

2015 Greenhouse Gas Inventory Update



Overview

- Background – 2015 is a critical milestone
 - Climate Action Timeline
- Countywide emissions
- Jurisdictional Data
- Next Actions
- Request for Board input

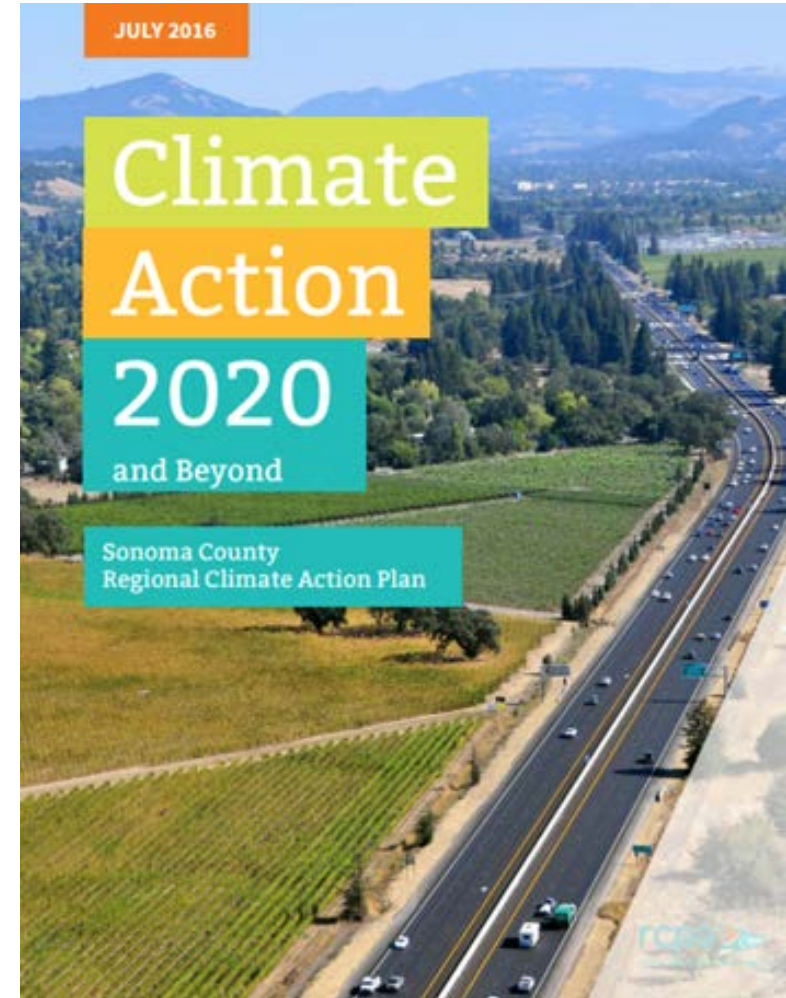
Background

Climate Action 2020 and Beyond

Countywide Goals

- 25% below 1990 levels by 2020
- 40% below 1990 levels by 2030
- 80% below 1990 levels by 2050

Align with state legislation



Timeline

- Climate Action 2020 adopted by this Board: July 2016
 - Baseline 2010 Inventory
- Lawsuit decision: September 2017
- RCPA Board adopts resolution reestablishing CA2020 measures and goals: November 2017
 - All member jurisdictions, except for the City of Santa Rosa, have adopted similar resolution
- Shift Plan Adopted: January 2018
- 2015 Greenhouse Gas Inventory Report : July 2018

Emissions sectors:



Building Energy



Transportation and Land Use



Solid Waste



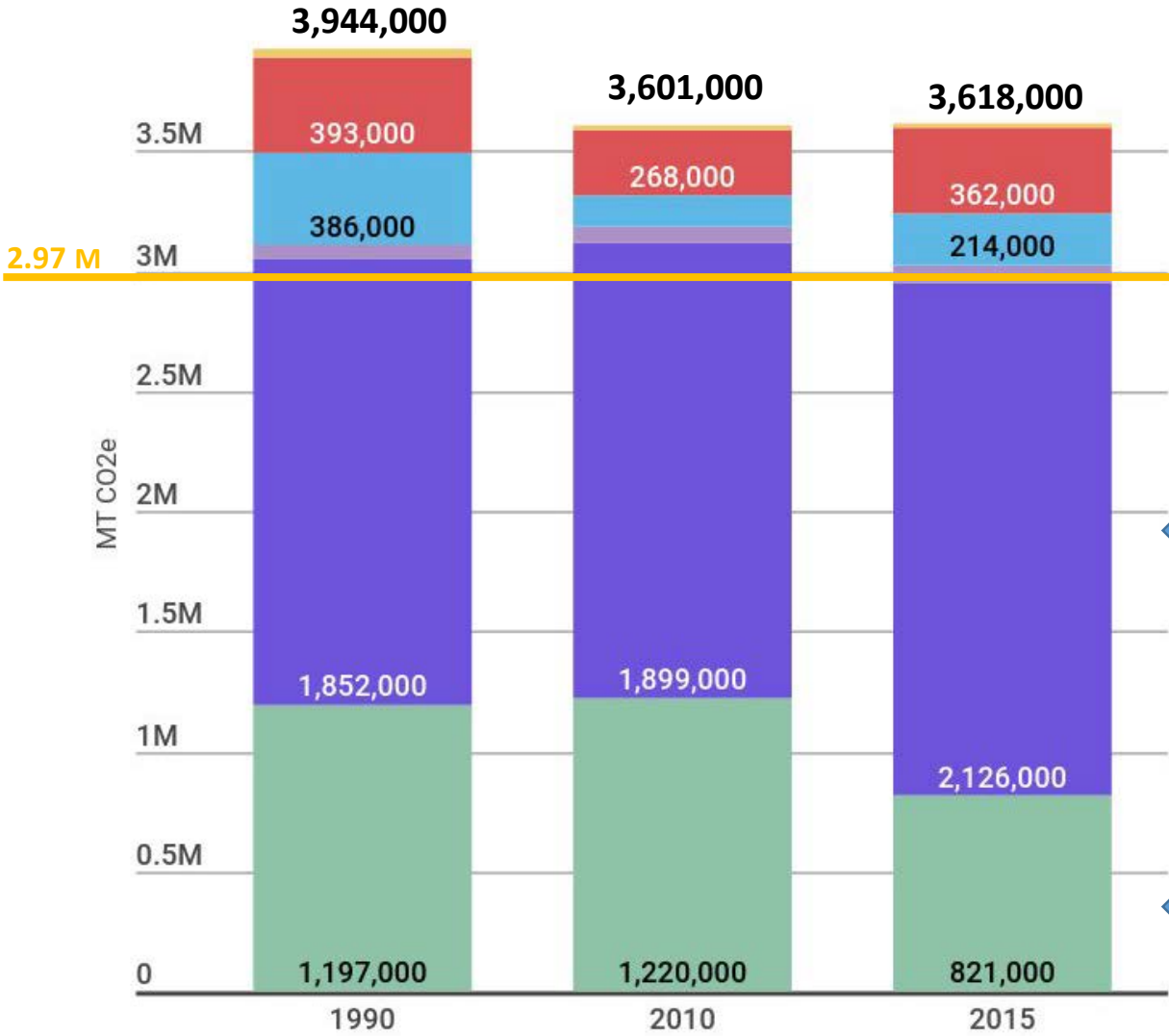
Water and Wastewater



Livestock and Fertilizer

Countywide Emissions

Countywide emissions remain around 9% below 1990 levels.

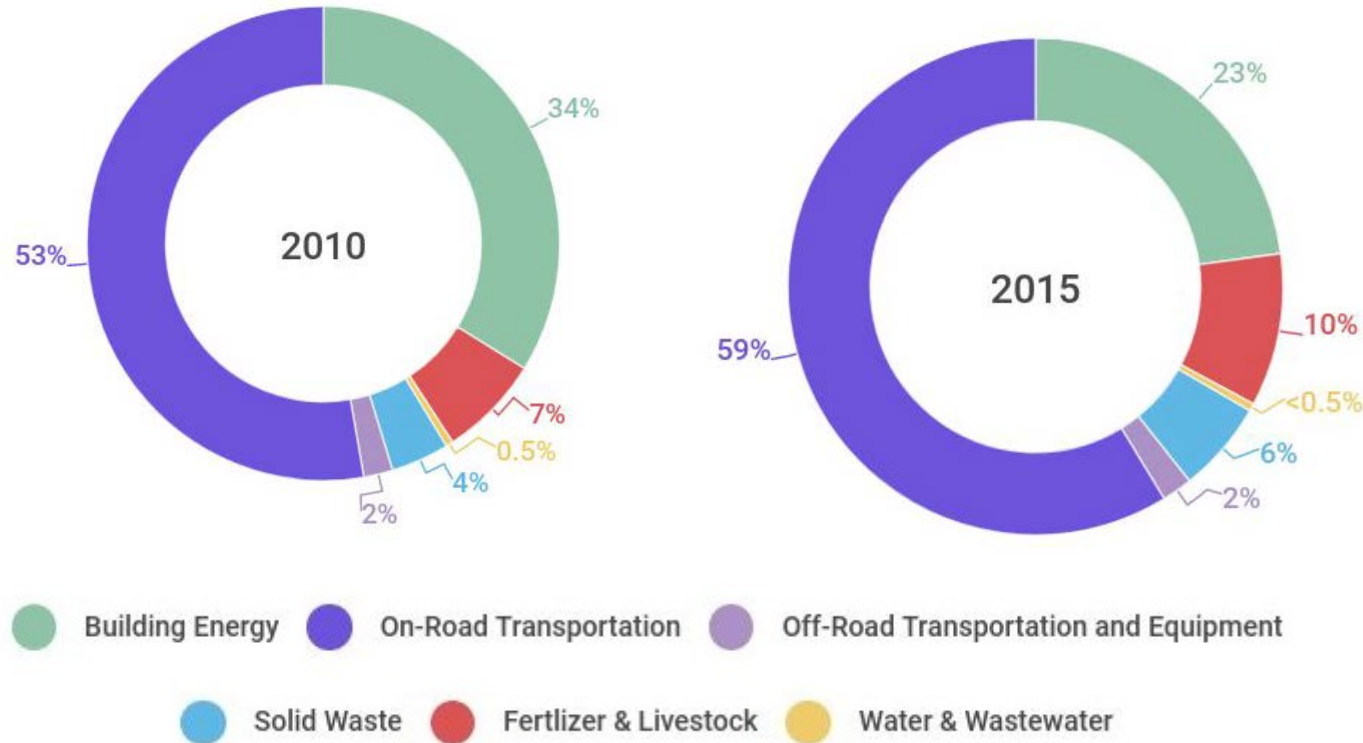


2020 Goal

260,000 more miles were driven per day in 2015 when compared to 2010.

Sonoma Clean Power inception lead to 33% reduction in GHGs from building energy use.

- Building Energy
- On-Road Transportation
- Off-Road Transportation and Equipment
- Solid Waste
- Fertilizer & Livestock
- Water & Wastewater



Sector	2010	2015	Percent Change
Building Energy	1,220,000	821,000	-33%
On-Road Transportation	1,899,000	2,126,000	8%
Off-Road Transportation & Equipment	62,000	75,000	16%
Solid Waste	134,000	214,000	60%
Fertilizer & Livestock	268,000	362,000	35%
Water & Wastewater	19,000	16,000	-14%

Units: MTCO₂e

Emissions increased in each sector except Building Energy and Water & Wastewater.

Jurisdiction Details

	Emissions (MTCO2e)					
	Backcast	Inventory		CA2020 Business as Usual Forecasts		
	1990	2010	2015	2020	2040	2050
<i>Emissions by Jurisdiction</i>						
Cloverdale	57,000	59,000	63,800	73,300	93,200	93,800
Cotati	51,500	52,100	49,900	61,300	69,000	70,900
Healdsburg	93,500	108,800	116,800	121,000	123,700	121,100
Petaluma	387,000	441,900	445,900	545,000	580,900	588,600
Rohnert Park	291,300	264,300	263,700	372,700	371,800	378,600
Santa Rosa	1,123,100	1,065,200	1,002,800	1,396,900	1,844,700	2,027,500
Sebastopol	73,200	76,300	72,500	93,000	96,500	97,100
Sonoma City	96,900	103,400	105,400	122,200	132,500	131,200
Windsor	133,000	157,800	151,900	188,100	212,000	216,500
Unincorporated Sonoma County	1,244,300	1,004,500	983,300	1,128,800	1,205,600	1,218,300
<i>Emissions Not Assigned to Individual Communities</i>						
Fertilizer and Livestock	392,800	267,600	361,800	242,600	193,500	169,000
Sonoma County Total	3,943,600	3,600,900	3,617,800	4,344,900	4,923,400	5,112,600

Per Capita Emissions		
	2010	2015
Cloverdale	6.8	7.3
Cotati	7.2	6.8
Healdsburg	9.7	10.1
Petaluma	7.6	7.5
Rohnert Park	6.5	6.3
Santa Rosa	6.3	5.8
Sebastopol	10.3	9.6
Sonoma	9.7	9.7
Windsor	5.9	5.6
Unincorporated County	6.9	6.3

Full report online at rcpa.ca.gov/emissions

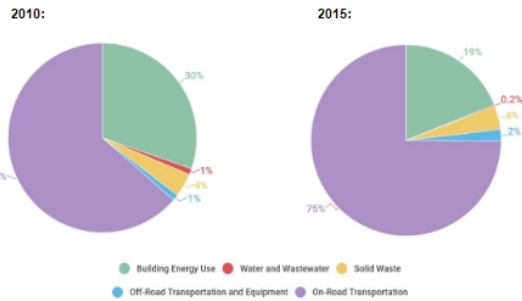
JURISDICTION SUMMARIES

Sonoma County continues progress towards the cleaner, more sustainable future roadmapped in [Climate Action 2020](#). Each jurisdiction's focus on climate action and recommitment to the goals and measures outlined in the CA2020 demonstrates the collective recognition of the need to address climate change at the local and regional level. The following sections offer insight into the status of GHG emission reductions in each community, focusing on the largest emissions source: transportation. As well as what can be done to move the region towards our short and long-term goals given where emissions increased and the strengths of those communities.

CLOVERDALE

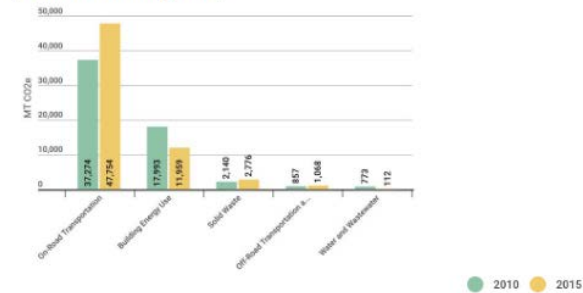
Greenhouse gas emissions in Cloverdale increased from 2010 to 2015. Communitywide emissions were 3% above 1990 levels in 2010, this percentage increased to 11% above 1990 levels in 2015. This increase is likely a result of community members driving farther distances each day - Annual vehicle miles traveled (VMT) within Cloverdale increased by almost 20 million annual miles between 2010 and 2015. This equates to a per capita daily VMT increased from 25 to 31 daily miles over this five year period.

GHG Inventory by Source

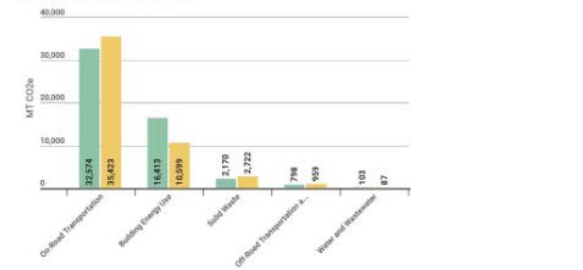


Cloverdale joined other Sonoma County communities in adopting a resolution reaffirming the city's goal to implement local, regional, and state greenhouse gas reduction measures included in Climate Action 2020. With guidance from the RCPA in coordination with city staff, Cloverdale is poised to implement the 13 transportation focused measures, section 5.1.4 of Climate Action

Cloverdale Emissions by Source



Cotati Emissions by Source



Key Activity Data by GHG Source

Source	Primary Emissions Source	Key Activity Data	Data Sources
Building Energy	Production of electricity (emissions generated at power plants) Combustion of natural gas	Total electricity use (megawatt hours) Total natural gas use (terms)	Electricity providers: PG&E, Healdsburg Electric, Sonoma Clean Power Natural gas providers: PG&E
On-Road Transportation	Combustion of gasoline and diesel fuel in vehicles	Vehicle miles traveled Fuel type and fuel economy of countywide vehicle fleet Travel patterns	Sonoma County Transportation Authority California Air Resources Board's (ARB) EMFAC2014 Model
Off-Road Transportation and Equipment	Combustion of fossil fuels in equipment (e.g., cranes, bulldozers, lawn mowers) Combustion of fossil fuels in off-road vehicles (e.g., tractors, boats, ATVs)	Fuel consumption in offroad vehicles and equipment Socioeconomic data	ARB's OFFROAD 4i and OFFROAD2011 model
Solid Waste	Methane emissions from decomposition of material sent to landfills	Tons of residential and commercial waste sent to landfills Profile of waste material in each jurisdiction (e.g., 19% office paper, 55% food waste)	Sonoma County Waste Management Agency CalRecycle
Wastewater Treatment	Emissions of methane and nitrous oxide that occur during wastewater treatment	Population served by each wastewater treatment plant (WWTP) Method of wastewater treatment at each WWTP Amount of digester gas produced at each WWTP	Sonoma County Water Agency Sanitation districts and jurisdictions that operate a WWTP
Water Conveyance	Production of electricity associated with the pumping and movement of water from source to user	Water consumption Water supply sources (e.g. groundwater, recycled water)	Urban Water Management Plans for each jurisdiction Sonoma County Water Agency
Livestock and Fertilizer	Emissions of nitrous oxide from the application of fertilizer Emissions of methane and nitrous oxide from livestock and manure management	Acres and types of crops grown in the county Livestock populations	Sonoma County Annual Crop Report U.S. Dept. of Ag National Agricultural Statistics Service

Next Steps for RCPA

Actions	2018 Q2	2018 Q3	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2
Implementation Status Update									
Needs and Barriers Assessment									
Quick Wins!									
2030 Goal Setting									
2030 Implementation Plans									
CA 2030 Update and 2018 GHG Inventory Release									

CALIFORNIA CLIMATE STRATEGY

An Integrated Plan for Addressing Climate Change



VISION

**Reducing Greenhouse Gas Emissions
to 40% Below 1990 Levels by 2030**

GOALS



**50%
renewable
electricity**



**50%
reduction
in petroleum
use in vehicles**



**Double energy
efficiency savings
at existing buildings**



**Carbon
sequestration
in the land base**



**Reduce
short-lived
climate pollutants**



**Safeguard
California**

Questions?