CALIFORNIA REGIONAL CLIMATE ADAPTATION INITIATIVE

Understanding Climate Change in the Central Coast; What Your Organization Can Do About It

By taking action today, the Central Coast 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.

Climate Resolve

Innovate. Advocate. Achieve. Together.

How will the Central Coast be impacted by climate change?

THE CENTRAL COAST IS WARMING. By mid-century (2041-2060) the Central Coast will likely warm by 4°F to 5°F above historic climatic temperatures. [1]

OUR HEALTH IS IN THE BALANCE. Longer and more frequent 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.

EXTREME STORM EVENTS ARE EXPECTED TO INCREASE. Along the Central Coast, atmospheric rivers are the dominant drivers of locally-extreme rainfall events. They are associated with most major inland floods, such as the record fooding on the San Lorenzo River in the winter of 2016-17. Along with El Niño events, which largely impact coastal areas, they are expected to increase in frequency and severity.

AT TIMES THERE WILL BE DROUGHT. Droughts will become more severe due to rising temperatures, increasing evaporation and decreasing soil moisture. Management of the region's already stressed water supplies will be challenging. This may be exacerbated by increased water demand due to higher heat.

WE ANTICIPATE MORE DESTRUCTIVE WILDFIRES. Frequent and sometimes large wildfires will continue to be a major disturbance in the region. Expansion into the wildland urban interface will continue to increase risks to human communities, making events like the Thomas Fire more frequent.

FLOODING WILL BE 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.

1 All citations are from Langridge, Ruth. (University of California, Santa Cruz). 2018. Central Coast Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-006.

THE PACIFIC OCEAN WILL RISE. Sea levels are projected to continue rising in the future. Roughly 1-2 feet of sea level rise (SLR) is projected by mid-century, and the most extreme projections predict 8-10 feet of SLR by end-of-century. If nothing is done, 2/3 of beaches in the region could erode, and 12,000 residents and $2.4 billion in property could be exposed to flooding by end-of-century in Santa Barbara County alone.

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 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 ROADS ARE VULNERABLE TO CLIMATE-FUELED EROSION. Sea level rise and storm surges will increase the vulnerabilities of coastal roads leading to a higher probability of erosion and landslides.

AGRICULTURAL PRODUCTION WILL SUFFER. Agricultural production is highly sensitive to climate change. The Salinas Valley has been identified as one of the most vulnerable agricultural regions in the country. SLO County wine region may also suffer.

WAIT — THERE'S GOOD NEWS. Within the Central Coast region, county and local governments have made great progress to reduce greenhouse gas emissions and make plans to adapt to climate change. Several plans highlighted are: County of Santa Barbara Climate Action Plan (2015), City of San Luis Obispo Climate Action Plan (2012; currently updating), City of Santa Cruz Climate Action Plan (2012), City of Paso Robles Climate Action Plan 2013), City of Atascadero Climate Action Plan (2014), and City of Monterey Climate Action Plan (2016). Each plan includes actions on climate change mitigation and adaptation. In addition, Monterey Bay Community Power (MBCP) is a community choice energy program that serves the counties of Santa Cruz, San Benito, and Monterey, and cities including San Luis Obispo. MBCP is moving the region forward towards 100 percent carbon-free electricity.

The Central Coast Climate Collaborative is an established network of local and regional community leaders throughout the six central coast counties. Santa Barbara County is forming its own Regional Climate Collaborative to improve resilience to climate change effects in the region. Likewise, the Monterey Bay Regional Climate Action Compact works as a partnership to lower emissions, develop the local economy, educate about climate, and plan adaptation efforts.

ACTION(S) TAKEN

Although the Central Coast 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 set targets to reduce GHG emissions and address climate change impacts. Highlighted actions include:

- **Santa Cruz and Monterey** counties have incorporated projections of SLR and storm damages into their Integrated Regional Water Management (IWRM) plans, focusing on conservation, restoration and sustainable water management.
- **City of Atascadero** expanded bike paths by 34 miles, reducing emissions by hundreds of $MTCO_2e$ since the project began in 2010.
- **Central Coast Wetlands Group** builds infrastructure and coordinates actions with regional partners to achieve a "no net loss" of wetlands in the Central Coast region.
- **City of Santa Cruz** has surpassed its goal and halved community-wide GHG emissions since 1990, and is well on track to reduce emissions by 80% by 2050 (its current goal).
- **Northern Chumash Tribal Council** operates an all-natural farm using greenhouse aeroponics , which uses only 10% of the land and water of typical farms.
- **City of San Luis Obispo (2017)** set a net-zero carbon City target and implemented cost-effective measures, including hiring a Sustainability Coordinator and forming a Green Team.
- **The cities of Atascadero, Arroyo Grande, Grover Beach, Morro Bay, Paso Robles, and Pismo Beach** prepared baseline inventories of emissions from community-wide and government operations through funding from the San Luis Obispo Air Pollution Control District.
- **City of Goleta** has committed to 100% renewable energy by 2030 and set the goal for municipal facilities to reach 100% renewable energy by 2025.

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 the Central Coast region.

- **THE MAIN PROBLEM . . . WELL, IT'S CARS.** The leading source of greenhouse gas emissions derives 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 ease the deployment of electric and hydrogen-fueled vehicles.
- **COOL DOWN NOW.** Deploy "cool roofs" — cool roofs cool your buildings, protects the people working or living inside, reduces energy consumption and even reduces smog.
- **STAY COOLER LONGER.** Plant more trees in your home — trees provide shade, cool the city, clean the air you breathe, and when planted at home can reduce utility bills. Some trees are provided free-of-charge by municipalities and utilities.
- **WATER IS LIFE.** Take advantage of free water conservation initiatives provided by water utilities — these products can not only lower water bills, they also save greenhouse gas emissions and build resilient communities.
- **EMBRACE LOCAL FLORA.** Convert grass lawns to native species with a turf replacement program. California-friendly landscaping conserves water, saves money on utility bills, and creates a wildlife-friendly environment. Turf conversion programs are often provided by many local water utilities.
- **PRIORITIZE COASTAL WETLANDS.** Emphasizing the protection 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.

- **APPLY SMARTS TO APPLIANCES.** Large appliances can be the biggest energy users in a household. Homeowners can make 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. Local utilities may help you recycle old appliances, and in some cases, replace them with new, energy efficient ones.
- **ENERGY EFFICIENT HOMES.** Make use of local utility programs that can help assess energy savings opportunities for your home. For example, PG&E offers the Energy Savings Assistance Program which will inform you of essential actions that you can take to make your home more energy efficient. Community choice utilities also offer efficiency incentives.
- **SMART SHOPPING.** The PG&E Marketplace can show you the best and most efficient products for your home. From air purifiers to pool pumps, find appliances that will help lower your carbon footprint and save you money.

- **EFFICIENCY PAYS DIVIDENDS.** Energy efficient light bulbs and appliances may be eligible for rebates. They lower utility bills and a household's carbon footprint.
- **COMMUNITY CHOICE ENERGY.** These Central Coast utilities allow households to purchase 100% renewable energy thereby lowering greenhouse gas emissions.
- **CAPTURE AND STORE RAINWATER.** Local and state water utilities offer 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 (Santa Barbara averages 19 inches) could collect 10,800 gallons of water in a year.

In the face of pandemics and other threats, climate solutions can also create 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.
- **COOLING AND RESILIENCE CENTERS.** For inland parts of the Central Coast, places such as libraries, senior centers, rec centers, and pools may serve as designated areas to protect and assist the public in times of need.

- **REVITALIZE GREEN SPACES.** Green spaces in urban areas are a key component to tackling climate change. The region's renowned parks serve as cooling centers, spaces for wildlife, and places for community connection. Plus, as we are experiencing during the current pandemic, natural urban spaces are one of the few places where people can commune safely.
- **PROTECT NATURE.** Finally, the Central Coast is famous for its natural beauty, which is accessible to families, outdoor enthusiasts, or anyone who wants a breath of fresh air at the beach. 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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