



# CALIFORNIA REGIONAL CLIMATE ADAPTATION INITIATIVE

Understanding Climate Change  
in the Greater Los Angeles  
Region; What Your Organization  
Can Do About It

***By taking action today,  
the greater Los  
Angeles region can  
move towards a  
healthier, more  
prosperous and  
sustainable future.***

**Why address climate change? What's the threat?**

Changes in global and local temperatures depend on the accumulation of carbon dioxide and other heat-trapping gases emitted from human activities into the atmosphere. The accumulation of greenhouse gases (GHGs) could be high (harming human health) or low (reducing health risks). The direction on climate impacts depends on the success of both international and local efforts to reduce GHG emissions.



## **How will Los Angeles, Ventura, Orange and western Riverside and San Bernardino counties be impacted by climate change?**

**LOS ANGELES IS WARMING.** By mid-century (2041-2060) the region will likely warm by 4°F to 5°F above historic climatic temperatures. Mountains and deserts areas will warm the most. By the end of this century, the region will be between 5°F to 8°F warmer, depending on future global emissions.<sup>(1)</sup>

**OUR HEALTH IS IN THE BALANCE.** Longer and more frequent high-heat days will increase the number of heat-related illnesses, such as heat stroke, heat cramps, heat exhaustion and dehydration, as well as other illnesses and premature deaths. Mortality risk for those 65 or older could increase ten-fold by the 2090s.

**INFECTIOUS DISEASES MAY SPREAD EASILY.** Conditions will ripen for mosquitoes and other disease vectors. Viruses such as West Nile, Zika, dengue fever, and chikungunya virus can proliferate throughout the region unless mitigated.

**AIR QUALITY WILL LIKELY WORSEN.** Climate change could lead to air stagnation conditions, which would increase pollutant concentrations and worsen air quality in the region. Hotter future temperatures will also increase surface ozone concentrations.

**AT TIMES THERE WILL BE MORE RAIN, BUT ALWAYS LESS SNOW.** Cumulative precipitation is not expected to change significantly, but will likely be delivered in more intense storms and within a shorter wet season, making it more difficult to capture runoff. Imported water from the Sierra Nevada, Cascade and Rocky Mountain regions will become less reliant due to declining snowpacks and earlier seasonal runoff.

<sup>1</sup> All citations are from Hall, Alex, Neil Berg, Katharine Reich. (University of California, Los Angeles). 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-007.



**AT TIMES THERE WILL BE DROUGHT.** Droughts will become more severe due to rising temperatures, increasing evaporation and decreasing soil moisture.

**WE ANTICIPATE MORE DESTRUCTIVE WILDFIRES.** Projections indicate that wildfires may increase throughout Southern California. The overall burned area is projected to increase over 64% for Santa Ana-based fires and over 77% for non-Santa Ana fires.

**FLOODING WILL BECOME A BIGGER PROBLEM.** The projected increase in precipitation extremes, alone and in combination with the projected increase in wildfires, creates increased potential for floods, mudslides, and debris flows.

**THE PACIFIC OCEAN WILL RISE.** Sea levels are projected to continue rising in the future. Roughly 1-2 feet of sea level rise is projected by mid-century, and the most extreme projections predict 8-10 feet of sea level rise by end-of-century. If nothing is done, 31-67% of Southern California beaches may completely erode by 2100.

**WATER WILL BECOME MORE ACIDIC.** Waters off the coast of California are acidifying twice as fast as the rest of the oceans around the world. Roughly 27% of all carbon dioxide emitted since 1959 has gone into the Pacific Ocean off the California coast. The steady rise of carbon dioxide will lower the pH of freshwater streams, lakes, and rivers, which will affect marine species and local ecosystems.

**MEETING ELECTRICITY DEMAND WILL BE CHALLENGING.** Residential electricity demand is likely to grow due to more frequent heat waves, while higher temperatures are likely to affect electricity supply from gas-fired plants.

**COASTAL INFRASTRUCTURE WILL BE AT RISK.** Port operations, electrical infrastructure and waste systems will be vulnerable to sea-level rise, storm surge and erosion.



**WAIT — THERE'S GOOD NEWS.** Southern California governments have made progress to reduce greenhouse gas emissions and make plans to adapt to climate change. Several plans highlighted are: County of Los Angeles OurCounty Sustainability plan (2019), City of Los Angeles Green New Deal plan (2020), Metro Climate Action and Adaptation Plan (2019), City of Long Beach CAAP (2020), SCAG Resilience Plans, Santa Ana Climate Action Plan (2015), City of Santa Clarita CAP (2012), and the County of Ventura Climate Action Plan (2019). Additionally, municipalities are updating their General Plans to include strategies that address climate mitigation and adaptation.

## **ACTION(S) TAKEN**

Although Los Angeles will be impacted in many ways by a changing climate, the region already has specific plans in place to address those impacts with innovative solutions that will create more livable cities for everyone. There are two pieces of legislation and one executive order that drive climate action in California.

- **Senate Bill 32 (2016)** requires California Air Resources Board (CARB) to reduce greenhouse gas emissions to 40% below 1990 levels by 2030.
- **Senate Bill 100 (2018)** commits California to achieving 100% renewable energy by 2045.
- **Executive Order B-55-18** commits California to achieving carbon neutrality in every sector by 2045.

On the regional level, cities and counties have identified actions and set targets to reduce GHG emissions and address climate change impacts. Highlighted actions include:

- **The Los Angeles County Office of Sustainability (2016)** was created within the Internal Services Department by the Board of Supervisors to respond to legislation, regulation, and policy related to climate change and serve as a central hub to coordinate Energy Efficiency, Conservation and Sustainability Programs within the County, its facilities, and the region. They recently published the landmark OurCountyLA sustainability plan.
- **Long Beach's City Council approved its Climate Action and Adaptation Plan (2020)** outlining the City's proposed approach both to address climate impacts to the city and to reduce the city's impact on the climate through reducing greenhouse gas emissions. By addressing both mitigation and adaptation together, the City has been able to consider how actions can synergistically produce multiple co-benefits, such as by addressing existing environmental health disparities while improving quality of life and health for all residents.
- **The City of Santa Ana's Climate Action Plan (2015)** adopts emissions reduction goals for the city while reducing pollution and energy use. Through this climate action plan Santa Ana hopes to address climate impacts in the community and at the same time stimulate the local economy. By saving energy and building resilience the city hopes that the money saved in the community will boost the local economy and promote local jobs.

- **City of Thousand Oaks adopted a Sustainability Plan (2018)** for municipal operations, which established the foundation for environmentally-friendly, fiscally-responsible, and sustainably-minded City operations. In 2019, all residential, commercial, and industrial electricity began receiving electricity from the Clean Power Alliance (CPA), and the City is currently developing a comprehensive sustainability and climate action plan.
- **City of Irvine (2019)** is currently developing its Climate Action plan to reduce emissions to 80% below 1990 levels by 2050. The city is also currently studying adopting a community choice energy (CCE) program; if adopted, customers will have the option to procure renewable energy.



- **The Transportation Electrification Partnership (2018)** comprises Los Angeles County, California Air Resources Board, Metro, the City of Los Angeles, and several utilities. Its task is to accelerate the deployment of zero-emission transportation technology and reduce GHG emissions from diesel vehicles.
- **The Los Angeles Water Board** first developed its “Framework for Climate Change Adaptation and Mitigation” in 2015. In 2019, the Water Board released its report of recommended actions.

**DEFEND CLIMATE PROGRESS.** These climate action policies often come under attack from fossil fuel and other corporate interests. Above all else, the State’s existing climate policies need to be defended.

**NEXT STEPS.** Here are some actions that you can take right now to prepare for the impact of climate change in Greater Los Angeles.

- **THE MAIN PROBLEM . . . WELL, IT’S CARS.** The leading source of greenhouse gas emissions in California is from the transportation sector. How do we reduce those emissions? First, by building affordable housing near public transit, and by creating neighborhoods that promote biking, scootering and walking. Another essential climate strategy is to encourage transition to electric and hydrogen-fueled vehicles

- **COMMUNITY CHOICE ENERGY.** Local community and municipal programs allow households to choose how much of their energy consumption comes from renewable energy resources, thereby lowering greenhouse gas emissions and ensuring electricity grid resilience.
- **JOIN A CLIMATE COLLABORATIVE.** The Los Angeles Regional Collaborative for Climate Action and Sustainability (LARC) facilitates the work of local governments in the county to mitigate and adapt to climate change. Municipalities partner with academia, non-profit organizations, and business and community leaders to coordinate climate resilience planning.
- **COOL DOWN NOW.** Deploy “cool roofs” — cool roofs cool your buildings, protect the people working or living inside, reduce energy consumption and even reduce smog.
- **WATER IS LIFE.** Take advantage of free water conservation initiatives provided by Metropolitan Water and other water utilities — these products not only lower water bills, they save greenhouse gas emissions and help communities become more resilient.
- **THIS AIN'T MARYLAND.** Convert grass lawns with a turf replacement program and replace them with California-friendly landscaping to conserve water, save money on utility bills, and create a wildlife-friendly environment. Turf conversion programs are often provided by Metropolitan Water and other local water utilities.
- **PRIORITIZE COASTAL WETLANDS.** Ensuring the protection and restoration of these ecosystems is vital. They are extremely effective carbon sinks and can absorb SLR and floods, thereby mitigating some of their effects to nearby areas.

There are many cost effective strategies that Californians can adopt around the home that can improve their quality of life and help with climate change.

- **SOLAR PANEL PRICES ARE DROPPING.** The price of photovoltaic panels has dropped significantly. The return on investment could be just a few short years.
- **APPLY SMARTS TO APPLIANCES.** Large appliances can be the biggest energy users in a household. Homeowners can make a big difference by making sure their air-conditioners and heaters are working efficiently. Taking care of these appliances can save residents money, energy, and ensure comfort on days with extreme weather.
- **APPLIANCE RECYCLING AND EXCHANGE PROGRAMS.** Local utilities may help you recycle old appliances, and in some cases, replace them with new, energy efficient ones.
- **EFFICIENCY PAYS DIVIDENDS.** Energy efficient light bulbs and appliances may be eligible for rebates through online marketplace websites from utility companies like LADWP and SCE. They lower utility bills and a household's carbon footprint.
- **MORE TREES PLEASE.** Plant more trees in and around your home — trees provide shade, cool the city, and clean the air you breathe. Plus, when planted at home, they can reduce utility bills. Some trees are provided free-of-charge by municipalities and utilities.

- **NATIVE PLANTS AND GARDENS.** Local organizations and utilities can provide rebates and instructions on converting your lawn into a native plant garden, which can help you save on your bill, conserve water, and create sustainable green space in your community.
- **CAPTURE AND STORE RAINWATER.** Local and state utilities have programs to subsidize purchases of water storage barrels and cisterns that can store up to 1,000 gallons of water. According to the American Rainwater Catchment Systems Association, a house with a 1,500-square-foot roof in an area that receives 12 inches of rain a year (downtown LA averages 14-15 inches) could collect 10,800 gallons of water in a year.



In the face of pandemics and other threats, climate solutions can also foster greater social connection and community resilience at-large.

- **ORGANIZE THE NEIGHBORHOOD.** Climate action starts when community members organize, educate their neighbors, and unite around common principles. Neighbors learn about each other's needs and priorities, about where their resources come from, about how their local economies are run. They learn the power of their collective voice and the importance of knowing their neighborhood and their neighbors.
- **GROW A CIVIC CULTURE.** Engage with people who may at first show uninterest, especially disenfranchised people. Give them the tools to engage with the political process through the lens of climate action and sustainability.
- **JOIN A CLIMATE COLLABORATIVE.** For those residing in Los Angeles County, the Los Angeles Regional Collaborative for Climate Action and Sustainability facilitates local climate planning and helps develop climate projects. For those in western San Bernardino and Riverside counties, the Inland Southern California Climate Collaborative provides similar services. For those in Ventura County, the Central Coast Climate Collaborative is a helpful resource. Unfortunately, Orange County does not have a climate collaborative.
- **COOLING AND RESILIENCE CENTERS.** Convert cooling centers into resilience centers — spaces such as libraries, senior centers, rec centers, and pools serve as designated areas to assist the public in times of need.

- **RECLAIM GREEN SPACES.** Green spaces in urban areas are a key component to climate resilience. The presence of parks provides environmental and health benefits, including improved water and air quality, and they also serve as natural cooling areas.
- **PROTECT NATURE.** Finally, Southern California is world-famous for its natural beauty. Our local public lands are accessible to families who want a breath of fresh air at the beach or any one of the many local parks. Protecting this is incredibly valuable for its own sake, let alone from a climate resilience or mitigation perspective.

### More about CCEDA and Climate Resolve

**CCEDA is comprised of organizations actively engaged in revitalizing California's neighborhoods** and its members produce results through a full range of community building strategies including real estate development-housing, retail and commercial-business assistance and lending, social services, and job training and creation. Additionally, CCEDA provides its members a clearinghouse for information and action that advances the field of community economic development.

**Climate Resolve builds collaborations to champion equitable climate solutions.** We connect communities, organizations and policymakers to address a global problem with local action. We inclusively develop practical initiatives that reduce climate pollution and prepare for climate impacts. Our purpose is a just and resilient future.



For more information on climate leadership in your community contact the California Community Economic Development Association:

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