



2

## GREENHOUSE GAS EMISSIONS INVENTORY, PROJECTIONS, AND REDUCTION TARGETS



This page intentionally left blank.



## Introduction

This chapter summarizes the County of San Diego's (County's) accounting of greenhouse gas (GHG) emissions from activities within the unincorporated communities of the county and from County operations. The inventory excludes emissions from activities on lands under tribal and military jurisdiction, as the County does not have land use authority over these lands. The inventory also excludes emissions from activities within incorporated cities, with the exception of County operations that occur in those areas. It includes a discussion of the primary sources and annual levels of GHG emissions for 2014 (i.e., baseline inventory); describes likely trends if emissions are not reduced for 2020, 2030, and 2050 (i.e., projections); and sets a path forward to reduce emissions for 2020, 2030, and 2050 (i.e., near-term targets and long-term goal).

### *2014 Inventory Year*

- It aligns with the California Air Resources Board's (CARB's) most recent inventory year.
- It represents the year with the most complete annual data set for the county.

Assembly Bill (AB) 32, Senate Bill (SB) 32, and Executive Orders (EOs) B-30-15 and S-3-05 use 1990 as a benchmark year to identify statewide GHG reduction targets. Data for the county's 1990 emissions level are **outdated**; therefore, the County prepared an inventory and established proportional targets for 2014. As explained further in this section, the CAP targets using a 2014 benchmark are consistent with the targets using a 1990 benchmark established by AB 32, SB 32, and EOs B-30-15 and S-3-05.

## Purpose of a Greenhouse Gas Emissions Inventory

One of the main objectives of this Climate Action Plan (CAP) is to identify and reduce local contributions to GHG emissions. This chapter is intended to serve as a foundation for the strategies and measures that the County will implement to reduce GHG emissions consistent with statewide 2020 and 2030 targets. Measuring GHG emissions is a critical first step in developing the CAP for several reasons. First, the GHG inventory identifies and quantifies major sources of GHG emissions associated with the activities and choices currently made by residents, businesses, and public institutions. Second, the inventory provides the baseline that is used to project emissions trends and develop accurate near-term reduction targets and a long-term goal consistent with State objectives. Finally, the 2014 inventory allows the County to develop, evaluate, and implement strategies and measures to achieve its near-term GHG reduction targets and long-term goal.

After the CAP is adopted, the County will prepare GHG emissions inventories every two years that will be compared to the 2014 inventory and be used to track progress in reducing emissions as CAP measures are implemented. The inventory establishes 2014 as the base year from which the County determines GHG reduction targets.





## GHG Emissions Inventory versus Carbon Footprint

Two common terms used when discussing GHG emissions quantification are “carbon footprint” and “GHG emission inventories.” While related, these concepts are not synonymous.

A GHG emissions inventory is an estimate of a defined set of gases (e.g., carbon dioxide [CO<sub>2</sub>], methane [CH<sub>4</sub>], nitrous oxide [N<sub>2</sub>O]) that contribute to climate change. The emissions inventory prepared for this CAP is focused on emissions that are generated due to activities within the unincorporated county and from County operations, from a defined set of sources (e.g., on-road transportation, electricity use, and waste). These include emissions that can be readily estimated, monitored, and reduced by County measures that support the efforts of residents and businesses, and are within local jurisdictional control. However, this means that the CAP GHG emissions inventory does not address everyone’s contribution to GHG emissions on a global scale (e.g., purchasing imported goods, global goods exports or air travel to and from the county).

The emissions inventory is limited to GHGs that are generated by activities in the county from a defined set of sources (e.g., on-road transportation, electricity use, and waste) that can be readily monitored and reduced through County actions.

Unlike a GHG emissions inventory, a carbon footprint is not limited to a defined geography or to a set of activities and sources that the County can influence. A carbon footprint includes all GHG emissions that result from everyone’s daily choices or the activities of a business

or organization, such as the energy required to grow and ship food; the energy required for various forms of travel or goods movement far beyond the county’s borders (e.g., trains, planes, and ships); or the embodied energy to manufacture, market, and dispose of the products used by county residents. Thus, not all the GHG emissions generated directly or indirectly are included in the county’s GHG emissions inventory. As detailed in Appendix A and Appendix B, the inventory was prepared using established protocols and models for community and local government operation emissions and includes sources over which the County would have “significant influence.” This reporting framework emphasizes policy relevance, highlighting a set of emission sources and activities that the County has the greatest opportunity to address.

This CAP includes strategies and measures that will help achieve the County’s objectives to reduce GHG emissions as documented in the emissions inventory.

Residents, businesses, and organizations make choices daily that produce GHG emissions that may be beyond the influence of the County and the CAP. This does not mean that residents or businesses should feel limited to only those measures identified in this CAP, which are focused primarily on the county’s inventoried emissions. Rather, members of the community can still make climate-friendly choices, such as buying locally-grown foods and locally-manufactured products that reduce electricity and energy use, to further reduce the local carbon footprint and further contribute to helping reverse climate change trends on a global scale.



## Baseline Inventory

The first step in the County's climate action planning process is to understand the sources and amounts of GHG emissions generated from activities within the county unincorporated areas and County operations. The International Council for Local Environmental Initiatives (ICLEI) *U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions* and ICLEI *Local Government Operations Protocol* were used to create the 2014 inventory. Using these methodologies, generally all emissions from activities within the unincorporated county are included as well as all emissions relating to County operations.

The County's 2014 inventory of GHG emissions is broken down into the following nine sectors, shown in decreasing level of contribution (i.e., one contributes the most and nine contributes the least). The inclusion of County operations in this inventory is explained further in this

The County's 2014 GHG Emissions Inventory has nine sectors:

1. On-Road Transportation
2. Electricity
3. Solid Waste
4. Natural Gas
5. Agriculture
6. Water
7. Off-Road Transportation
8. Wastewater
9. Propane

section. Table 2.1 and Figure 2.1 show emission levels for each sector and their relative contribution.

**On-Road Transportation:** On-road transportation emissions associated with gasoline and diesel driving on county roadways, in addition to emissions from County fleet operations and employee commutes.

**Electricity:** Emissions from electricity generation due to electricity consumption in residential, commercial, industrial, and agricultural facilities. This includes electricity consumption at local government facilities such as County buildings, streetlights, and stormwater pumps.

**Solid Waste:** Waste emissions associated with landfills in the county (including County-operated closed landfills) and waste generated in the unincorporated county. Solid waste generated by local government facilities is also included in this sector.

**Natural Gas:** Emissions associated with natural gas consumption in residential, commercial, industrial, and agricultural facilities. This includes natural gas use at County facilities.

**Agriculture:** Agricultural emissions associated with livestock, fertilizer use, soil management, and agricultural equipment. No agricultural emissions are attributed to local government operations.

**Water:** Water-related emissions associated with energy and fuel used to convey, extract, treat, and distribute water in the unincorporated areas for domestic, irrigation, and industrial purposes. This includes water use at County facilities for employee use and irrigation.

**Off-Road Transportation:** Emissions associated with gasoline and diesel consumption by off-road vehicles and equipment, including emissions from construction equipment and recreational vehicles. This includes all



off-road vehicles operated by the County.

**Wastewater:** Wastewater treatment emissions associated with the energy consumed and emissions produced to process domestic sewage and industrial wastewater either at on-site septic systems or centralized wastewater treatment plants. This includes wastewater generation at County facilities located outside the unincorporated county.

**Propane:** Emissions associated with residential propane usage, such as outdoor hearths, barbecues, and in homes that do not have access to natural gas pipelines. Due to lack of usage data, no propane emissions are attributed to non-residential operations. Local government operations did not report propane usage at facilities beyond emergency generators.

The 2014 GHG inventory includes both emissions attributable to the community activities within the unincorporated county, as well as County-operated facilities and operations inside and outside of the unincorporated areas of the county. Many of the County's facilities and operations are located in incorporated cities, though these activities would not occur without the existence of the unincorporated community and are therefore attributed to the County. The intent of this inventory is to provide a complete picture of emissions from activities under the County's influence and jurisdictional control, both at a community level and from local government operations. Further details on the methodology for the inventory can be found in Appendix A and Appendix B.

On-road transportation emissions include all vehicles traveling within the unincorporated county, partial emissions from vehicles traveling to and from the unincorporated county, and County fleet and employee commute vehicles traveling both within and outside of the unincorporated county. For example, the on-road

transportation inventory includes emissions from a

County employee commuting from the City of El Cajon to a County office in the City of San Diego. Likewise, the inventory includes emissions associated with the operation of County facilities outside the unincorporated county, such as electricity and natural gas use at a County office located in the City of San Diego (e.g., the County Administration Center and the County Operations Center, both which are located within the City of San Diego). County operations located within the unincorporated county are already assumed to be included in community-level data, such as within aggregated natural gas use data from San Diego Gas and Electric for the unincorporated county, because the data gathered for the unincorporated county included all consumption data for the county and did not exclude County operations. Emissions from air traffic are not included in this inventory as air traffic is under federal jurisdiction.

## Units of Measurement

An important aspect of GHGs is the unit of measurement used to inventory and estimate emissions. The largest contributor to climate change is CO<sub>2</sub> and it is also the most recognized GHG; however, there are two other primary GHGs that must be addressed to meet State-mandated reduction targets: CH<sub>4</sub> and N<sub>2</sub>O. To simplify discussion of these emissions collectively, climate action plans use a measurement known as carbon dioxide equivalent (CO<sub>2</sub>e).

The CO<sub>2</sub>e measurement translates each GHG into a comparable metric to CO<sub>2</sub>. This entails multiplying non-CO<sub>2</sub> gases by their global warming potential (GWP). According to the Intergovernmental Panel on Climate Change (IPCC), CH<sub>4</sub> and N<sub>2</sub>O are 25 and 298 times more potent, respectively, than CO<sub>2</sub> in their ability to trap heat in the atmosphere (IPCC 2007). A metric ton of CO<sub>2</sub>e

(MTCO<sub>2</sub>e) is the standard measurement of the amount of GHG emissions produced and released into the atmosphere.

The CO<sub>2</sub>e measurement translates each GHG to CO<sub>2</sub> by weighting it by its relative GWP. Converting these gases into CO<sub>2</sub>e (i.e., emissions of one metric ton of CH<sub>4</sub> are equivalent to emissions of 25 metric tons of CO<sub>2</sub> and emissions of 1 metric ton of N<sub>2</sub>O are equivalent to emissions of 298 metric tons of CO<sub>2</sub>) allows consideration of all the GHGs in comparable terms and makes it easier to communicate how various sources and types of GHG emissions contribute to climate change.

Additional details related to the specific emission sectors, data sources, assumptions, and methodology can be found in Appendix A and Appendix B. Table 2.1 and Figure 2.1 show the breakdown of the County’s GHG emissions in 2014, including County operational emissions, which have been incorporated into the nine GHG sectors.

The county’s top five emitting sectors in 2014 are:

1.

On-Road Transportation (45%)

2.

Electricity (24%)

3.

Solid Waste (11%)

4.

Natural Gas (9%)

5.

Agriculture (5%)

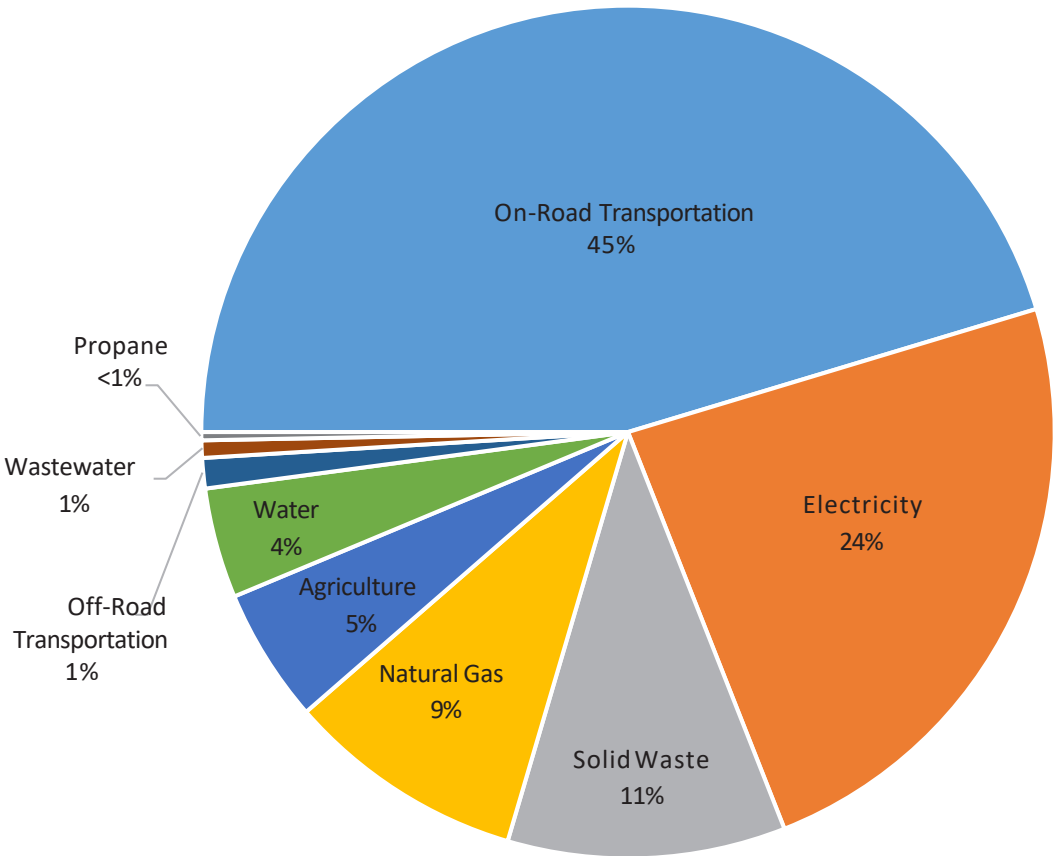
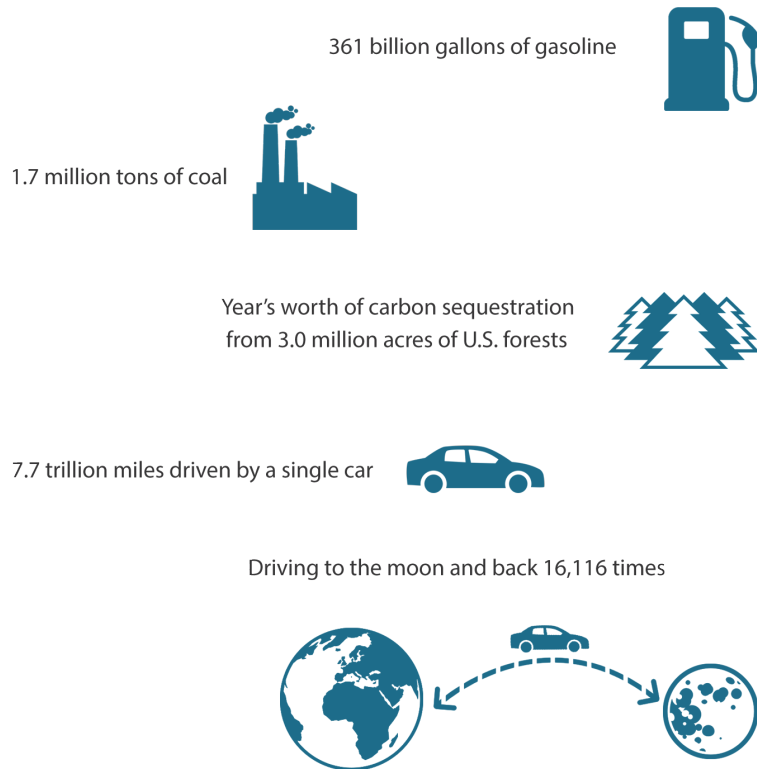


Figure 2.1 County GHG Emissions by Sector (2014)  
Note: Data may not add to totals due to rounding.



# Greenhouse Gas Emissions Inventory, Projections, and Reduction Targets

## HOW MUCH IS 3.2 MILLION METRIC TONS OF GREENHOUSE GASES?



**Table 2.1 County GHG Emissions by Sector (2014)**

Emissions Sector	Emissions (MTCO <sub>2</sub> e)	Percent (%)
On-Road Transportation	1,456,060	45
Electricity	760,638	24
Solid Waste	338,107	11
Natural Gas	290,712	9
Agriculture	163,696	5
Water	134,269	4
Off-Road Transportation	36,927	1
Wastewater	21,183	1
Propane	9,914	<1
<b>Total</b>	<b>3,211,505</b>	<b>100</b>

Notes: Columns may not add to totals due to rounding

MTCO<sub>2</sub>e = metric tons of carbon dioxide equivalents

Source: Data modeled by Ascent Environmental in 2017.



## Emissions Projections

Greenhouse gas projections estimate future emission levels based on a continuation of current trends in activity, population growth, and accounting for known legislative actions that could affect emissions in the future. Projections provide insight into the scale of reductions needed to achieve the near-term reduction targets and long-term goal.

The projections, referred to as the “business-as-usual” (BAU) projections, assume no additional GHG reduction efforts and regulations. The BAU projections also assume that population, housing, employment, and transportation activity will grow over time, consistent with the San Diego Association of Governments (SANDAG) projections that are based on the General Plan growth forecasts. Growth from General Plan Amendments (GPAs) adopted since adoption of the 2011 General Plan Update are also included in the projections. Finally, the BAU projections do not account for GHG emissions reductions associated with implementation of the CAP or future emission reductions programs initiated by the federal and State government because the BAU projections are intended to demonstrate the expected growth in GHG emissions if no action is taken by the State or at the local level.

Details on how the projections were developed and the indicators used to estimate each emission sector, as well as data sources can be found in Appendix A and Appendix B.

The BAU GHG emissions projections in the CAP assume a continued increase in population, housing units, employment, and transportation activity. Projections are based on SANDAG’s projections and the General Plan.

## Demographic Trends

Greenhouse gas emission projections were estimated for 2020, 2030, and 2050 using County-specific demographic and transportation activity projections from SANDAG. Table 2.2 shows demographic data used to develop GHG projections.

**Table 2.2      Demographic Trends in the Unincorporated County**

	2014	2020	2030	2050
Population	454,599	493,604	551,712	600,560
Employment	85,742	95,671	104,157	129,788
Number of Households	163,354	174,741	192,925	213,486

Notes: Population shown is for the unincorporated County excluding tribal and military lands. Detailed demographics data are provided in Appendix A.



## Legislative Reductions

The county's GHG projections account for several legislative actions that will reduce future emissions, without any additional local government action called for in this CAP (Table 2.3). The applied legislative reductions include:

- Improved vehicle efficiency standards;
- Increased electric vehicle mode share;
- Adopted improvements to the State's Building Energy Efficiency Standards; and
- Adopted statewide targets to reach 50% renewable mix in statewide electricity generation by 2030.

Most currently adopted legislation does not address emissions reductions beyond 2030. For this reason, projected emissions are expected to decrease through 2020 and 2030, but increase by 2050 as population grows while legislative reductions remain static based on their status.

**Table 2.3 County GHG Inventory and Projections with and without Legislative Reductions (MTCO<sub>2e</sub>)**

Emissions Sector	2014	2020	2030	2050
<b>Total Without Any Legislative Reductions (BAU Total)</b>	<b>3,211,505</b>	<b>3,407,168</b>	<b>3,723,596</b>	<b>4,220,560</b>
<b>Emissions with Legislative Reductions</b>				
On-Road Transportation	1,456,060	1,306,679	1,081,223	1,116,114
Electricity	760,638	690,144	661,266	723,503
Solid Waste	338,107	358,651	389,610	411,298
Natural Gas	290,712	302,017	323,008	353,041
Agriculture	163,696	161,376	160,136	158,760
Water	134,269	125,616	128,104	139,446
Off-Road Transportation	36,927	40,815	43,938	49,733
Wastewater	21,183	23,001	25,708	27,985
Propane	9,914	10,372	11,055	11,629
<b>Total with Legislative Reductions</b>	<b>3,211,505</b>	<b>3,018,671</b>	<b>2,824,049</b>	<b>2,991,507</b>
Legislative Reductions	0	-388,498	-899,547	-1,229,053

Notes: Columns may not add to totals due to rounding.

BAU = Business-as-Usual

GHG=greenhouse gases

MTCO<sub>2e</sub> = metric tons of carbon dioxide equivalents

Source: Data modeled by Ascent Environmental in 2017.

A detailed description and analysis of how specific legislation has influenced the county’s GHG emissions projections can be found in Appendix A and Appendix B. Table 2.3 and Figure 2.2 show the breakdown of the county’s projected GHG emissions including the effect of legislative reductions.

The table and figure also include a comparison to total emissions that would occur without any legislative reductions.

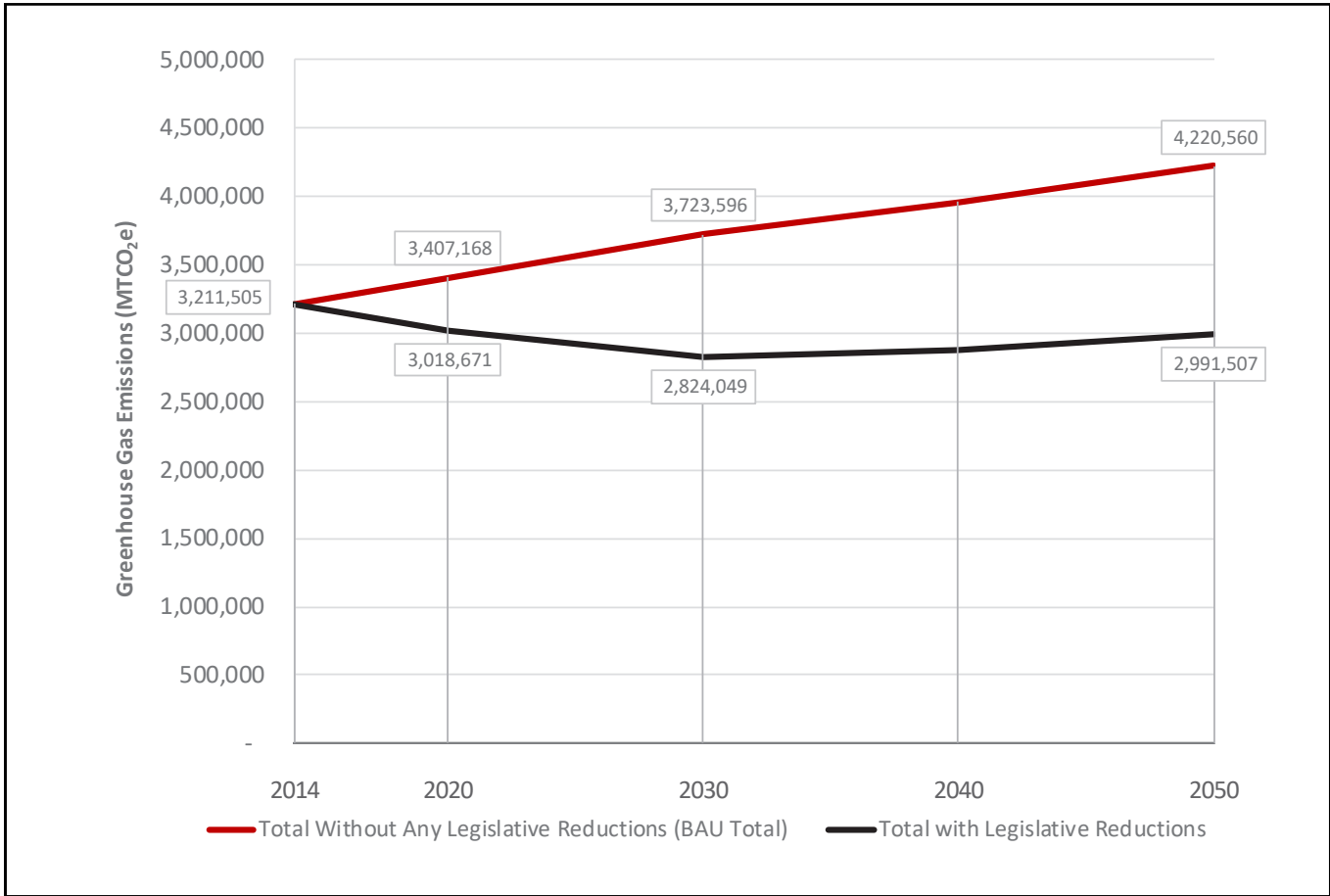


Figure 2.2 County GHG Inventory and Projections with and without Legislative Reductions



## Reduction Targets

This CAP primarily focuses on reducing emissions by 2020 and 2030, consistent with legislatively-adopted State targets. While it is important to create a long-term emissions reduction goal, it would be speculative to demonstrate achievement of a goal for 2050 with the information known today. This is primarily due to uncertainty around future technological advances and future changes in federal and State law beyond 2030. California's GHG reduction targets have been legislatively adopted for 2020 and 2030, while the 2050 goal is expressed in an EO. In addition, *California's 2017 Climate Change Scoping Plan* (Scoping Plan Update) is focused on meeting the 2030 reduction target, as directed in SB 32 and AB 32. Therefore, the County's CAP aligns with the State in setting a 2030 target. As climate change science and policy continues to evolve, the County will be able to apply new reductions toward meeting the long-term 2050 GHG emissions reduction goal in future CAP updates, as outlined in Chapter 5. As directed in AB 32, SB 32, and EOs B-30-15 and S-3-05, the State aims to reduce annual statewide GHG emissions to:

- 1990 levels by 2020;
- 40% below 1990 levels by 2030; and
- 80% below 1990 levels by 2050.

The Scoping Plan Update indicates that reducing the State's emissions to 80% below 1990 levels by 2050 would be consistent with IPCC's analysis of the global emissions trajectory needed to stabilize atmospheric concentrations at 350 parts per million or less, to "reduce the likelihood of catastrophic climate change" (CARB 2014).

Some communities do not have baseline inventories dating back to 1990 and therefore must extrapolate from more recent inventories. To determine an overall GHG

reduction target at the local level that would be consistent with the State's overall targets, CARB recommends community-wide GHG reduction goals for local climate action plans that would help the State achieve its 2030 and 2050 targets (CARB 2017). These goals, presented in the Scoping Plan Update, consist of reducing emissions to 6 MTCO<sub>2</sub>e per capita and 2 MTCO<sub>2</sub>e per capita by 2030 and 2050, respectively. Considering the overall statewide emissions in 1990 and 2014, and the projected statewide population in 2030 and 2050, these per-capita goals would be equivalent to reducing 2014 emissions by 40% by 2030 and 77% by 2050 (CARB 2016, Department of Finance 2014). The per capita targets were determined to be applicable to the County because a goal of the CAP is to achieve State goals and CARB's per-capita metrics provide the means to accomplish that.

The County's reduction targets are consistent with CARB's Scoping Plan Update's recommended community targets, as well as the State's 2014 GHG emissions inventory and the targets established by AB 32, SB 32, and EOs B-30-15 and S-3-05.

The ultimate framework for setting a local GHG reduction target is based on governing legislation (AB 32 and SB 32). CARB identifies local governments as essential partners in meeting State goals and makes recommendations on setting local targets. The State is on track to meet 2020 reduction targets; therefore, specific reduction goals for 2020 are not described in the Scoping Plan Update. A target equivalent to reaching 1990 levels by 2020 can be calculated by comparing the State's GHG inventories for 1990 and 2014. Per CARB's estimate of California's GHG inventory, the state emitted approximately 431 million





MTCO<sub>2</sub>e (MMTCO<sub>2</sub>e) in 1990 and 441.5 MMTCO<sub>2</sub>e in 2014, a two percent increase. Applying this statewide trend at the county level, the County would also need to reduce emissions to two percent below 2014 levels to match 1990 levels. The County does not have a 1990 GHG inventory with which to develop a County GHG target for 2020 due to data constraints; therefore, the State inventories taken in 1990 and 2014 are relied upon to establish reduction targets, which are then applied to the County's 2014 inventory data. The difference between the state's 1990 and 2014 emissions are used to determine the equivalent reduction from 2014 to achieve 1990 emissions at the local level.

Setting a target with respect to a baseline year, such as 2014, is standard industry practice in climate action planning. The original 2008 Scoping Plan developed by CARB recommended a reduction below baseline levels as a valid reduction target, in recognition of the challenges in developing a 1990 inventory for a local jurisdiction. Data used for developing the 2014 inventory represent the best available data, based on improved inventory methodologies and data collection procedures. The same level of rigor cannot be applied to a 1990 inventory and any attempts to extrapolate activity data (e.g., vehicle miles traveled, energy consumption) for 1990 would introduce a large margin of error and provide an inaccurate accounting of county emissions. Therefore, reliance on State data to determine relative reduction levels that can be applied to local 2014 emissions levels is a valid methodology to determine reduction targets. Emissions caps pursuant to AB 32, SB 32, EOs B-30-15, and S-3-05 are set at a statewide level; therefore, the relative reductions necessary from 2014 levels for the state are applied to the local inventory.

It should be noted that statewide GHG emissions have been declining since the original 2008 Scoping Plan.

As State regulations to achieve GHG reductions have been implemented, they also have a positive effect on local emissions, as evidenced in the legislative reductions incorporated into the projections. The original Scoping Plan identified a 15% reduction target for local governments developing CAPs. However, that relative reduction was based on then-existing levels (i.e., 2005).

To meet reduction targets, the County will need to reduce emissions to:

- 3,147,275 MTCO<sub>2</sub>e in 2020
- 1,926,903 MTCO<sub>2</sub>e in 2030
- 738,646 MTCO<sub>2</sub>e in 2050

Because statewide emissions have declined since 2005, the relative reduction required is now lower to achieve the same absolute emissions level (i.e., 431 MMTCO<sub>2</sub>e by 2020). This does not imply that reduction targets for 2020 have been relaxed; rather, this reflects the decline in statewide emissions since 2005. In addition, 2020 is only the first milestone in the State's long-term GHG reduction strategy. Similarly, while the relative reduction target (the reduction percentage) in the CAP is different from that identified in the 2011 General Plan Update (GPU) Program Environmental Impact Report (PEIR), it is still consistent with the reductions mandated under AB 32 for the reasons discussed above. Inventory methodologies and data collection techniques have evolved since certification of the 2011 GPU PEIR; however, the overall framework of reduction targets is inherently based on State legislation.



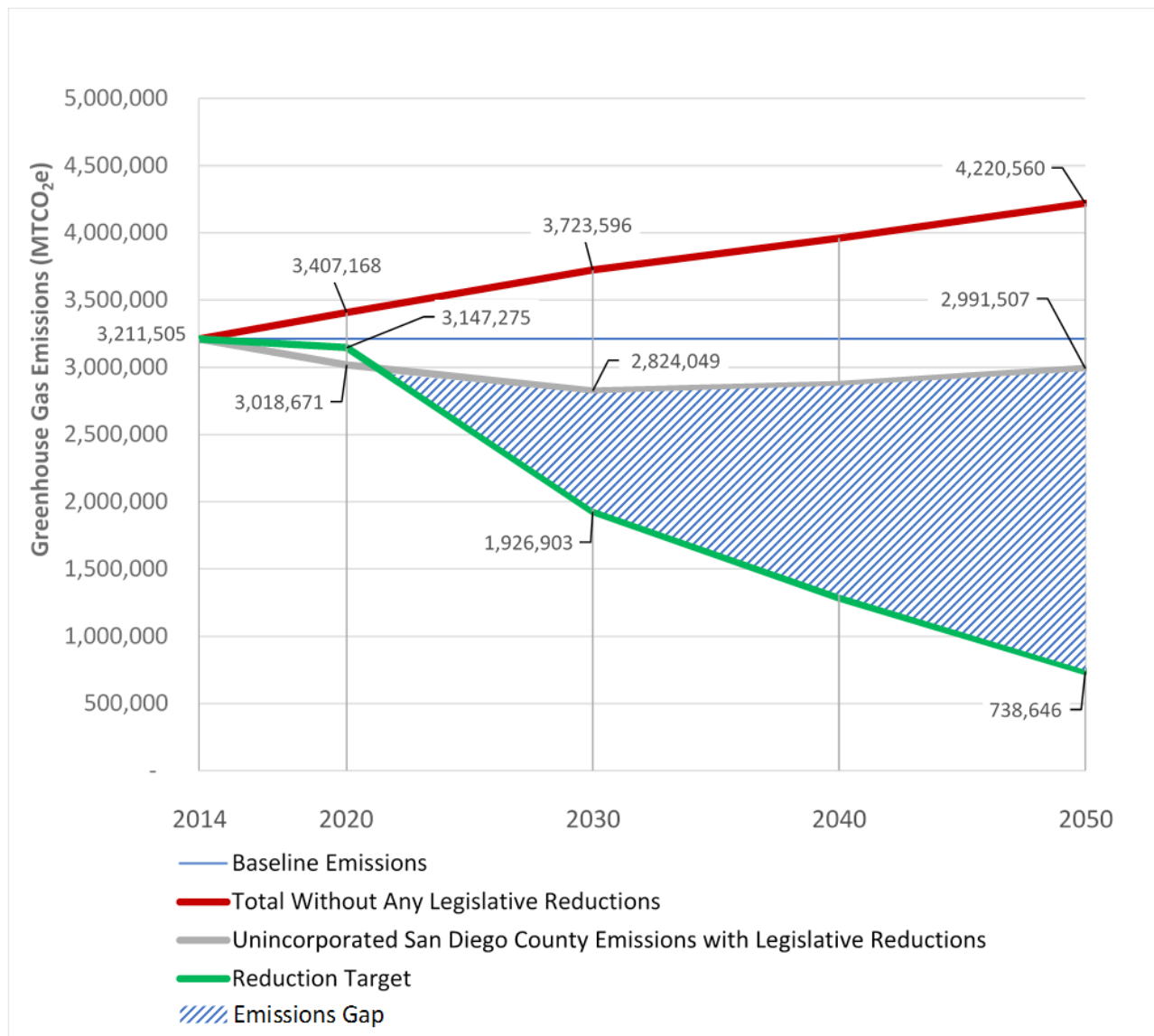
# Greenhouse Gas Emissions Inventory, Projections, and Reduction Targets

Thus, consistent with CARB's recommended community targets and recent updates to the State's 2014 GHG emissions inventory, the following 2020 and 2030 adjusted reduction targets and 2050 goal should be achieved in the county:

- two percent below 2014 levels by 2020;
- 40% below 2014 levels by 2030; and
- 77% below 2014 levels by 2050.

Figure 2.3 and Table 2.4 show the GHG reduction targets alongside the County's emissions over time without including any measures and actions proposed in this CAP.

Attaining a two percent reduction in GHG emissions would require that annual emissions be reduced to approximately 3,147,275 MTCO<sub>2</sub>e in 2020, which is approximately 64,230 MTCO<sub>2</sub>e lower than 2014 levels. To achieve long-term GHG reductions, the County would need to reduce emissions to 1,926,903 MTCO<sub>2</sub>e by 2030,



**Figure 2.3** County GHG Emission Projections and Reduction Targets without CAP Measures



or approximately 1,284,602 MTCO<sub>2</sub>e (40%) below 2014 GHG emissions levels. To achieve a 77% reduction in GHG emissions from 2014 levels by 2050, the County would need to reduce its emissions to approximately 738,646

MTCO<sub>2</sub>e in 2050, which is approximately 2,472,859 MTCO<sub>2</sub>e lower than 2014 levels. A detailed technical analysis of the County's emissions reduction targets and long-term goal can be found in Appendix C.

**Table 2.4 County GHG Emissions Projections and Reduction Targets without CAP Measures (MTCO<sub>2</sub>e)**

	2014	2020	2030	2050
Total Without Any Legislative Reductions (BAU Total)	3,211,505	3,407,168	3,723,596	4,220,560
Total with Legislative Reductions	3,211,505	3,018,671	2,824,049	2,991,507
2020 Reduction Target (Percent below 2014)		3,147,275 (2% below 2014)		
2030 Reduction Target (Percent below 2014)			1,926,903 (40% below 2014)	
2050 Reduction Goal (Percent below 2014)				738,646 (77% below 2014)
Notes: Columns may not add to totals due to rounding. BAU = Business-as-Usual GHG=greenhouse gases MTCO <sub>2</sub> e = metric tons of carbon dioxide equivalents Source: Data modeled by Ascent Environmental in 2017.				

Legislative actions will help lower GHG emissions in the county by requiring improvements in energy efficiency in buildings and vehicles, lowering emissions associated with electricity generation, and reducing direct GHG emissions, such as from fuel combustion in off-road vehicles. The resulting legislative GHG reductions, shown in Table 2.3 will occur without any additional action on the part of the County.

The overall decrease in emissions is primarily due to reductions from the electricity sector resulting from cleaner electricity generation, improved energy efficiency in buildings, and more fuel efficient vehicles.



## Emissions Gap

A comparison between the GHG reduction targets and emission projections highlights the remaining emissions gap, or reductions needed for the County to meet its future GHG reduction targets. The County is on track to meet its 2020 target with the help of existing legislation, such as the Renewables Portfolio Standard. However, to meet the 2030 target and 2050 goal, the County will need to achieve a reduction of **897,145** MTCO<sub>2</sub>e by 2030 and

**2,252,861** MTCO<sub>2</sub>e by 2050 beyond legislative-adjusted projections. To close the emissions gap shown in Figure 2.3, this CAP proposes 11 strategies and **30** measures that the County would implement to reduce GHG emissions. Chapter 3 of the CAP discusses the GHG reduction strategies and measures aimed at closing the emissions gap for 2030.

## General Plan Amendments

The GHG emissions inventory for the CAP does not include emissions attributable to proposed GPAs that would increase density/intensity above what is allowed in the General Plan. Even though there were GPAs that were adopted between 2011 (adoption of 2011 General Plan Update) and 2014 (inventory baseline year), none of these GPAs were constructed by 2014 and; therefore, their GHG emissions are not included in the 2014 inventory. The 2014 inventory is based on emissions-generating activities that existed on the ground in 2014.

The CAP GHG projections to 2020, 2030, and 2050 include GHG emissions from the GPAs that were adopted by the County between August 2011 (adoption of 2011 General Plan Update) and August 2017 (date at which the Draft CAP and CAP Draft Supplemental Environmental Impact Report [SEIR] were released for public review). See Appendix A for a detailed discussion regarding adopted GPAs, which were incorporated in the GHG projections.

General Plan Amendment projects currently in process and under County review, which have not been adopted by the San Diego County Board of Supervisors (Board)

have not been included in the 2014 GHG emissions inventory or projections. These projects are analyzed in the cumulative impact analysis of the **Final** SEIR, Chapter 2.7, because they represent current or reasonably foreseeable probable future projects. CEQA Guidelines Section 15130 requires discussion of cumulative impacts. As discussed in the **Final** SEIR, Chapter 2.7, GPAs have the potential to result in a significant cumulative impact and also impact the ability of the County to meet its targets and goal. However, Mitigation Measure GHG-1 is provided to reduce the cumulative impact to less than significant. In addition, Mitigation Measure GHG-1 would be required for all future GPAs not discussed in the **Final** SEIR. With incorporation of Mitigation Measure GHG-1, GPAs listed in the cumulative impact discussion of the Draft SEIR and all future GPAs that propose increased density/intensity above what is allowed in the General Plan will comply with the CAP and; therefore, will not interfere with the County's 2020 and 2030 GHG reduction targets or 2050 goal. General Plan Amendments would, therefore, comply with the threshold of significance, which is consistency with the CAP.