

This Climate Action Plan (“CAP”) provides a comprehensive roadmap to address the challenges of climate change in the City of Escondido (“City”). While climate change is a global issue, it impacts communities on a local scale. It is the responsibility of all members of society, including local governments, to reduce greenhouse gas (“GHG”) emissions in their communities. Acting on climate change means both reducing GHG emissions from activities within the city and helping the community adapt to climate change and improve its resilience over the long term. The City has dedicated resources and partnered with the San Diego Association of Governments (“SANDAG”) to create this CAP to achieve GHG reductions and address climate change at the local level. In an effort to combat climate change, this CAP sets GHG reduction targets and proposes achievable, locally-based strategies to reduce GHG emissions from both municipal and community activities.

Scientific evidence shows that the Earth’s climate is experiencing a warming trend as a result of increasing GHGs in the atmosphere. Increasing average temperatures are also causing changes in the climate, including disrupted ocean currents, increased extreme weather events, and changes in precipitation patterns, etc. This phenomenon is known as global climate change. As California continues to experience historic trends of rising average temperatures, extreme weather events and storms, and higher sea levels, there is evidence that the effects of global climate change are already occurring and that reductions in GHG emissions are needed to prevent the most catastrophic effects of climate change.

This CAP aims to address climate change by reducing GHG emissions from activities within the city, and by identifying threats and strategies for adapting to adverse environmental conditions caused by climate change.

The State has taken several steps to reduce GHG emissions and respond to the threat of global climate change. In 2006, the California Global Warming Solutions Act (Assembly Bill [“AB”] 32) established the state’s first target to reduce GHG emissions, which set a goal of lowering emissions to 1990 levels by 2020. In 2016, Governor Brown signed Senate Bill (“SB”) 32 into law, which established a new mid-term GHG reduction target of 40 percent below 1990 levels by 2030, aligned with leading international governments, such as the European Union. The 2030 target set under SB 32 places California on a trajectory towards meeting its longer-term goal, which is to bring emissions down to 80 percent below 1990 levels by 2050. According to the California Air Resources Board (“CARB”), the State has been making steady progress in reducing statewide emissions and has met its 2020 target. Many climate experts believe that eventually a reduction of greater than 80 percent will be required to achieve climate stabilization.

Over the last decade, the City has taken several steps to begin addressing climate change and achieving reductions in GHG emissions, both in the City’s operations as well as the broader community. The City adopted its most recent CAP in 2013 (“2013 CAP”). The 2013 CAP detailed the City’s first communitywide GHG inventories for 2005 and 2010, which provided baseline emissions data from which future GHG emissions were estimated and reduction measures were developed.

This CAP provides an update to the inventories, projections, and GHG reduction measures identified in the 2013 CAP.



Source: City of Escondido

Key Components of Climate Action Planning

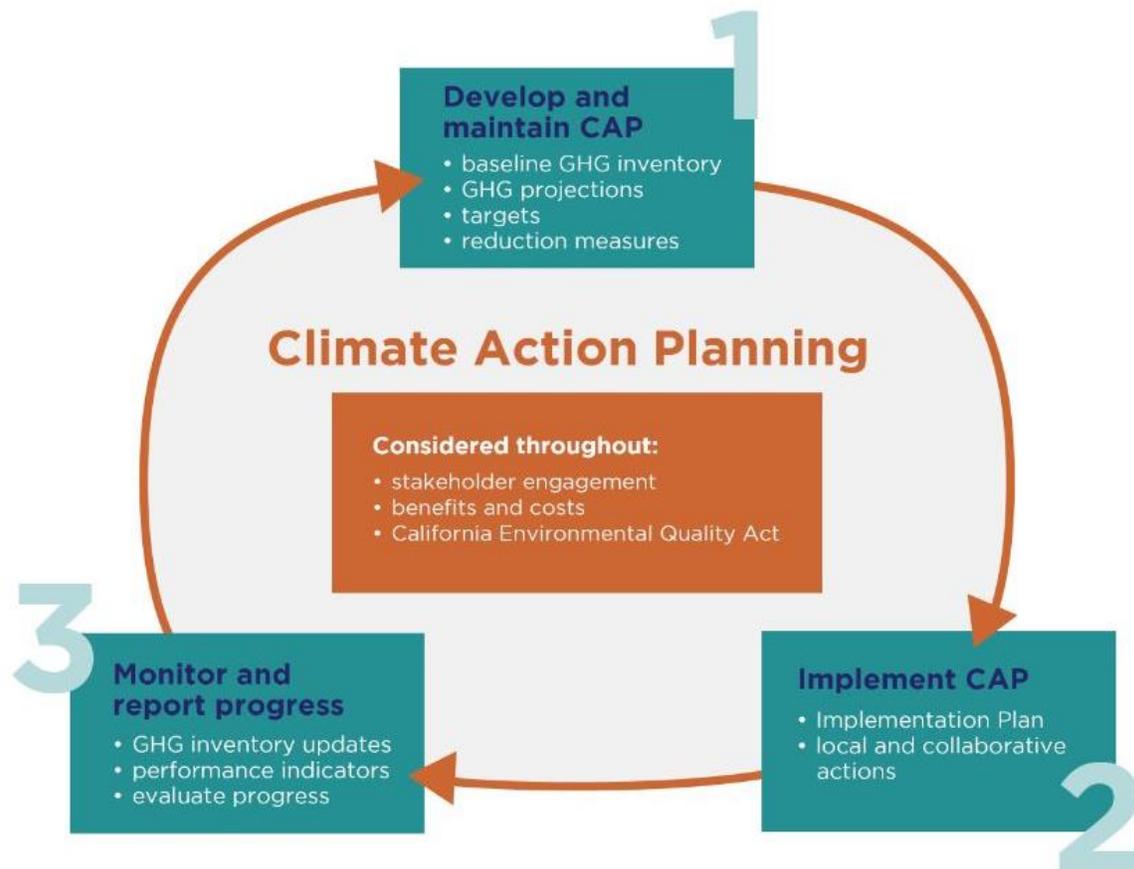
Three essential steps to the climate action planning process include:

Step 1: Develop and Maintain a CAP, which includes preparing baseline emissions estimates and projections and developing reduction targets and strategies.

Step 2: Implement the CAP through local measures.

Step 3: Monitor and Report Progress on CAP implementation and identify improvements or adjustments that can be made to the plan in the future.

Adoption of this CAP marks the beginning of an iterative process of maintaining, implementing, monitoring, and updating the CAP. Over time, the City will continue to repeat the iterative process by updating this CAP as new technologies, legislative actions, information, and inventories become available. The key components of the climate action planning process are summarized below and shown graphically in **Figure ES-1**.



Source: SANDAG 2018.

Figure ES-1

The Climate Action Planning Process

Step 1: CAP Development

Development of the CAP consists of setting a baseline inventory of communitywide GHG emissions, projecting GHG emissions for future years, setting GHG reduction targets, and identifying strategies and measures the City will implement to achieve these reduction targets.

Baseline GHG Inventory

A baseline GHG inventory provides a snapshot of the emissions associated with a community's GHG producing activities in a single year. For this CAP, a baseline GHG emissions inventory was prepared for 2012, consistent with the base year used for SANDAG's Series 13 Regional Growth Forecast. It was estimated that the City generated 943,000 metric tons of carbon dioxide equivalent ("MTCO₂e") in 2012. The two largest sources of GHG emissions were from on-road transportation (e.g., on-road vehicular gasoline and diesel consumption) and energy sources (e.g., electricity and natural gas consumption in buildings) accounting for 53 percent and 39 percent, respectively. Baseline inventories also provide the emissions levels from which to forecast emissions and set emissions reduction targets based on state goals. The City's baseline emissions inventory, forecasted emissions, and reduction targets are further discussed in [Chapter 2](#).

In 2012, the City's total GHG emissions of 943,000 MTCO₂e were produced across the following emissions categories:

- 53% from on-road transportation
- 39% from energy (electricity and natural gas consumption)
- 3% from off-road transportation
- 3% from solid waste
- 2% from water and wastewater

Citywide Emissions Projections

Citywide emissions projections were modeled based on a continuation of current trends in activity, population, and job growth. The business-as-usual ("BAU") condition provides estimates of future citywide emissions based on existing growth trends assuming no additional actions would be taken to reduce GHG emissions. Based on trend data, the City would experience a decrease in emissions through 2020 under BAU conditions to 12 percent below 2012 baseline levels. This decrease is primarily due to the City's implementation of the 2013 CAP and State and federal actions that have resulted in GHG reductions locally. Citywide emissions under BAU conditions would steadily rise after 2020 through 2035 but would not exceed 2012 baseline levels.

State and federal actions that are planned to take place in the future would further reduce the City's projected emissions when applied across the various GHG emissions categories. This projection, with the application of state and federal legislative actions that would reduce local GHG emissions, is referred to as the Legislatively-Adjusted BAU condition. With legislative reductions applied, the City's emissions would be 16 percent below 2012 baseline levels in 2020, 37 percent below 2012 baseline levels in 2030, and 40 percent below



Source: City of Escondido

2012 baseline levels in 2035 with legislative actions. [Table ES-1](#) provides a summary of both BAU and Legislatively-Adjusted BAU project emissions for 2020, 2030, and 2035.

Projection	2012 Baseline Emissions (MTCO ₂ e)	2020		2030		2035	
		Total Emissions (MTCO ₂ e)	Change from 2012 Baseline (%)	Total Emissions (MTCO ₂ e)	Change from 2012 Baseline (%)	Total Emissions (MTCO ₂ e)	Change from 2012 Baseline (%)
BAU	943,000	831,000	-12	833,000	-12	842,000	-11
Legislatively- Adjusted BAU	--	789,000	-16	598,000	-36	570,000	-39
Reduction Targets	--	907,000	-4	547,000	-42	456,000	-52

Notes: BAU = business-as-usual; GHG = greenhouse gas; MTCO₂e = metric tons of carbon dioxide equivalent
Source: EPIC 2018, EPIC 2020.

Reduction Targets

This CAP's reduction targets were established using a communitywide mass emissions approach as recommended by CARB. These targets, to be achieved through implementation of this CAP, are to reduce citywide GHG emissions to four percent below 2012 levels by 2020, 42 percent below 2012 levels by 2030, and 52 percent below 2012 levels by 2035. A summary of the projections and targets is shown in **Table ES-1**. The methodologies used for calculating each projection and City reduction targets are further discussed in **Chapter 2**.

Reduction Strategies and Measures

The City would meet its 2020 emissions reduction target under BAU conditions, based on existing activities and trends. However, to meet the City's 2030 and 2035 reduction targets, additional actions beyond those implemented at the State and federal level are required. To meet the City's 2030 and 2035 targets, this CAP identifies strategies and measures to reduce GHG emissions citywide from a variety of emissions categories. In total, the City has identified nine strategies for reducing citywide GHG emissions, listed below in **Table ES-2**.

Strategy	Description
Strategy 1	Increase the Use of Zero-Emission or Alternative Fuel Vehicles
Strategy 2	Reduce Fossil Fuel Use
Strategy 3	Reduce Vehicle Miles Traveled
Strategy 4	Increase Building Energy Efficiency
Strategy 5	Increase Renewable and Zero-Carbon Energy
Strategy 6	Increase Water Efficiency
Strategy 7	Diversify Local Water Supply
Strategy 8	Reduce and Recycle Solid Waste
Strategy 9	Carbon Sequestration and Land Conservation

Source: EPIC 2020.

Under each of the nine strategies are detailed measures to help reduce GHG emissions citywide. The City will implement 31 total measures to achieve emission reductions from five emissions categories: transportation, energy (electricity and natural gas consumption), water and wastewater, solid waste, and carbon sequestration. The emissions categories identified in this CAP are consistent with the presentation of emissions categories defined through SANDAG’s Regional Climate Action Planning Framework (“ReCAP”). Measures were developed based on a review of the measures included in the 2013 CAP, community input, existing and future planning efforts in the City, potential co-benefits, and feasibility of implementation. Each measure provides direct and measurable emissions reductions through implementation of specific programs, policies, or projects. **Table ES-3** provides a list of five measures in this CAP from which the City would receive the greatest GHG reduction benefits.

Implementation of all GHG reduction measures would result in a reduction of approximately 499,000 MTCO_{2e} in 2030 and 456,000 MTCO_{2e} in 2035.

Measure	Description
Measure E-5.3	The City will develop or join a program to further increase grid-supply renewables and zero carbon electricity to 100 percent of the City’s electricity supply, reducing citywide emissions by 29,486 MTCO _{2e} in 2035.
Measure S-8.1	The City will work with its franchise waste hauler to prepare a waste diversion plan that achieves a 90 percent waste diversion rate, reducing citywide emissions by 27,405 MTCO _{2e} in 2035.
Measure T-3.8	The City will work with MTS and NCTD to increase transit ridership through increased service frequency and development located near transit stations, reducing citywide emissions by 17,099 MTCO _{2e} by 2035.
Measure T-3.9	The City will develop a service population-based threshold for VMT to apply to new development project to support the reduction in citywide VMT, reducing citywide emissions by 11,075 MTCO _{2e} by 2035.

Notes: MTS = Metropolitan Transit System; MTCO_{2e} = metric tons of carbon dioxide equivalent; NCTD = North County Transit District; VMT = vehicle miles traveled
 Source: EPIC 2020.

Step 2: Implementation

Implementation of the CAP plays a crucial role in how the City will meet its GHG emission reduction targets. Implementation of the CAP will require investments, long-term commitments, and widespread community participation. Ongoing partnerships between community residents, businesses, property owners, the City, and other agencies and organizations in the region are essential for successful implementation. On a communitywide level, individuals and businesses can play an important role in reducing GHG emissions by changing habits to produce less waste or use alternative modes of transportation.

As new development is proposed in the city, it will be required to incorporate more sustainable design features to reduce project GHG emissions. Consistent with the California Environmental Quality Act (“CEQA”) Guidelines Section 15183.5, this qualified CAP will allow for CEQA streamlining through a CAP Consistency Review Checklist (“Checklist”). The CAP Checklist contains GHG reduction measures applicable to development projects that are required to be implemented on a project-by-project basis. Further details on City implementation strategies are provided in **Chapter 4**.

Step 3: Monitoring

Ongoing management, oversight, and collaboration is required to support the implementation of the CAP. Similar to implementation of the CAP, monitoring is an important part of ensuring the success of the CAP in achieving the City's 2030 and 2035 reduction targets. The City will monitor progress towards the 2030 and 2035 targets through partnerships with SANDAG and other local jurisdictions in developing local GHG inventory updates every two years. City staff will provide annual updates to the City Council and Planning Commissions on CAP implementation and efforts. Just as this CAP serves as an update to the City's 2013 CAP, the City will update this CAP in the future to ensure strategies and measures remain implementable and feasible, adjusting measures based on changing conditions or demands, and incorporating new technologies not considered in previous CAPs. **Chapter 4** provides a detailed description of the City's monitoring efforts to ensure reduction targets and goals are met.



Source: City of Escondido

Adaptation Measures

The climate action planning process is primarily focused on addressing the causes of climate change and identifying measures to reduce GHG emissions and limit additional impacts on the climate system (i.e. the five spheres that comprise Earth's climate). Though many CAPs recognize that climate change is already taking place, the interactions between climate change, human health, and equitable climate solutions are not always addressed. As an additional component to climate action planning, the City recognizes the importance of building resilience in the community to future climate change—related impacts through climate adaptation. Climate adaptation refers to adjusting individual and societal behaviors, systems, and infrastructure to reduce the impact climate change impacts like heat waves, worsening air quality, and flooding have on infrastructure, services, and the well-being of the community. These impacts would not affect all persons in the community equally and certain climate change effects would impact certain vulnerable populations more than others. A broader examination of social equity and environmental justice through climate adaptation planning assists in the development of more sustainable public policies that address climate change at the community level. Therefore, this CAP includes measures to improve the city's resilience to potential environmental risks and hazards that will be exacerbated by climate change, while seeking equitable climate change adaptation solutions for all residents, businesses, and other community members. Measures are organized to reduce climate change impacts associated with increased temperatures, increased frequency of extreme weather events and heat waves, changes in precipitation patterns and water availability, increased likelihood of flooding, and increased wildfire risk. Included within each adaptation strategy are programs and policies to support climate adaptation and resiliency, with a focus on specific vulnerabilities and impacts that have the potential to affect the community's populations, functions, and structures. The City will implement the measures in **Table ES-4** to adapt to the impacts of climate change. A detailed discussion of the City's climate vulnerabilities and adaptation strategies is included in **Chapter 5**.

While the City works to reduce GHG emissions, climate change impacts are already occurring. To ensure equitable response for all residents, the City will implement adaptation measures to address current climate change impacts at the local level.

Table ES-4 Climate Adaptation Measures

Measure	Description
Measure A-1.1	Fully anticipate, plan for, and mitigate the risks of climate change and seize the opportunities associated with the social and environmental change.
Measure A-1.2	Make sure that everyone is given the opportunity to be prepared for the current and future risks that are exacerbated by climate impacts.
Measure A-1.3	Hardwire social equity and environmental justice into new programs and projects.
Measure A-1.4	Develop working relationships with other agencies and continue to analyze climate impacts.
Measure A-2.1	Make sure that everyone has equitable access to healthy environments in which to live, work, and play.
Measure A-2.2	Create “climate safe and decent” housing options.
Measure A-2.3	Build capacity for adaptive neighborhoods.
Measure A-2.4	Build a sustainable and resilient transportation network.

Source: City of Escondido, 2020.

To be effective, this CAP includes a roadmap for implementing new policies, programs, incentives, and requirements shortly after adoption, as well as longer term actions that the City would implement following additional research and examination, in line with the City’s ongoing CAP monitoring and evaluation of new technologies. In addition to addressing challenges faced by the City in reducing GHG emissions and adapting to climate change, the CAP will enable the City to continue to be on the forefront of sustainable planning. For the City, the goal of sustainable planning will be to meet the needs of the present without compromising the future. Through addressing both communitywide GHG reduction and adaptation together, the City has been able to consider how actions can synergistically produce multiple co-benefits, such as addressing existing environmental health disparities while improving quality of life and health for all residents.

CAP Organization

This CAP is organized into five chapters. **Chapter 1** provides an introduction to climate action planning, the need for a CAP to address local GHG emissions, and the framework for CAP development. **Chapter 2** summarizes the City’s baseline GHG emissions, estimates GHG emission forecasts for target years, and sets citywide GHG reduction targets. **Chapter 3** includes a description of strategies and measures the City will take to reduce local GHG emissions and describes the supporting actions and co-benefits of each strategy. **Chapter 4** provides an outline for how the City will implement these reduction strategies and measures and includes guidelines for monitoring and updating the CAP. **Chapter 5** evaluates the City’s vulnerability to climate change and strategies the City is and will be implementing to adapt to climate change impacts.