

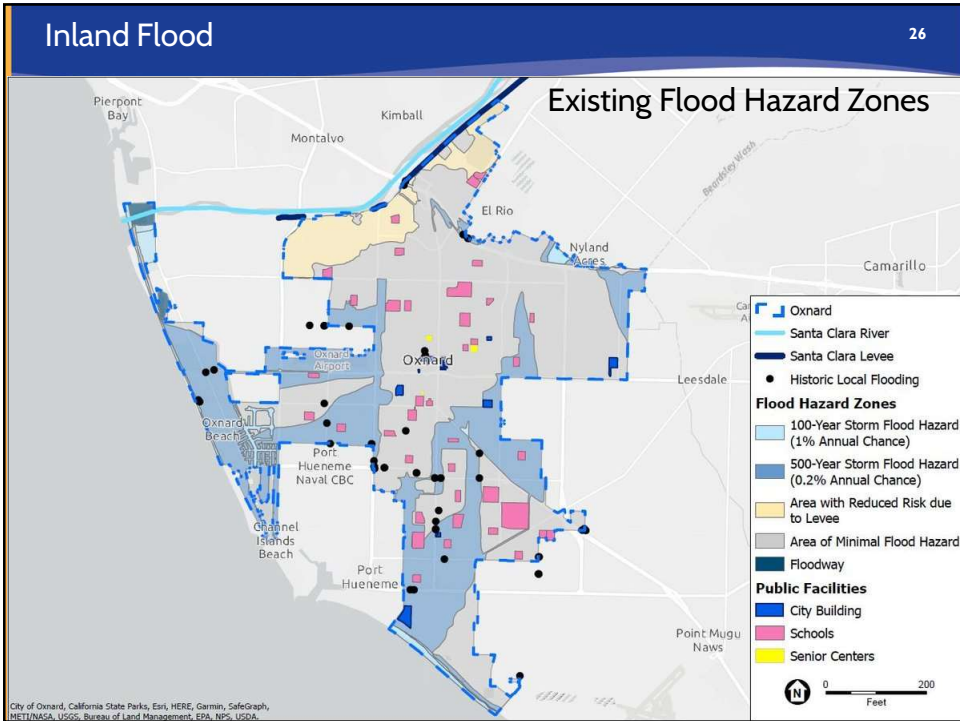






25

25



26

Inland Flood

27

Vulnerabilities:

- Roadways, evacuation routes, critical infrastructure, and agricultural land
- People with mobility challenges, unsheltered people, low-income households, renters
- Areas in the northern and eastern areas of the City with high levels of impervious surfaces



A historical photo of Santa Clara River passing under Highway 101 during the 1969 flood – Courtesy of Ventura County Watershed Protection District

27

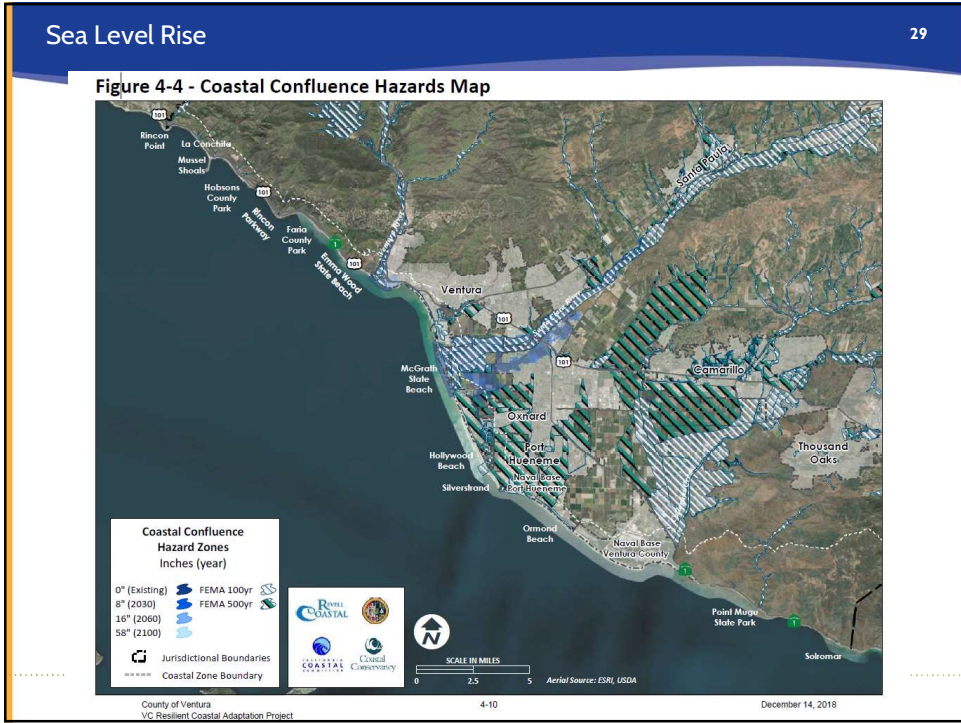
Inland Flood

28

Vulnerabilities / Adaptation Strategies:

- Roadways, evacuation routes, critical infrastructure, and agricultural land
 1. Prioritize low-impact development (LID) stormwater practices
 2. Elevate or relocate buildings or critical infrastructure
 3. Create a flood impacts monitoring program
- People with mobility challenges, unsheltered people, low-income households, renters
 4. Ensure accessibility of early warning systems
 5. Evaluate the accessibility of evacuation routes and their resilience to flood impacts.
 6. Encourage advanced coordination between transit operators to facilitate evacuations during inland flooding events.
- Areas in the northern and eastern areas of the City with high levels of impervious surfaces
 7. Implement green infrastructure in areas that are most vulnerable to stormwater flooding

28



29

Sea Level Rise 30

Adaptation Strategies identified by County to address vulnerable communities:

1. Prioritize projects near vulnerable communities
2. Further study the impacts of sea level rise on hazardous sites
3. Improve evacuation routes and procedures to be more accessible
4. Provide renter's flood insurance education in the coastal zone
5. Encourage landlords to make properties more resilient to sea level rise
6. Improve outreach materials to ensure they are accessible to non-English speakers and those without internet

Coastal flooding at 5th Street and Mandalay Beach Road

30

Next Steps

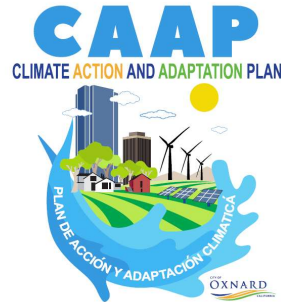
31

April 2022

- Public Draft CAAP; public comment
- Round 2 community meetings
- Final Stakeholder meeting
- Planning Commission study session

September 2022

- Public Hearing; City Council adoption



31

Send Us More of Your Input!

32

- *The City will send each stakeholder an email with strategy questions, should you wish to provide more input*
- *Input on questions should be provided by Feb. 3, 2022*
- *Stay abreast of our CAAP efforts and secure this presentation by going to: <https://www.oxnard.org/climate-action-plan/>*
- *Other ways of providing input:*
 - Email: OxnardCAAP@oxnard.org
 - Call Kathleen Mallory: 805-385-8370
 - Send her a letter: 214 South C Street, Oxnard, CA 93030

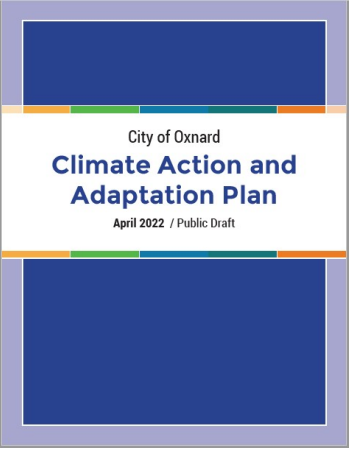
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Round 3 Presentations

Climate Action and Adaptation Plan Public Draft *Stakeholder Group Discussions*



City of Oxnard
**Climate Action and
Adaptation Plan**
April 2022 / Public Draft

May 5, 2022



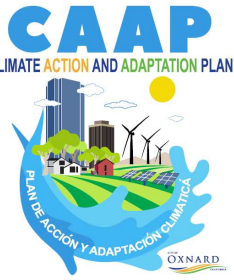
1

Purpose of Meeting 2

Purpose of Stakeholder Group Discussions

1. Review Engagement Efforts and Input Received from Community
2. Provide overview of Draft Climate Action and Adaptation Plan (CAAP)
3. Help guide your review
4. Answer questions and gather feedback

Thank you for joining and participating in today's discussion!

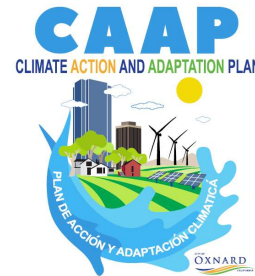


2

Outline for Today's Discussion

3

- Welcome and Introductions
- Summary of Community and Stakeholder Input
- CAAP Outline and Overview
- Key GHG Reduction Strategies
- Climate Change Adaptation Strategies
- Implementation Details
- Closing Thoughts / How to Stay Engaged



3

Community and Stakeholder Input

4

Input influences strategies and actions in the CAAP:

- Community Survey in May 2021 (133 responses)
- Eleven focused stakeholder meetings in May 2021 (6) and Jan 2022 (5)
- Public Workshops: May 2021 and May 14, 2022
- Stakeholder meeting May 5, 2022

Overall – Strong Community Interest in Strategies that:

- Emphasize equity and prioritize vulnerable populations
- Benefit the entire community
- Consider economic feasibility and cost vs. benefits
- Promote ongoing education and collaboration through Plan implementation

4

Community and Stakeholder Input

5

Climate change impacts of the greatest concern to the community:

- Extreme heat
- Poor air quality
- Drought



5

Community and Stakeholder Input

6

Concern also expressed for:

- Sea level rise / coastal erosion
- Extreme storms and stormwater flooding
- More spread of West Nile virus, Valley Fever and other diseases



6

Community and Stakeholder Input

7

For reducing GHG emissions, support expressed for:

- Land use development that promotes walking and cycling
- Safer routes and paths for cyclists and pedestrians
- Higher energy efficiency in existing buildings and new construction
- More rooftop solar throughout community, and on municipal buildings
- Microgrids and increased energy storage
- Expand EV charging options; electrify the City fleet
- Improve the City transit system and encourage housing development along transit corridors
- Planting more trees
- Increasing recycling and composting
- Conserving water

7

CSPSHDC Committee Meeting in January 2022


Committee support for City taking action to reduce emissions:

- Reduce Vehicle Miles Traveled (VMT)
- Green electricity supply
- Improve energy efficiency of buildings/electrify buildings
- Electrify transportation
- Strive for zero waste

8

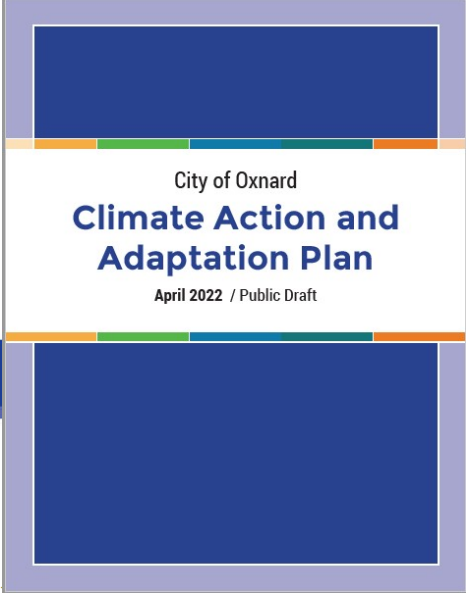
Questions and Discussion

9



Questions so far?
(Please raise hand or type in chat box)

9



City of Oxnard
Climate Action and Adaptation Plan
April 2022 / Public Draft

Public Draft CAAP

10

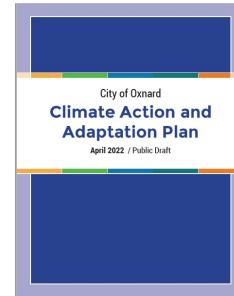
10

CAAP Outline

11

Executive Summary

1. Introduction and Background
2. Understanding Oxnard's GHG Emissions
3. Reducing Greenhouse Gas Emissions
4. Community Vulnerability and Adaptation
5. Implementation and Monitoring



APPENDICES

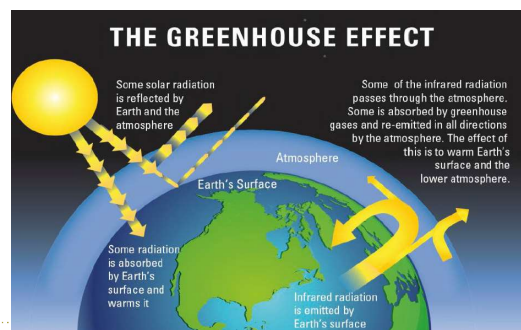
- A. Community and Stakeholder Engagement Reports
- B. Major Climate Policies and Regulations in California
- C. Greenhouse Gas Quantification Methods
- D. City of Oxnard Socioeconomic Vulnerability Index
- E. Partnering Organizations
- F. Funding Sources

11

Chapter 1: Introduction and Background

12

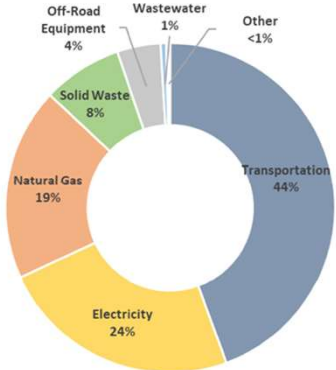
- Why Prepare a CAAP?
- What Causes Climate Change?
- Why Is Climate Change a Concern for Oxnard?
- Vulnerable Communities and Social Equity Considerations
- State Policy Drivers and Relationship to other Local Plans



12

Chapter 2: Oxnard's GHG Emissions 13

- **Community Greenhouse Gas Inventory**
 - 2010 and 2018
 - 95% of community emissions from transportation, electricity, natural gas and solid waste.
 - Includes a breakdown of emissions from municipal operations (~3% of the total).
- **Emissions Forecast**
- **Oxnard's GHG Reduction Target**
 - Aligns with CA policy and statewide GHG target (SB 32)




Category	Percentage
Transportation	44%
Electricity	24%
Natural Gas	19%
Solid Waste	8%
Off-Road Equipment	4%
Wastewater	1%
Other	<1%

2018 Community GHG Inventory


13

Chapter 3: Reducing GHG Emissions 14


14 GHG reduction strategies organized under 7 categories:




Clean Energy
(E)




Green Buildings
(B)




Transportation
(T)




Land Use (L)



Water Conservation
and Reuse (W)

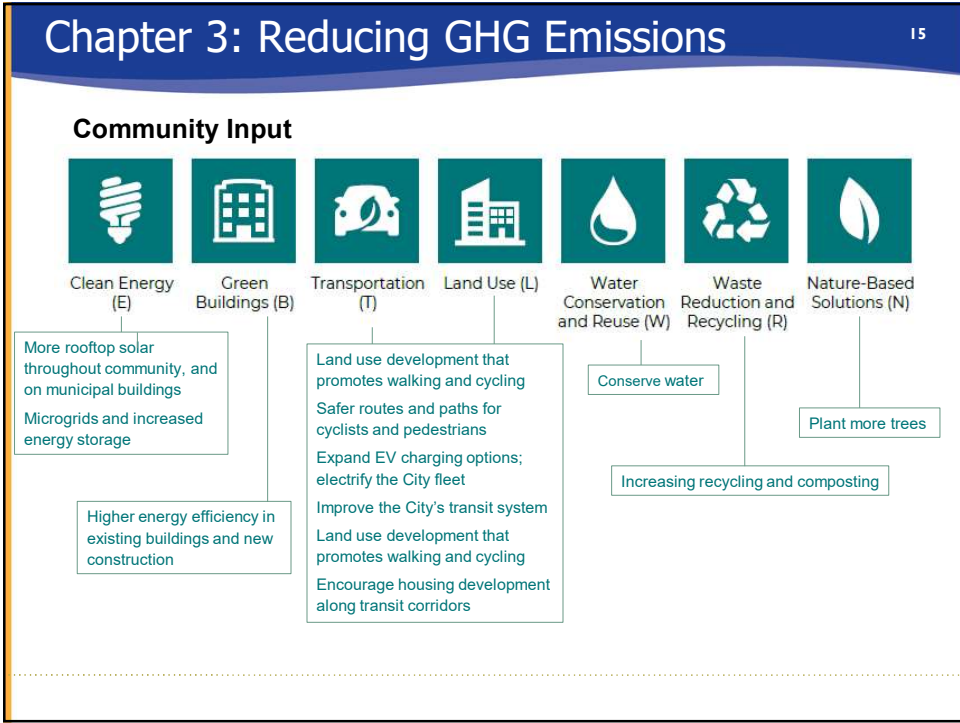


Waste Reduction and
Recycling (R)



Nature-Based
Solutions (N)

14



15

Chapter 3: Reducing GHG Emissions 16

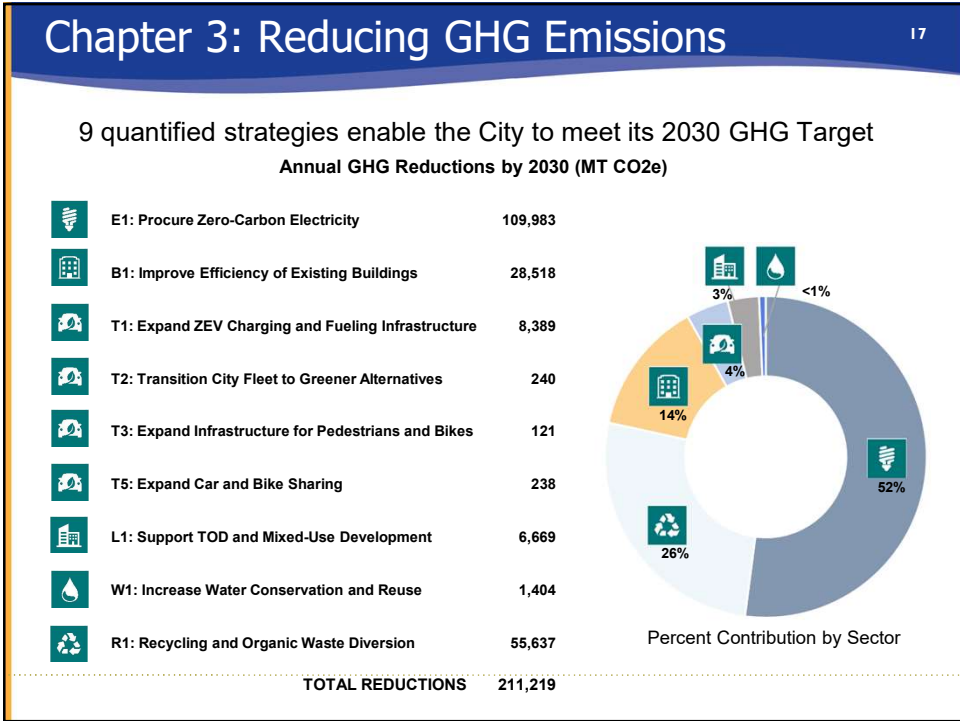
Details provided for each strategy

- Description
- Alignment w/ State Actions
- Key Implementing Actions
 - Community
 - Municipal Operations
 - More detail in Chapter 5
- Estimated Annual GHG Reductions by 2030
- GHG Benefit-Cost Ratio
- Performance Objective

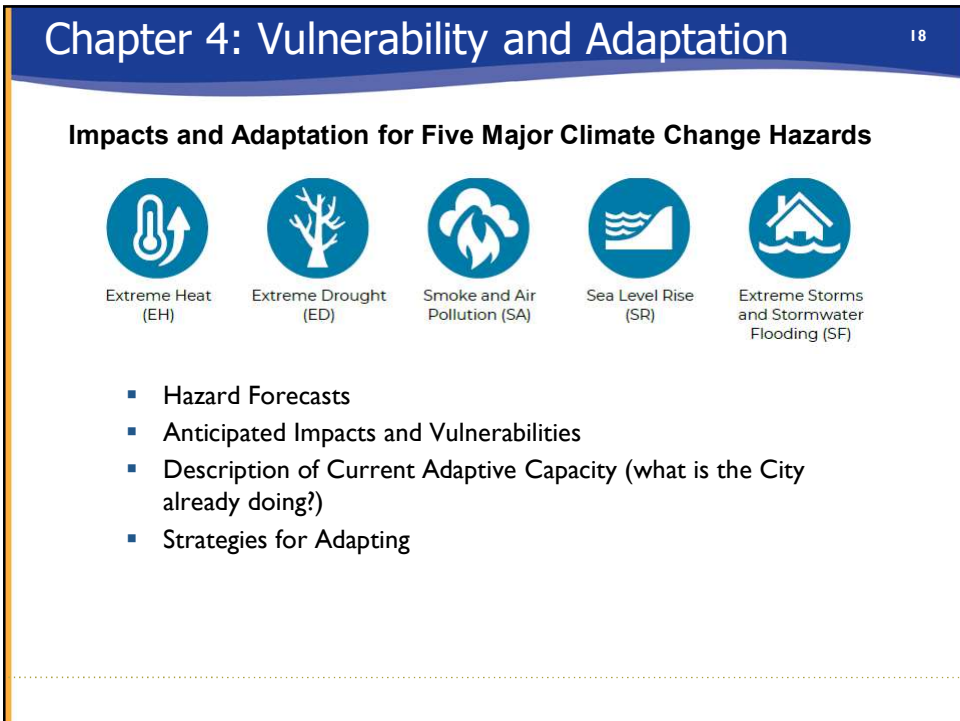
B1: Improve Efficiency of Existing Buildings

<p>GHG REDUCTIONS BY 2030 28,518 MTCO₂e annually</p> <p>GHG BENEFIT-COST RATIO High</p> <p>PERFORMANCE OBJECTIVE By 2030, reduce the total energy use of existing residential, commercial, and municipal buildings by 10 percent, compared to 2018</p>	<p>STRATEGY DESCRIPTION</p> <p>Increasing the energy efficiency of existing buildings reduces GHG emissions by decreasing the consumption of natural gas, electricity that is not 100 percent carbon-free, and other non-renewable energy sources. Energy-efficiency improvements can be achieved through a variety of methods, including periodic (e.g., every 5 years) energy audits, ongoing benchmarking, through ENERGY STAR® portfolio manager, appliance rebates, building retrofits, and education of consumers. In addition to GHG emission reduction, programs that promote energy-efficient building improvements can lower energy bills and create local green jobs. The City will improve energy efficiency of existing buildings through coordination with existing agencies and organizations, as well as through public outreach to inform building owners of the opportunities available to them.</p> <p>With stringent standards already in place for new buildings and major retrofits through Title 24 (e.g., light-emitting diode [LED] lighting replacements, heating, air conditioning, and ventilation [HVAC] replacements), Strategy B1 focuses on existing community and municipal buildings, especially older buildings that are the least efficient and present the biggest opportunity for improvement.</p> <p>Regional Energy Networks (RENs) help cities, counties, school districts, water agencies, and special districts identify and implement energy efficiency projects. The Tri-County Regional Energy Network (3C-REN) and the Southern California Regional Energy Network (SoCalREN) both offer programs and assistance in the City of Oxnard.</p> <p>ALIGNMENT WITH STATE INITIATIVES</p> <ul style="list-style-type: none"> • California building energy efficiency standards (Title 24, Part 6) • California Schools Healthy Air, Plumbing, and Efficiency Program (CALSHAPE) provides funding to upgrade HVAC systems in public schools and to replace non-compliant plumbing fixtures and appliances that fail to meet water efficiency standards <p>KEY IMPLEMENTING ACTIONS</p> <p>Community</p> <ul style="list-style-type: none"> • B1 - Partner with existing agencies such as CPA, 3C-REN, SoCalREN, and/or the Ventura County Regional Energy Alliance (VCREA) to promote and take advantage of local programs, meet with these agencies on a quarterly basis
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16



17



18

Chapter 5: Implementation and Monitoring

19

- What the Community Can Do to Help
- Implementation Framework/Steps
- Implementing GHG Reduction Strategies
- Implementation Resilience and Adaptation Strategies



Teaching children about waste reduction and recycling

19

Chapter 5: Implementation and Monitoring

20

- What the Community Can Do to Help
- Implementation Framework/Steps
- Implementing GHG Reduction Strategies
- Implementation Resilience and Adaptation Strategies

TABLE S-2 GHG Reduction Strategies and Actions – Implementation Details

STRATEGY/ACTION	TIMEFRAME	LEAD DEPARTMENT	POTENTIAL PARTNERS	FISCAL IMPACT	FUNDING SOURCE(S)
Clean Energy E1: Procure Zero-Carbon Electricity					
<i>Performance metric: Maintain 95 percent participation (by community as a whole) in CPA's 100 Percent Green tier, or equivalent, through 2030.</i>					
<i>Community</i>					
E1.1 – Invest City staff time and financial resources in maintaining a minimum 95% community participation rate in CPA's 100 Percent Green Power (or equivalent) through the year 2030	Near term (2022–2025)	• Community Development	• CPA	• General Fund	Not needed
E1.2 – Work with the CPA to develop an educational campaign targeted to businesses and residents on the importance of subscribing to the CPA's 100 Percent Green level	Near term (2022–2025)	• Community Development	• CPA	• General Fund	Not needed
E1.3 – Partner with CPA to promote Power Share, which provides DAC residents with a 20% discount and 100 percent renewable energy	Near term (2022–2025)	• Community Development	• CPA • Community Orgs	• General Fund	CPA
<i>Municipal</i>					
E1.4 – Request a rate analysis from CPA at	Near term	• Public Works	• CPA	• General	Not needed

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Chapter 5: Implementation and Monitoring

21

- What the Community Can Do to Help
- Implementation Framework/Steps
- Implementing GHG Reduction Strategies
- Implementation Resilience and Adaptation Strategies

TABLE 5-2 GHG Reduction Strategies and Actions – Implementation Details

STRATEGY/ACTION	TIMEFRAME	LEAD DEPARTMENT	POTENTIAL PARTNERS	FISCAL IMPACT	FUNDING SOURCE(S)	
TABLE 5-3 Potential Climate Change Resilience and Adaptation Strategies – Implementation Details						
STRATEGY	TIMEFRAME	LEAD DEPARTMENT	POTENTIAL PARTNERS	FISCAL IMPACT	KNOWN FUNDING SOURCES	
Community Preparedness (CP)						
E1.1 – 1 resou comn 100 Pt throu E1.2 – educa busin impor 100 Pt E1.3 – Share a 20% energ Munk E1.4 –	CP1: Develop a public education campaign to inform community of climate hazards and impacts CP2: Ensure early warning systems are adequate for extreme events related to climate change CP3: Invest in backup power systems and energy storage at emergency centers and cooling centers	Near term Mid term Mid term	• Community Development • Community Development • Public Works • Emergency Services • Public Works	• Community Orgs • VCAPCD • CCTD • Port of Hueneme • SCE • CPA • 3C-REN • VCDPA	• General Fund • CIP • General Fund • CIP • General Fund	• None identified • CAL OES grants • SCE • CPA • 3C-REN • SoCalREN

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Next Steps

22

- May 9 – Public drop-in hours – 4 to 6 p.m.; Interpretations provided (Social Media Blast – help get word out) - <https://esassoc.zoom.us/j/5196700616>
- May 14 – Public Workshop, 9 to 11 a.m.; Interpretations provided (Social Media Blast – help get word out) - <https://kearnswest.zoom.us/j/82714724412?pwd=SWVNU2wvSWF3Z3JmS3NCOXplRkUvdz09>
- May 16 – Stakeholder comments due to: OxnardCAAP@oxnard.org
- June 1 – Public comment period ends
- June 16 – Planning Commission Study Session on Draft CAAP
- July 7 – Planning Commission Provides Recommendation to City Council on Final CAAP
- July 12 – Committee Meeting on Final CAAP
- Sept 6 – Public Hearing; City Council adoption on CAAP

Stay abreast of our CAAP efforts by going to:

<https://www.oxnard.org/climate-action-plan/>

22

Questions and Discussion

23



Question/Comments from Stakeholders?
(Please raise hand or type in chat box)

Other ways of providing input:

- Email: OxnardCAAP@oxnard.org
- Call Kathleen Mallory: 805-385-8370
- Send her a letter: 214 South C Street, Oxnard, CA 93030

Stay abreast of our CAAP efforts by going to:

<https://www.oxnard.org/climate-action-plan/>

23




Thank you

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Climate Action and Adaptation Plan – Public Meeting
Plan de Acción y Adaptación Climática – Reunión Pública

City of Oxnard
Climate Action and Adaptation Plan
April 2022 / Public Draft

May 14, 2022



1

2

Welcome and thank you for participating!
You can participate in this meeting in English and Spanish.

¡Bienvenidos y gracias por participar! Puede participar en esta reunión en inglés y español.

2

3

Good News - This workshop is being recorded and will be posted!

Buenas noticias - ¡este taller se está grabando y se publicará!

3

You are viewing Kearns & West's screen View Options ▾

CAAP
CLIMATE ACTION AND ADAPTATION PLAN
PLAN DE ACCIÓN Y ADAPTACIÓN CLIMÁTICA
OXNARD

Kearns & West

Webinar Manager

Audio

Video

Participants/
Las Participantes

Chat/
Charla

Spanish Interpretation/
Traducan en Español

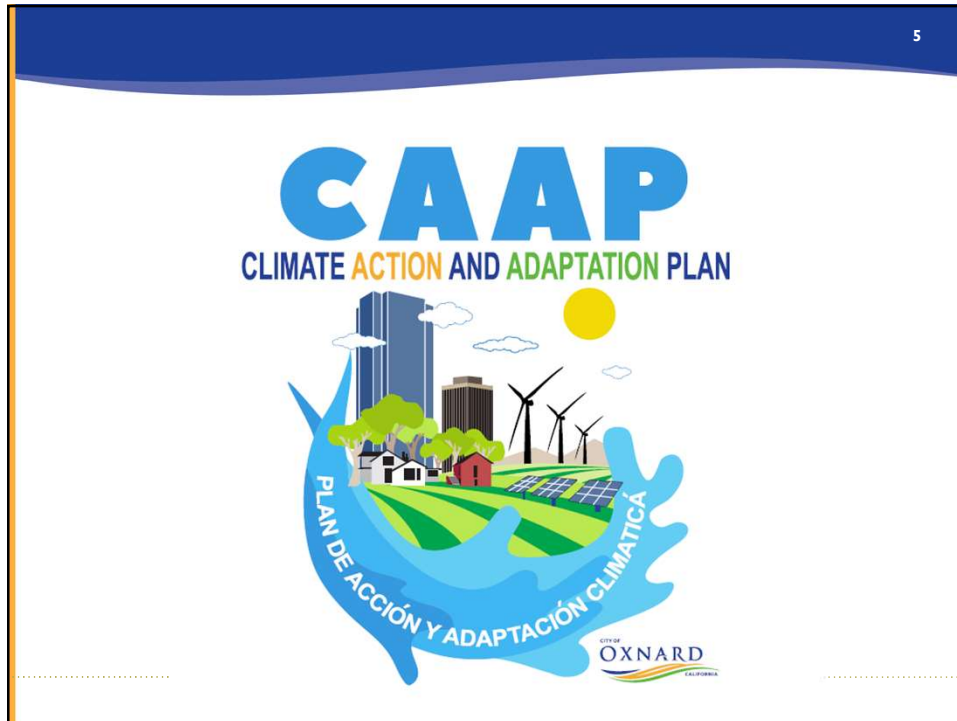
Reactions/
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Mute
Start Video

Participants 2
Chat
Share Screen
Record

Interpretation
Reactions
Leave

4



5

6

Purpose of Meeting

Review Engagement Efforts and Input Received from Community
Provide overview of the Climate Action and Adaptation Plan (CAAP)
Answer questions and gather feedback

Thank you for joining and participating in today's discussion!

Propósito de la Reunión

Revisar los esfuerzos de participación y los aportes recibidos de la comunidad.
Proporcionar una descripción general del Plan de Acción y Adaptación Climática (CAAP)

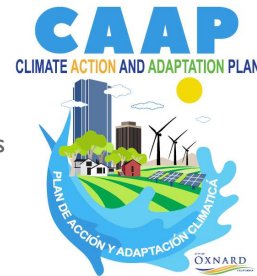
Responder sus preguntas y recopile comentarios
¡Gracias por unirse y participar en la discusión de hoy!

6

Today's Discussion Discusión de hoy

7

- Summary of Community and Stakeholder Input
 - CAAP Outline and Overview
 - GHG Reduction Strategies
 - Climate Change Adaptation Strategies
 - Implementation Details
 - Closing Thoughts / How to Stay Engaged
-
- Resumen de los aportes de la comunidad y las partes interesadas
 - Esquema y descripción general del CAAP
 - Estrategias de reducción de GEI
 - Estrategias de Adaptación al Cambio Climático
 - Detalles de implementación
 - Pensamientos finales / Cómo mantenerse comprometido



7

Tips for Productive Meetings/ Consejos para reuniones productivas

8

- Actively participate – we want your input!
 - Be respectful
 - Listen for understanding
 - Stay concise to allow time for everyone
-
- Participe activamente, ¡queremos su opinión!
 - Ser respetuoso
 - Escuchar para entender
 - Manténgase breve para darle tiempo a todos

8

Community Driven Process

9

Proceso impulsado por la comunidad

Successful community engagement:

- Community Survey in May 2021 (133 responses)
- Twelve focused stakeholder meetings in May 2021, Jan 2022 and May 2022
- Public Workshops/Meetings: May 2021 and May 2022

Participación exitosa de la comunidad:

- Encuesta comunitaria en mayo de 2021 (133 respuestas)
- Doce reuniones de partes interesadas enfocadas en mayo de 2021, enero de 2022 y mayo de 2022
- Talleres públicos/reuniones: mayo de 2021 y mayo de 2022

9

Community Input Aporte de la comunidad

10



Overall – Strong community interest in strategies that:

- Emphasize equity and prioritize vulnerable populations
- Benefit the entire community
- Consider economic feasibility and cost vs. benefits
- Promote ongoing education and collaboration through Plan implementation


En general: fuerte interés de la comunidad en estrategias que:

- Enfatizar la equidad y priorizar las poblaciones vulnerables
- Beneficiar a toda la comunidad
- Considerar la viabilidad económica y el costo versus los beneficios
- Promover la educación continua y la colaboración a través de la implementación del Plan

10

Community Input Aporte de la comunidad	
<p>Climate change impacts of greatest concern:</p> <ul style="list-style-type: none"> • Extreme heat • Poor air quality • Extreme drought 	<p>Impactos del cambio climático de mayor preocupación:</p> <ul style="list-style-type: none"> • Calor extremo • Mala calidad del aire • Sequía extrema
	
	

11

Community Input Aporte de la comunidad	
<p>Also, concern for:</p> <ul style="list-style-type: none"> • Sea level rise / coastal erosion • Extreme storms and flooding • Spread of diseases (e.g., West Nile, Valley Fever) 	<p>Además, preocupación por:</p> <ul style="list-style-type: none"> • Aumento del nivel del mar/erosión costera • Tormentas extremas e inundaciones • Propagación de enfermedades (p. ej., Nilo Occidental, Fiebre del Valle)
	
	

12

Community Input Aporte de la comunidad

13

Slide 1 of 2

Support expressed for GHG reduction strategies:

- Land use development that promotes walking and cycling
- Safer routes and paths for cyclists and pedestrians
- Higher energy efficiency in existing buildings and new construction
- More rooftop solar throughout community, and on municipal buildings
- Microgrids and increased energy storage

Apoyo expresado a las estrategias de reducción de GEI:

- Desarrollo que promuevan caminar y andar en bicicleta
- Rutas y caminos más seguros para ciclistas y peatones
- Mayor eficiencia energética en edificios existentes y de nueva construcción
- Más energía solar en los techos en toda la comunidad y en los edificios municipales
- Microrredes y mayor almacenamiento de energía

13

Community Input Aporte de la comunidad

14

Slide 2 of 2

Support expressed for GHG reduction strategies:


- Expand EV charging options; electrify the City fleet
- Better public transit; more housing along transit corridors
- Planting more trees
- Increasing recycling and composting
- Conserving water

Apoyo expresado a las estrategias de reducción de GEI:

- Ampliar las opciones de carga de vehículos eléctricos; electrificar la flota de la ciudad
- Mejor transporte público; más viviendas a lo largo de los corredores de tránsito
- Plantar más árboles
- Aumentar el reciclaje y el compostaje
- Conservar el agua

14

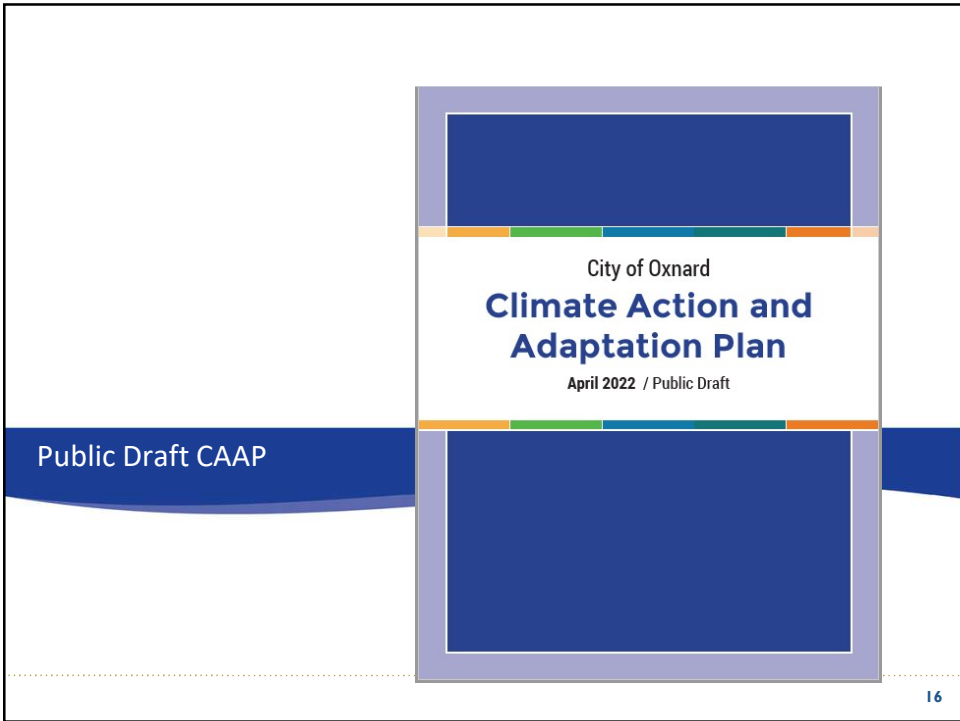
Questions and Discussion Preguntas y Discusión ¹⁵



Questions so far?
(Please raise hand or type in chat box)

*¿Preguntas hasta ahora?
(Levante la mano o escriba en el cuadro de chat)*

15



Public Draft CAAP

City of Oxnard
**Climate Action and
Adaptation Plan**
April 2022 / Public Draft

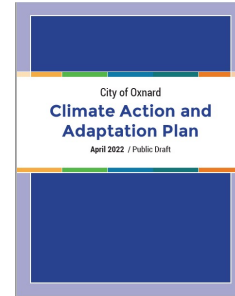
16

CAAP Outline

17

Executive Summary

1. Introduction and Background
 2. Understanding Oxnard's GHG Emissions
 3. Reducing Greenhouse Gas Emissions
 4. Community Vulnerability and Adaptation
 5. Implementation and Monitoring
- + Technical Appendices



Resumen ejecutivo

1. Introducción y Antecedentes
 2. Comprender las emisiones de GEI de Oxnard
 3. Reducción de las emisiones de gases de efecto invernadero
 4. Vulnerabilidad y Adaptación de la Comunidad
 5. Implementación y Monitoreo
- + Anexos Técnicos

17

Chapter 1: Introduction and Background

18

- Why Prepare a CAAP?
- What Causes Climate Change?
- Why Is Climate Change a Concern for Oxnard?
- Vulnerable Communities and Social Equity Considerations
- State Policy Drivers and Relationship to other Local Plans

Capítulo 1: Introducción y Antecedentes

- ¿Por qué preparar un CAAP?
- ¿Qué causa el cambio climático?
- ¿Por qué el cambio climático es una preocupación para Oxnard?
- Comunidades vulnerables y consideraciones de equidad social
- Impulsores de políticas estatales y relación con otros planes locales

18

Chapter 2: Oxnard's GHG Emissions 19

- **Community Greenhouse Gas Inventory**
 - 95% of community emissions from transportation, electricity, natural gas and solid waste.
- **Emissions Forecast and Target**
 - 2030 Target aligns with CA policy and statewide GHG target (SB 32)

Capítulo 2: Emisiones de GEI de Oxnard

- Inventario comunitario de gases de efecto invernadero
 - 95% de las emisiones comunitarias por transporte, electricidad, gas natural y residuos sólidos.
- Pronóstico y objetivo de emisiones
 - El objetivo para 2030 se alinea con la política de CA y el objetivo de GEI a nivel estatal (SB 32)

2018 Community GHG Inventory

Category	Percentage
Transportation	44%
Electricity	24%
Natural Gas	19%
Solid Waste	8%
Off-Road Equipment	4%
Wastewater	1%
Other	<1%

19

Chapter 3: Reducing GHG Emissions 20

14 GHG reduction strategies organized under 7 categories:

Clean Energy (E)

Green Buildings (B)

Transportation (T)

Land Use (L)

Water Conservation and Reuse (W)

Waste Reduction and Recycling (R)

Nature-Based Solutions (N)

Capítulo 3: Reducción de las emisiones de GEI

14 estrategias de reducción de GEI organizadas en 7 categorías:

Energía limpia

Edificios Verdes

Transporte

Uso del suelo

Conservación y reutilización del agua

Reducción y reciclaje de agua

Soluciones basadas en la naturaleza

20

Chapter 3: Reducing GHG Emissions

21

Capítulo 3: Reducción de las emisiones de GEI

Community Input Informs Strategies

Los aportes de la comunidad informan las estrategias



More rooftop solar throughout community, and on municipal buildings

Más energía solar en los techos en toda la comunidad y en los edificios municipales

21

Chapter 3: Reducing GHG Emissions

22

Capítulo 3: Reducción de las emisiones de GEI

Community Input Informs Strategies

Los aportes de la comunidad informan las estrategias



Higher energy efficiency in buildings

Mayor eficiencia energética en los edificios

22

Chapter 3: Reducing GHG Emissions

23

Capítulo 3: Reducción de las emisiones de GEI

Community Input Informs Strategies

Los aportes de la comunidad informan las estrategias



More electric vehicle charging stations

Más puntos de recarga para vehículos eléctricos

23

Chapter 3: Reducing GHG Emissions

24

Capítulo 3: Reducción de las emisiones de GEI

Community Input Informs Strategies

Los aportes de la comunidad informan las estrategias



Safer routes and paths for cyclists and pedestrians

Rutas y caminos más seguros para ciclistas y peatones

24

Chapter 3: Reducing GHG Emissions

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Capítulo 3: Reducción de las emisiones de GEI

Community Input Informs Strategies

Los aportes de la comunidad informan las estrategias



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Chapter 3: Reducing GHG Emissions

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Capítulo 3: Reducción de las emisiones de GEI

Community Input Informs Strategies

Los aportes de la comunidad informan las estrategias




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Chapter 3: Reducing GHG Emissions 27


Capítulo 3: Reducción de las emisiones de GEI

Community Input Informs Strategies
Los aportes de la comunidad informan las estrategias




Clean Energy
(E)

Energía limpia




Green Buildings (B)

Edificios Verdes




Transportation (T)

Transporte




Land Use (L)

Uso del suelo




Water Conservation and Reuse (W)

Conservación y reutilización del agua



Waste Reduction and Recycling (R)

Reducción y reciclaje de agua



Nature-Based Solutions (N)

Soluciones basadas en la naturaleza

Plant more trees
Plantar más árboles

27


Chapter 3: Reducing GHG Emissions 28

Details provided for each strategy

- Description
- Alignment w/ State Actions
- Key Implementing Actions
- Annual GHG Reductions by 2030
- GHG Benefit-Cost Ratio
- Performance Objective

Detalles proporcionados para cada estrategia

- Descripción
- Alineación con acciones estatales
- Acciones clave de implementación
- Reducciones anuales de GEI para 2030
- Relación beneficio-costo de GEI
- Objetivo de rendimiento







 **B1: Improve Efficiency of Existing Buildings**

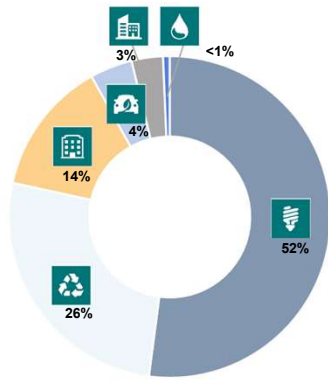
<p>GHG REDUCTIONS BY 2030 28,518 MTCO₂e annually</p> <p>GHG BENEFIT-COST RATIO High</p> <p>PERFORMANCE OBJECTIVE By 2030, reduce the total energy use of existing residential, commercial, and municipal buildings by 10 percent, compared to 2018.</p>	<p>STRATEGY DESCRIPTION</p> <p>Increasing the energy efficiency of existing buildings reduces GHG emissions by decreasing the consumption of natural gas, electricity that is not 100 percent carbon-free, and other non-renewable energy sources. Energy-efficiency improvements can be achieved through a variety of methods, including periodic (e.g., every 5 years) energy audits, ongoing benchmarking, through ENERGY STAR® portfolio manager, appliance rebates, building retrofits, and education of consumers. In addition to GHG emission reduction, programs that promote energy-efficient building improvements can lower energy bills and create local green jobs. The City will improve energy efficiency of existing buildings through coordination with existing agencies and organizations, as well as through public outreach to inform building owners of the opportunities available to them.</p> <p>With stringent standards already in place for new buildings and major retrofits through Title 24 (e.g., light-emitting diode [LED] lighting replacements, heating, air conditioning, and ventilation [HVAC] replacements), Strategy B1 focuses on existing community and municipal buildings, especially older buildings that are the least efficient and present the biggest opportunity for improvement.</p> <p>Regional Energy Networks (RENs) help cities, counties, school districts, water agencies, and special districts identify and implement energy efficiency projects. The Tri-County Regional Energy Network (TC-REN) and the Southern California Regional Energy Network (SoCalREN) both offer programs and assistance in the City of Oxnard.</p> <p>ALIGNMENT WITH STATE INITIATIVES</p> <ul style="list-style-type: none"> • California building energy efficiency standards (Title 24, Part 6) • California Schools Healthy Air, Plumbing, and Efficiency Program (CalSHAPE) provides funding to upgrade HVAC systems in public schools and to replace non-compliant plumbing fixtures and appliances that fail to meet water efficiency standards. <p>KEY IMPLEMENTING ACTIONS</p> <p>Community</p> <ul style="list-style-type: none"> • B1 – Partner with existing agencies such as CPA, 3C-REN, SoCalREN, and/or the Ventura County Regional Energy Alliance (VCREA) to promote and take advantage of local programs, meet with these agencies on a quarterly basis.
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Chapter 3: Reducing GHG Emissions 29

GHG reduction strategies enable the City to meet its 2030 Target
 Las estrategias de reducción de GEI permiten a la Ciudad cumplir con su Meta 2030

-  **52% of reductions from Clean Energy**
52% de reducciones de Energía Limpia
-  **26% from Waste Reduction & Recycling**
26% de Reducción y Reciclaje de Residuos
-  **14% from Green Building**
14% de Reducción y Reciclaje de Residuos
-  **4% from Transportation**
4% de Transporte
-  **3% from Land Use**
3% del uso de la tierra
-  **<1% from Water Conservation & Reuse**
<1% de conservación y reutilización del agua




Percent Contribution by Sector in 2030
Contribución porcentual por sector en 2030

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Chapter 4: Vulnerability and Adaptation 30

Capítulo 4: Vulnerabilidad y Adaptación


Impacts and Adaptation for Five Major Climate Change Hazards
 Impactos y Adaptación para Cinco Peligros Principales del Cambio Climático




Extreme Heat (EH)
Calor Extremo




Extreme Drought (ED)
Sequía Extrema



Smoke and Air Pollution (SA)
Humo y Contaminación del Aire



Sea Level Rise (SR)
Aumento Del Nivel Del Mar



Extreme Storms and Stormwater Flooding (SF)
Tormentas extremas y aguas pluviales

- Hazard Forecasts
- Pronósticos de peligros
- Anticipated Impacts and Vulnerabilities
- Impactos y vulnerabilidades previstos
- Strategies for Adapting
- Estrategias de Adaptación


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Chapter 5: Implementation and Monitoring 31

Capítulo 5: Implementación y Monitoreo

- What the Community Can Do to Help
- Implementation Framework/Steps
- GHG Reduction Strategies
- Resilience and Adaptation Strategies

- Lo que la comunidad puede hacer para ayudar
- Marco de implementación/pasos
- Estrategias de reducción de GEI
- Estrategias de resiliencia y adaptación



Teaching children about waste reduction and recycling

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Chapter 5: Implementation and Monitoring 32

Capítulo 5: Implementación y Monitoreo

- What the Community Can Do to Help
- Implementation Framework/Steps
- GHG Reduction Strategies
- Resilience and Adaptation Strategies

- Lo que la comunidad puede hacer para ayudar
- Marco de implementación/pasos
- Estrategias de reducción de GEI
- Estrategias de resiliencia y adaptación

TABLE 5-2 GHG Reduction Strategies and Actions – Implementation Details

STRATEGY/ACTION	TIMEFRAME	LEAD DEPARTMENT	POTENTIAL PARTNERS	FISCAL IMPACT	FUNDING SOURCE(S)
<p>Clear Performance or eq</p> <p>Community</p> <p>E11 – Invest C resources in r community f 100 Percent C through the 3</p> <p>E12 – Work w educational c businesses ar importance c 100 Percent C</p> <p>E13 – Partner Share, which 3-20% share</p>					

TABLE 5-3 Potential Climate Change Resilience and Adaptation Strategies – Implementation Details

STRATEGY	TIMEFRAME	LEAD DEPARTMENT	POTENTIAL PARTNERS	FISCAL IMPACT	KNOWN FUNDING SOURCES
Community Preparedness (CP)					
<p>CP1: Develop a public education campaign to inform community of climate hazards and impacts</p> <p>CP2: Ensure early warning systems are adequate for extreme events related to climate change</p>	<p>Near term</p> <p>Mid term</p>	<ul style="list-style-type: none"> • Community Development <ul style="list-style-type: none"> • Community Development • Public Works • Emergency Services 	<ul style="list-style-type: none"> • Community Orgs <ul style="list-style-type: none"> • VCAPCD • CCTD • Port of Hueneume 	<ul style="list-style-type: none"> • General Fund <ul style="list-style-type: none"> • CIP • General Fund 	<ul style="list-style-type: none"> • None identified <ul style="list-style-type: none"> • CAL OES grants

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Next Steps

Próximos pasos

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- June 1 – Public comment period ends; send to: OxnardCAAP@oxnard.org
 - June 16 – Planning Commission Study Session on Draft CAAP
 - July 7 – Planning Commission Provides Recommendation to City Council on Final CAAP
 - July 12 – Committee Meeting on Final CAAP
 - Sept 6 – Public Hearing; City Council adoption on CAAP
-
- June 1 – Finaliza el período de comentarios públicos; Enviar a: OxnardCAAP@oxnard.org
 - June 16 – Sesión de Estudio de la Comisión de Planificación sobre el Proyecto de CAAP
 - July 7 – La Comisión de Planificación proporciona una recomendación al Concejo Municipal sobre el CAAP final
 - July 12 – Reunión del Comité de la CAAP Final
 - Sept 6 – Audiencia pública; Adopción del Concejo Municipal sobre CAAP

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Questions and Discussion

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Question/Comments from Stakeholders?
(Please raise hand or type in chat box)

*¿Preguntas/comentarios de las partes interesadas?
(Levante la mano o escriba en el cuadro de chat)*

Otras formas de proporcionar información:

Other ways of providing input:

- Email: OxnardCAAP@oxnard.org
- Call Kathleen Mallory: 805-385-8370
- Send her a letter: 214 South C Street, Oxnard, CA 93030

Stay abreast of our CAAP efforts by going to:

<https://www.oxnard.org/climate-action-plan/>

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appendix**b**

Major Climate Policies and Regulations in California as of 2022

Executive Order S-3-05

In June 2005, the Governor of California signed Executive Order S-3-05, which identified the California Environmental Protection Agency (CalEPA) as the lead coordinating state agency for establishing climate change emissions reduction targets in California. A “Climate Action Team,” a multi-agency group of state agencies, was set up to implement Executive Order S-3-05. The Governor’s executive order established aggressive emissions reductions goals: by 2010, GHG emissions must be reduced to 2000 levels; by 2020, GHG emissions must be reduced to 1990 levels; and by 2050, GHG emissions must be reduced to 80 percent below 1990 levels. GHG emission reduction strategies and measures to reduce global warming were identified by the California Climate Action Team in 2006.

Global Warming Solutions Act of 2006 (Assembly Bill 32)

In 2006, the California legislature adopted Assembly Bill (AB) 32, requiring that California cap GHG emissions statewide at 1990 levels by 2020. AB 32 requires CARB to establish a program for statewide GHG emissions reporting, and monitoring/enforcement of that program. In response to AB 32, CARB developed the **Climate Change Scoping Plan** in 2008, which contained a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emissions reduction programs calculated to meet the 2020 statewide GHG emissions limit and initiate the transformations needed to achieve the state’s long-range climate objectives.¹ The Scoping Plan identifies local governments as “essential partners” in achieving California’s goals to reduce GHG emissions, encouraging the adoption of reduction targets for community and municipal operations emissions that are consistent with the state’s 2020 commitment (identified as equivalent to 15 percent below “current” [i.e., 2008] levels). The First Update to the Scoping Plan was approved by the California Air Resources Board (CARB) in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations.²

California’s Cap-and-Trade Program

The 2008 Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions and achieve its 2020 statewide target. A cap-and-trade program sets the total amount of GHG emissions allowable for facilities under the cap and allows covered sources, including producers and consumers of energy, to determine the least expensive strategies to comply. Carbon offset credits are created through the development of projects, such as renewable energy generation or carbon sequestration projects, that achieve the reduction of emissions from activities not otherwise regulated, covered under an emissions cap, or resulting from government incentives. Offsets are verified reductions of emissions whose ownership can be transferred

¹ California Air Resources Board, Initial AB 32 Climate Change Scoping Plan Document. <https://www.arb.ca.gov/cc/scopingplan/document/scoping-plan2008.htm>.

² California Air Resources Board, First Update to the AB 32 Scoping Plan. <https://www.arb.ca.gov/cc/scopingplan/document/updatedscoping-plan2013.htm>.

to others. Altogether, the emissions covered by the cap-and-trade program total 80 percent of all GHG emissions in California, and is fundamental to meeting California's long-range climate targets at low cost.

AB 398, passed in 2017, extended the state Cap-and-Trade Program through 2030. The 2017 Scoping Plan includes the Cap-and-Trade Program as a core strategy for achieving the statewide GHG target mandated by Senate Bill (SB) 32 (see below).

Low-Carbon Fuel Standard

The overall goal of the low-carbon fuel standard (LCFS) is to lower the carbon intensity of California transportation fuel. The standard as described in the 2008 Scoping Plan required a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. With adoption of the 2017 Scoping Plan Update (see below), the standard has been changed to a reduction of at least 18 percent. Recent proposed amendments by CARB indicate that the program will be extended to 2030 with a GHG reduction target of 20 percent. A significant expansion of the renewable-fuels market has been included in the CARB staff proposal.

Senate Bill 32 and 2017 Scoping Plan Update

In 2016, the California State Legislature adopted SB 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 amends AB 32 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030, while AB 197 includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

In response to SB 32 and the 2030 GHG reduction target, CARB developed *California's 2017 Climate Change Scoping Plan*, adopted in December 2017.³ The 2017 Scoping Plan Update's strategy for meeting the 2030 GHG target incorporates the full range of legislative actions and state-developed plans that have relevance to the year 2030. These include regulations for extending the state Cap-and-Trade Program through 2030 (AB 398); increasing the LCFS to 18 percent, improved vehicle, truck and freight movement emissions standards, increasing renewable energy, improving energy efficiency, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet the state's energy needs.

Senate Bill 1279 and 2022 Scoping Plan Update

In September of 2022 the State of California adopted Assembly Bill 1279 (AB 1279), which creates a legally binding goal that the state achieve carbon neutrality — meaning the state either eliminates or captures all of its GHG emissions — by no later than 2045. AB 1279 also requires the state to reduce GHG emissions by at least 85 percent below 1990 levels in that timeframe. CARB is currently drafting a 2022 Scoping Plan Update that considers the AB 1279 goals; it will likely be adopted by the end of 2022.

³ California Air Resources Board, *The 2017 Climate Change Scoping Plan Update*, January 20, 2017. https://www.arb.ca.gov/cc/scoping-plan/2030sp_pp_final.pdf.

Pavley Regulation (AB 1493), Advanced Clean Cars (ACC), and the California Mobile Source Strategy

Assembly Bill 1493 (2002), known as the Pavley Bill, directed CARB to adopt regulations to reduce emissions from new passenger vehicles. The federal Clean Air Act ordinarily preempts state regulation of motor vehicle emissions standards; however, California is allowed to set its own standards with a federal waiver from the U.S. Environmental Protection Agency, granted in 2009. Known as the Pavley Clean Car Standards, AB 1493 regulated GHG emissions from new passenger vehicles (light-duty automobiles and medium-duty vehicles) from 2009 through 2016.

In January 2012, CARB approved the ACC program, a new emissions-control program for model years 2015 through 2025. The program includes components to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. The zero-emissions vehicle (ZEV) program will act as the focused technology of the ACC program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles (PHEV) in the 2018 to 2025 model years.

In May 2016, CARB released the updated Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next 15 years through a transition to ZEVs, cleaner transit systems, and reduction of vehicle miles traveled (VMT). The Mobile Source Strategy calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) by 2025 and 4.2 million ZEVs by 2030. It also calls for more-stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium- and heavy-duty vehicles and increased deployment of zero-emissions trucks primarily for class 3 to 7 “last mile” delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions, and a 50 percent reduction in the consumption of petroleum-based fuels.

Renewables Portfolio Standard and Senate Bill 350

SB 1078 established California’s Renewables Portfolio Standard (RPS) in 2002, which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from eligible renewable sources by 2017. SB 107 changed the target date to 2010. In November 2008, Executive Order S-14-08 expanded the state’s RPS goal to 33 percent renewable power by 2020. In September 2009, Executive Order S-21-09 directed CARB (under its AB 32 authority) to enact regulations to help the state meet the 2020 goal of 33 percent renewable energy. The 33 percent by 2020 RPS goal was codified in April 2011 with SB X1-2. This new RPS applies to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. The

Clean Energy and Pollution Reduction Act of 2015 (SB 350) was signed in October 2015, which requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030. Most recently, SB 100, signed by Governor Brown on September 10, 2018, increases the RPS requirement to 60 percent eligible renewables by 2030 and 100 percent by 2045.

SB 350 also has several provisions in addition to increasing the RPS to 50 percent by 2030, as noted above. Most important to local governments, SB 350 requires statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030.

California Building Code

California Code of Regulations Title 24, Part 6, sets forth California's energy efficiency standards for residential and nonresidential buildings and was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically (typically every 3 years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The current standards (2019), made effective on January 1, 2020, require new residential building to install rooftop solar photovoltaic systems. The next iteration of the energy standard, which will go into effect January 2023, will include new prescriptions and performance standards for building electrification.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11), commonly referred to as the CALGreen Code, requires new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt that encourage or require additional measures in the five green building topics.

Senate Bill 375

In 2008, SB 375 was enacted to address indirect GHG emissions caused by urban sprawl. SB 375 develops emissions-reduction goals that apply to a region's transportation planning activities. SB 375 provides incentives for local governments and developers to create new walkable and sustainable communities, revitalize existing communities, and implement conscientiously planned growth patterns that concentrate new development around public transportation nodes. CARB has been working with the state's metropolitan planning organizations to align their regional transportation, housing, and land use plans to reduce VMT and demonstrate the region's ability to attain its GHG reduction targets.

Senate Bill 535 – Greenhouse Gas Reduction Fund and Disadvantaged Communities

SB 535 (2012) requires CalEPA to identify disadvantaged communities and requires that 25 percent of all funds allocated pursuant to an investment plan for the use of state moneys collected through a cap-and-trade program be allocated to projects that benefit disadvantaged communities and at least 10 percent of the 25 percent to be spent on projects located in disadvantaged communities.

Senate Bill 379

California SB 379 (2015) requires all cities and counties to address climate adaptation and resilience in the safety element of a general plan and/or in a local hazard mitigation plan (LHMP). The bill requires that the updated plan include a set of goals, policies, and objectives based on a vulnerability assessment that is specific to the local geography. Additionally, the bill requires that the updated plan include a set of feasible implementation measures designed to carry out the plan's goals, policies, and objectives and establishes minimum requirements that such implementation measures must include. These requirements include feasible methods to avoid or minimize the climate change impacts on new land uses, the location of essential public facilities outside of at-risk areas, the designation of adequate and feasible infrastructure located in an at-risk area, and the identification of natural infrastructure that could be used in adaptation projects. The update to the safety element must occur at the next update of an LHMP on or after January 1, 2017. Local jurisdictions without an LHMP must update their safety elements on or before January 1, 2022.

Executive Order B-55-18

In September 2018, the Governor of California signed Executive Order B-55-18, calling for the state to achieve carbon neutrality “as soon as possible, and no later than 2045,” exceeding the previous 2005 target of 80 percent reduction from 1990 levels by 2050 (Executive Order S-3-05).

appendix

Greenhouse Gas Quantification Methods

This appendix describes the methods used to develop the City of Oxnard communitywide and municipal operations greenhouse gas (GHG) emissions inventories, for the calendar years 2010 and 2018. It also presents methods used to develop GHG emissions forecasts for 2030 and 2050, and for estimating the emission reductions associated with the strategies and actions presented in the City of Oxnard Climate Action and Adaptation Plan (CAAP).

Greenhouse Gas Emissions Inventory: 2010 and 2018

Community Inventory

This section describes the methods for estimating baseline 2010 GHG emissions from community-induced activities and sources along with an updated inventory for the year 2018. The community-scale inventory includes emissions from transportation, electricity, natural gas, solid waste, off-road equipment, wastewater, water, and passenger rail.

TRANSPORTATION

Origin-destination (OD) method vehicle miles traveled (VMT) data for 2010 and 2018 were provided by Fehr & Peers. For details on VMT modeling and quantification methodology, see **Attachment A, Vehicle Miles Traveled Baseline Analysis**.

Emissions were calculated using CARB's Emission Factors 2021 model (EMFAC2021).¹ EMFAC2021 generates vehicle emission rates by area, year, vehicle type, fuel type, speed, and other parameters. EMFAC2021 was run for Ventura County for 2010 and 2018 in "emission rate" mode to generate vehicle travel emission factors for all vehicle types and fuel types for aggregated (average) speeds and model years. The EMFAC vehicle type categories were aligned with the three categories of VMT for which Fehr & Peers was able to provide splits (passenger, truck, and bus).² The EMFAC emission factors were converted to grams of CO₂e per mile (g CO₂e/mi) then weighted by fuel type and vehicle type using Countywide VMT. Then an aggregate emission factor was determined by weighting vehicle type splits provided by Fehr & Peers. The aggregate emission factor was applied to the Citywide OD method VMT. The 2010 and 2018 split and aggregated emission factors can be found in **Table C-1**.

TABLE C-1 Transportation Emission Factors, 2010 and 2018

METRIC	EMISSION FACTOR (g CO ₂ e/mi)	
	2010	2018
Passenger Vehicle	409.2	345.7
Truck	1,115.7	1,050.6
Bus	1,660.0	1,573.3
Aggregate – Weighted by Vehicle Type	445.1	381.4

Note: g CO₂e/mi = grams of carbon dioxide equivalent per mile.

¹ California Air Resources Board (CARB), EMFAC2021 Model, 2021. <https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9>. Accessed October 2021.

² The "passenger vehicle" category corresponds to EMFAC vehicle categories LDA, LDT1, LDT2, MCY, and MDV. The "trucks" category corresponds to EMFAC vehicle categories LHDT1, LHDT2, MHDT, HHDT, and MH. The "bus" category corresponds to EMFAC vehicle categories OBUS, SBUS, and UBUS.

ELECTRICITY

Residential and non-residential electricity consumption data for the City of Oxnard was provided by Southern California Edison (SCE). Indirect GHG emissions from electricity consumption were quantified using emission factors reported by The Climate Registry (TCR) and SCE. Because SCE emission factors from 2008 through 2010 were not available, an average of 2005 through 2007 publicly reported emission rates were used to derive an emission factor for 2010, yielding a factor of 631 pounds per megawatt-hour (lbs/MWh) for 2010.³ In 2018, SCE's power mix was 36% eligible renewable, 10% hydropower and nuclear (carbon-free), 17% natural gas, and 37% unspecified fossil-fuel sources. SCE's publicly reported emission rate for 2018 electricity was 513 lbs/MWh.⁴

NATURAL GAS

Residential and non-residential natural gas consumption data for the City was provided by Southern California Gas (SCG), which was converted to GHG emissions using emission factors from TCR.⁵ However, the following adjustments and assumptions were made to account for the CA Public Utilities Commission's Aggregation Rules and Data Security Policies:

- 2010 non-residential consumption data was adjusted to remove consumption and GHG emissions from all large industrial stationary sources (i.e., entities that fall under the State's Cap and Trade rules, or so-called "capped entities") to better align with the 2014–2019 datasets provided by SCG in 2020 and 2021. There were five active capped entities in Oxnard, CA, in 2010 and four in 2018.
 - It was assumed consumption and GHG emissions data from the P&G Paper Products Co., the largest user and emissions source of the capped entities, had already been omitted from the data provided by SCG during development of the 2013 Energy Action Plan (EAP) due to the CPUC Aggregation Rules and Data Security Policies in effect at the time.
 - Per the current CPUC Aggregation Rules and Data Security Policies currently in effect, namely the 5/25 Rule, it is known that no single customer accounts for more than 25% of the total energy consumption when aggregated over a group consisting of five customers; accordingly, it was assumed no consumption or emissions data from the capped entities were included in the 2014–2019 non-residential data or independent industrial data provided by SCG.
 - Analyses also showed that when consumption data from the P&G Paper Products Co. was added to the 2010 non-residential data and when consumption data from all capped entities were added to the 2018 non-residential consumption data, there is only a ~5.4% decrease in non-residential consumption data from 2010 to 2018.
 - 2010 consumption data from the P&G Paper Products Co. also individually exceeds the cumulative 2010 non-residential consumption data previously provided during the development of the 2013 EAP.
 - For the above reasons, it was reasonable to assume data from P&G Paper Products Co had already been omitted in the originally provided 2010 non-residential data, while data from the remaining

³ The Climate Registry (TCR), CRIS Public Reports, Utility-Specific Emission Factors, 2021. <https://www.theclimateregistry.org/our-members/cris-public-reports/>. Accessed October 2021.

⁴ Edison International, *Edison International Sustainability Report 2019*, 2019. <https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf>. Accessed 2021.

⁵ TCR, 2020. Default Emission Factors. <https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed October 2021.

four active capped entities had been included in 2010, while also assuming data from all active capped entities were omitted in the provided 2014–2019 non-residential and industrial data.

- Rather than using the individually provided annual industrial data for 2018, 2018 annual industrial consumption data was calculated as the difference between the grouped commercial, industrial, and residential (CIR) data and the sum of the individually provided commercial, single-family, and multifamily data for 2018.
 - Commercial customer consumption for 2018 passed the utility's Energy Data Request Program (EDRP) 15/20 aggregation rule that conforms to CPUC Aggregation Rules and Data Security Policies, no data was omitted.
 - The single-family residential and multifamily residential data passed the EDRP 15/20 aggregation rule; no data was omitted; the consumption can be added to determine the total residential consumption.
 - The industrial data for the years 2014–2018 did not pass the EDRP 5/25 aggregation rule; some data was omitted from the files provided
 - For the above reasons, it was determined complete data were provided for commercial, single family, and multifamily data, but not for the industrial sector, due to the CPUC Aggregation Rules and Data Security Policies
 - Accordingly, the inconsistent fluctuations in annual consumption from year to year in non-residential data are contingent upon the amount of industrial data that is able to be shared in a given year

SOLID WASTE

Solid waste disposal tonnage for 2018 was provided by the City. 2010 tonnage was unavailable; therefore, estimates were derived by back-casting from 2018 using population data. The disposed waste tonnage for each year was characterized using data from California Department of Resources Recycling and Recovery.⁶ Emission factors for each waste category, in units of MTCH₄ per ton of waste, were obtained from the ICLEI Community Protocol.⁷ These emission factors were then applied to the characterized solid waste data to estimate GHG emissions associated with disposal of waste in the landfill.

OFF-ROAD EQUIPMENT

The CARB OFFROAD2017 model was used to estimate Countywide fuel use for off-road vehicles and equipment in 2010 and 2018.⁸ The following vehicle classes were included in the inventory: construction and mining, commercial/industrial, portable equipment, and agriculture. Sector-specific employment data for Ventura County and Oxnard, obtained from the Ventura County Transportation Mode (VCTM) as provided by

⁶ California Department of Resources Recycling and Recovery, *2018 Disposal-Facility-Based Characterization of Solid Waste in California. Table 4: Material Composition of California's Overall Disposed Waste Stream, 2020.* <https://www2.calrecycle.ca.gov/Publications/Details/1666>. Accessed October 2021.

⁷ ICLEI, *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions*, 2013. Appendix E: Solid Waste Emission Activities and Sources, Version 1.1. Table SW.5: CH₄ Yield for Solid Waste Components. <https://icleiusa.org/us-community-protocol/>. Accessed October 2021.

⁸ CARB, OFFROAD 2017 – ORION (v1.0.1), 2017. <https://www.arb.ca.gov/orion/>. Accessed October 2021.

Fehr & Peers, were used to apportion fuel use to the City.⁹ Sector- and fuel-specific emission factors from TCR¹⁰ and standard conversion factors from the U.S. Department of Energy¹¹ were then applied to the City's estimated fuel consumption (diesel, gasoline, and natural gas) to estimate GHG emissions associated with off-road equipment use.

WATER

Electricity use associated with Oxnard's water utility was provided by the City for 2010 and 2018. The City's water system is all-electric, therefore, no natural gas consumption data was collected. The electricity consumption data captures the extraction, treatment, and distribution of potable water in the City, as well as building electricity used in water service facilities (e.g., lights, cooling, etc.). GHG emissions were then estimated using the SCE emission factors provided in the Electricity section, above.

WASTEWATER

The following data on Oxnard's wastewater utility was provided by the City for 2010 and 2018: the population served by Oxnard's wastewater treatment plant (WWTP), average daily wastewater flow, WWTP and advanced water purification facility (AWPF) electricity use, and WWTP natural gas use. The energy data provided includes consumption from WWTP and AWPF facility use, e.g., lights, heating, cooling, administrative buildings, etc. GHG emissions from energy consumption associated with the wastewater and recycled water systems were then estimated using electricity and natural gas emission factors, as described in the Electricity and Natural Gas sections above. Service population and equations WW.8, WW.12(alt), WW.11(alt), and WW.11(alt).2 from the ICLEI Community Protocol¹² were then used to estimate process emissions, effluent discharge fugitive emissions, and septic system fugitive emissions. N₂O process and fugitive emissions were assumed to be partially offset by the AWPF in 2018, as 25% of WWTP effluent was diverted to the AWPF that year.

PASSENGER RAIL

GHG emissions from both Metrolink and Amtrak were quantified for the City for 2010 and 2018. Diesel fuel consumed by Metrolink in 2010 and 2018, obtained from the Bureau of Transportation Statistics (BTS),¹³ was converted to GHG emissions using emission factors from TCR.¹⁴ GHG emissions were then apportioned to Ventura County using the ratio of operating route miles by county within the Metrolink system.¹⁵ Emissions were then further apportioned to the City by the portion of Ventura County Metrolink Station boardings that occur within Oxnard.¹⁶

⁹ Fehr & Peers, 2021. Ventura County Transportation Model, City of Oxnard population, housing, and employment data for 2012 and 2040. This SED is also used by the South Coast Association of Government's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to forecast future conditions.

¹⁰ TCR, Default Emission Factors, 2020. <https://www.theclimaterestry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed October, 2021.

¹¹ Department of Energy (DOE), Alternative Fuels Data Center, 2021. https://afdc.energy.gov/fuels/equivalency_methodology.html. Accessed October 2021.

¹² ICLEI, *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions*, 2013. Appendix F: Wastewater and Water Emission Activities and Sources, Version 1.1. <https://icleiusa.org/us-community-protocol/>. Accessed October 2021.

¹³ Bureau of Transportation Statistics, Full Reporter Data, Transportation Agencies. Southern California Regional Rail Authority Fuel Consumption, 2021. Link no longer available.

¹⁴ TCR, Default Emission Factors, 2020. <https://www.theclimaterestry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed October, 2021.

¹⁵ Southern California Regional Rail Authority, Metrolink Fact Sheet, 2019. <https://metrolinktrains.com/globalassets/about/agency/facts-and-numbers/fact-sheet-for-website-q1-fy-19.pdf>. Accessed October 2021.

¹⁶ Ventura County Transportation Commission, Email correspondence with Jeni Eddington. Annual weekday Metrolink Boardings at Ventura County stations in 2010 and 2018, 2020.

2010 and 2018 GHG emissions associated with Amtrak's Coast Starlight and Pacific Surfliner lines (the two Amtrak lines that run through Oxnard) were obtained from Amtrak's annual GHG inventories, which are third-party verified.^{17,18} The 2018 ridership ratio of Oxnard Station passengers (arrivals and departures) to total passengers was then applied to each Amtrak line to apportion emissions to the City.^{19,20,21} Because 2010 ridership data was unavailable, the 2018 ridership ratio was used to apportion 2010 GHG emissions as well.

Municipal Operations Inventory

This section describes the methods for estimating baseline 2010 GHG emissions from Oxnard's municipal operations along with updated emission for the year 2018. The municipal inventory includes emissions from the City's on-road and off-road fleets, electricity, natural gas, solid waste, wastewater treatment, water treatment and delivery, and employee commute.

ON-ROAD & OFF-ROAD FLEETS

The following raw fleet data were provided by the City for 2010 and 2018: unique equipment identification number ("Equipment Number"), model year, make/model, equipment description (e.g., "Sedan 4.6L", "Truck 2t Dump", "Van 3.9L"), department/division, fuel type, off-road percentage, on-road percentage, total fuel quantity (gallons or GGE²² for CNG), off-road fuel quantity (gallons or GGE for CNG), on-road fuel quantity (gallons or GGE for CNG), and mileage.

CO₂ emissions were quantified based on known fuel use and fuel type. CH₄ and N₂O emissions were quantified based on vehicle/equipment type, vehicle model year, fuel type, and known fuel use or known mileage. On-road and off-road miles were estimated by multiplying the on-road (%) and off-road (%) by the total amount of provided miles. The on-road and off-road percentages were based on on-road and off-road gallons out of total gallons, respectively.

Emission factors were obtained from TCR.²³ Make/model and equipment description were used to classify equipment into the following equipment/vehicle types based on TCR categories: highway vehicles (passenger car, light truck, medium and heavy-duty vehicle, and motorcycle), non-highway vehicles (agricultural equipment, construction/mining equipment, lawn and garden equipment, industrial/commercial equipment, and recreational equipment). A compressed natural gas (CNG) emission factor was developed by converting the TCR factor (in units of kilograms of CO₂ per standard cubic foot, kg CO₂/scf) to kg/GGE using a standard conversion factor.²⁴

¹⁷ Amtrak, *Amtrak Sustainability Report FY2019*, 2020. <https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/environmental/Amtrak-Sustainability-Report-FY19.pdf>. Accessed October 2021.

¹⁸ Amtrak, *The Climate Registry Annual GHG Inventory, 2010*, 2011. Link not available.

¹⁹ Rail Passengers Association, *Ridership Statistics*, 2020. <https://www.railpassengers.org/resources/ridership-statistics/>. Accessed October 2021.

²⁰ Rail Passengers Association, *Amtrak Fact Sheet: Pacific Surfliner Service*, 2020. <https://www.railpassengers.org/site/assets/files/3474/35.pdf>. Accessed October 2021.

²¹ Rail Passengers Association, *Amtrak Fact Sheet: Coast Starlight Service*, 2020. <https://www.railpassengers.org/site/assets/files/3442/34.pdf>. Accessed October 2021.

²² Gallons of gasoline equivalent.

²³ TCR, *Default Emission Factors*, 2020. Tables 2.1, 2.5, 2.6, and 2.7. <https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed January 2022.

²⁴ Department of Energy, *Alternative Fuels Data Center*, 2021. https://afdc.energy.gov/fuels/equivalency_methodology.html. Accessed October 2021.

ELECTRICITY

Municipal electricity consumption data for the City was provided by SCE. Indirect GHG emissions from electricity consumption were quantified using emission factors reported by The Climate Registry and SCE, as described above, in the Community Inventory section of this document.

NATURAL GAS

Municipal natural gas usage was obtained from SCG, which was converted to GHG emissions using emission factors from TCR.²⁵ Municipal consumption data was provided for the years 2014 to 2020. Because 2010 data was not available and 2014 data was incomplete, 2015 was used as a proxy year for 2010.

SOLID WASTE

Municipal solid waste was estimated using the ratio of municipal-operation-generated waste to total city waste of another California city. This value, 3%, was applied to Oxnard's 2010 and 2018 waste disposal emissions.

WATER TREATMENT & DELIVERY

Because Oxnard provides its own water services, all emissions associated with treatment and delivery of water in the City belong in the municipal operations inventory. Therefore, municipal water emissions are equal to community water emissions for both years. The quantification methods are described in the Community Inventory section, above.

WASTEWATER TREATMENT

Because Oxnard provides its own wastewater services, all emissions associated with treatment and delivery of water in the City belong in the municipal operations inventory. The only wastewater emissions excluded from the municipal operations inventory are those associated with septic systems. The quantification methods are described in the Community Inventory section, above.

EMPLOYEE COMMUTE

All City employee commute data was obtained from the 2018 Oxnard City Services Commute Survey Analysis. This data was used to estimate daily mileage per commute mode and converted to annual mileage used an assumed work-day count of 253. Because 2010 commute data was unavailable, 2018 VMT was back cast to 2010 using a population ratio. The passenger vehicle emission factors derived from EMFAC2021 data, which can be found in Table C-1 of the Community Inventory section, were then applied to the employee commute VMT.

²⁵ TCR, Default Emission Factors, 2020. <https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed January 2022.

Greenhouse Gas Emissions Forecasts: 2030 and 2050

Business-as-Usual Forecasts

This section describes the approach for modeling business-as-usual (BAU) emissions, which represents future emissions based on current population and regional growth trends, land use growth patterns, and regulations or policies introduced before the 2018 baseline year. The BAU scenario demonstrates the growth in GHG emissions that would occur if no further action were to be taken by the City, State, or Federal Government after 2018. The BAU forecast serves as a reference point for other forecasting scenarios, which include the Adjusted BAU that incorporates several federal and State regulations, and the reductions from the local strategies and actions included in the CAAP.

Each sector of the community inventory was forecasted to 2030 and 2050 using the socioeconomic data (SED) obtained from the Ventura County Transportation Model, which was used by Fehr & Peers to model future VMT and which uses SED from the 2016 SCAG RTP/SCS.²⁶ Population, housing, and employment data were available for 2012 and 2040, which were interpolated and extrapolated upon to obtain 2010, 2018, 2030, and 2050 SED.

Table C-2 presents the SED used for the BAU forecast, while **Table C-3** indicates which sets of socioeconomic and activity data were used to forecast each sector.

TABLE C-2 City of Oxnard Socioeconomic Data

DATA/METRIC	2010	2018	2030	2050
Population	192,661	204,142	221,364	250,066
Households	48,101	52,429	58,920	69,740
Employment	36,631	57,712	89,333	142,035

Note: Derived from Ventura County Transportation Model data, as provided by Fehr & Peers.

²⁶ Fehr & Peers, 2021. Ventura County Transportation Model, City of Oxnard population, housing, and employment data for 2012 and 2040. This SED data is also used by the South Coast Association of Government's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) to forecast future conditions.

TABLE C-3 2030 and 2050 Forecasting Methods by Sector

SECTOR	DATA FORECASTED	SOCIOECONOMIC METRIC USED
Transportation	Vehicle miles traveled (VMT)	Population
Residential Energy	Electricity consumption (MWh) and natural gas consumption (therms)	Households
Non-Residential Energy	Electricity consumption (MWh) and natural gas consumption (therms)	Population
Solid Waste	Waste disposed (tons)	Population
Off-Road Equipment	Fuel consumption (gal)	Employment
Wastewater	Electricity consumption (MWh), natural gas consumption (therms), and population served	Population
Water	Electricity consumption (MWh) and natural gas consumption (therms)	Population
Passenger Rail	Emissions (MTCO _{2e})	Population

Adjusted Business-as-Usual Forecasts

Like the standard BAU forecast, the Adjusted BAU forecast provides an estimate of future emission levels based on the continuation of existing trends in demographic growth (such as population and housing), activity or resource consumption (such as electricity use), technology changes, and regulation. Unlike the BAU forecast, the Adjusted BAU forecast accounts for expected outcomes of federal, state, and local measures. Specifically, the Adjusted BAU forecast includes the following programs and policies:

1. California's Renewable Portfolio Standard (RPS) program and Senate Bill 100 (SB100) targets for renewable energy;
2. Advanced Clean Cars and Pavley regulations; and
3. CAL Green Title 24 standards.

Each of these three adjustments are explained in the following sections.

S1: RENEWABLES PORTFOLIO STANDARD AND SB 350

The Clean Energy and Pollution Reduction Act of 2015, or Senate Bill 350 (Chapter 547, Statutes of 2015) was approved by Governor Brown on October 7, 2015. SB 350 increased the standards of the California Renewable Portfolio Standards (RPS) program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33% to 50% by December 31, 2030. On September 10, 2018, Governor Brown signed SB 100, establishing that 100% of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS goals that were established by SB 350 in 2015. Specifically, the bill increases required energy from renewable sources for both investor-owned utilities and publicly owned utilities from 50% to 60% by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33% by 2020, 44% by 2024, and 52% by 2027. The updated RPS goals are considered achievable, since many California energy providers are already meeting or exceeding the RPS goals established by SB 350. The Adjusted BAU forecasts accounts for these renewable energy targets, as discussed below.

To account for California's RPS targets under SB 100 in the Adjusted BAU forecast, the GHG emission factors for electricity consumption were adjusted. These emission factors represent indirect GHG emissions generated at power plants and are applied to electricity consumption in the City. The RPS has the effect of lowering indirect emissions associated with electricity consumption because it mandates increasing percentages of renewable sources of power supplied by electricity utilities in future years. The RPS requires 60% eligible renewables by 2030 and 100% RPS-eligible renewable resources by 2045.²⁷

To adjust for the RPS in future years, indirect electricity emission factors reported by SCE, along with the energy power mix, were collected for the years 2015–2020.²⁸ The California Energy Commission (CEC) reports power mix data in Power Content Labels; these are available through 2020 for SCE.²⁹ Based on data reported for 2016–2020, a composite “non-RPS” emission intensity factor was generated for each year. This factor is calculated based on the reported total emission factor and the non-RPS power mix. Then, for each forecast year (2030 and 2050), an emission factor for total delivered electricity was calculated based on these composite “non-RPS” emission intensity factors for each reported year and the projected RPS requirement for eligible renewables for each year. The 2030 and 2050 Adjusted BAU electricity emission factors used, which incorporate the RPS, are 295.5 lbs CO₂e/MWh and 0.0 lbs CO₂e/MWh, respectively.

S2: PAVLEY VEHICLE STANDARDS AND THE MOBILE SOURCE STRATEGY

In 2002, Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires that CARB develop and adopt, by January 1, 2005, regulations that achieve “the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State.” To meet the requirements of AB 1493, in 2004 CARB approved amendments to the California Code of Regulations, adding GHG emissions standards to California's existing standards for motor vehicle emissions. All mobile sources are required to comply with these regulations as they are phased in from 2009 through 2016. These regulations are known as the Pavley standards (named for the bill's author, State Senator Fran Pavley).

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the Original Scoping Plan, CARB approved the Advanced Clean Cars Program, an emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34% fewer global warming gases and 75% fewer smog-forming emissions. The program also requires car manufacturers to offer for sale an increasing number of zero-emission vehicles (ZEVs) each year, including battery electric, fuel cell, and plug-in hybrid electric vehicles. In December 2012, CARB adopted regulations allowing car manufacturers to comply with California's GHG emissions requirements for model years 2017–2025 through

²⁷ RPS-eligible resources include solar, wind, geothermal, small hydroelectric, or biopower facilities that are located within the Western Electricity Coordinating Council (WECC) region, which encompasses fourteen western U.S. states and portions of Canada and Mexico. The majority of RPS-eligible electricity currently comes from solar and wind. Large hydroelectric dams and nuclear facilities, two major sources of carbon-free power, are not RPS-eligible.

²⁸ Edison International, 2020 Sustainability Report, Past Reports, 2020. <https://www.edison.com/home/sustainability/sustainability-report.html>. Accessed January 2022.

²⁹ California Energy Commission (CEC), 2018 Power Content Label, July 2019. https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_Southern_California_Edison.pdf. Accessed January 2022.

compliance with the EPA GHG requirements for those same model years.³⁰ The Adjusted BAU forecasts accounts for these vehicle fleet efficiency standards, as discussed below.

On-road transportation emissions under the previously described regulations are calculated using BAU forecasted VMT and emission factors weighted by fuel type and vehicle type (passenger vehicles, trucks, and transit vehicles)³¹ for years 2030 and 2050 from the EMFAC2021 model.³² **Table C-4** presents the Adjusted BAU transportation emission factors for 2030 and 2050.

TABLE C-4 Forecasted Transportation Emission Factors, 2030 and 2050

METRIC	EMISSION FACTOR (g CO ₂ e/mi)	
	2030	2050
Passenger Vehicle	236.6	203.0
Truck	874.5	772.0
Bus	1,450.1	1,332.4
Aggregate – Weighted by Vehicle Type	269.0	232.0

Note: g CO₂e/mi = grams of carbon dioxide equivalent per mile

S3: CAL GREEN (TITLE 24 BUILDING ENERGY EFFICIENCY STANDARDS)

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods (CEC, 2016). The current Title 24, Part 6 standards (2019 standards) were made effective on January 1, 2020. The new Title 24, Part 6 standards (2022 standards) were adopted by the CEC in August 2021 and will be made effective on January 1, 2023. The Adjusted BAU forecasts accounts for these updates to Title 24, as discussed below.

Under the Adjusted BAU scenario, energy use was adjusted to reflect the effects of Title 24 standards. Title 24 Building Efficiency Standards are updated every three years by the California Energy Commission. The model uses approximate increased energy efficiency percentages for the 2019 Title 24 standards³³ implemented in 2020, and the 2022 standards to be implemented in 2023.³⁴ The 2019 percentages are based on CEC estimates for residential and non-residential buildings and assume that the solar PV requirement is met. The 2022

³⁰ Advanced Clean Car program information available online at: <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about>. Accessed January 2022.

³¹ Passenger vehicles correspond to EMFAC categories LDA, LDT1, LDT2, MCY, and MD. Trucks correspond to EMFAC categories LHDT1, LHDT2, MHDT, HHDT, and MH.

³² CARB, EMFAC2021 Model, 2021. <https://arb.ca.gov/emfac/emissions-inventory/4c9f04282a1f85d62a27721058b5a3bb6fd22fb9>. Accessed January 2022.

³³ CEC, 2019 Building Energy Efficiency Standards FAQ, 2020. https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf. Accessed January 2022.

³⁴ CEC, 2022 Building Energy Efficiency Standards Summary, 2021. https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf. Accessed January 2022.

percentages were calculated based on CEC's Draft Environmental Impact Report for the 2022 standards.³⁵ This document outlined the changes in building energy use from the 2019 to 2022 standards on a project-by-project basis. Weighted averages were taken to generate efficiency change values for single and multifamily residential buildings for both electricity and natural gas. These efficiency changes are applied to 2019 energy use intensity (EUI) values to generate 2022 EUI values for each building type, which are then applied to the square footage of new construction. In the model, the adjusted EUI is also applied to 15% of the total square footage of existing buildings to account for the approximately 15% of buildings that are retrofitted each year. Because Title 24 is updated on a three-year cycle, the 2022 changes in energy efficiency are applied every three years in the model.

Greenhouse Gas Reduction Strategies

This section describes the calculation methods for estimating local GHG emission reductions for the CAAP strategies. These emission reductions occur beyond the Federal and State regulations and policies accounted for in the Adjusted BAU forecast. The quantified strategies include:

- E1: Procure Zero-Carbon Electricity
- B1: Improve Efficiency of Existing Buildings
- T1: Expand Zero Emission Vehicle (ZEV) Charging and Fueling Infrastructure
- T2: Transition City Fleet to Greener Alternatives
- T3: Expand Infrastructure for Pedestrians, Bikes, and Micro-mobility Solutions
- T5: Expand Car and Bike Sharing
- L1: Support Transit-Oriented and Mixed-Use Development
- W1: Increase Water Conservation and Reuse
- R1: Recycling and Organic Waste Diversion

Clean Energy

E1: PROCURE ZERO-CARBON ELECTRICITY

Quantified Performance Objective: The community will maintain at least 95% participation in the Clean Power Alliance's (CPA) 100% Green tier, or equivalent, through 2030.

To quantify the impact associated with ME1, it was assumed that CPA's 100% Green tier offering would have an emission factor of 0.0 lbs/MWh of electricity delivered, which was applied to 95% of the City's 2030 forecasted electricity consumption in residential and non-residential buildings. The GHG reduction impact of Strategy E1 was quantified after Strategy B1 to avoid double counting, i.e., energy efficiency improvements were applied to 2030 forecasted electricity use prior to application of the CPA emission factor.

In addition to the building energy sector, this strategy impacts the water and wastewater sector. The 100% Green tier emission factor of 0.0 lbs/MWh was applied to 95% of electricity consumption associated with both

³⁵ CEC, *Draft Environmental Impact Report: Amendments to the Building Energy Efficiency Standards (2022 Energy Code)*, May 19, 2021. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed January 2022.

water consumption and wastewater treatment. The GHG reduction impact of Strategy E1 was quantified after Strategy W1 to avoid double counting, i.e., the energy-saving effects of water conservation were applied to 2030 forecasted electricity use associated with the water and wastewater sectors prior to application of the reduced emission factor.

Green Buildings

B1: IMPROVE EFFICIENCY OF EXISTING BUILDINGS

Quantified Performance Objective: By 2030, reduce the total energy use of existing residential, commercial, and municipal buildings by 10%, compared to 2018.

To quantify the impact associated with Strategy B1, 10% of consumption was subtracted from the 2030 forecasted electricity and natural gas use. The 2030 Adjusted BAU SCE emission factor was applied to the reduced electricity consumption, and the standard natural gas emission factor was applied to the reduced natural gas consumption.

Transportation & Land Use

T1: EXPAND ZERO EMISSION VEHICLE (ZEV) CHARGING AND FUELING INFRASTRUCTURE

Quantified Performance Objective: Increase the number of EV charging stations throughout the City to 1,500 by 2030.

Through this strategy, the City is creating opportunity for increased communitywide ZEV penetration³⁶ by expanding access to EV charging infrastructure. The State's 2030 ZEV count and charge station count goals are 5,000,000 and 700,000, respectively.^{37,38} The City's goal of 1,500 charging stations by 2030 represents 0.21% of the Statewide goal, despite the City representing approximately 0.55% of the State's forecasted light duty vehicles in 2030, according to EMFAC; therefore, this local charging station goal is relatively conservative. It is assumed that implementation of Strategy T1 will contribute to 0.21% of the Statewide ZEV count goal of 5 million, which is equivalent to approximately 10,700 ZEVs.

The City's 2018 light-duty vehicle count³⁹ was forecasted to 2030 using population data. This value, along with the targeted Citywide ZEV count, was used to determine the target ZEV penetration. The light duty ZEV penetration forecast from EMFAC was then subtracted from the target ZEV penetration to avoid double-counting what was accounted for in the Adjusted BAU forecast and to avoid overestimating the impact of Strategy T1. The resulting percentage used to estimate the reduction in Citywide transportation emissions, assuming ZEVs have an emission factor of 0.0 MTCO_{2e} per mile.

³⁶ ZEV penetration is the ratio of ZEVs to the total number of vehicles.

³⁷ CARB, *Revised Draft 2020 Mobile Source Strategy*, April 23, 2021. https://ww2.arb.ca.gov/sites/default/files/2021-04/Revised_Draft_2020_Mobile_Source_Strategy.pdf. Accessed October 2021.

³⁸ CEC, *Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment (Revised Staff Report)*, 2021. <https://www.energy.ca.gov/programs-and-topics/programs/electric-vehicle-charging-infrastructure-assessment-ab-2127>. Accessed October 2021.

³⁹ CEC, Vehicle Population in California. Web Dashboard. 2022. <https://www.energy.ca.gov/data-reports/energy-insights/zero-emission-vehicle-and-infrastructure-statistics/vehicle-population>. Accessed January 2022.

The GHG reduction impact of Strategy T1 was quantified after accounting for reductions from Strategies T3, T5, and L1 to avoid double counting, i.e., VMT reductions from these strategies were applied to 2030 forecasted VMT prior to accounting for electrification of vehicles.

T2: TRANSITION CITY FLEET TO GREENER ALTERNATIVES

Quantified Performance Objective: By 2030, replace all remaining diesel trucks in the City’s Environmental Resource Division to alternative fuel vehicles.

Using municipal fleet data provided by the City, the average diesel use per year per environmental resource division (ERD) truck was determined for 2018. The average fuel use per truck was then forecasted to 2030 using population data. Forecasted fuel use per ERD truck was converted to GHG emissions assuming both a diesel fleet and a CNG fleet using the same emission factors identified in the municipal fleet section of this appendix. Emissions per diesel ERD truck and emissions per CNG ERD truck were each multiplied by the number of trucks to be converted by 2030. CNG fleet emissions were then subtracted from diesel fleet emissions to determine the reduction impact associated with Strategy T2.

T3: EXPAND INFRASTRUCTURE FOR PEDESTRIANS, BIKES, AND MICRO-MOBILITY SOLUTIONS; T5: EXPAND CAR AND BIKE SHARING; & L1: SUPPORT TRANSIT-ORIENTED AND MIXED-USE DEVELOPMENT

The GHG reduction impacts of Strategies T3, T5, and L1 were quantified by Fehr & Peers under the assumptions identified in **Table C-5**.

TABLE C-5 City of Oxnard VMT Reduction Strategy Quantification Assumptions

STRATEGY	IMPLEMENTATION ASSUMPTION	QUANTIFICATION ASSUMPTION	VMT REDUCTION	TRIP TYPES ^a
T3: Expand Infrastructure for Pedestrians, Bikes, and Micro-Mobility Solutions	Adopt the Sustainable Transportation Plan, which includes expansion/ improvement of bicycle/ micro-mobility and pedestrian networks and safety improvements.	Assumes that implementation of the STP will result in a 1% increase in sidewalk miles and a 50% expansion of the bike network above what is scoped in Oxnard’s Bicycle and Pedestrian Master Plan (2011).	0.20%	II
T5: Expand Car and Bike Sharing	Require large new commercial/ institutional developments to provide commute benefits; City-led pilots and/or policy support for EV carshare, e-bikeshare, and e-scooter share.	Assumes that 10% of all employees in Oxnard will receive commute support due to new TDM program requirements; EV carshare pilot will include 10-20 vehicles; 10% of households in Oxnard will have access to e-bikeshare and/or e-scooter share.	0.10%	XI
			0.20%	II
L1: Support Transit-Oriented and Mixed-Use Development	Implementation of Oxnard Housing Element (2021) and policy changes to increase density, diversity, and mix of land uses adjacent to transit.	Assumes that 17% planned growth in households due to implementation of Housing Element will be located near transit.	3.70%	II
			3.70%	IX

Notes:

Data provided by Fehr & Peers.

^a Trip types are utilized for the origin-destination VMT modeling method. IX = internal, external; XI = external, internal; and II = internal, internal. For additional information on trip types and the VMT modeling effort, see Attachment A, Vehicle Miles Traveled Baseline Analysis.

Water Conservation and Reuse

W1: INCREASE WATER CONSERVATION AND REUSE

Quantified Performance Objective: Reduce community and municipal per capita water use by 10% by the year 2030.

To quantify the impact associated with Strategy W1, 10% of electricity consumption was subtracted from the 2030 forecasted electricity use associated with water consumption and wastewater treatment. The 2030 Adjusted BAU SCE emission factor was applied to the reduced electricity consumption, and the standard natural gas emission factor was applied to the reduced natural gas consumption. Additionally, 10% of emissions associated with the following non-electric wastewater systems were subtracted from the 2030 forecasted wastewater emissions total: wastewater treatment plant natural gas use, wastewater treatment N₂O process and fugitive emissions, and fugitive emissions from community septic systems.

Waste Reduction and Recycling

R1: RECYCLING AND ORGANIC WASTE DIVERSION

Quantified Performance Objective: Achieve 75% diversion of total solid waste from landfills by 2025. Achieve 75% diversion of organics from landfills by 2030.

To quantify the impact associated with Strategy R1, it was assumed that 75% less organic material and 75% less inorganic material by weight would be sent to the landfill in 2030. The reduction was assumed to be evenly distributed across each category of waste (e.g., mixed solid waste, grass, leaves, food scraps, etc.); therefore, the impact of the strategy is equivalent to a 75% reduction in solid waste emissions.

ATTACHMENT A

Vehicle Miles Traveled Baseline Analysis

Memorandum

Date: 2/28/2022

To: Jeff Caton, P.E., LEED AP, Director Sustainable Communities, and Brian Schuster, Senior Managing Associate – ESA Environmental Science Associates

From: Seth Contreras, PhD, Planner and Chelsea Richer, AICP, Associate – Fehr & Peers

Subject: VMT Baseline Analysis in Support of the Oxnard Climate Action Plan

LA20-3189

Introduction

Fehr & Peers, as part of the Environmental Science Associates (ESA) team, is assisting with the transportation modeling efforts in support of the development of the City of Oxnard Climate Action Plan Project (Project) in Oxnard, California. The purpose of this memorandum is to document the methodologies utilized to estimate the baseline vehicle miles traveled (VMT) associated with the City in support of quantifying GHG emissions relating to the passenger vehicles.

The remainder of this memorandum is divided into the following sections: Transportation Modeling Description, VMT Baseline Analysis, Speed Bin Estimation.

Transportation Modeling

Origin-destination-based VMT was estimated using the Ventura County Transportation Model (VCTM), which is validated to the base year 2012, incorporates SCAG's 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and forecasts future conditions out to 2040. VMT data was then summarized by speed bin for internal-internal, internal-external and external-internal trips for 2010 and 2018.

For years not validated in the model (i.e., 2010, 2018), Fehr & Peers applied interpolation and extrapolation methods from validated model years based on VMT forecast data from available forecast years in consultation with the City and ESA as described in the ensuing section.



VMT Baseline Analysis

The VCTM model is a sub-area model of the SCAG 2016 RTP/SCS model, but with a more refined traffic analysis zone (TAZ) network within the City of Oxnard, as well as the inclusion of Santa Barbara County, a non-SCAG county area. Origin-destination-based VMT summaries for base year 2012 and (*fiscally constrained*) horizon year 2040 are provided by the model and broken down by jurisdiction within Ventura County. Please see **Attachment A** for the VMT results of the City of Oxnard for base year 2012 and future horizon year 2040.

2010 and 2018 VMT

To estimate VMT for the City of Oxnard in 2010 and 2018 using the VCTM model, straight-line interpolation was applied. **Figure 1** below shows the linear trend line for the VCTM model years 2012 (the calibrated base year) and 2040 (the fiscally constrained future horizon year). Note that 2010 was estimated by back-casting from year 2012, using the same linear growth rate from 2012-2040. **Table 1** shows the VMT summary for the City of Oxnard for 2010 and 2018. For Climate Action Plans (CAPs), it is standard to apply 50% of internal-external and external-internal (IX/XI) VMT trip ends to the external jurisdiction, and to omit external-external (or pass-through) VMT.

Figure 1 VMT Interpolation Between 2010 and 2040

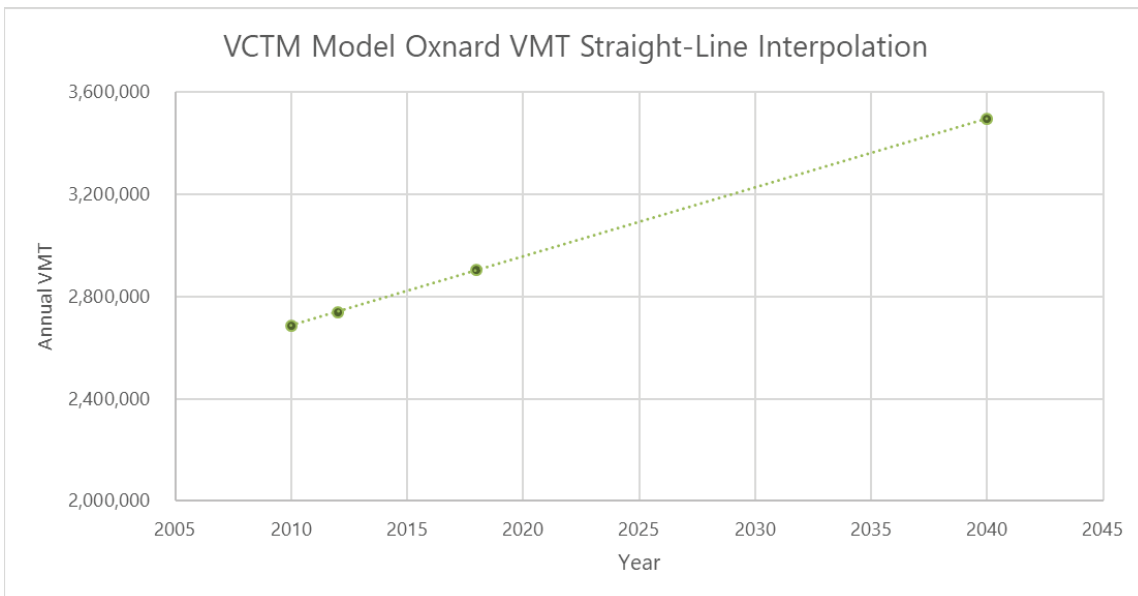




TABLE 1 Oxnard VMT Summary for 2010 and 2018

VCTM Oxnard 2010 VMT Summary		VCTM Oxnard 2018 VMT Summary	
Units	Total VMT	Units	Total VMT
Internal-Internal (I/I)	426,888	Internal-Internal	600,512
Internal-External (IX)	1,192,086	Internal-External	1,190,419
External-Internal (XI)	1,168,575	External-Internal	1,165,622
SUM 2,787,548		SUM 2,956,553	

Table 1 above shows the VMT breakdown for the City of Oxnard for 2010 and 2018. The total VMT grew by 6% over the 8-year time period, with the majority of the vehicle trips either starting or ending outside of the City. The IX/XI portion of the VMT accounts for approximately 80% of the total VMT. **Table 2** on the subsequent page shows the VMT broken down even further by municipality, using straight-line interpolation between 2012 and 2040. Recall that in CAPs, it is standard to apply 50% of internal-external and external-internal (IX/XI) VMT trip ends to the external jurisdiction, and to omit external-external (or pass-through) VMT. For example, for the Oxnard VMT row and column highlighted in green in Table 2, 50% of each of the IX/XI VMT is associated with the City of Oxnard, while the other 50% is applied to non-Oxnard trip end.

TABLE 2 City of Oxnard VMT

VCTM 2010 (2018)												
Daily Vehicle Miles Traveled in 1,000s												
O/D Method	Non-Ventura County ¹	Camarillo	Fillmore	Moorpark	Ojai	Oxnard	Port Hueneme	San Buenaventura	Santa Paula	Simi Valley	Thousand Oaks	Unincorporated
Non-Ventura County ¹	-	615 (621)	150 (179)	377 (391)	65 (64)	956 (933)	127 (118)	535 (549)	134 (143)	1,863 (1,893)	1,740 (1,755)	1,325 (1,338)
Camarillo	606 (612)	97 (101)	5 (5)	32 (32)	16 (15)	104 (126)	14 (14)	116 (111)	29 (28)	56 (54)	144 (144)	151 (146)
Fillmore	148 (180)	5 (5)	35 (36)	8 (9)	3 (4)	10 (13)	1 (1)	13 (16)	11 (15)	14 (14)	16 (17)	40 (46)
Moorpark	372 (386)	31 (32)	8 (9)	70 (74)	4 (4)	42 (43)	5 (5)	21 (21)	11 (11)	124 (127)	127 (130)	77 (74)
Ojai	57 (56)	16 (14)	3 (4)	4 (3)	25 (25)	54 (49)	6 (6)	22 (22)	11 (12)	7 (7)	13 (12)	69 (68)
Oxnard	974 (949)	104 (127)	10 (13)	43 (44)	58 (53)	427 (601)	72 (77)	368 (355)	73 (79)	82 (81)	251 (242)	350 (358)
Port Hueneme	129 (120)	15 (14)	1 (1)	6 (5)	7 (6)	72 (77)	16 (15)	43 (39)	8 (8)	11 (10)	35 (31)	44 (41)
San Buenaventura	514 (529)	116 (111)	13 (15)	21 (21)	22 (22)	356 (344)	41 (38)	716 (739)	57 (60)	39 (39)	77 (77)	203 (1203)
Santa Paula	130 (140)	29 (28)	12 (15)	10 (11)	12 (12)	71 (77)	8 (8)	56 (59)	58 (69)	18 (18)	33 (34)	72 (74)
Simi Valley	1,732 (1,786)	58 (55)	14 (15)	116 (118)	7 (7)	81 (80)	11 (10)	37 (38)	18 (18)	555 (563)	274 (281)	191 (175)
Thousand Oaks	1,669 (1,685)	142 (141)	16 (17)	121 (124)	12 (12)	249 (238)	33 (30)	74 (73)	32 (33)	267 (273)	768 (781)	281 (272)
Unincorporated	1,277 (1,286)	157 (152)	43 (50)	81 (78)	71 (71)	344 (352)	43 (40)	201 (201)	74 (77)	203 (185)	297 (286)	393 (381)

¹Includes other SCAG counties to the east and south, as well as Santa Barbara County to the north.



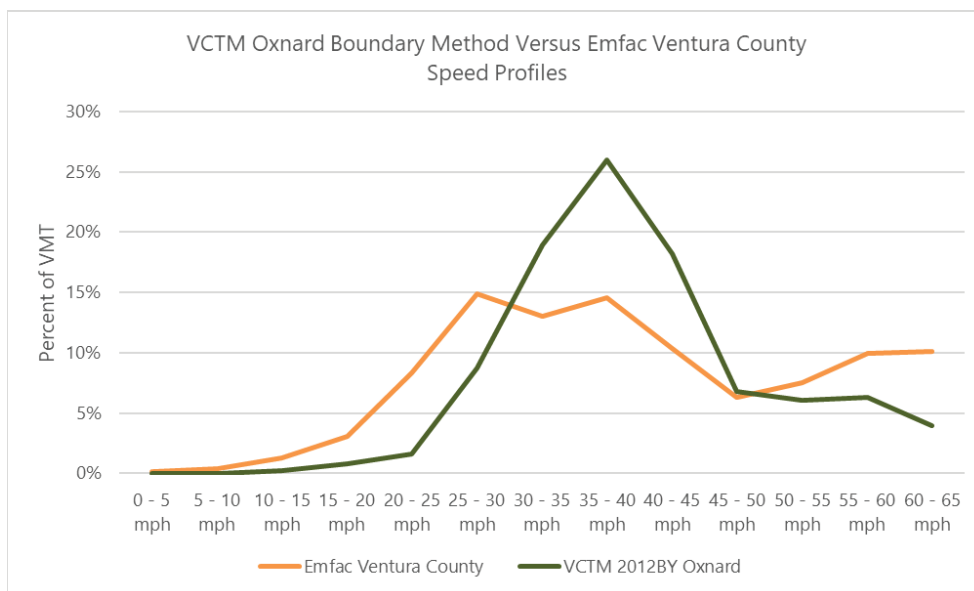
Speed Bins

This section describes the methodology for splitting the Oxnard VMT into their appropriate speed bins for air quality and GHG emission quantification purposes. Typically, speed bin profiles for air quality conformity analysis applies the “VMT boundary method,” which includes pass-through trips (or XX), and accounts for VMT that takes place within the City boundary road network (or the select-link analysis). However, given the nature of the CAP to utilize the O/D method to account for the full length of the vehicle trip, the boundary method is not applicable. That leaves two options for determining an appropriate speed bin profile for the Oxnard CAP: applying the same speed bin profile distribution from the boundary method to the O/D VMT, or utilizing the speed bin profiles for Ventura County in the California Air Resources Board (CARB) *Emfac*¹ Model.

Boundary Method Versus CARB Emfac Countywide Method

Figure 2 below shows the comparison between using the speed bin profiles in the Boundary Method of the VCTM model versus Emfac. The boundary method speed profiles (in green) show higher VMT in the 30mph-45mph range, while the Emfac Ventura countywide speed profiles show higher VMT in the 50mph-65mph range. When looking at emissions, the Emfac Ventura speed profiles yield slightly higher GHG emissions, approximately 8% higher than the VCTM. Given this, as well as the proportion of Oxnard related VMT that occurs outside of the City boundaries, it is appropriate to use the Emfac Ventura County speed bin profiles for the Oxnard CAP.

Figure 2 Speed Bin Profile Comparison



¹ CARB Emfac2017 Model. arb.ca.gov/emfac/



Oxnard VMT by Speed Bin

Table 3 below shows the Oxnard VMT (O/D method) for 2010 and 2018 broken down by speed bin. The allocation is based on the VMT percentage splits in the *Emfac2017* model for Ventura County (for light-duty automobiles/gasoline fuel-powered).

TABLE 3 Speed Bin Profile for Oxnard VMT

SPEED BINS		
Emfac2017 Ventura County		
Speed Ranges	2010 Average Daily VMT	2018 Average Daily VMT
0 - 5 mph	3,978	4,323
5 - 10 mph	10,821	18,937
10 - 15 mph	36,985	40,495
15 - 20 mph	75,233	98,496
20 - 25 mph	237,541	270,108
25 - 30 mph	410,444	438,344
30 - 35 mph	365,097	391,766
35 - 40 mph	402,320	447,156
40 - 45 mph	285,700	288,272
45 - 50 mph	187,704	194,298
50 - 55 mph	208,567	218,967
55 - 60 mph	279,324	271,306
60 - 65 mph	283,834	274,085
VMT - Total	2,787,548	2,956,553

**Attachment A: SCAG 2016 RTP/SCS
VMT for the City of Oxnard**

TABLE A1 City of Oxnard

VCTM 2012BY

Daily Vehicle Miles Traveled

O/D Method	Non-Ventura County ¹	Camarillo	Fillmore	Moorpark	Ojai	Oxnard	Port Hueneme	San Buenaventura	Santa Paula	Simi Valley	Thousand Oaks	Unincorporated
Non-Ventura County ¹	-	616,594	156,977	380,769	65,108	950,123	124,590	538,519	136,362	1,821,290	1,743,677	1,328,267
Camarillo	607,598	98,385	4,627	31,586	16,124	109,117	14,211	115,124	28,461	55,725	144,056	149,903
Fillmore	156,234	4,578	35,297	8,398	3,479	10,743	1,275	13,946	12,190	13,644	15,913	41,147
Moorpark	375,143	31,497	8,365	71,426	3,596	41,834	5,334	20,801	10,894	124,985	127,486	76,156
Ojai	57,158	15,269	3,191	3,507	24,811	52,530	6,218	21,594	11,454	6,745	12,428	68,588
Oxnard	967,712	110,059	10,907	43,300	57,110	470,294	72,939	364,491	74,803	81,467	248,544	352,005
Port Hueneme	127,138	14,807	1,310	5,692	6,817	73,461	15,596	41,923	8,349	11,074	34,057	43,342
San Buenaventura	517,849	114,745	13,625	21,196	22,037	352,822	40,432	721,354	57,723	39,214	77,160	202,767
Santa Paula	132,456	28,536	12,365	10,327	12,330	72,554	8,003	56,436	60,481	17,959	33,361	72,480
Simi Valley	1,745,801	57,128	14,075	116,261	6,862	80,621	10,524	37,330	18,334	556,947	275,882	187,138
Thousand Oaks	1,672,960	141,720	16,007	121,512	12,398	246,147	32,503	73,767	32,148	268,480	771,473	278,903
Unincorporated	1,279,199	156,193	44,920	80,420	71,161	345,720	41,857	201,403	74,933	198,745	293,989	390,365

¹Includes other SCAG counties to the east and south, as well as Santa Barbara County to the north.

TABLE A2 City of Oxnard

VCTM 2040BL												
Daily Vehicle Miles Traveled												
O/D Method	Non-Ventura County ¹	Camarillo	Fillmore	Moorpark	Ojai	Oxnard	Port Hueneme	San Buenaventura	Santa Paula	Simi Valley	Thousand Oaks	Unincorporated
Non-Ventura County ¹	-	637,982	260,532	427,042	59,753	871,329	95,787	587,592	169,004	2,017,417	1,798,168	1,372,626
Camarillo	629,244	111,487	5,142	31,402	11,526	185,748	11,706	96,877	27,573	46,782	142,593	131,691
Fillmore	268,587	4,845	37,007	11,040	5,597	21,224	1,160	22,675	23,412	15,837	20,020	63,065
Moorpark	425,581	31,688	10,830	83,353	3,402	45,729	3,685	21,892	11,977	136,233	139,674	67,594
Ojai	53,080	10,884	5,021	3,253	27,774	35,411	3,556	22,611	12,059	6,632	10,948	67,769
Oxnard	881,989	191,058	20,886	47,813	38,488	1,077,980	92,630	321,049	96,206	80,327	219,870	381,355
Port Hueneme	96,137	11,879	1,146	3,869	3,877	92,205	11,652	29,999	7,031	6,819	21,902	31,621
San Buenaventura	571,111	95,264	21,745	21,991	23,199	309,880	29,388	801,657	69,694	40,056	74,074	201,613
Santa Paula	166,691	27,777	23,265	11,548	13,106	94,380	6,904	69,304	98,122	19,289	35,905	80,177
Simi Valley	1,933,129	47,981	16,312	124,947	6,879	76,081	6,602	38,439	18,823	586,728	299,114	129,192
Thousand Oaks	1,727,261	139,507	19,555	131,024	11,082	209,454	21,020	72,026	34,417	290,952	815,140	248,098
Unincorporated	1,309,868	138,504	67,871	68,321	71,044	373,561	31,355	200,907	83,362	133,182	255,793	347,700

¹Includes other SCAG counties to the east and south, as well as Santa Barbara County to the north.

appendix**d**

City of Oxnard Socioeconomic Vulnerability Index

A socioeconomic vulnerability index was developed to identify the areas that face greater vulnerability in Oxnard due to social, economic and health indicators. This process was developed to enhance understanding of local equity and the indicators that may contribute to disproportionate burden. As a result, the findings of this process are able to enhance the effectiveness of decision-making and future implementation, with the goal of prioritizing those that are most in need. Those individuals and groups that were identified as most vulnerable are described in Chapter 4, *Community Vulnerability and Adaptation*.

Indicators of concern within Oxnard were identified through the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 and California Healthy Places Index (HPI) tool. These tools provide data on environmental and social indicators that affect communities statewide and identify communities that are most disadvantaged or burdened by indicator. Social indicators selected for Oxnard’s vulnerability index were identified and then vetted through community and stakeholder engagement meetings.

Methodology

Through CalEnviroScreen 4.0 and HPI, percentile information was gathered for each census tract within Oxnard and assigned a vulnerability score based on natural breaks. This process utilized CalEnviroScreen 4.0, HPI, Microsoft Excel, and ArcGIS Pro to identify percentiles by indicator, use natural break thresholds, determine overall vulnerability scores by census tracts, and project the vulnerability scores onto a map. **Table D-1** describes the indicators identified through CalEnviroScreen 4.0 and HPI.

TABLE D-1 Socioeconomic Vulnerability Indicators

INDICATOR	DESCRIPTION
CalEnviroScreen 4.0	
Asthma	This indicator represents an asthma rate. It is an estimate of the number of emergency department visits for asthma per 10,000 people over the years 2015 to 2017. The percentile describes the asthma rate compared to census tracts in California. The average percentile of census tracts for Oxnard is 50, meaning, meaning the asthma rate is higher than 50 percent of the census tracts in California.
Cardiovascular Disease	This indicator represents the rate of heart attacks. It is an estimate of the number of emergency department visits for acute myocardial infarction (or heart attack) per 10,000 people over the years 2015 to 2017. The percentile describes the rate of heart attacks compared to census tracts in California. The average percentile of census tracts for Oxnard is 52, meaning, meaning the rate of heart attacks is higher than 52 percent of the census tracts in California.
Low Birth Weight	This indicator represents the percent of low-birth-weight babies in the census tract. It measures the percentage of babies born weighing less than 2500 grams (about 5.5 pounds) out of the total number of live births over the years 2009 to 2015. The number describes the percent of low-birth-weight babies compared to census tracts in California. The average percent of low-birth-weight babies in Oxnard is 45 percent, meaning the percent low birth weight is higher than 45 percent of the census tracts in California.
Low Education	The low education indicator measures the percentage of adults over 25 in the census tract with less than a high school education. The data is from 2015 to 2019. The percentile describes the percent of adults without a high school education compared to census tracts in California. the average percentile of census tracts for the city of Oxnard is 71, meaning the percent of adults without a high school education is higher than 71 percent of the census tracts in California.

INDICATOR	DESCRIPTION
Housing Burden	The housing burden indicator measures the percent of households in a census tract that are both low income (making less than 80 percent its county median family income) and severely burdened by housing costs (paying greater than 50 percent of their income to housing costs). The data are from 2013 - 2017. The percentile describes the percent housing burdened compared to the rest of the state. The average percentile of census tracts for the city of Oxnard is 52, meaning the percent housing burdened is higher than 52 percent of the rest of the state.
Linguistic Isolation	The linguistic isolation indicator measures the percentage of households in the census tract where no one over 14 speaks English well. The data is from 2015 to 2019. The percentile describes the percent of linguistically isolated households compared to census tracts in California. The average percentile of census tracts for the city of Oxnard is 64, meaning the percent of linguistically isolated households is higher than 64 percent of the census tracts in California.
Poverty	The poverty indicator measures the percentage of people in the census tract living below twice the federal poverty level. Twice the poverty level is used due to the high cost of living in California. The data is from 2015 to 2019. The percentile describes the percent of people living below twice the poverty level compared to census tracts in California. The average percentile of census tracts for the city of Oxnard is 64, meaning the percent of people living below twice the poverty level is higher than 64 percent of the census tracts in California.
Unemployment	The unemployment indicator measures the percentage of people over 16 in the census tract who are unemployed and eligible for the workforce. The indicator excludes retirees, students, homemakers, institutionalized persons except prisoners, those not looking for work, and military personnel on active duty. The data is from 2015 to 2019. The percentile describes the percent of unemployed people in Oxnard, compared to census tracts in California. The average percentile of census tracts for the city of Oxnard is 52, meaning the percent of unemployed people is higher than 52 percent of the census tracts in California.
Healthy Places Index	
Automobile Access	This indicator measures the percentage of households with access to an automobile compared to other tracts in California. The average percentile of census tracts for the city of Oxnard is 60, meaning Oxnard has a higher percentage of households with access to an automobile than 60 percent of other California census tracts.
Active Commuting	This indicator measures the percentage of workers (16 years and older) who commute to work by transit, walking, or cycling than other tracts in California. The average percentile of census tracts for the city of Oxnard is 32, meaning Oxnard has a higher percentage of workers who commute than 32 percent of other California census tracts.
Park Access	This indicator measures the percentage of the population living within walkable distance (half-mile) of a park, beach, or open space greater than 1 acre, compared to other census tracts in California. The average percentile of census tracts for the city of Oxnard is 59, meaning Oxnard has a higher percentage of the population living within walkable distance (half-mile) of a park, beach, or open space greater than 1 acre than 59 percent of other California census tracts.
Tree Canopy	This indicator measures the percentage of land with tree canopy (weighted by number of people per acre) compared to other California census tracts. The average percentile of census tracts for the City of Oxnard is 17, meaning Oxnard has a higher percentage of land with tree canopy than just 17 percent of other California census tracts. (In Oxnard, 3.12 percent of land has tree canopy.)
Insured Adults	This indicator measures the percentage of adults ages 18 to 64 years with health insurance. The average percentile of census tracts for the city of Oxnard is 30, meaning Oxnard has a higher percentage of adults with health insurance than just 30 percent of other California census tracts. (In the City, 68.83 percent of people ages 18 to 64 years are currently insured.)
Children	This indicator measures the percentage of people under 5 years old. The average percentile of census tracts for the city of Oxnard is 69, meaning Oxnard has a higher percentage of children than 69 percent of other California census tracts.
Outdoor Workers	This indicator measures the percentage of adults (over 16) who work outdoors. The average percentile of census tracts for the city of Oxnard is 81, meaning Oxnard has a higher percentage of adults (over 16) who work outdoors than just 81 percent of other California census tracts. (In this tract, 52.48 percent of people older than 16 and employed work outdoors.)

INDICATOR	DESCRIPTION
Non-English Speakers	This indicator measures the percentage of households where at least one person, ages 14 years or older, does not speak English well, compared to other census tracts in California. The average percentile of census tracts for the City of Oxnard is 65, meaning Oxnard has a higher percentage of households where at least one person does not speak English well than 65 percent of other California census tracts.
Non-White	This indicator measures the percent of non-Whites in the population. The average percent of census tracts for the City of Oxnard is 79, meaning the percent of adults who are non-white is 79 percent. A greater percentage of non-Whites indicates greater vulnerability as people of color are often associated with less opportunities/resources and with various conditions and indicators that increase their vulnerability e.g., income, linguistic isolation, vehicle ownership, poverty, access to education and employment.

The process determined a vulnerability score by census tract, for all tracts within Oxnard. The majority of census tracts within Oxnard were found to have greater vulnerability due to the indicators and respective vulnerability scores used in the assessment.

As in Chapter 4, *Community Vulnerability and Adaptation*, **Figure D-1** shows the relative vulnerability of Oxnard census tracts based on the indicators described above.

Vulnerable Populations

This section describes all persons and groups identified as vulnerable to climate hazards, including those that were not included within the social vulnerability index. For those groups not included, this was due to either a lack of data or a lesser degree of vulnerability relative to other groups. A lower degree of vulnerability does not mean the group is not vulnerable or able to benefit from targeted resources and capacity-building. However, for the purposes of this methodology, groups with significantly lower levels of vulnerability as described by the data were not included so as not to significantly alter the results of the vulnerability index. Data from CalEnviroScreen 4.0 and HPI, and community/stakeholder feedback, identified and vetted vulnerable populations considered in the vulnerability index.

Children

Roughly 8 percent of the population of the City of Oxnard is under 5 years of age. Children under the age of 5 are particularly affected by heat waves, pollution, undernutrition, vector borne diseases, as well as respiratory and cardiovascular diseases due to anatomical, cognitive immunological, and psychological differences between children and adults (HPI, 2020; Lawrence et al., 2018).

Elderly

Within the City of Oxnard, approximately nine percent of people are at least 65 years old. The city has a lower percentage of elderly than 84 percent of other cities statewide. The southwestern communities of Oxnard Shores and Channel Islands west of Victoria Ave have the highest percentage of elderly, with approximately 25 percent of people ages 65 years and older. Older adults may be less mobile and may have more trouble evacuating in the event of flooding or another climate event.

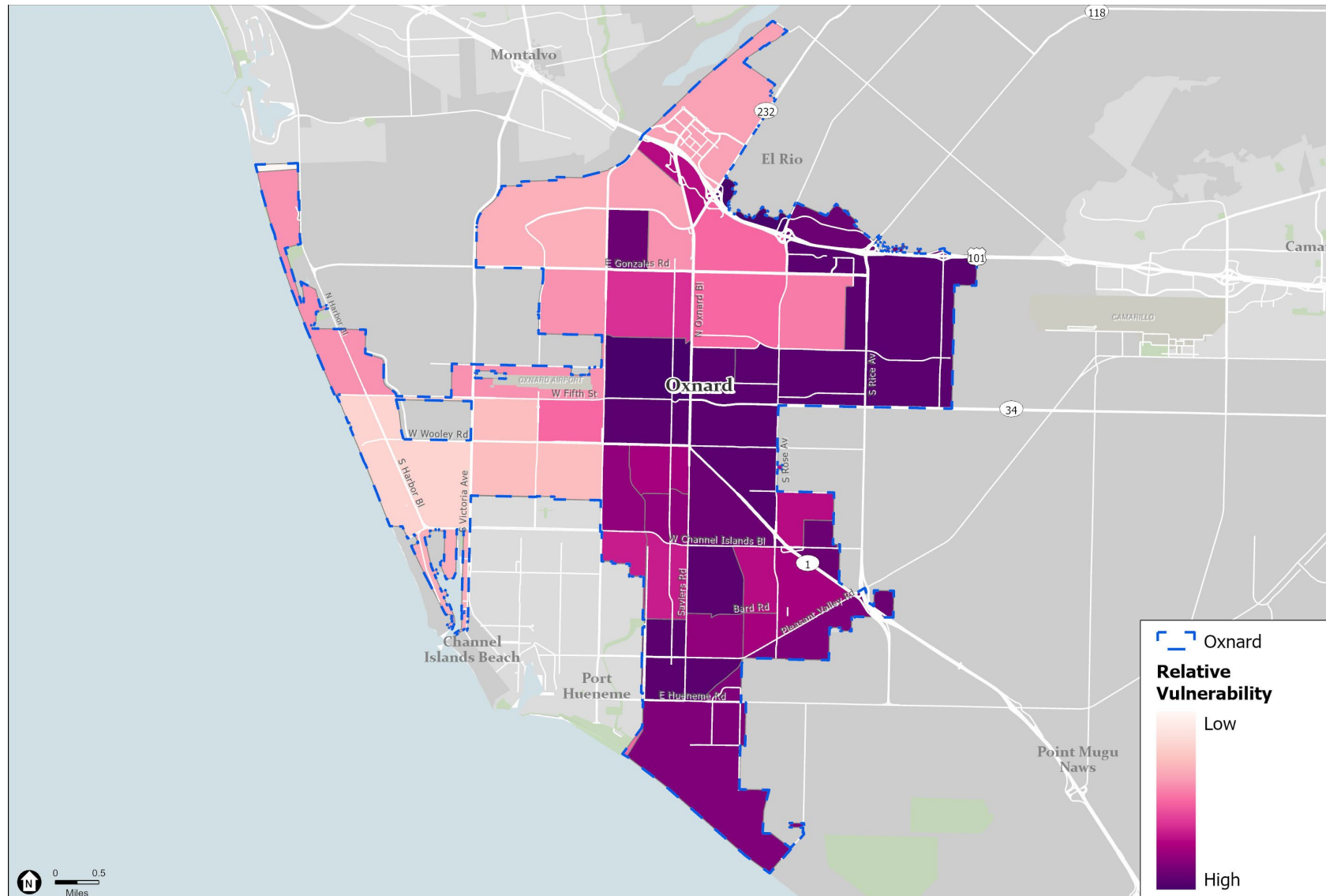


FIGURE D-1 Relative Socioeconomic Vulnerability in Oxnard

Linguistically Isolated Households

Within the City of Oxnard, approximately 17 percent of households do not have an adult that speaks English, which is lower than the percentage of linguistically isolated households in other cities across the state. This percentage is higher in census tracts towards the center and eastern portions of the city. Households without an English speaker at home are considered to be linguistically isolated and may have more difficulty accessing information about evacuation. Linguistic isolation can increase vulnerability during climate events as it affects the ability to understand and respond to hazards.

LGBTQ+ Individuals

There is a lack of datasets regarding members of LGBTQ+ communities. These individuals are considered vulnerable populations and face significant challenges adapting to climate change (CA 4th climate change assessment, 2018). LGBTQ+ individuals face challenges from discrimination and may receive less support and have less resources to increase their resilience and respond to hazards.

Low Education Attainment

Individuals and households with members having a higher education are able to access more opportunities in the workforce and usually have greater earning ability than those with less education. Studies have linked low educational attainment with health impacts from air pollution (OEHHA, 2021). In Oxnard, approximately 5 percent of individuals ages 15 to 17 are not enrolled in school. Oxnard has a higher percentage of 15- to 17-year-olds in school than 16 percent of other cities statewide. Having access to education increases the capacity for individuals to have a career and income. Education is also correlated with increased life expectancy and reduced risk of negative health outcomes (PHASoCal, 2018).

Low Income

The city as a whole has 47 percent of individuals with an income below 200 percent of the federal poverty threshold.¹ The central, eastern and southern portions of the city have a greater number of individuals with an income below 200 percent of the federal poverty threshold, ranging from 51 percent to 73 percent. Low-income households and individuals are more likely to live in inadequate housing and are more likely to live in areas that are already disproportionately impacted by pollution, health problems, and natural disasters. Low-income communities have less access to financial resources and are more likely to be uninsured, which makes adaptation and recovery from coastal hazards more difficult. Additionally, low-income households often do not have access to vehicles, which can make evacuating more difficult (PHASoCal, 2018).

Low-Income Homeowner Housing Burden

Compared to the city as a whole, where 12 percent of low-income homeowners spend more than 50 percent of their income on housing costs, the Ormond Beach Commercial Area community to the south has 28 percent of low-income home owners that do so. High housing costs and housing instability reduce a household's access to

¹ 200 percent of the federal poverty level is often used to represent poverty in California due to high costs of living.

financial resources and may make a household more likely to be uninsured, all of which makes adaptation and recovery from coastal hazards more difficult (PHASoCal, 2018).

Outdoor Workers

Outdoor workers are a significant part of Oxnard's community. There are approximately 20 percent of people ages 16 and older that are employed outdoors in Oxnard. The city has a lower percentage of persons ages 16 and older that work outdoor than 11 percent of other California cities. Outdoor workers are at high risk from climate hazards, including extreme heat, flooding, severe weather, air pollution and wildfire smoke, and others. Outdoor workers also face health-related risks caused by extreme heat, such as heat stress and heat stroke (PHASoCal, 2018).

People Lacking Health Insurance

Approximately 31 percent of adults in Oxnard do not have health insurance. This percentage demonstrates less healthy conditions than roughly 87 percent of other cities statewide. Lack of health insurance is higher in neighborhoods in the eastern, southern and central portions of the City, with the lowest percentage in the La Colonia neighborhood (56 percent). Having health insurance greatly improves health outcomes by connecting people with the necessary medical care. Individuals without access to healthcare are likely to be more vulnerable to the health impacts of flooding and the mental health impacts of climate change.

People of Color

People of color make up the majority of persons in Oxnard, approximately 86 percent of people. Race and ethnicity are considered within the Healthy Places Index as an important social determinant of health, and contributes to the overall scoring of healthy conditions in communities statewide. People of color may face discrimination, linguistic barriers, and other factors that limit their ability to adapt to climate hazards.

People with Disabilities

In the City of Oxnard, there are approximately 10 percent of individuals that have a physical or mental disability. Two neighborhoods in the central area of the city, on either side of Oxnard Boulevard near Wooley Road, have higher percentages of adults with disabilities compared to other areas of the city (an average of 16 percent). To the southwest within the Hollywood by the Sea community, there are 13 percent of individuals with a disability. Individuals with disabilities may experience the effects of climate change more intensely than other groups due to discrimination, marginalization, and other social and economic factors. Additionally, certain disabilities may prevent individuals from being mobile, which may impact their ability to evacuate in the event of flooding.

Renters

The City of Oxnard as a whole has 47 percent of housing units occupied by renters, which is less than other cities statewide. Three neighborhoods in the center portion of Oxnard (along North Oxnard Boulevard) have an

average of 72 percent occupied housing units occupied by renters. One tract in southern Oxnard, between West Pleasant Valley Road and West Hueneme Road, has almost 82 percent of renters, the highest in the city. Renters, especially low-income renters, have a reduced ability to prepare homes and properties for climate hazards, such as inland and coastal flooding. Additionally, low-income renters often spend a disproportionate amount of their income on housing costs and are at an increased risk of displacement during natural disasters. Within several neighborhoods in Oxnard, along North Oxnard Boulevard to the north and Channel Islands Boulevard to the south, over 30 percent of renters pay more than 50 percent of their income on housing costs. Renters also do not have access to information regarding the flood risk of rented properties and often do not have insurance to cover losses from natural disasters (HPI, 2020).

Single Heads of Household

Approximately 26 percent of households in Oxnard are led by a single parent. Households led by a single parent are vulnerable to the impacts of climate hazards as they have only one wage earner to support household financial needs and only one parent to perform family and house care duties (HPI, 2020).

Undocumented Individuals

Undocumented individuals are an important part of the community and workforce, though there is often a gap in data that provides important population information for this group. Lack of data on undocumented individuals can make it challenging to identify and deploy targeted strategies that increase resources and support. Data from HPI shows that approximately 37 percent of people in Oxnard are born outside of the U.S. or U.S. territory. Oxnard has a higher percentage of people born outside of the U.S. than approximately 90 percent of other cities statewide. However, this is not representative of undocumented individuals in Oxnard.

Unemployed/Underemployed

Compared to the City of Oxnard where 71 percent of people ages 25 to 64 are employed, the central neighborhoods of Oxnard near Wooley Road and Oxnard Boulevard have a lower percentage of employed individuals at approximately 61 percent. One census tract to the south, south of East Pleasant Valley Road, also has approximately 61 percent of people ages 25 to 64 employed (PHASoCal, 2018). Unemployed or under employed individuals may be more vulnerable to the impacts of climate change as they may have less access to financial and other resources, which may make adaptation to climate change more difficult (PHASoCal, 2018).

Unsheltered Individuals

Unsheltered individuals are more exposed to extreme heat, air pollution, and flooding and are at an increased risk for dehydration, sunburn, respiratory and cardiovascular diseases as well as displacement. Homeless individuals are also less likely to have access to healthcare, financial resources, or reliable transportation.

Visitors and Seasonal Residents

Visitors and seasonal residents are particularly vulnerable to extreme heat as they may not be aware of the potential for negative impacts or of available resources to assist with cooling. Visitors and seasonal residents are less likely to receive information or warnings regarding potential climate impacts and be less aware of available programs and policies to reduce impacts such as evacuation plans and routes etc. Therefore, seasonal residents and visitors may be less prepared and more vulnerable to climate change impacts such as flooding.

Additionally, visitors from surrounding areas may increase in the future as other beaches are lost, and as extreme heat events further inland spur more people to seek respite at the coast. Ventura County estimates that Ventura beaches could experience up to eight inches of sea level rise by 2030 under a high sea level rise scenario, and up to 58 inches by 2100 (VC Resilient Coastal Adaptation Project, 2018). This may increase the demand for beach access at other beaches along the coast.

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appendix

Partnering Organizations

Table E-1 lists the businesses, community-based organizations, climate stewards, local, state, and federal partners that could potentially work with the City Lead Department to implement the strategies and actions in the City of Oxnard CAAP. Many of these organizations contributed ideas and input to the development of the CAAP.

TABLE E-1 Potential Partnering Organizations

NAME	CONTACT	EMAIL
Environmental Organizations		
Audubon	Cynthia Hartley	cynhartley@gmail.com
Beacon	Marc Beyeler	beyeler@beacon.ca.gov
CAUSE	Maricela Morales	mmorales@coastalalliance.com Maricela@causenow.org Ocil@causenow.org
Climate First	Karina Kaye Liz Beall	karina.kaye@gmail.com liz@cfrog.org
Climate Hub	Chris Tull	Ctull17@gmail.com
Coastal Representatives	Laura Cook Randy Cabral Ron Matson Mark Ostrove	laurapcook@gmail.com RKCFX55@gmail.com rwmatson@sbcglobal.net mostrove@gmail.com
Community Environmental Council	Alexis Rizo Florenca Ramirez Jennifer Hernandez Michael Chiacos	alexis.rizo@cecmail.org ; azulflorenca@gmail.com jhernandez@cecmail.org mchiacos@cecmail.org
Friends of Santa Clara River	Jim Danza	contact@fscr.org
Influence Ecology	Josh Damingo	josh@influenceecology.com
Nature Conservancy	Kat Selm Peter Dixon Alyssa Mann	karina.kaye@gmail.com ; peter.dixon@tnc.org alyssa.mann@tnc.org
Sierra Club	James Hines	jhcasitas@gmail.com
Sierra Club Los Padres Chapter	Elizabeth Lamar	elisabethlamar@hotmail.com
Businesses		
Gills Onions	Laura Hamman	LauraHamman@gillsonions.com
KC Enterprises	KC Cady	
Local 585	Anthony Mireles	anthony.mireles@local585.org
Marine Emporium Landing	Steve Buenger	steve@buengerinc.com
McGrath Ranch and Garden	Phil McGrath	
Oxnard Chamber of Commerce	Nancy Lindholm	n.lindholm@oxnardchamber.org
Oxnard Young Planning Group (OXYG)	Laura Mullen	Mullen.laura@gmail.com
Proctor and Gamble	Mario Aguilar	aguilar.m@pg.com
Surfrider Ventura County Chapter	Laura Oergel	chair@ventura.surfrider.org
TKC Enterprises	Tom Cady	tomcady@aol.com
UCCE Ventura County and Hansen Agricultural Research and Extension Center	Annemiek Schilder	amschilder@ucanr.edu
Ventura County Coastal Association of Realtors	Marta Brown	MGBrown@vcrealtors.com

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appendix

Funding Sources

Table F-1 lists available programs and funding sources. Federal, state, and regional agencies and organizations provide grants and loans, as well as planning assistance, for investments in a variety of climate-related projects. Grants and loans can provide short-term funding for program development and program testing, and could help pay for the staff time required to develop programs, and then establish an alternative financial framework for the program’s continued operation after the grant expires. In addition, utilities and other organizations offer rebates, financing, and discounts that can help fund energy efficiency improvements, appliance replacements, and other projects for homes and businesses.

TABLE F-1 Potential Funding Sources to Support CAP Implementation

PROGRAM	DESCRIPTION
Federal Programs	
Energy Efficient Mortgages	The Federal Housing Administration (FHA) offers an Energy Efficient Mortgage Loan program that helps current or future homeowners save money on their utility bills by enabling borrowers who might not otherwise qualify for conventional loans on affordable terms to finance energy-efficient improvements with their FHA mortgage. Qualified homebuyers or homeowners are automatically pre-approved for an additional 5 to 15 percent of their approved loan to do energy-efficient repairs to their home without adding to their debt-to-income ratio. The EEM program recognizes that an energy-efficient home will have lower operating costs, making it more affordable for the homeowner.
ENERGY STAR® Portfolio Manager®	Portfolio Manager is a free tool supported by the U.S. Environmental Protection Agency that measures a building's energy performance and compares it to other similar buildings. It allows building owners and managers to track energy use and verify improvements. Approximately 40 percent of U.S. commercial building space is benchmarked in Portfolio Manager—making it the industry-leading benchmarking tool.
Federal Emergency Management Agency (FEMA)	<p>Federal Emergency Management Agency (FEMA) Hazard Mitigation Grants (HMG): Local governments, tribes and eligible not-for profits may apply for HMG funding in post-disaster areas to implement long-term solutions to reduce or eliminate impacts and future losses from future extreme events and disasters. Potential projects may include increasing the elevation of structures vulnerable to flooding; property acquisition for conversion to open space; flood control projects; wind or extreme temperature retrofits; and, similar projects that advance the resilience of infrastructure of the built environment.</p> <p>FEMA Pre-Disaster Mitigation Program (PDM): PDM grants support projects that implement long-term risk reduction from future hazards and climate events while reducing dependence on future federal disaster recovery assistance. Eligible projects include generator installation at critical facilities, eligible acquisition, elevation and mitigation reconstruction projects, and more.</p> <p>FEMA Flood Mitigation Assistance Program (FMA): Local governments, tribes and certain not-for-profit organizations may apply for FMA for infrastructure and utility protection, floodwater management, wetland restoration, aquifer storage, water and wastewater management and other related projects.</p>
Federal Solar Investment Tax Credit	The federal residential solar energy credit is a tax credit that can be claimed on federal income taxes for a percentage of the cost of a solar photovoltaic (PV) system. The system must be placed in service during the tax year and generate electricity for a home located in the United States. In December 2020, Congress passed an extension of the ITC, which provides a 26% tax credit for systems installed in 2020-2022, and 22% for systems installed in 2023. (Systems installed before December 31, 2019 were eligible for a 30% tax credit.) The tax credit expires starting in 2024 unless Congress renews it.

PROGRAM	DESCRIPTION
Federal Infrastructure Investment and Jobs Act (IIJA)	<p>The Federal Infrastructure Investment and Jobs Act (IIJA), passed in 2021, authorizes approximately \$550 billion in new federal investment in America’s transportation, communication and water infrastructure, with much of the funding geared towards the clean energy transition and to increasing resilience to climate change. The legislation includes:</p> <ul style="list-style-type: none"> • \$39 billion of new investment to modernize transit, and improve accessibility for the elderly and people with disabilities. • \$7.5 billion to build a national network of electric vehicle chargers • \$73 billion for power infrastructure and the clean energy transmission. • \$110 billion for roads, bridges and other major projects; • \$11 billion in transportation safety programs; • \$39 billion in transit modernization and improved accessibility.
Low Income Home Energy Assistance Program (LIHEAP)	<p>LIHEAP is a federal program administered by U.S. Department of Health and Human Services that provides assistance to eligible low-income households to manage and meet their immediate home heating and/or cooling needs. LIHEAP offers several of services to help low-income households meet their home energy needs.</p>
Moving Ahead for Progress in the 21st Century (MAP-21)	<p>Federal funding through the MAP-21 program is administered through the state and regional governments. MAP-21 funding is administered through Caltrans, MPOs (SCAG in Southern California), and RTPAs (RCTC in Riverside County). Most of the funding programs are transportation versus recreation oriented, with an emphasis on reducing auto trips and providing an intermodal connection. In most cases, MAP-21 provides matching grants of 50 to 100 percent.</p>
Safe Routes to Schools	<p>Safe Routes to Schools is an international movement focused on increasing the number of children who walk or bike to school by funding projects that remove barriers to doing so. These barriers include a lack of infrastructure and non-infrastructure projects, safety, and limited programs that promote walking and bicycling. In California, two separate Safe Routes to School programs are available at both the state and federal level, and both programs fund qualifying infrastructure projects.</p>
U.S. Department of Energy (DOE)	<p>The Federal government including DOE provides grants and other financial incentives to local governments for renewable energy installations and alternative fuel vehicle and fueling infrastructure. Information regarding programs is available at http://www.grants.gov.</p>
United States Department of Housing and Urban Development	<p>The City implements their Home Improvement Program, which supports the implementation of energy-efficient upgrades to qualifying low- to moderate-income households in owner-occupied single-family homes. The program is funded by the U.S. Department of Housing and Urban Development (HUD) through allocation of the HOME Investment Partnerships Program (HOME) formula grants.</p>
WaterSense	<p>WaterSense, a voluntary partnership program sponsored by the U.S. Environmental Protection Agency, is both a label for water-efficient products and a resource for helping residents and businesses save water.</p>
State Programs	
CAL FIRE	<p>The CAL FIRE Urban and Community Forestry Program focuses on use of trees and associated vegetation to provide multiple benefit solutions and to mimic the functions of natural forests in neighborhoods. CAL FIRE offers grants to eligible applicants on an annual basis, as funding permits. These grants are designed to assist communities to create or implement multibenefit projects with a focus on GHG emissions and providing benefits to disadvantaged communities.</p>
California Air Resources Board (CARB)	<p>CARB offers several grants, incentives, and credits programs to reduce on-road and off-road transportation emissions. Residents, businesses, and fleet operators can receive funds or incentives depending on the program.</p> <ul style="list-style-type: none"> • California Vehicle Rebate Program (CVRP) provide up to \$7,000 for recipients to purchase or lease a new plug-in hybrid electric vehicle (PHEV), battery electric vehicle (BEV), or a fuel cell electric vehicle (FCEV). The CVRP prioritizes low-income recipients. • The Car Sharing and Mobility Options program provides funding for bikeshare options in low-income areas.

PROGRAM	DESCRIPTION
	<ul style="list-style-type: none"> • The Carl Moyer Program provides funding to replace older heavy-duty diesel vehicles and equipment with cleaner technologies, primarily in environmental justice and low-income communities • Clean Mobility Options Voucher Pilot Program (CMO) funds zero-emission mobility projects such as carsharing, bikesharing, vanpooling, ride-on-demand services, and innovative transit services in disadvantaged communities. • Bus Replacement Grant program offers grants for the purchase of new zero-emission buses to replace old gasoline, diesel, compressed natural gas, or propane buses. • Hybrid and Zero Emission Truck and Bus Voucher Incentive Project (HVIP) accelerates commercialization by providing point-of-sale vouchers to make advanced vehicles more affordable • Clean Vehicle Assistance program provides grants and affordable financing to help California residents with gross household incomes less than or equal to 400 percent of the federal poverty level to purchase a new or used hybrid or electric vehicle. • The Clean Cars 4 All program (formerly known as the Enhanced Fleet Modernization Plus-Up Program) helps get lower-income consumers into cleaner technology vehicles by retiring their older, higher-polluting vehicle and upgrading to a cleaner vehicle. Participants also have the option to replace their older vehicle for alternative mobility options such as public transit passes or an electric bicycle. • Clean Off-Road Equipment Voucher Incentive Project (CORE) promotes the purchase of clean technology over internal combustion options, targeting commercial-ready off-road products that have not yet achieved a significant market foothold. • The \$1 billion Proposition 1B Goods Movement Emission Reduction Program is a partnership between CARB and local agencies, air districts, and seaports to quickly reduce air pollution emissions and health risk from freight movement along California's trade corridors. • The Lower-Emission School Bus Program provides funds to purchase new buses to replace old, high-emitting public school buses. • Air Quality Improvement Program (AB 118) is a voluntary incentive program administered by CARB to fund clean vehicle and equipment projects, research on biofuels production, research on the air quality impacts of alternative fuels, and workforce training. • Carbon credits can be generated through CARB's Low Carbon Fuel Standard (LCFS), through eligible projects that support the deployment of ZEV infrastructure, including for hydrogen and electric vehicles.
California Climate Investments (CCI)	<p>CCI uses proceeds from the Cap-and-Trade Program to facilitate comprehensive and coordinated investments throughout California to further the state's climate goals. Through funding from the Greenhouse Gas Reduction Fund (GGRF), CCI offers the following incentive programs:</p> <ul style="list-style-type: none"> • The CVRP provides funding for recipients to purchase or lease a new PHEV, BEV, or FCEV. • The Clean Vehicle Assistance Program provides grants and affordable financing to help low-income Californians purchase a new or used hybrid or electric vehicle. • Various programs promoting clean energy and energy efficiency.
California Coastal Commission	<p>The State Coastal Conservancy issues grants on an on-going basis to non-profit organizations, public agencies, and federally-recognized tribes for projects that restore and protect the California coast, increase public access to it, and increase communities' resilience to climate change.</p> <ul style="list-style-type: none"> • The Coastal Resource and Public Access Program funds a wide variety of capital improvement projects along the California coast and in coastal watersheds, to increase availability of beaches, parks and trails for the public, protect and restore natural lands and wildlife habitat, preserve working lands, and increase community resilience to the impacts of climate change.

PROGRAM	DESCRIPTION
California Department of Community Services and Development	The Low-Income Weatherization Program (LIWP) supports owners and residents to lower utility costs, save energy, and reduce GHG emissions from multifamily properties. The LIWP is funded by the California Department of Community Services and Development and covers approximately 30 to 100 percent of energy efficiency upgrade costs for low-income residents within disadvantaged communities. The program also provides free property assessments, design assistance, and contractor coordination.
California Department of Food and Agriculture (CDFA)	<p>CDFA State Water Efficiency and Enhancement program: CDFA Water Efficiency and Enhancement grants support projects that reduce on-farm water consumption to achieve greenhouse gas emission reductions and water conservation.</p> <p>Sustainable Agricultural Lands Conservation (SALC) program: The SALC program provides funding for agricultural conservation easements, agricultural land strategy planning, and other GHG emission reduction projects in the agricultural sector. The SALC program is administered by the Strategic Growth Council in partnership with the California Department of Conservation and the California Natural Resources Agency.</p>
California Department of Fish and Wildlife (CDFW)	<p>CDFW implements a number of programs to support green infrastructure, parks, urban forestry, and agriculture, and ultimately reduce GHG emissions:</p> <ul style="list-style-type: none"> • Funding opportunities for multibenefit ecosystem restoration and protection projects under both Proposition 1 and Proposition 68. Funding focuses on planning, implementation, and acquisition projects across multiple priorities. • The Wetlands Restoration for Greenhouse Gas Reduction Program restores wetland ecosystems to provide essential services to California's people, wildlife, and fish. Wetlands have high carbon sequestration rates that can sequester carbon for decades. This program is part of California Climate Investments (CCI).
California Department of Resources Recycling and Recovery (CalRecycle)	<p>CalRecycle grant programs allow jurisdictions to assist public and private entities in management of waste streams. Incorporated cities and counties in California are eligible for funds. Program funds are intended to:</p> <ul style="list-style-type: none"> • Reduce, reuse, and recycle all waste • Reduce landfill disposal of organics, including food waste • Encourage development of recycled-content products and markets • Protect public health and safety and foster environmental sustainability <p>The Recycling Market Development Zone (RMDZ) program combines recycling with economic development to fuel new businesses, expand existing ones, create jobs, and divert waste from landfills. This program provides attractive loans, technical assistance, and free product marketing to businesses that use materials from the waste stream to manufacture their products and are located in a zone.</p>
California Department of Transportation (Caltrans)	<p>Caltrans offers funding programs to support implementation of bicycle and pedestrian infrastructure:</p> <ul style="list-style-type: none"> • The Active Transportation Program (ATP) funds bike and pedestrian infrastructure projects, educational and promotional efforts, safe routes to school projects, and active transportation planning. The state awards half of the funds through a competitive grants process. Forty percent goes to metropolitan agencies to distribute and 10 percent goes to rural areas. At least 25 percent of all funds must benefit residents in disadvantaged communities. • Sustainable Communities Grants to encourage local and regional planning that further state goals related to sustainability, preservation, mobility, safety, innovation, economy, health, and social equity. • The Strategic Partnerships Grants help to identify and address statewide, interregional, or regional transportation deficiencies on the state highway system in partnership with Caltrans. This program also funds transit-focused planning projects that address multimodal transportation deficiencies. • Transportation Development Act (TDA) Article 3 (SB 821) funding, also known as the Local Transportation Fund (LTF), which is used by cities for the planning and construction of bicycle and pedestrian facilities.

PROGRAM	DESCRIPTION
California Department of Water Resources (DWR)	<p>Adopted by California voters in 2014, Proposition 1 authorized a state water bond to implement water infrastructure projects listed in regionally adopted Integrated Regional Water Management Plans (IRWMPs). Proposition 1 funding is allocated to IRWMP projects in a competitive grant process. Such projects may include public water system improvements, watershed protection and restoration, integrated water management, water recycling, ecosystem protection, groundwater management, flood management, drought preparedness projects and more.</p>
California Energy Commission (CEC)	<p>The CEC funds both the California Capital Access Program (CalCAP) and the California Electric Vehicle Infrastructure Project (CALeVIP) program that provide incentives for installation of vehicle charging infrastructure.</p> <p>The Southern California Incentive Project (SCIP), part of CALeVIP, offers rebates of up to \$70,000 per direct current (DC) fast Electric Vehicle Supply Equipment (EVSE) installation at new sites and 75% of total project costs, and up to \$40,000, per DC fast EVSE installation at replacement or make-ready sites. Installations in disadvantaged communities are eligible for rebates for 80% of the total project cost, up to \$80,000 per DC fast EVSE, regardless of installation site type.</p> <p>The California Capital Access Program (CalCAP) provides small business borrowers and lenders incentives to finance the design, development, purchase, and installation of electric vehicle charging stations in California.</p> <p>The CEC is also the primary funder of the state's advanced microgrid projects, which to date has dedicated \$84.5 million in matching funding to develop 20 projects across the state.</p> <p>The CEC provides loan programs through the Energy Conservation Assistance Act (ECAA) that support energy efficiency and energy generation projects:</p> <ul style="list-style-type: none"> • The ECAA-Ed program provides zero-interest rate loans to public school districts, charter schools, county offices of education, and state special schools. • The ECAA Low-Interest Loans program provides 1 percent interest loans to local governments, special districts, public colleges and universities, public care institutions, and public hospitals for energy retrofits and some new construction projects.
California Natural Resources Agency (CNRA)	<p>The CNRA offers a variety of grant and loan programs within its departments and conservancies. Programs include but are not limited to the following:</p> <ul style="list-style-type: none"> • The Urban Greening Grant Program funds projects that reduce GHG emissions by sequestering carbon, decreasing energy consumption, and reducing vehicle miles traveled. • The Environmental Enhancement & Mitigation Program funds projects that contribute to mitigation of the environmental effects of transportation facilities. These include urban forestry projects designed to offset vehicular emissions of carbon dioxide. • The Urban Green Infrastructure Program provides funding for multibenefit green infrastructure investments in or benefitting disadvantaged or severely disadvantaged communities.
California Public Utilities Commission (CPUC)	<p>CPUC administers the Technology and Equipment for Clean Heating (TECH) and Building Initiative for Low Emissions Development (BUILD) programs, designed to cut carbon emissions in buildings from fossil fuel combustion for water heating, space heating, and cooking. \$200 million in funding will boost the market for efficient electric space and water heating equipment for buildings, and provide incentives to all-electric new housing, with a focus on low-income households. The programs are funded by the state's cap and trade program.</p> <p>The CPUC's California Solar Initiative (CSI), launched in 2006, continues to provide incentives to low-income customers installing solar PV systems and to all utility customers installing solar water heating systems. The CSI has a Single-family Affordable Solar Homes (SASH) Program, managed by GRID Alternatives, that provides qualified low-income homeowners fixed, up front, capacity-based incentives to help offset the upfront cost of a solar electric system.</p> <p>The CPUC's Self-Generation Incentive Program (SGIP) provides incentives to support existing, new, and emerging distributed energy resources. SGIP provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter.</p>

PROGRAM	DESCRIPTION
California Office of Emergency Services (Cal OES)	Local governments may be eligible for federal funding administered by California to support general disaster and hazard response planning and preparedness. While climate change hazard mitigation interventions have a limited track-record in this line of funding, the allhazards approach is broad enough to capture a wide range of activities. In particular, the development of an institutional capacity for communications and intelligence of ongoing hazards is critical for adaptive management of assets and portfolios.
California State Transportation Agency (CalSTA)	The Transit and Intercity Rail Capital Program (TIRCP) was created by Senate Bill 862 to provide grants from the state's Greenhouse Gas Reduction Fund (GGRF) to fund transformative capital improvements that will modernize California's intercity, commuter, urban rail systems, and bus and ferry transit systems. The aim is to reduce GHG emissions by reducing congestion and vehicle miles traveled throughout California.
Energy Upgrade California	Energy Upgrade California is a statewide program that educates California residents about opportunities to manage energy use, identify clean-energy options, and find rebates and incentives to increase energy efficiency. The program is supported by CPUC, CEC, various utilities, regional energy networks, Community Choice Aggregation, businesses, nonprofits, and local governments. The Gateway Cities Energy Leader Partnership offers assistance in understanding this program and finding contractors who can assess and complete projects that are funding-eligible. Funding is provided by investor-owned energy utility customers under the auspices of CPUC and CEC.
Strategic Growth Council (SGC)	<p>The Affordable Housing and Sustainable Communities Program (AHSC) is administered by the SGC and implemented by the Department of Housing and Community Development (HCD). The AHSC Program funds land use, housing, transportation, and land preservation projects to support infill and compact development that reduce GHG emissions. Funding for the AHSC Program is provided from the GGRF.</p> <p>The Transformative Climate Communities (TCC) Program funds community-led development and infrastructure projects that achieve major environmental, health, and economic benefits in California's most disadvantaged communities. Funded by California's Cap-and-Trade Program, TCC empowers the communities most impacted by pollution to choose their own goals, strategies, and projects to enact transformational change—all with data-driven milestones and measurable outcomes.</p> <p>SGC's Urban Greening Grant Program funds urban greening projects and plans that reduce energy consumption, conserve water, improve air and water quality, and provide other community benefits. These funds assist entities in developing a master urban greening plan that will ultimately result in projects to help the state meet its environmental goals and the creation of healthy communities. These funds also assist entities to preserve, enhance, increase or establish community green areas such as urban forests, open spaces, wetlands, and community spaces (e.g., community gardens).</p> <p>SGC is also allocating funding for community resilience centers starting in 2023. Funding will support community efforts to build new facilities or retrofit existing facilities that will serve as centers to help vulnerable residents withstand the impacts of extreme heat, wildfires, power outages, flooding, and other emergency situations brought about by climate change.</p>
Regional Programs	
Clean Power Alliance (CPA)	<p>Clean Power Alliance (CPA) is the community choice aggregation (CCA) serving local businesses and residents in the greater Los Angeles County, including the City of Oxnard. CPA offers a variety of programs and funding sources geared towards local renewable energy generation and storage as well as demand response management. In 2018, the City joined CPA, and starting in 2019, the default service for all customers became 100 Percent Green Power, relying entirely on renewable energy procured by CPA.</p> <p>CPA's Power Share program offers income-qualified customers in under-resourced communities with discounted 100% renewable energy.</p> <p>CPA's Net Energy Metering (NEM) program allows customers with rooftop solar or other eligible generating systems to receive bill credits and even cash back when their systems produce more energy than they use over a 12-month period.</p>

PROGRAM	DESCRIPTION
Property Assessed Clean Energy (PACE) programs	<p>PACE programs offer financing of energy-efficient upgrades for different types of residential, commercial, and industrial properties. With the PACE framework, local governments provide initial funds for the installation of energy-efficient projects and renewable-energy systems. The property owner then repays the loan over a period of time. The Home Energy Renovation Opportunity (HERO) Program is an energy-efficient financing program designed specifically for residential upgrades where the loan becomes part of the property assessment and is repaid through property taxes.</p>
Southern California Association of Governments (SCAG)	<p>SCAG provides a variety of services to assist local jurisdictions with implementing bicycle infrastructure and to encourage the community to use active modes of transportation:</p> <ul style="list-style-type: none"> • The Sustainable Communities Program provides direct technical assistance to jurisdictions to complete planning and policy efforts that enable implementation of the regional RTP/SCS. • SCAG’s Go Human program is a community outreach and advertising campaign with the goals of reducing traffic collisions in Southern California and encouraging people to walk and bike more. This program is funded by grants from the California Office of Traffic Safety, the California Active Transportation Program, the Mobile Source Air Pollution Reduction Review Committee, and other local sponsors. The program encourages active transportation through education, advocacy, information sharing, and events.
Metropolitan Water District of Southern California (MWD)	<p>SoCal Water\$mart program is a partnership between MWD and its 26 member agencies, including West Basin Municipal Water District, to fund home and business rebates.</p>
Southern California Edison (SCE)	<p>SCE’s Charge Ready Program assists businesses, government organizations, and property owners with deploying the infrastructure and equipment necessary to support EV charging stations at their multi-family buildings, public sector, or business locations. The program includes rebates for Electric Vehicle Supply Equipment (EVSE) installation, as well as technical assistance. Rebate amounts vary, and sites located in disadvantaged communities are eligible for additional rebates.</p> <p>SCE offers tools and resources that enable residential customers and businesses to manage costs, reduce energy usage, and get payment assistance, including:</p> <ul style="list-style-type: none"> • The Energy Savings Assistance program is available to certain homeowners and renters who receive electric services through a residential meter and have an SCE account. • For businesses, SCE offers Continuous Energy Improvement, a free consulting service. • The Mobile Home Upgrade program offers no-cost energy conservation evaluations by an energy specialist to identify opportunities for energy reduction and savings on electricity bills. The program also offers energy efficiency installations and improvements and is available to mobile homes or mobile home communities that have an active SCE service account. • The Direct Install Program for businesses to reduce energy costs. Under this program, businesses receive an energy efficiency evaluation and installation of energy-efficient equipment including light-emitting diode (LED) lights, fluorescent lighting, hi-bay lighting, refrigeration, and LED signs. • SCE offers special electric vehicle Time-of-Use rate plans that offer reduced rates when customers charge during off-peak hours. • SCE customers can join SCE’s Green Rate or Community Renewables Program to tap into the power of the sun through new renewable energy options, without having to install their own solar panels. • SCE’s Home Efficiency Guide provides information regarding home energy use and conservation opportunities. The Home Efficiency Guide emphasizes the benefits of electric appliances including increased energy efficiency, energy bill reduction, improvements to indoor air quality, and overall environmental benefits.
Southern California Gas Company (SoCalGas)/ Sempra Energy	<p>SoCalGas offers programs to single-family residential, multifamily residential, and commercial customers to identify energy efficiency improvements that save money and energy. Cities can join a Local Government Partnership with SoCalGas to gain access to increased rebates and incentives, free facility audits, and assistance for community outreach/events. These programs are funded by California utility customers under the auspices of CPUC:</p>

PROGRAM	DESCRIPTION
	<ul style="list-style-type: none"> • The Energy Savings Assistance Program (ESAP) program provides weatherization services to low-income households served by SCE who meet the CARE program income guidelines. • The Comprehensive Mobile Home Program offers no-cost energy conservation evaluations and energy efficiency installations such as low-flow showerheads and faucet aerators. The program also provides natural gas energy efficiency improvements such as duct tests and seal of HVAC systems. • The Commercial Direct Install (CDI) program offers long-term energy savings to qualifying customers. Through the CDI program, a trained energy efficiency representative will evaluate energy and water use to identify areas for businesses to save energy and water. • The Residential Direct Install program has no income requirements and is available to renters and homeowners living in single-family and multifamily dwellings. This no-cost program provides energy improvements to eligible customers to help make their homes more comfortable and help conserve energy, which could lead to lower utility bills. • The SoCalGas Marketplace is an online tool that features incentives for energy-efficient home appliances and consumer electronics. • SoCalGas offers a special residential Natural Gas Vehicle (NGV) billing rate for customers who choose this option. Refueling your NGV at home on this rate may yield a lower refueling cost compared with using a public station.
Private and Nongovernmental Support	
Community-Based Nonprofits	Community-based non-profits should be considered as resources for direct and indirect support, including funding, for program activation and operations. For example, GRID Alternatives helps provide access to clean, renewable solar energy to low-income families and hands-on job training to help workers enter the solar industry.
Private Investors	Private investors may provide funding to local governments. For example, energy service companies can finance the up-front investments in energy efficiency, reimbursed by the local government over a contract period. Private companies may finance solar power installations, and then recoup their investment by selling the resulting power to the building owner.
Independent Energy Purchase/Solar Services Model	Local governments can finance solar PV system purchases and installations at no upfront cost by signing a long-term power purchase agreement with a developer and agreeing to host a PV system at its facility. The developer pays for the design, construction and installation of the system, often arranging third-party financing. The investor who provides the upfront capital and owns the project receives returns from payments from the host developer. The host's payments are at a predetermined fixed price and are assessed much like a monthly utility payment. The local government, as host, benefits from the fixed-income price payments, reduced peaked energy costs, and reduced GHG emissions all at no upfront cost.

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appendixg

City Council Resolution of Approval for the CAAP

RESOLUTION NO. 2022 15,652

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OXNARD APPROVING THE ADDENDUM TO THE 2030 GENERAL PLAN CERTIFIED PROGRAM ENVIRONMENTAL IMPACT REPORT (PEIR; SCH # 2007041024) AND THE CLIMATE ACTION AND ADAPTATION PLAN (CAAP). FILED BY CITY OF OXNARD, COMMUNITY DEVELOPMENT DEPARTMENT, 214 SOUTH C STREET, OXNARD, CA, 93030.

WHEREAS, the State of California Senate Bill 32 (SB 32) calls for a statewide reduction of Greenhouse Gas (GHG) emissions to 40 percent below 1990 levels by 2030; and

WHEREAS, the State of California SB 379 requires for the City to identify the threats the City faces with climate change and provide a list of recommended strategies to address climate change; and

WHEREAS, the City of Oxnard 2030 General Plan was adopted on October 11, 2011; and the operative documents of the Oxnard 2030 General Plan consist of the (1) Background Report (2006), and the (2) Goals and Policies (2011); and

WHEREAS, in 2011 the City of Oxnard City Council certified the 2030 General Plan Program Environmental Impact Report (SCH #2007041024); and

WHEREAS, pursuant to the California Quality Act Guidelines Section 15164, the City has prepared an Addendum affirming that the analysis contained in the 2030 General Plan PEIR adequately addresses the potential environmental impacts associated with implementation of the Final CAAP; and

WHEREAS, the City of Oxnard 2030 General Plan includes a Sustainable Community (SC) Element that draws from SB32 and directs the development of a CAAP with the following Goals:

- SC-1.2 – Support Statewide Global Warming and Climate Change Mitigation: Continue to monitor and support the efforts of the California Air Resources Board and other agencies as they formulate Global Warming and Climate Change adaptation and mitigation strategies and programs.
- SC-1.3 – Develop a Climate Action and Adaptation Plan (CAAP) That Supports the Regional SB 375 Sustainable Communities Strategy: Develop a Climate Action and Adaptation Plan that implements requirements adopted by the California Air Resources Board and/or the Ventura County APCD that establishes a GHG emissions qualitative and quantitative threshold of significance, establishes GHG reduction targets, and supports the regional SB 375 Sustainable Communities Strategy.

See

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<https://www.oxnard.org/wp-content/uploads/2017/06/Oxnard-2030-General-Plan-Amend-06.2017-SM.pdf> (page 44 of pdf - Page 2-11 of 2030 General Plan document); and

WHEREAS, proposed CAAP has been developed to align with California's statewide target mandated of SB 32, which requires the State of California to reduce GHG emissions 40 percent below 1990 levels by 2030; and

WHEREAS, since 2021, City Staff held rounds of virtual stakeholder meetings with participants to discuss global climate change concerns, including vulnerable communities, and actions to consider for reducing GHGs in Oxnard. Six stakeholder group meetings were held during this time frame. Virtual public workshops (conducted in both English and Spanish, including translation of PowerPoints) were conducted on May 17 and 22, 2021 asking a series of questions regarding the CAAP to identify the climate change impacts of most concern to the community and to gather ideas about the best ways to reduce GHGs in the community. Approximately 60 members of the public participated during these two public workshops. Staff also released an online survey from May 1, 2021 through May 31, 2021 in English and Spanish to request public input on key CAAP questions. These engagement efforts helped identify climate impacts of concern in the community vulnerability assessment, and to identify effective CAAP strategies and actions for improving community resilience and reducing greenhouse gas emissions; and

WHEREAS, on January 25, 2022, City Staff presented a report to the Community Services, Public Safety, Housing & Development Committee ("Committee") on the City's CAAP including identification of a reduction percentage in compliance with State law. The report summarizes GHG reduction strategies, and provided the Committee with an update on stakeholder and community input; and

WHEREAS, on January 26, 2021, and January 27, 2021, City Staff held a second round of Virtual Stakeholder meetings with 40 to 50 participants to: (1) Gather input on community vulnerabilities to climate change and potential strategies to address vulnerably; and (2) improve the understanding of community experience with climate change hazards and social vulnerability and equity. Five stakeholder group meetings were held during this time; and

WHEREAS, the City prepared a draft CAAP that was made available to the public for initial review and comment between April 26, 2022 and June 1, 2022; and

WHEREAS, on May 5, 2022 staff conducted a virtual public workshop where the Draft CAAP was reviewed. Members of the City's CAAP stakeholder group provided verbal comments on the document along with written comments; and

WHEREAS, on May 9, 2022 staff conducted virtual drop in office hours where community members were encouraged to "drop by" at any time to receive information and ask questions; and

WHEREAS, on May 14, 2022 staff held a virtual community workshop where the Draft CAAP was presented and participants were able to provide input; and

WHEREAS, the Planning Commission held a public meeting on July 7, 2022 to review and provide input on the CAAP. At the July 7th meeting, the Planning Commission received a presentation from the City's CAAP consultant on the Draft CAAP document; received public comments on the Draft CAAP document; and provided feedback on the Draft CAAP document; and

WHEREAS, the Planning Commission held a public meeting on September 1, 2022 to consider approving a resolution recommending that the City Council of the City of Oxnard approve an Addendum to the 2030 General Plan Program Environmental Impact Report (PEIR; SCH # 2007041024 - Addendum No. 1), including recommended changes to the Draft CAAP document (see Exhibit A) and adopted Resolution No. 2022-32, on file with the Planning Division.

NOW, THEREFORE, the City Council of the City of Oxnard hereby resolves as follows:

Section 1. The foregoing recitals are true and correct and are hereby incorporated into the operative provisions of this Resolution.

Section 2. The City Council approves the CAAP with amendments identified in Exhibit A of the Planning Commission's September 1, 2022 resolution of approval No. 2022-32. Incorporating these edits and amendments to the CAAP document as recommended by City Staff and will constitute the Final CAAP.

Section 3. The City Council approves an Addendum (see Exhibit A) to the 2030 General Plan Program Environmental Impact Report (SCH # 2007041024).

Section 4. The City Council supports the near term, mid term, and long term related projects identified in the Final CAAP in an effort to achieve, and exceed the State of California Senate Bill 32 (SB 32) statewide reduction of Greenhouse Gas (GHG) emission goal to achieve a 40 percent reduction in GHG emissions below 1990 levels by 2030.

PASSED AND ADOPTED by the City Council on this 7th day of December 2022, by the following vote:


AYES: Councilmembers Basua, MacDonald, Teran, and Zaragoza

NOES: None.

ABSENT: Councilmembers Madrigal and Perello


ABSTAIN: None.

RECUSE: None.


John Zaragoza, Mayor

ATTEST: 
Rose Chaparro, City Clerk

APPROVED AS TO FORM:

 12/12/2022
Stephen M. Fischer, City Attorney