



CHICO
CLIMATE ACTION COMMISSION
REGULAR MEETING AGENDA
THURSDAY, MAY 13TH, 2021 - 6:00 P.M.
MUNICIPAL CENTER – 421 MAIN STREET – COUNCIL CHAMBERS

Chico

CLIMATE ACTION COMMISSION

Cheri Chastain, Chair
Mark Stemen, Vice Chair
David Donnan
Kirk Monfort
Michael Nelson
Rebekah Casey
Vacant

**Copies of this agenda
available from:**
Community Development Department
411 Main Street, 2nd Floor
Chico, CA 95928
(530) 879-6800

Or

www.chico.ca.us

Posted: May 6, 2021
Prior to: 5:00 p.m.

The Commission appreciates your cooperation in turning off all cell phones during this meeting.

City Staff

Brendan Vieg – Community Development Director
Molly Marcussen – Associate Planner



Please contact the City Clerk at (530) 896-7250 should you require an agenda in an alternative format or if you need to request a disability-related modification or accommodation in order to participate in a meeting. This request should be received at least three working days prior to the meeting in order to accommodate your request.

Information and Procedures Concerning Climate Action Commission Meetings

Public Participation:

All members of the public may address the Climate Action Commission on any item listed on the agenda. Public participation in the hearing process is encouraged.

Please step up to the podium microphone when addressing the Commission.

Each speaker will be asked to voluntarily state his/her name before speaking, and after speaking to voluntarily write his/her name on a record to be maintained by the City Staff.

The Commission and City staff will ensure order and decorum during all Commission meetings. Persons demonstrating rude, boisterous or profane behavior will be called to order by the Chair. If such conduct continues, the Chair may call a recess, requesting the removal of such person(s) from the Council Chamber, adjourn the meeting or take other appropriate action.

Time Limit:

Presentations should be limited to a maximum of three (3) minutes, unless otherwise determined by the Chair.

A speaker may not defer his/her time to other speakers.

Groups or organizations are encouraged to select a spokesperson to speak on their behalf. Each subsequent speaker is encouraged to submit new information, rather than repeating comments made by prior speakers.

Written Material:

The Climate Action Commission may not have sufficient time to fully review written materials presented at the public hearing. Interested parties are encouraged to provide written materials at least eight (8) days prior to the public hearing to allow distribution with the Climate Action Commission's agenda packet to provide adequate time for review by the Climate Action Commission. Written materials submitted in advance of the public hearing must be submitted to the City of Chico, Community Development Department, 411 Main Street, 2nd Floor, or by mail to: P. O. Box 3420, Chico, CA 95927. Materials related to an item on this agenda submitted to the Climate Action Commission after distribution of the agenda packet are available for public inspection in the Community Development Department at 411 Main Street, 2nd Floor, Chico, CA 95928 during normal business hours.

Hearing Impaired:

Anyone who has difficulty hearing the proceedings of a meeting may be provided with a portable listening device by requesting one from the City Staff. The device works directly from the public-address system, and the listener can hear all speakers who are using a microphone.

Special Presentations:

Special presentations which include slides, films, etc. during the course of a meeting will only be allowed with **prior** approval of the Climate Action Commission.

Business from the Floor:

The Chair will invite anyone in the audience wishing to speak to the Climate Action Commission to identify themselves and the matter

they wish to discuss which would involve matters not already on the posted agenda.

The Commission may also be direct that a matter be placed on a future agenda, provide direction to staff, or request that staff research a particular issue. No action may be taken until a subsequent meeting.

Agenda Copies are:

-Available at the meeting.

-May be mailed by subscription, at an annual cost set forth in the City of Chico Fee Schedule.

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-Copies may be obtained after payment of applicable copy fees.

Agenda Items:

The agenda items will be considered in the order listed unless the Commission requests a change. In order that all items may be considered, any item may be continued to another meeting if it appears there will be insufficient time for full consideration of the item.

Items Not Appearing on Posted Agenda:

This agenda was posted on the Council Chamber bulletin board at least 72 hours in advance of this meeting. For each item not appearing on the posted agenda, upon which the Climate Action Commission wishes to take action, the Commission must make one of the following determinations:

1. Determine by a majority vote that an emergency exists as defined in Government Code Sec. 54956.5.
2. Determine by a two-thirds vote, or by a unanimous vote if less than two-thirds of the Climate Action Commission is present, that need to take immediate action and that the need for action came to the attention of the City subsequent to the agenda being posted.

Use of Cell Phones During Meetings:

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Appeal of Climate Action Commission Decision:

Any aggrieved person or persons dissatisfied with a Climate Action *Commission* decision may appeal that decision to the City Council within 10 calendar days. In accordance with Government Code Section 65009, if any person(s) challenges the action of the Climate Action *Commission*, said person(s) may be limited to raising only those issues that were raised at the public hearing described in this notice, or in written correspondence delivered to the Climate Action *Commission* at, or prior to, the public hearing.

CITY OF CHICO
CLIMATE ACTION COMMISSION
REGULAR MEETING OF THURSDAY, MAY 13th, 2021
Municipal Center - 421 Main Street - Council Chambers - 6:00 pm

PUBLIC PARTICIPATION: *This meeting is being conducted in accordance with Executive Order N-29-20. Members of the public may virtually attend the meeting using the City’s Zoom platform.*

Zoom public participants may use the following information to remotely view and participate in the Climate Action Commission meeting online:

Event Name: Climate Action Commission meeting

Date/Time: Thursday, May 13th, 2021, at 6:00 PM

Event URL: <https://zoom.us/j/5476135576?pwd=U09XL2xMMW52b0dtMmNVaHgvNG5Zdz09>

Password: Climate21

Meeting ID: 547 613 5576

Call-in #: +1 408 638 0968 or +1 669 900 6833 **Call-in Password:**
271542327

1. CALL TO ORDER

1.1. Roll Call

2. CONSENT AGENDA

*All matters listed under the Consent Agenda are considered routine and will be enacted by one motion. There will be no separate discussion of these items unless requested by a member of the Climate Action Commission. A member of the public may request that an item be removed, provided the item does not relate to a noticed hearing which has been closed to further public comment. **Items removed from the Consent Agenda will be considered immediately following the approval of the Consent Agenda.***

2.1. Approval of Minutes

April 8th, 2021 (**Attachment A**).

3. ITEMS TO BE DISCUSSED

3.1. CAP Introduction Review

The commission will review and provide feedback on the draft Climate Action Plan Introduction (**Attachment B**), as well as the document’s design and layout (**Attachment C**).

3.2. CivicSpark Initiative Update

CivicSpark Fellow Austin Powell will provide an update regarding the effort to develop long-term strategies for mitigating anticipated local impacts of climate change consistent with SB 379.

4. BUSINESS FROM THE FLOOR/PUBLIC COMMENT

Members of the public may address the Commission at this time on any matter not already listed on the agenda, with comments being limited to three minutes. The Commission cannot take any action at this meeting on requests made under this section of the agenda.

5. REPORTS & COMMUNICATIONS

These items are provided for the Commission 's information. Although the Commission may discuss the items, no action can be taken at this meeting. Should the Commission determine that action is required, the item or items may be included for action on a subsequent posted agenda.

6. ADJOURNMENT

Adjourn to the Adjourned Regular Meeting of Thursday, June 10, 2021.

CITY OF CHICO
CLIMATE ACTION COMMISSION MEETING MINUTES
REGULAR MEETING OF THURSDAY, APRIL 8TH, 2021
Municipal Center - 421 Main Street - Council Chambers - 6:00 pm

Commissioners Present: Cheri Chastain, Chair
Mark Stemen, Vice Chair
Michael Nelson
Rebekah Casey
Kirk Monfort

Commissioners Absent: Dave Donnan

Staff Members Present: Brendan Vieg, CDD Director
Molly Marcussen, Associate Planner
Austin Powell, CivicSpark Fellow

1. CALL TO ORDER

1.1. Commissioners and staff were present as noted above.

2. CONSENT AGENDA

2.1. Approval of Minutes

Vice Chair Stemen moved to approve the minutes. Commissioner Nelson seconded. *Minutes approved 5-0-1.*

3. ITEMS TO BE DISCUSSED

3.1. Building Electrification Workshop

The City's Climate Action Plan consultant, Rincon Consultants, as well as guest speakers, provided an overview regarding building electrification feasibility and implementation. Guest speakers included Hannah Kaye, representative from PG&E, who discussed electrification reliability and the company's ability to meet future demand, and Chuck Tatreau, a local developer who shared his recent experience building an all-electric multi-family residential project in Chico. Community members and the Commission asked questions and provided feedback to the consultant and staff regarding building electrification in Chico. A link to the full meeting recording can be found here: <https://chico.ca.us/pod/meeting-recording>.

4. BUSINESS FROM THE FLOOR/PUBLIC COMMENT

None.

5. REPORTS & COMMUNICATIONS

Associate Planner Molly Marcussen informed the commission the recruitment for the Climate Action Commission closes on April 12th, 2021.

6. **ADJOURNMENT**

Adjourn at 7:14 to the Adjourned Regular Meeting of Thursday, May 13th, 2021.

City of Chico Climate Action Plan Update

Introduction

Vision for Climate Action in Chico

The City of Chico (Chico) can already appreciate what is needed to address climate change impacts and migration through the next decade. Heavy rainfall and flooding in 2017 caused the Oroville Dam’s spillways to overflow, prompting the evacuation of more than 180,000 people living downstream. Strong winds and drought conditions in 2018 created the deadliest wildfire in California’s history, which destroyed the town of Paradise and drove a massive influx of climate migrants into the City of Chico. Fire again threatened the region as recently as 2020, when a lightning strike caused the Northern Complex fire in Plumas and Butte Counties. These disasters have already put the City of Chico on the frontlines of a changing climate.

In response to the need for ambitious climate action, this Climate Action Plan (CAP) has developed specific actions to mitigate greenhouse gas (GHG) emissions and achieve the community’s target to achieve carbon neutrality by 2045. Achieving carbon neutrality in Chico will contribute to the global emissions trajectory needed to stabilize atmospheric concentrations at 350 parts per million (ppm) or less, which is consistent with the International Panel on Climate Change (IPCC) analysis on what is necessary to reduce the likelihood of catastrophic global climate change. Addressing climate change also presents the community with an opportunity to operate more efficiently and effectively, position for economic opportunities, avoid inequities, and improve health and well-being. The CAP is consistent with the County’s commitment to address climate change and work towards a more sustainable, healthy and resilient community.

A note about COVID-19

The outbreak of the COVID-19 pandemic drastically affected daily life and has highlighted the interdependence of public health, economic and racial equity, and environmental sustainability on a national level. As the national and local economy begin to recover from the impacts of the COVID-19 pandemic, it has become imperative to plan for a future that aligns economic growth and new building development with equity and sustainability. This CAP balances its strategies for a sustainable Chico against the need for economic growth and new building development in an equitable and realistic way, serving the overall recovery effort in Chico.

The CAP also builds on lessons learned from the pandemic to improve Chico’s air quality, building development practices, transportation options, and housing and resource affordability.

Leading Principles

This CAP was developed with several key leading principles in mind. With drought, fires, and flooding projected to worsen across California over the coming decades due to climate change,¹ the City of Chico has developed this CAP to reduce its fair share of California’s greenhouse gas (GHG) emissions through 2030 and create a plan for a **safer and more resilient future**. The CAP also strategically positions the community’s residents and business-owners to take early advantage of emerging **economic**

¹ <https://www.nrdc.org/sites/default/files/climate-change-health-impacts-california-ib.pdf>

opportunities. Finally, the CAP will enable **affordable housing** development, prioritize **social equity**, improve the **quality of life** for residents, and **engage** the citizens of Chico in ongoing climate action work. These leading principles are described in more detail below.

- **Safer future** – Reducing GHG emissions in the City of Chico will help prevent damage and loss of life from flooding, fires, heat waves, and drought made worse by climate change.
- **Economic opportunity** – New technologies and innovative approaches to procuring energy for communities are lowering lifestyle costs for the average resident and operating costs for the average business owner. Taking advantages of these opportunities and implementing them now will save the community money in both the short- and long-term.
- **Affordable housing** – California’s housing crisis weighs heavily on the State, including within the City of Chico. Adopting and implementing the CAP will make building affordable housing in Chico easier and faster for developers. This makes Chico a better place to live now, and more resilient to population changes that may arise from climate disasters in the future.
- **Social equity** – The City of Chico knows that the CAP will only be successful with proper consideration of social equity. The strategies contained in the CAP were developed in consultation with the City’s frontline communities and vulnerable populations to develop a plan that works for all members of the community.
- **Quality of life** – The CAP envisions a future for Chico with cleaner air, resilient water sources, and more active and livable neighborhoods.
- **Engaged citizens** – The City of Chico cannot act alone. The success of this CAP is dependent on input from and collaboration with the community. The City views climate action as an iterative process, which will be adjusted based on new technologies, new information, and feedback from the community through an ongoing education and outreach campaign.

The City of Chico has developed the CAP to be realistic in its approach though ambitious in its targets. The CAP’s strategies take a new approach to climate change policy that is actionable, measurable, cost-effective, fiscally responsible, and highly implementable over the course of the next decade.

CAP Funding and Financing

To help ensure the CAP is both cost-effective and fiscally responsible for the City and the community, the CAP includes a Climate Action Finance Map (Appendix D). The Climate Action Finance Map is a detailed and interactive tool that includes funding and financing pathway options to support the measures and actions included in the CAP. Specifically, the map identifies multiple grants, City partner sponsorships, State- or utility-level incentive programs, loans, bonds, fees, and tax pathways to be utilized for implementing the CAP actions that would otherwise create new costs for the City and community. The funding and financing pathways primarily focus on actions with higher implementation costs such as those related to new infrastructure. The City and community costs associated with each CAP action are explained in detail in Chapter 4. By implementing this CAP in concert with the Climate Action Finance Map, the costs to the City and community will be minimized.

Purpose

This CAP will guide the City of Chico towards reducing GHG emissions consistent with the State goal to reduce GHG emissions 40% below 1990 levels by 2030, established by Senate Bill (SB) 32, and will make substantial progress towards the State’s long term goal of carbon neutrality by 2045, established by

Executive Order B-55-18. In addition, this CAP will fulfill the requirements of the California Environmental Quality Act (CEQA) Guidelines § 15183.5(b) to be a qualified GHG reduction plan. Under CEQA, local agencies must evaluate the environmental impacts of new development projects, including impacts from GHG emissions associated with their construction and operation. This process can be cumbersome for local agencies and developers alike and may result in project delays. The CEQA Guidelines recognize this and provide an option for new developments to streamline the CEQA analysis of GHG emissions by tiering off of a “qualified” GHG reduction plan. Per CEQA Guidelines § 15183.5(b), a qualified GHG reduction plan must:

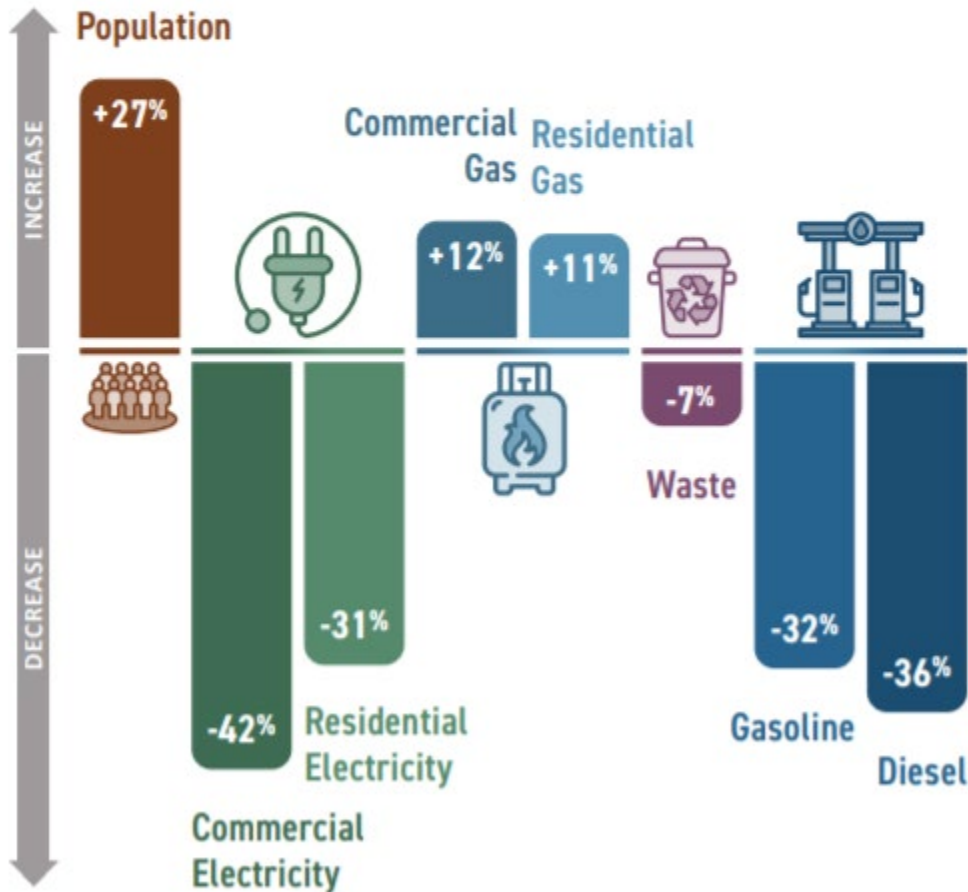
1. Quantify existing and projected GHG emissions within the plan area
2. Establish a reduction target based on SB 32
3. Identify and analyze sector specific GHG emissions from Plan activities
4. Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve specified reduction target
5. Establish a tool to monitor progress and amend if necessary
6. Adopt in a public process following environmental review

This Climate Action Plan meets these requirements and will provide the City of Chico and its developers with a critical tool for enabling development over the next decade. The City considers this especially important, given the current need for new affordable housing and future development plans. By developing a qualified GHG reduction plan, the City has provided new construction a viable pathway through the GHG analysis under CEQA and ensured that new development will meet the long-term goals of the City in a cost-effective manner.

History of Sustainability in Chico

The City of Chico has already begun the work necessary to reduce GHG emissions and adopt an ambitious yet realistic CAP, having accomplished a significant reduction in GHG emissions since 2005. In fact, community-wide emissions have decreased 27% since 2005, exceeding the City’s original goal of 25% in Chico’s 2020 Climate Action Plan. After accounting for population increases since 2005, this equates to a 42% decrease in GHG emissions per person, demonstrating that the City is well on its way to achieving the ambitious reductions included in this plan.

Since 2005, emissions in Chico have decreased **27% overall** and **42% per person**, despite a large population increase.



Emissions reductions in Chico have been driven by the proactive approach taken by the City and the community since the City adopted its first CAP in 2012 and from actions taken by at the State to reduce emissions across California.

[timeline graphic of State and local climate action]

Climate Action Commission Spotlight

The City of Chico’s Climate Action Commission (CAC) was established in 2019 to serve as an advisory body to the City Council on matters related to climate action, adaptation, and resilience, including reducing GHG emissions through preparation and maintenance of this CAP. The CAC was an evolution of Chico’s Sustainability Task Force, which was created in 2007 after Chico’s Mayor signed the Mayor’s Climate Protection Agreement. The Sustainability Task Force assisted the City in meeting the objectives of the Mayor’s Agreement, tracked GHG emissions in an annual GHG emissions inventory, and developed the City’s first CAP.

The CAC has advised the development of this CAP from its inception and continues to advise City Council on climate action and resiliency throughout the City of Chico.

Community Engagement

In addition to feedback and guidance from the Climate Action Commission, Chico's CAP was developed alongside an involved public engagement process. This process consisted of building awareness about the CAP effort, informing the community about Chico's GHG emissions and reduction progress so far, soliciting and obtaining feedback from the community on community context and priorities, engaging the community on Chico-specific climate action issues and policies, and meeting with targeted stakeholders to build policy development consensus. These efforts included:

- Winter 2019: Initial listening sessions led by the Climate Action Commission at the Rotary Club of Chico Sunrise, Butte Environmental Council, CSU Chico, Chico High School, and Pleasant Valley High School, prior to CAP development kick-off.
- Ongoing: presentations on CAP progress and technical findings at the City's monthly Climate Action Commission meetings for the duration of the CAP development process.
- May/June 2020: Phase 1 outreach, conducted virtually to mitigate community spread of COVID-19, led by the City and consultant team. A comprehensive list of 350 stakeholders was built and notifications on the virtual outreach event were disseminated in English and Spanish through the City website and social media channels, multiple emails and calls directly to stakeholders, and a news story on Telemundo. Community members participated in a "Check your Chico Knowledge" quiz, watched an animated informational video, and provided feedback in a short online questionnaire in both English and Spanish. **This effort resulted in active engagement from 200 community members.**
- October 2020: CAP Stakeholder meeting on electrification. The City invited XX stakeholders to participate in a Zoom meeting, which solicited discussion and feedback from participants on the CAP's electrification strategy.
- November/December 2020: Phase 2 outreach, conducted virtually to mitigate community spread of COVID-19, led by the City and consultant team. Notifications on the virtual outreach event were disseminated in English and Spanish through the City website and social media channels, notifications to all stakeholders and over 200 community members, and personal calls and emails to 50 high-priority stakeholders. Community members participated in a virtual community workshop in both English and Spanish, consisting of a short informational video and nine-page interactive document which solicited open-ended feedback on key proposed GHG reduction strategies. **The effort reached 4,490 community members and resulted in active engagement from 57 households.**

Further details on the outreach conducted, including the information shared, stakeholders contacted, activities conducted during the outreach phases, and the results and feedback from the community, are included in Appendix A of the CAP. Community input was carefully reviewed during the planning process and incorporated into the CAP. The CAP therefore addresses the CAP's strategies, the strategy implementation timeline, the purpose of the CAP, and the community's concerns about the CAP's strategies, which included housing affordability, grid reliability, access to natural gas, affordability of electric appliances, and bike safety.

Focus on Feedback and Equity

The community engagement process for the CAP had an early focus on community feedback and equitable engagement. These goals were manifested in the multi-pronged outreach efforts, targeted stakeholder identification and engagement, and provision of engagement materials in both English and Spanish. The City of Chico understands the importance of incorporating all needs and perspectives of the community, particularly those of the under-served and underrepresented members, into the CAP's strategies. While the stakeholder list included community groups and organizations that represents diverse and comprehensive perspectives on climate action, particular attention was paid to reaching underrepresented and disadvantaged communities. Environmental and public health conditions within disadvantaged communities are often impacted by GHG emissions more than other communities, and areas with high concentration of low-income families are more likely to be exposed to pollution and environmental hazards. Some Chico residents live in census tracts among the 25% most disadvantaged in the State.² While these community members would benefit from the outcomes of the CAP such as improved air quality, they may also face disproportionate barriers to implementing proposed CAP strategies, such as transitioning to all-electric appliances. To this end, the City engaged the Chapman/Mulberry Neighborhood Association, Chico Unified School District, and Team Chapman to disseminate information about the CAP and opportunities to participate in the planning process to their constituents so that a wide berth of opinions and perspectives could be gathered and used to develop equitable reduction measures.

The Science of Climate Change

What is climate change?

Climate change is caused by increasing levels of GHGs in the atmosphere. GHGs trap energy from the sun in earth's atmosphere, called the greenhouse effect. This effect makes the earth warm enough to sustain life; however, land use changes and combustion of fossil fuels are increasing GHGs in the atmosphere, amplifying the greenhouse effect, and causing a global change to climate patterns. This pattern is widely accepted by the scientific community, with over 97% of climate scientists agreeing that climate change is occurring and that human activities are the root cause.³

At the community level, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are the most common GHGs, making up 97% of the GHG emissions generated in the United States.⁴ GHG are released to the atmosphere via emissions from the combustion of fossil fuels. This occurs, for example, when gasoline is combusted in a car or natural gas is combusted in a heater or coal is burned to create electricity.

Climate change is projected to cause increasingly hazardous conditions for life on earth, including increased heat waves, wildfires, drought, extreme storms, flooding, and sea level rise. Secondary impacts of climate change include adverse changes to biological resources and public health.⁵

² CalEnviroStreen 3.0

³ <https://climate.nasa.gov/scientific-consensus/>

⁴ <https://www.wri.org/blog/2020/02/greenhouse-gas-emissions-by-country-sector>

⁵ <https://www.nrdc.org/sites/default/files/climate-change-health-impacts-california-ib.pdf>

The International Panel on Climate Change (IPCC) projections show that a reduction in GHG emission to carbon neutrality by mid-century is required to limit warming trends from climate change to 2.7 degrees Fahrenheit and limit the worst impacts of climate change.⁶

⁶ <https://www.ipcc.ch/sr15/chapter/spm/>

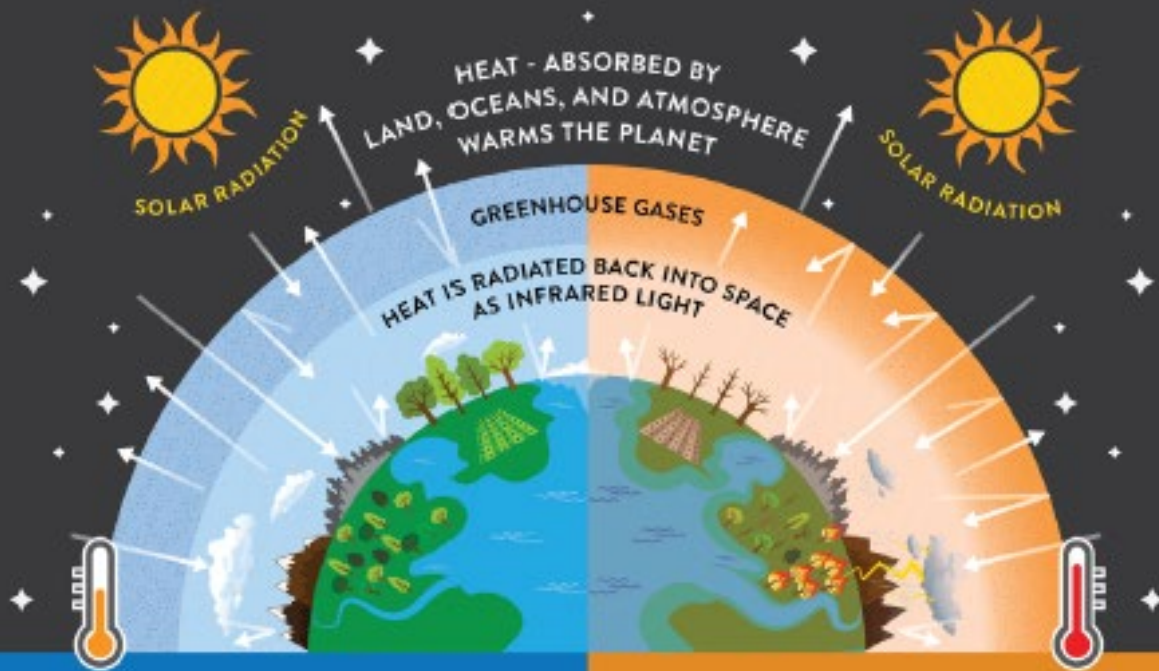
Greenhouse Gas Effect

Since the advent of the industrial revolution human activities such as burning fossil fuels and deforestation have caused a substantial increase in the concentration of greenhouse gases in the atmosphere.

THE RESULT: Extra trapped heat and higher global temperatures.

WITH NORMAL GREENHOUSE GASES

WITH INCREASED GREENHOUSE GASES



Some heat continues into space while the rest, trapped by greenhouse gases, help maintain the planet's relatively comfortable temperatures.

**LESS GAS =
LESS HEAT TRAPPED IN THE ATMOSPHERE**

Retain more reliable:

- Weather
- Temperature
- Rainfall
- Sea Level

Increased greenhouse gases means less heat escapes to space. Between preindustrial times and now, the earth's average temperature has risen by 1.8°F (1.0°C).

**MORE GAS =
MORE HEAT TRAPPED IN THE ATMOSPHERE**

Results in more intense:

- Storms
- Heat
- Drought
- Sea Level Rise

How do cities contribute to climate change?

The main sources of GHG emissions in cities are buildings, transportation, waste, and water. Building emissions are associated with electricity and natural gas used by commercial, residential, and municipal buildings. Transportation emissions are generated by fuels used to power cars, trucks, and off-road vehicles. Waste generates methane emissions from trash (especially organics) decomposing in the landfill. Water emissions are generated by the electricity used to transport water for residential, commercial, and agricultural use, and emissions from wastewater treatment processes.

How can cities mitigate climate change?

Local governments play a fundamental role in reducing state-level and local GHG emissions from local emissions sources. Local government policies can influence high-emissions behaviors, mitigate climate change effects, and prepare the community for a more resilient future. Cities can exercise their influence through local land use planning, building standards, and public and private partnerships to develop behavior-changing policies. Electricity and even some fuels can be generated through renewable and carbon neutral processes. Through their influence, cities can improve building codes, incentivize alternative transportation options, expand options for waste stream diversion and renewable energy sources, and education community members about their choices as citizens and customers. This Climate Action Plan is the City of Chico's next step in a long history of improving sustainability, decreasing GHG emissions, and improving the quality of life for Chico's communities.

Climate Change Impacts in Chico

Chico Context

Located at the northeastern edge of the agriculturally rich Sacramento Valley, the City of Chico is the most populous city in Butte County. The City supports a diverse range of industries, including agriculture, recreation, tourism, healthcare, manufacturing, and education. The City is home to California State University, Chico, the second oldest institution in the California State University system, Enloe Medical Center, which serves as the regional medical hospital and level II Trauma Center, and Bidwell Park, which covers 17% of the City's geographical extent.

Chico was the fastest growing city in California in 2019.⁷ The 2018 Camp Fire destroyed the nearby town of Paradise and created 50,000 climate migrants, many of whom moved in with friends and family in Chico, growing the City's population 20.7% almost overnight. The Butte County Association of Governments (BCAG) estimates a large growth in housing units in Chico through 2030, accompanied by a decrease in population through 2030, as many people temporarily displaced by the Camp Fire move away from Chico.

[Projected growth graphic]

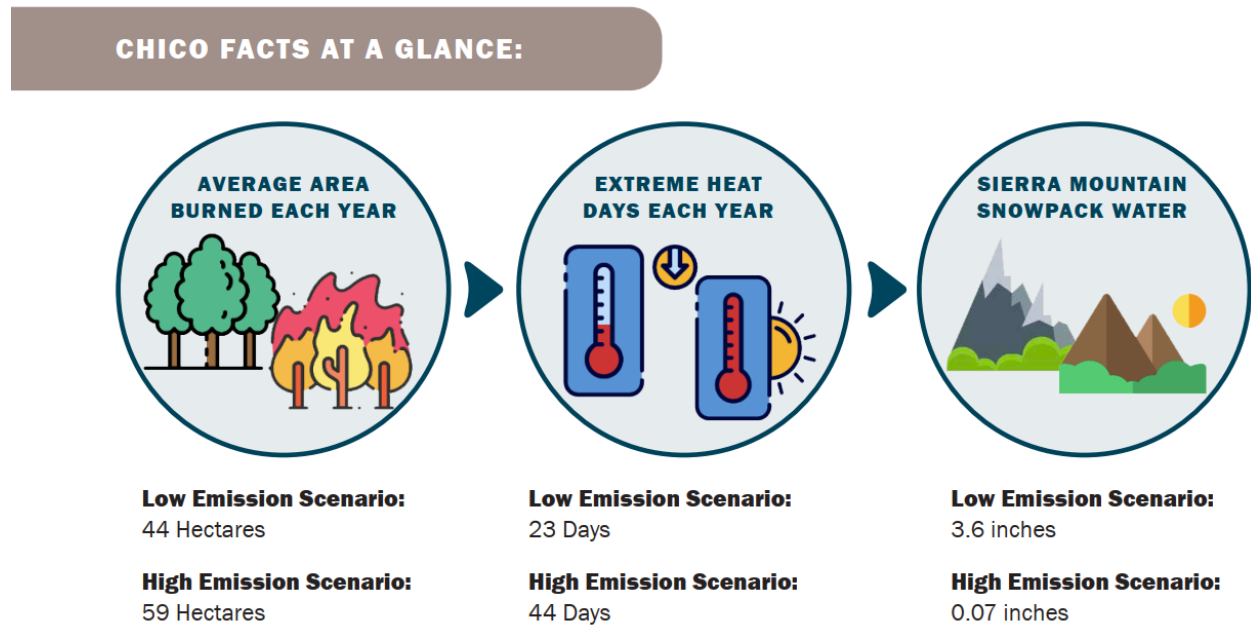
Chico's geographic location, industries, demographics, and future growth together dictate the City's vulnerabilities to climate change. The City of Chico completed a Vulnerability Assessment in 2018 to outline the potential climate impacts Chico is expected to see in the future. The Vulnerability Assessment includes a summary of the City's efforts to adapt to these impacts. While this CAP primarily

⁷ Department of Finance, 2019

focuses on reducing GHG emissions in Chico to mitigate the most significant impacts of climate change, many of the strategies identified will also help prepare the City for these future changes.

Vulnerability Assessment

The number of extreme temperature days, heat waves, and wildfires vary greatly depending on the amount of GHG emissions that humans emit over time. Increased GHG emissions can reduce snowpack, negatively affecting sensitive habitats like Bidwell Park, and potentially require human migrations like Chico experienced from the Camp Fire. Climate change impacts in Chico were analyzed in the City’s 2018 Vulnerability Assessment and are expected to affect public health and safety, and the health of the local economy.



Public Health and Safety

Adverse impacts from climate change are expected to disproportionately affect vulnerable populations, including people in low-income areas, communities of color, young children and the elderly, people experiencing homelessness, outdoor workers, and socially or linguistically isolated people. Currently 25.2% of Chico’s residents are living in poverty⁸ and 1,096 people are considered to be homeless.⁹

⁸ United State Census Bureau, 2017

⁹ 2017 Homeless Point in Time Census and Survey Report, 2017

Wildfire

Increased temperatures are leading to increased frequency and extent of wildfires across California. The City of Chico has already experienced the devastating effects of increasing wildfires, after the Camp Fire in 2018 and the Northern Complex Fire in 2020.

Climate Change Impacts in Action – 2018 Camp Fire

The massive influx of people from the 2018 Camp Fire exacerbated crime and traffic congestion and put undue pressure on the sewage and waste systems in the City. Lack of housing to accommodate these new people was the single biggest post-fire issue, creating more pressure for affordable housing in a city that already faces a homelessness crisis, like most other cities in California.

The lasting effects of the Camp Fire serve to highlight the importance of maintaining strong development trends in Chico through the future. To align with State GHG reduction goals and build new housing to meet demand, the City of Chico must adopt a new strategy for development. This CAP contains the first steps of this new strategy, making Chico more resilient to future events like the Camp Fire.



Figure 1 Aftermath of the Paradise Fire (Chico Enterprise-Record)

Drought

Periods of drought are increasing in Chico, leading to decreasing surface water and groundwater availability. This will particularly affect agricultural output, potentially resulting in decreased food supply and resiliency.¹⁰

Respiratory Illness

Local GHG emissions directly affect local air quality. NO₂ emissions from natural gas usage in buildings account for 92% of outdoor NO₂ concentrations in California¹¹ and are disproportionately linked with respiratory illnesses, including asthma and COVID-19 mortality.¹² Increased wildfire risk is leading to more frequent periods of low-quality air in Chico, which poses a health hazard to vulnerable populations.

Heat-related Illness

The duration and magnitude of heat waves are already increasing in Chico. Cases of heat-related illnesses such as nausea, dizziness, stroke, dehydration, and heat exhaustion are expected to rise and exacerbate pre-existing medical conditions. Vulnerable populations are less likely or unable to own an air conditioner because they cannot afford to pay the utility bill, which tends to be higher in low-income populations living in aging buildings with poor insulation and ventilation.

Ecological Degradation and Disease

The changing climate is affecting biological resources and ecological function in Chico, especially in spaces like Bidwell Park that span multiple habitat types. Decreasing ecological function can lead to faster-spreading diseases, to which humans and crops may be vulnerable.

Health of the Local Economy

Climate change is expected to disproportionately affect small and medium businesses in Chico due to lack of capital and resources combined with a low number of operational facilities. Climate change is also forcing the business-as-usual approach to infrastructure and energy to become more expensive.

Power Outages

High temperatures and winds decrease the efficiency of power lines and can lead to power outages and blackouts, limiting and disrupting operations of businesses.

Impacts to Infrastructure

Climate change can impact Chico's infrastructure. High temperatures cause excessive roadway degradation and increased pressure on the structural joints in bridges. Increased flood events and wildfires cause considerable property damage. These changes will lead to increased infrastructure costs for taxpayers, residents, and businesses owners.

¹⁰ <https://www.csuchico.edu/sustainability/doc-library/chico-climate-change-vulnerability-assessment.pdf>

¹¹ EPA National Emissions Inventory, 2017)

¹² American Lung Association

Cost of Natural Gas

Residential natural gas usage is projected to decline 25% by 2050 due to increased energy efficiency.¹³ This will lead to dramatically increased natural gas prices to maintain the high costs of natural gas infrastructure. This is expected to disproportionately affect residents and businesses who rely on natural gas for cooking and heating.

¹³ <https://gridworks.org/initiatives/cagas-system-transition/>

1. INTRODUCTION



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VISION FOR CLIMATE ACTION IN CHICO

The City of Chico (Chico) can already appreciate what is needed to address climate change impacts and migration through the next decade. Heavy rainfall and flooding in 2017 caused the Oroville Dam's spillways to overflow, prompting the evacuation of more than 180,000 people living downstream. Strong winds and drought conditions in 2018 created the deadliest wildfire in California's history, which destroyed the town of Paradise and drove a massive influx of climate migrants into the City of Chico. Fire again threatened the region as recently as 2020, when a lightning strike caused the Northern Complex fire in Plumas and Butte Counties. These disasters have already put the City of Chico on the frontlines of a changing climate.

In response to the need for ambitious climate action, this Climate Action Plan (CAP) has developed specific actions to mitigate greenhouse gas (GHG) emissions and achieve the

community's target to achieve carbon neutrality by 2045. Achieving carbon neutrality in Chico will contribute to the global emissions trajectory needed to stabilize atmospheric concentrations at 350 parts per million (ppm) or less, which is consistent with the International Panel on Climate Change (IPCC) analysis on what is necessary to reduce the likelihood of catastrophic global climate change. Addressing climate change also presents the community with an opportunity to operate more efficiently and effectively, position for economic opportunities, avoid inequities, and improve health and well-being. The CAP is consistent with the County's commitment to address climate change and work towards a more sustainable, healthy and resilient community.

A NOTE ABOUT COVID-19

The outbreak of the COVID-19 pandemic drastically affected daily life and has highlighted the interdependence of public health, economic and racial equity, and environmental sustainability on a national level. As the national and local economy begin to recover from the impacts of the COVID-19 pandemic, it has become imperative to plan for a future that aligns economic growth and new building development with equity and sustainability. This CAP balances its strategies for a sustainable Chico against the need for economic growth and new building development in an equitable and realistic way, serving the overall recovery effort in Chico.

The CAP also builds on lessons learned from the pandemic to improve Chico's air quality, building development practices, transportation options, and housing and resource affordability.





LEADING PRINCIPLES

This CAP was developed with several key leading principles in mind. With drought, fires, and flooding projected to worsen across California over the coming decades due to climate change,¹ the City of Chico has developed this CAP to reduce its fair share of California's greenhouse gas (GHG) emissions through 2030 and create a plan for a safer and more resilient future. The CAP also strategically positions the community's residents and business-owners to take early advantage of emerging economic opportunities. Finally, the CAP will enable affordable housing development, prioritize social equity, improve the quality of life for residents, and engage the citizens of Chico in ongoing climate action work. These leading principles are described in more detail below.

- **SAFER FUTURE:** Reducing GHG emissions in the City of Chico will help prevent damage and loss of life from flooding, fires, heat waves, and drought made worse by climate change.
- **ECONOMIC OPPORTUNITY:** New technologies and innovative approaches to procuring energy for communities are lowering lifestyle costs for the average resident and operating costs for the average business owner. Taking advantages of these opportunities and implementing them now will save the community money in both the short- and long-term.
- **AFFORDABLE HOUSING:** California's housing crisis weighs heavily on the State, including within the City of Chico. Adopting and implementing the CAP will make building affordable housing in Chico easier and faster for developers. This makes Chico a better place to live now, and more resilient to population changes that may arise from climate disasters in the future.
- **SOCIAL EQUITY:** The City of Chico knows that the CAP will only be successful with proper consideration of social equity. The strategies contained in the CAP were developed in consultation with the City's frontline communities and vulnerable populations to develop a plan that works for all members of the community.
- **QUALITY OF LIFE:** The CAP envisions a future for Chico with cleaner air, resilient water sources, and more active and livable neighborhoods.
- **ENGAGED CITIZENS:** The City of Chico cannot act alone. The success of this CAP is dependent on input from and collaboration with the community. The City views climate action as an iterative process, which will be adjusted based on new technologies, new information, and feedback from the community through an ongoing education and outreach campaign.

¹ <https://www.nrdc.org/sites/default/files/climate-change-health-impacts-california-ib.pdf>



The City of Chico has developed the CAP to be realistic in its approach though ambitious in its targets. The CAP's strategies take a new approach to climate change policy that is

actionable, measurable, cost-effective, fiscally responsible, and highly implementable over the course of the next decade.

PURPOSE

This CAP will guide the City of Chico towards reducing GHG emissions consistent with the State goal to reduce GHG emissions 40% below 1990 levels by 2030, established by Senate Bill (SB) 32, and will make substantial progress towards the State's long term goal of carbon neutrality by 2045, established by Executive Order B-55-18. In addition, this CAP will fulfill the requirements of the California Environmental Quality Act (CEQA) Guidelines § 15183.5(b) to be a qualified GHG reduction plan. Under CEQA, local agencies must evaluate the environmental impacts of new development projects, including impacts from GHG emissions associated with their construction and operation. This process can be cumbersome for local agencies and developers alike and may result in project delays. The CEQA Guidelines recognize this and provide an option for new developments to streamline the CEQA analysis of GHG emissions by tiering off of a "qualified" GHG reduction plan. Per CEQA Guidelines § 15183.5(b), a qualified GHG reduction plan must:

1. Quantify existing and projected GHG emissions within the plan area
2. Establish a reduction target based on SB 32
3. Identify and analyze sector specific GHG emissions from Plan activities
4. Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve specified reduction target
5. Establish a tool to monitor progress and amend if necessary
6. Adopt in a public process following environmental review

This Climate Action Plan meets these requirements and will provide the City of Chico and its developers with a critical tool for enabling development over the next decade. The City considers this especially important, given the current need for new affordable housing and future development plans. By developing a qualified GHG reduction plan, the City has provided new construction a viable pathway through the GHG analysis under CEQA and ensured that new development will meet the long-term goals of the City in a cost effective manner.

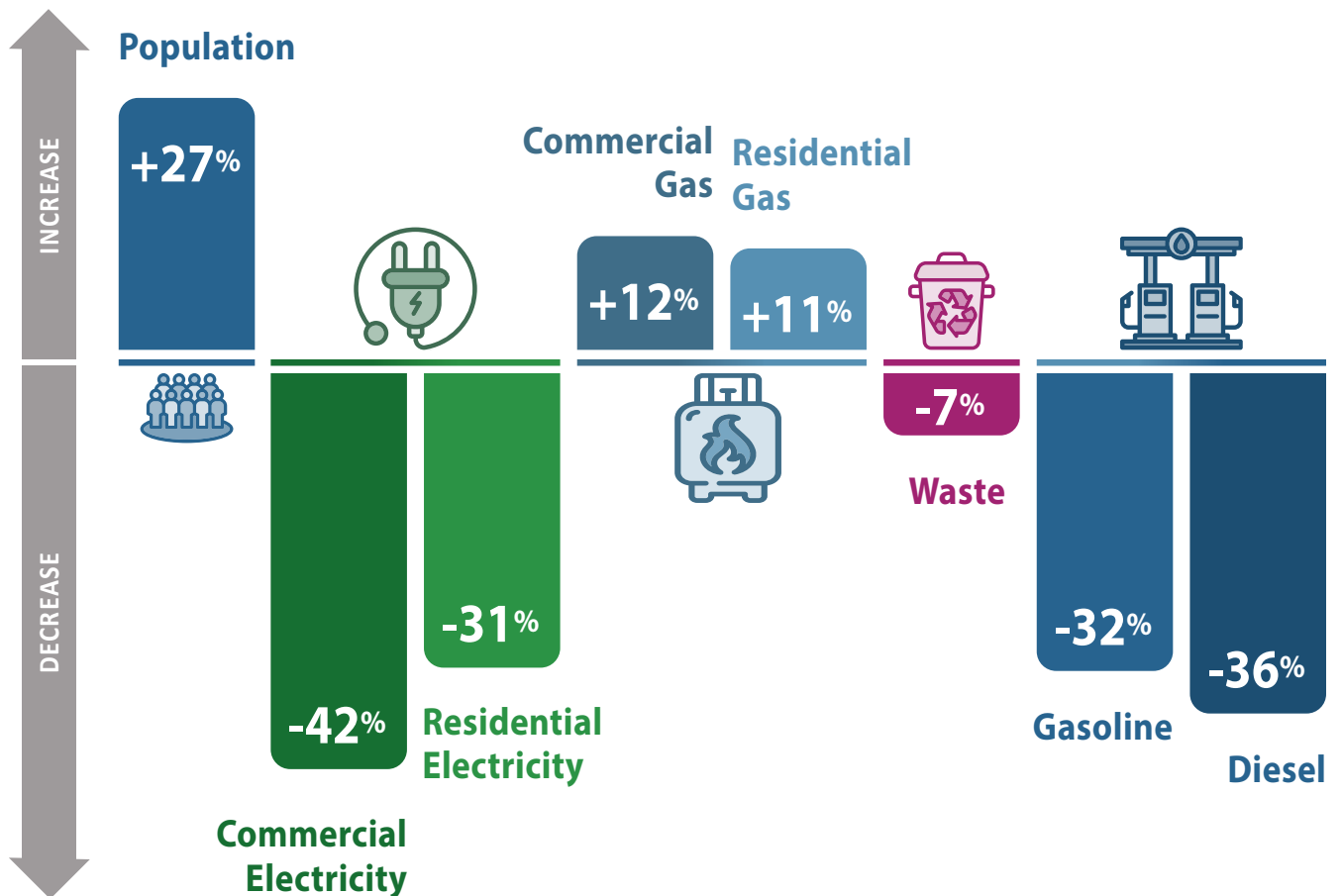


HISTORY OF SUSTAINABILITY IN CHICO

The City of Chico has already begun the work necessary to reduce GHG emissions and adopt an ambitious yet realistic CAP, having accomplished a significant reduction in GHG emissions since 2005. In fact, community-wide emissions have decreased 27% since 2005, exceeding the City's original goal of 25% in Chico's

2020 Climate Action Plan. After accounting for population increases since 2005, this equates to a 42% decrease in GHG emissions per person, demonstrating that the City is well on its way to achieving the ambitious reductions included in this plan.

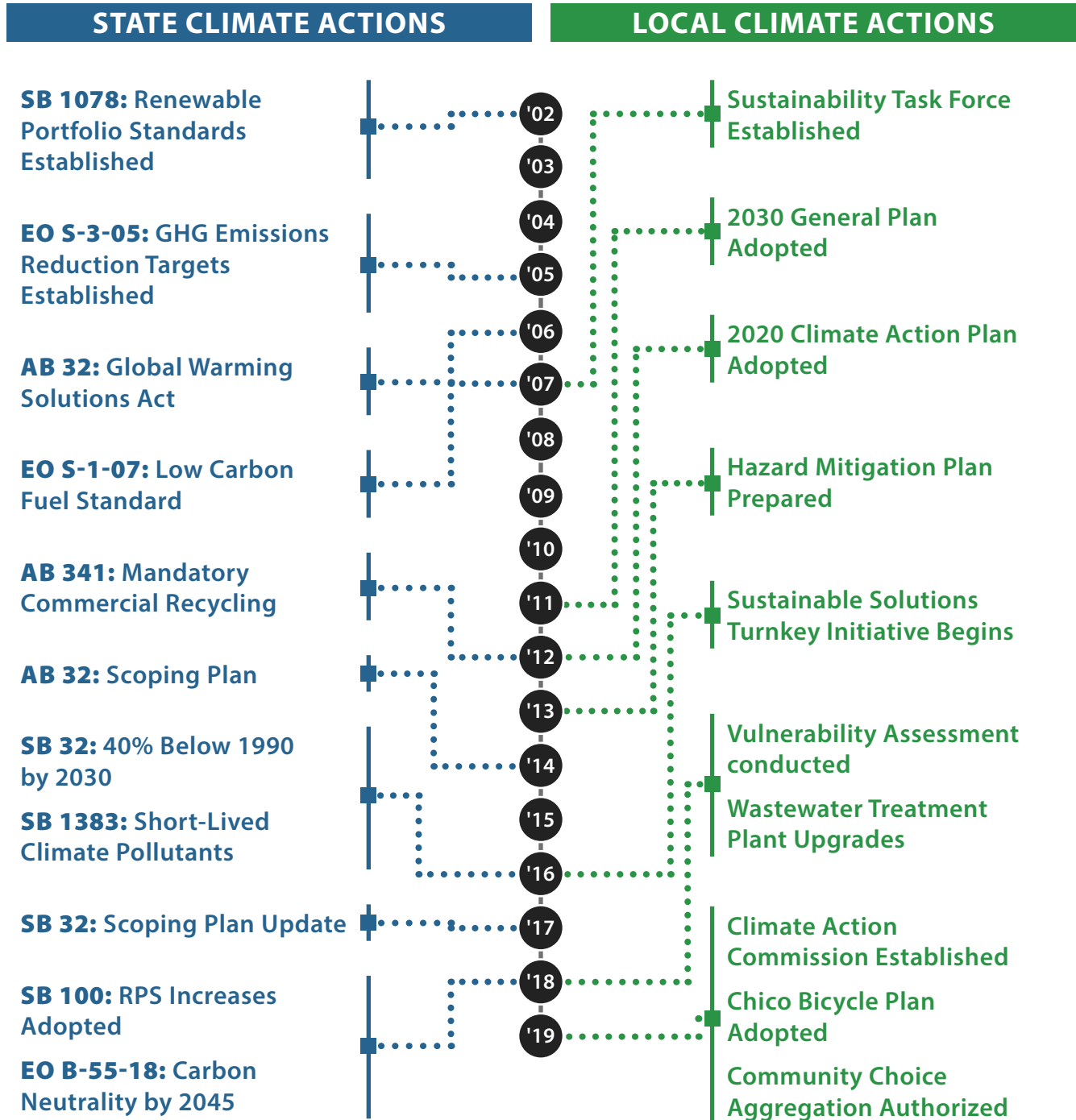
Since 2005, emissions in Chico have decreased 27% overall and 42% per person, despite a large population increase.





Emissions reductions in Chico have been driven by the proactive approach taken by the City and the community since the City adopted its first CAP in 2012 and from actions taken by at the State to reduce emissions across California.

Figure 1. State and Local Climate Action





CLIMATE ACTION COMMISSION SPOTLIGHT

The City of Chico's Climate Action Commission (CAC) was established in 2018 to serve as an advisory body to the City Council on matters related to climate action, adaptation, and resilience, including reducing GHG emissions through preparation and maintenance of this CAP. The CAC was an evolution of Chico's Sustainability Task Force, which was created in 2007 after Chico's Mayor signed the Mayor's Climate Protection Agreement. The Sustainability Task

Force assisted the City in meeting the objectives of the Mayor's Agreement, tracked GHG emissions in an annual GHG emissions inventory, and developed the City's first CAP. The CAC has advised the development of this CAP from its inception and continues to advise City Council on climate action throughout the City of Chico.





COMMUNITY ENGAGEMENT

In addition to feedback and guidance from the Climate Action Commission, Chico's CAP was developed alongside an involved public engagement process. This process consisted of building awareness about the CAP effort, informing the community about Chico's GHG emissions and reduction progress so far, soliciting and obtaining feedback from the community on community context and priorities, engaging the community on Chico-specific climate action issues and policies, and meeting with targeted stakeholders to build policy development consensus. These efforts included:

- **ONGOING:** presentations on CAP progress and technical findings at the City's monthly Climate Action Commission meetings for the duration of the CAP development process.
- **WINTER 2019:** Initial listening sessions led by the Climate Action Commission at the Rotary Club of Chico Sunrise, CSU Chico, and Pleasant Valley High School prior to CAP development kick-off.
- **MAY/JUNE 2020:** Phase 1 outreach, conducted virtually to mitigate community spread of COVID-19, led by the City and consultant team. A comprehensive list of 350 stakeholders was built and notifications on the virtual outreach event were disseminated in English and Spanish through the City website and social media channels, multiple emails and calls directly to stakeholders, and a news story on Telemundo. Community members participated in a "Check your Chico Knowledge" quiz, watched an animated informational video, and provided feedback in a short online questionnaire in

both English and Spanish. This effort resulted in active engagement from 200 community members.

- **OCTOBER 2020:** CAP Stakeholder meeting on electrification. The City invited XX stakeholders to participate in a Zoom meeting, which solicited discussion and feedback from participants on the CAP's electrification strategy.
- **NOV/DEC 2020:** Phase 2 outreach, conducted virtually to mitigate community spread of COVID-19, led by the City and consultant team. Notifications on the virtual outreach event were disseminated in English and Spanish through the City website and social media channels, personal calls and emails to fifty stakeholders and over 200 community members. Community members participated in a virtual community workshop in both English and Spanish, consisting of a short informational video and nine-page interactive document which solicited open-ended feedback on key proposed GHG reduction strategies. The effort reached 4,490 community members and resulted in active engagement from 57 households.

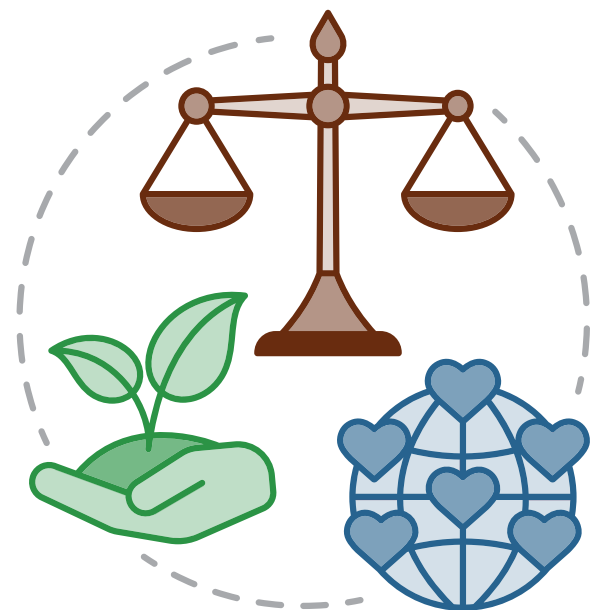


Further details on the outreach conducted, including the information shared, stakeholders contacted, activities conducted during the outreach phases, and the results and feedback from the community, are included in Appendix A of the CAP. Community input was carefully reviewed during the planning process and incorporated into the CAP. The CAP therefore addresses the CAP's strategies, the strategy implementation timeline, the purpose of the CAP, and the community's concerns about the CAP's strategies, which included housing affordability, grid reliability, access to natural gas, affordability of electric appliances, and bike safety.

Focus on Feedback and Equity

The community engagement process for the CAP had an early focus on community feedback and equitable engagement. These goals were manifested in the multi-pronged outreach efforts, targeted stakeholder identification and engagement, and provision of engagement materials in both English and Spanish. The City of Chico understands the importance of incorporating all needs and perspectives of the community, particularly those of the under-served and underrepresented members, into the CAP's strategies. While the stakeholder list included community groups and organizations that represents diverse and comprehensive perspectives on climate action, particular attention was paid to reaching underrepresented and disadvantaged communities. Environmental and public health conditions within disadvantaged communities are often impacted by GHG

emissions more than other communities, and areas with high concentration of low-income families are more likely to be exposed to pollution and environmental hazards. Some Chico residents live in census tracts among the 25% most disadvantaged in the State.² While these community members would benefit from the outcomes of the CAP such as improved air quality, they may also face disproportionate barriers to implementing proposed CAP strategies, such as transitioning to all-electric appliances. To this end, the City engaged the Chapman/Mulberry Neighborhood Association, Chico Unified School District, and Team Chapman to disseminate information about the CAP and opportunities to participate in the planning process to their constituents so that a wide berth of opinions and perspectives could be gathered and used to develop equitable reduction measures.



² CalEnviroStreen 3.0



Figure 4. Greenhouse Gas Effect and Associated Climate Impacts

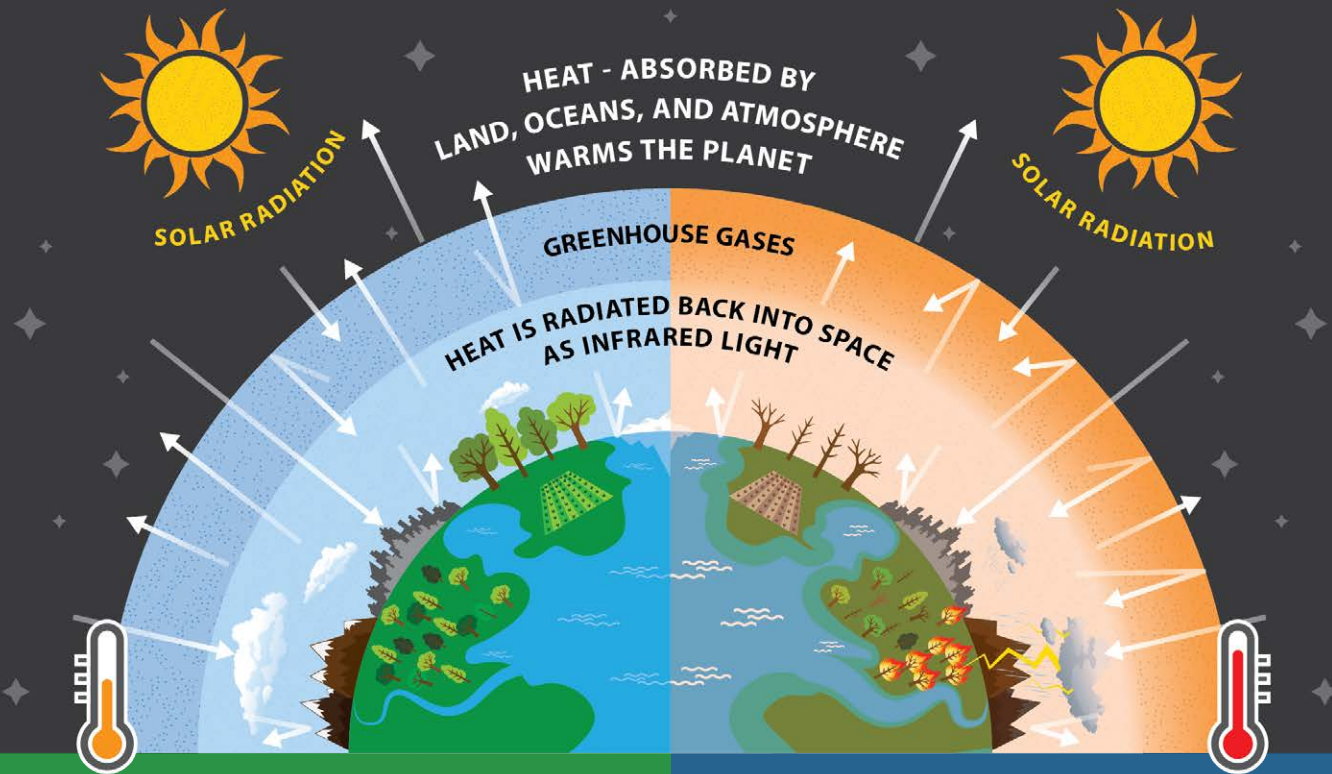
GREENHOUSE GAS EFFECT

Since the advent of the industrial revolution human activities such as burning fossil fuels and deforestation have caused a substantial increase in the concentration of greenhouse gases in the atmosphere.

THE RESULT: Extra trapped heat and higher global temperatures.

WITH NORMAL GREENHOUSE GASES

WITH INCREASED GREENHOUSE GASES



Some heat continues into space while the rest, trapped by greenhouse gases, help maintain the planet's relatively comfortable temperatures.

Increased greenhouse gases means less heat escapes to space. Between preindustrial times and now, the earth's average temperature has risen by 1.8°F (1.0°C).

**LESS GAS =
 LESS HEAT TRAPPED IN THE ATMOSPHERE**

**MORE GAS =
 MORE HEAT TRAPPED IN THE ATMOSPHERE**

Retain more reliable:

Results in more intense:

- Weather
- Temperature
- Rainfall
- Sea Level

- Storms
- Heat
- Drought
- Sea Level Rise

THE SCIENCE OF CLIMATE CHANGE

What is Climate Change?

Climate change is caused by increasing levels of GHGs in the atmosphere. GHGs trap energy from the sun in earth's atmosphere, called the greenhouse effect. This effect makes the earth warm enough to sustain life; however, land use changes and combustion of fossil fuels are increasing GHGs in the atmosphere, amplifying the greenhouse effect, and causing a global change to climate patterns. This pattern is widely accepted by the scientific community, with over 97% of climate scientists agreeing that climate change is occurring and that human activities are the root cause.³

At the community level, carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are the most common GHGs, making up 97% of the GHG emissions generated in the United States.⁴

GHG are released to the atmosphere via emissions from the combustion of fossil fuels. This occurs, for example, when gasoline is combusted in a car or natural gas is combusted in a heater or coal is burned to create electricity.

Climate change is projected to cause increasingly hazardous conditions for life on earth, including increased heat waves, wildfires, drought, extreme storms, flooding, and sea level rise. Secondary impacts of climate change include adverse changes to biological resources and public health.⁵

The International Panel on Climate Change (IPCC) projections show that a reduction in GHG emission to carbon neutrality by mid-century is required to limit warming trends from climate change to 2.7 degrees Fahrenheit and limit the worst impacts of climate change.⁶

³ <https://climate.nasa.gov/scientific-consensus/>

⁴ <https://www.wri.org/blog/2020/02/greenhouse-gas-emissions-by-country-sector>

⁵ <https://www.nrdc.org/sites/default/files/climate-change-health-impacts-california-ib.pdf>

⁶ <https://www.ipcc.ch/sr15/chapter/spm/>



How do Cities Contribute to Climate Change?

The main sources of GHG emissions in cities are buildings, transportation, waste, and water. Building emissions are associated with electricity and natural gas used by commercial, residential, and municipal buildings. Transportation emissions are generated by fuels used to power cars, trucks, and off-road vehicles. Waste generates methane emissions from trash (especially organics) decomposing in the landfill. Water emissions are generated by the electricity used to transport water for residential, commercial, and agricultural use, and emissions from wastewater treatment processes.



How Can Cities Mitigate Climate Change?

Local governments play a fundamental role in reducing state-level and local GHG emissions from local emissions sources. Local government policies can influence high-emissions behaviors, mitigate climate change effects, and prepare the community for a more resilient future. Cities can exercise their influence through local land use planning, building standards, and public and private partnerships to develop behavior-changing policies. Electricity and even some fuels can be generated through renewable and carbon neutral processes. Through their influence, cities can improve building codes, incentivize alternative transportation options, expand options for waste stream diversion and renewable energy sources, and education community members about their choices as citizens and customers. This Climate Action Plan is the City of Chico's next step in a long history of improving sustainability, decreasing GHG emissions, and improving the quality of life for Chico's communities.





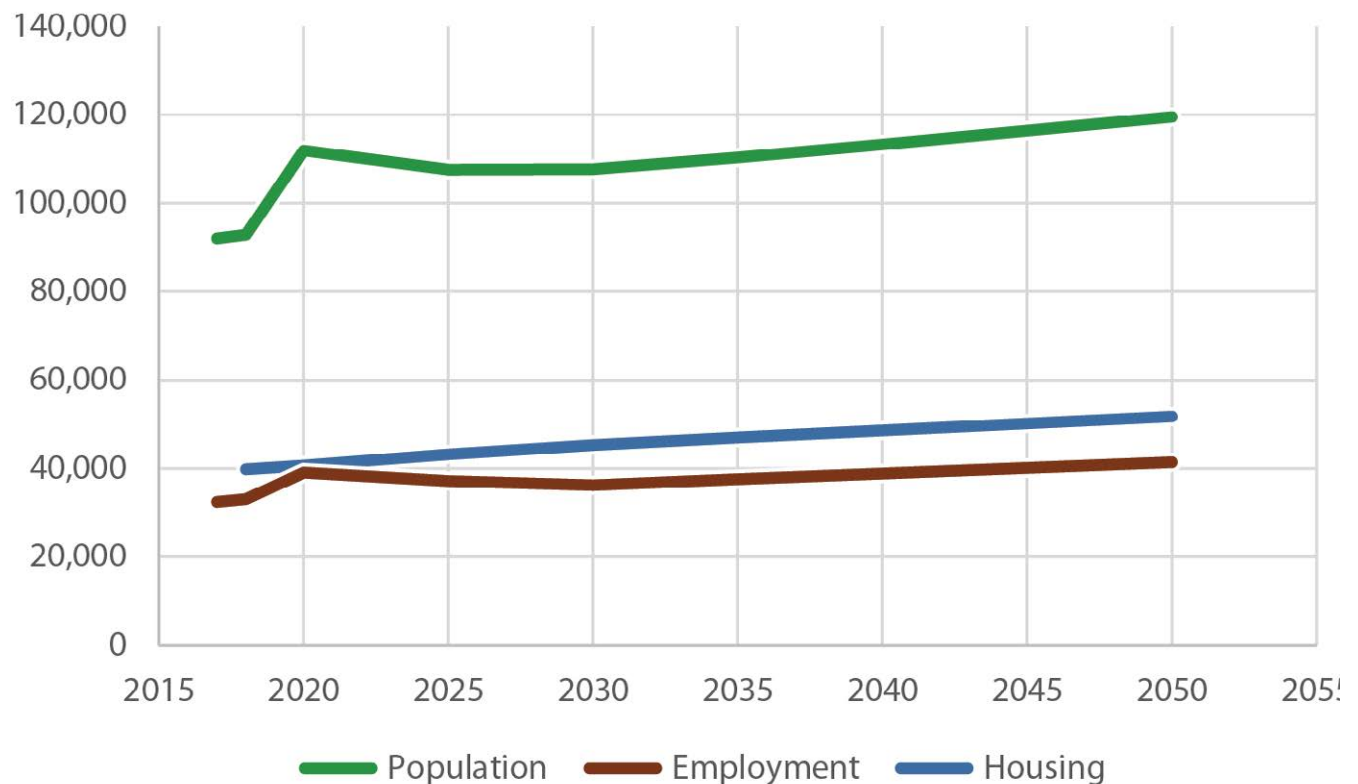
CLIMATE CHANGE IMPACTS IN CHICO

Chico Context

Located at the northeastern edge of the agriculturally rich Sacramento Valley, the City of Chico is the most populous city in Butte County. The City supports a diverse range of industries, including agriculture, recreation, tourism, health-care manufacturing, and education. The City is home to California State University, Chico, the second oldest institution in the California State University system, Enloe Medical Center, which serves as the regional medical hospital and level II Trauma Center, and Bidwell Park, which covers 17% of the City’s geographical extent.

Chico was the fastest growing city in California in 2019.⁷ The 2018 Camp Fire destroyed the nearby town of Paradise and created 50,000 climate migrants, many of whom moved in with friends and family in Chico, growing the City’s population 20.7% almost overnight. The Butte County Association of Governments (BCAG) estimates a large growth in housing units in Chico through 2030, accompanied by a decrease in population through 2030, as many people temporarily displaced by the Camp Fire move away from Chico.

Figure 2. City of Chico Projected Growth



⁷ Department of Finance, 2019

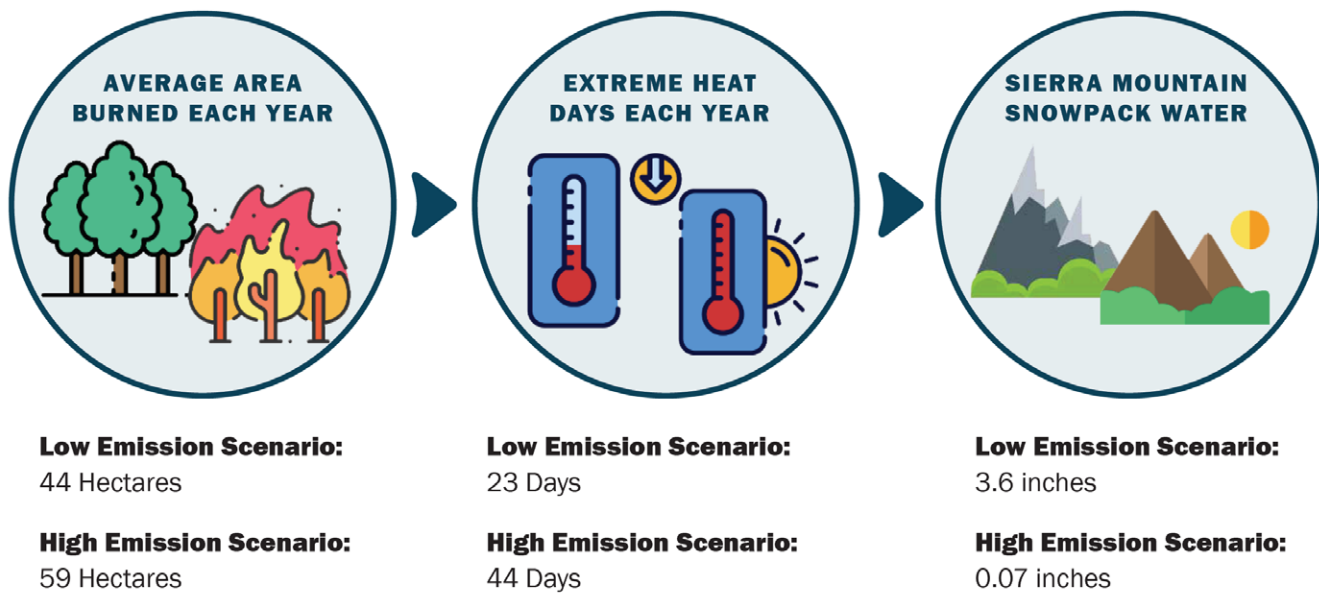


Chico’s geographic location, industries, demographics, and future growth together dictate the City’s vulnerabilities to climate change. The City of Chico completed a Vulnerability Assessment in 2018 to outline the potential climate impacts Chico is expected to see in the future. The Vulnerability Assessment includes a summary of the City’s efforts to adapt to these impacts. While this CAP primarily focuses on reducing GHG emissions in Chico to mitigate the most significant impacts of climate change, many of the strategies identified will also help prepare the City for these future changes.

The number of extreme temperature days, heat waves, and wildfires vary greatly depending on the amount of GHG emissions that humans emit over time. Increased GHG emissions can reduce snowpack, negatively affecting sensitive habitats like Bidwell Park, and potentially require human migrations like Chico experienced from the Camp Fire. Climate change impacts in Chico were analyzed in the City’s 2018 Vulnerability Assessment and are expected to affect public health and safety, and the health of the local economy.

Vulnerability Assessment

Figure 3. Chico Facts at a Glance



PUBLIC HEALTH AND SAFETY

Adverse impacts from climate change are expected to disproportionately affect vulnerable populations, including people in low-income areas, communities of color, young children

and the elderly, people experiencing homelessness, outdoor workers, and socially or linguistically isolated people. Currently 25.2% of Chico's residents are living in poverty⁸ and 1,096 people are considered to be homeless.⁹

8 United State Census Bureau, 2017

9 2017 Homeless Point in Time Census and Survey Report, 2017

CLIMATE CHANGE IMPACTS IN ACTION – 2018 CAMP FIRE

The massive influx of people from the 2018 Camp Fire exacerbated crime and traffic congestion and put undue pressure on the sewage and waste systems in the City. Lack of housing to accommodate these new people was the single biggest post-fire issue, creating more pressure for affordable housing in a city that already faces a homelessness crisis, like most other cities in California.

The lasting effects of the Camp Fire serve to highlight the importance of maintaining strong development trends in Chico through the future. To align with State GHG reduction goals and build new housing to meet demand, the City of Chico must adopt a new strategy for development. This CAP contains the first steps of this new strategy, making Chico more resilient to future events like the Camp Fire.



Aftermath of the Paradise Fire (Chico Enterprise-Record)



WILDFIRE

Increased temperatures are leading to increased frequency and extent of wildfires across California. The City of Chico has already

experienced the devastating effects of increasing wildfires, after the Camp Fire in 2018 and the Northern Complex Fire in 2020.



DROUGHT

Periods of drought are increasing in Chico, leading to decreasing surface water and groundwater availability. This will particularly

affect agricultural output, potentially resulting in decreased food supply and resiliency.¹⁰



RESPIRATORY ILLNESS

Local GHG emissions directly affect local air quality. NO₂ emissions from natural gas usage in buildings account for 92% of outdoor NO₂ concentrations in California¹¹ and are disproportionately linked with respiratory illnesses,

including asthma and COVID-19 mortality.¹² Increased wildfire risk is leading to more frequent periods of low-quality air in Chico, which poses a health hazard to vulnerable populations.



HEAT-RELATED ILLNESS

The duration and magnitude of heat waves are already increasing in Chico. Cases of heat-related illnesses such as nausea, dizziness, stroke, dehydration, and heat exhaustion are expected to rise and exacerbate pre-existing medical conditions. Vulnerable populations are less likely or

unable to own an air conditioner because they cannot afford to pay the utility bill, which tends to be higher in low-income populations living in aging buildings with poor insulation and ventilation.



ECOLOGICAL DEGRADATION AND DISEASE

The changing climate is affecting biological resources and ecological function in Chico, especially in spaces like Bidwell Park that span multiple habitat types. Decreasing ecological function can lead to faster-spreading diseases, to which humans and crops may be vulnerable.



¹⁰ <https://www.csuchico.edu/sustainability/doc-library/chico-climate-change-vulnerability-assessment.pdf>

¹¹ EPA National Emissions Inventory, 2017)

¹² American Lung Association



HEALTH OF THE LOCAL ECONOMY

Climate change is expected to disproportionately affect small and medium businesses in Chico due to lack of capital and resources

combined with a low number of operational facilities. Climate change is also forcing the business-as-usual approach to infrastructure and energy to become more expensive.

POWER OUTAGES

High temperatures and winds decrease the efficiency of power lines and can lead to power

outages and blackouts, limiting and disrupting operations of businesses.



IMPACTS TO INFRASTRUCTURE

Climate change can impact Chico's infrastructure. High temperatures cause excessive roadway degradation and increased pressure on the structural joints in bridges. Increased flood

events and wildfires cause considerable property damage. These changes will lead to increased infrastructure costs for taxpayers, residents, and businesses owners.



COST OF NATURAL GAS

Residential natural gas usage is projected to decline 25% by 2050 due to increased energy efficiency.¹³ This will lead to dramatically increased natural gas prices to maintain the high costs of natural gas infrastructure. This is expected to disproportionately affect residents and businesses who rely on natural gas for cooking and heating.



¹³ <https://gridworks.org/initiatives/cagas-system-transition/>



Figure 5. Table Example

Land Use Type	Use Details
Neighborhood and University Serving Retail	950,000 sf
Gas Station	5,000 sf service station with 16 fuel pumps
Restaurants (excluding hotel)	13,000 sf
Hotel	280 rooms
Single Family Residential	140 units
Multi-Family Residential	150 units
Student Housing	330 units
Other	
Floor Area Ratio (FAR)	0.37
Site Coverage	81.9%
Parking	2,757 spaces
Public Street/Retention/Open Space	5.06 acres
Total gsf	775,000 gsf
Total Acres (limits of work)	55.83

Table citation



COLOR PALETTE



R	39	43	22	97	166	129	161
G	99	146	111	142	105	208	34
B	143	69	50	46	51	212	113

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Figure 6. Table Title

Figure 7. Figure Title