

Summary of ReCAP Select Snapshot Activity Data Sources

Emissions Category	Performance Indicators	Source	Notes on Data or Processing Data	
	Population (as of January 2016)	Based on SANDAG Demographic and Socioeconomic Estimates for the jurisdiction (May 25, 2019).	Population and housing unit estimates are updated annually. SANDAG May 2019 version estimates may differ from previous or later versions' estimates.	
	Occupied Housing Units (as of January 2016)		Population is the sum of household and group quarters population. Occupied housing units are the units occupied by household population, not including group quarters.	
Transportation	Community-wide	Number of public electric vehicle chargers through 2017	Alternative Fuels Data Center Alternative Fueling Station Locator https://afdc.energy.gov/stations/#/analyze	Data filtering criteria: Fuel Type: ELEC Status: Available Access: Public The number of chargers are the number of nozzles or plugs, one site may have more than one charger.
		Number of Power Your Drive electric vehicle chargers through 2018	Data provided by SDG&E to SANDAG and EPIC (Charger installations completed prior to the end of 2018) The locations of the chargers are shown in https://www.sdge.com/pyd-map	Electric vehicle chargers are installed through SDG&E Power Your Drive at workplaces (including municipal fleets) and multi-family buildings (apartment and/or condo buildings). These chargers are not available for public use. The number of chargers are the number of nozzles or plugs. One site may have more than one charger.
		Number of clean vehicles (alternative fuel vehicles) through 2017	Department of Motor Vehicles Statistics Fuel Type by City as of 1/1/2018 https://www.dmv.ca.gov/portal/dmv/detail/pubs/media_center/statistics	Zero emission vehicles include battery electric, plug-in hybrid and fuel cell vehicles.
		Number of clean vehicles registered (alternative fuel vehicles) as percentage of total vehicles registered, through 2017		
		Number of clean vehicles per 10,000 capita, through 2017		
		Number of zero emission vehicles (battery electric, plug-in hybrid electric, fuel cell electric) through 2017		
		Number of zero emission vehicles as percentage of total vehicles registered through 2017		
	Number of zero emission vehicles as percentage of total vehicles registered through 2017			
	Municipal Operations	Number of electric vehicle chargers stations at municipal sites through 2018	Data provided by City	N/A
		Number of clean vehicles in municipal fleet through 2018		
	Community-wide	Miles of Bicycle Lanes (miles in 2016)	Data provided by SANDAG to EPIC	Miles of bicycle facilities represent the data based on what were "on the ground" in 2016. The mileages are based on the length of street centerline segment, which can include bicycle facilities on either side of the street, or both sides. The classification of bicycle facilities is based on the California Highway Design Manual and used by SANDAG. Miles of bicycle lanes as percentage of road miles are based on the miles of bicycle facilities and miles of roads, excluding freeways, freeway to freeway ramps, freeway on/off ramps, private streets, alleys, military streets within bases, paper streets, and unpaved roads.
		Miles of Bicycle Lanes as Percentage of Road Miles (% in 2016)		
		Passengers on and off transit per weekday - Bus (Fiscal Year 2016 and 2017)	Data provided by SANDAG to EPIC (Data were provided by MTS and NCTD to SANDAG)	Passengers served by transit stops are represented by boardings and alightings in Santee, and are identified with transit stop IDs. The data are for weekday only, not including weekend data.
		Passengers on and off transit per weekday - Trolley (Fiscal Year 2016 and 2017)		
Passengers on and off transit per weekday - Sprinter (Fiscal Year 2016 and 2017)				
Passengers on and off transit per weekday - Coaster (Fiscal Year 2016)				
Number of local businesses participating in SANDAG iCommute program events (2016, 2017 and 2018)		Data provided by SANDAG to EPIC SANDAG Employer Program, Active Employers as of December 7, 2018	Include all types of iCommute program activities.	
Number of SANDAG vanpools to or from City (2016, 2017 and 2018)	Data provided by SANDAG to EPIC SANDAG Vanpool Program, Active Vanpools, as of November 16, 2018	Vanpool origin cities and business cities are used to identify the origin and destinations of the vanpools. Number of vanpools indicates the vanpools that were in operation and received monthly subsidies from SANDAG in that year.		

Energy	Energy Consumption and Savings	Community-wide	Citywide electricity consumed - grid-supply only (MWh in 2016)	Data provided by SDG&E to EPIC	Electricity use represents metered sales data only, does not include transmission and distribution losses or behind-the-meter supply (e.g., behind-the-meter PV). KWh and therms are converted to MMBtu using 99,976 btu/therm and 3,412 btu/kWh conversion factors. Energy use per home is calculated based on citywide residential energy use and the number of occupied housing units.		
			Citywide electricity consumed- grid-supply only (MMBtu in 2016)				
			Average residential electricity consumed - grid-supply only (kWh per home in 2016)				
			Average residential electricity consumed - grid-supply only (MMBtu per home in 2016)				
			Citywide natural gas consumed (million therms in 2016)				
			Citywide natural gas consumed (MMBtu in 2016)				
			Average residential natural gas consumed (therms per home in 2016)				
			Average residential natural gas consumed (MMBtu per home in 2016)				
			Citywide energy (electricity + natural gas) consumed (MMBtu in 2016)				
			Average residential energy (electricity + natural gas) consumed (MMBtu per home in 2016)				
			Citywide electricity savings through SDG&E programs (MWh in 2016 and 2017)			Data provided by Semptra to EPIC	Energy savings from SDG&E energy efficiency program participants only. This includes all customer sectors in the jurisdiction, e.g., residential, commercial, and industrial (if any). The savings are estimates comparing the energy use with and without the energy efficiency projects. A negative natural gas value means additional natural gas is used. Net energy savings means the net of electricity and natural gas savings. KWh and therms are converted to MMBtu using 99,976 btu/therm and 3,412 btu/kWh conversion factors.
			Citywide electricity savings through SDG&E programs (MMBtu in 2016 and 2017)				
	Citywide natural gas savings through SDG&E programs (therms in 2016 and 2017)						
	Citywide natural gas savings through SDG&E programs (MMBtu in 2016 and 2017)						
	Citywide net energy savings through SDG&E energy efficiency programs (MMBtu in 2016 and 2017)						
	Municipal Operations	Municipal facilities electricity consumed - grid-supply only (MWh in 2016, 2017 and 2018)	Data provided by TRC to EPIC	Electricity use represents metered sales data only, does not include transmission and distribution losses or behind-the-meter supply (e.g., behind-the-meter PV or co-generation). Energy consumed may include municipal facilities with service addresses outside city boundary. KWh and therms are converted to MMBtu using 99,976 btu/therm and 3,412 btu/kWh conversion factors.			
		Municipal facilities electricity consumed - grid-supply only (MMBtu in 2016, 2017 and 2018)					
		Municipal facilities natural gas consumed (therms in 2016, 2017 and 2018)					
Municipal facilities natural gas consumed (MMBtu in 2016, 2017 and 2018)							
Municipal facilities energy (electricity + natural gas) use (MMBtu in 2016, 2017 and 2018)							
Municipal facilities energy saved through SDG&E programs	Data provided by SDG&E to TRC, shared with EPIC	Energy savings from SDG&E energy efficiency program participants only. No activity means no municipal energy efficiency project received SDG&E incentives from 2016 to 2018.					
Renewable Energy	Community-wide	Percent of renewables in grid electricity supply in 2016	California Energy Commission 2016 Power Content Label https://www.energy.ca.gov/pcl/labels/2016_labels/San_Diego_Gas_and_Electric.pdf	For SDG&E bundled customers only. Electricity providers for SDG&E's Direct Access customers have different renewable contents.			
		Citywide PV capacity - all systems (MWs through 2016, 2017 and 2018)	California Distributed Generation Statistics Interconnection NEM data Current as of 2018-12-31 https://www.californiadgstats.ca.gov/downloads/	Systems in Carlsbad that are interconnected as of December 31 of a given year (application approved date) are included for that year. MWs are in direct current (dc). Database is updated quarterly. Statistics in this version may be different from previous or later versions.			
		PV capacity per capita - all systems (Ws per capita through 2016, 2017 and 2018)					
	Municipal Operations	PV capacity at municipal facilities (kW as of 2018)	Data provided by City	N/A			
Wastewater	Community-wide	Wastewater produced per capita (gallons per capita per day in 2016)	Provided by city and/or wastewater treatment agency for the city	N/A			
Water	Community-wide	Potable water consumed per capita (gallons per capita per day in 2016)	Water suppliers and/or jurisdiction; by type (raw imported, treated imported, local surface, local groundwater, recycled)	N/A			
		Citywide recycled water consumed (acre-feet in 2016)					
Solid Waste	Community-wide	Waste disposed in landfill per capita (pounds per person per day in 2016)	CalRecycle Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility	N/A			
	Community-wide	Citywide waste diversion rate (% in 2016)	CalRecycle Jurisdiction Diversion/Disposal Rate Summary https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006	Diversion rate is calculated based on City's per resident disposal rate target (pounds per capita per day - PPD), which is equivalent to a 50% diversion rate, and the PPD in a year. Each city has a different disposal rate target.			
	Community-wide	Average annual number of new trees planted by City	Data provided by City	Number of trees does not include trees added at private properties.			

Summary of GHG Inventory Method and Data Source Differences

Emissions Category	Category Detail	Year 2012 Inventory Method and Data Sources	Year 2016 Inventory Methods and Data Sources
General	Population	SANDAG estimates	no change
	Jobs	Series 13	no change
Transportation	Activity (VMT)	SANDAG Series 12 or Series 13 (version may vary, 13.3.0 or 13.2.5) O-D VMT	SANDAG Series 14 (Version 14.0.1) O-D VMT
	Emission Factor (g CO ₂ e/mile)	Derived from EMFAC2011 or EMFAC2014	Derived from EMFAC2017
Electricity	Activity (MWh)	SDG&E	no change
	Emission Factor (lbs CO ₂ e /MWh)	EPIC, calculated based on bundled and Direct Access emission factors. The bundled emission factor is in turn calculated from Power Source Disclosure Program data and eGrid databased on specific power plant emissions. The Direct Access emission factor is a default value from the CPUC.	no change
Natural Gas	Activity (therms)	SDG&E	no change
	Emission factor (MMT CO ₂ e/MMtherms)	constant, 0.0545	no change
Solid Waste	Activity (tons disposed into landfills)	CalRecycle Disposal Reporting System	no change
	Closed landfills	EPA MMR if greater than 25,000 MT per year CO ₂ e; city data on closed landfills	no change
	Emission factor (methane emissions/ton)	1) ICLEI, average mixed solid waste emission factor (0.06 MT CH ₄ /short ton), OR 2) Based on jurisdiction's or nearby jurisdiction's waste characterization study and landfill waste emission factor from EPA WARM Model Version 14	Based on jurisdiction's or nearby jurisdiction's waste characterization study and landfill waste emission factor from EPA WARM Model Version 14
	Capture rate of emissions from the landfills	default 75% unless otherwise provided by the city	no change
Off-road Transportation	Emissions	Sub-categories under off-road transportations included in the inventory are jurisdiction-specific. Sub-category emissions are allocated to each jurisdiction from the San Diego region-wide emissions based on specific scaling factors such as shown below: Recreation vehicle (population) Law and garden equipment (population) Light commercial equipment (commercial jobs) Construction and mining (construction jobs) Industrial (Industrial jobs) Diesel-fueled portable equipment (jobs)	no change
Water	Consumption (gallons or Acre-feet)	1) Waster suppliers district-wide per capita water use and jurisdiction's population, OR 2)Water suppliers and/or jurisdiction; by water type (raw imported, treated imported, local surface, local groundwater, recycled)	Water suppliers and/or jurisdiction; by type (raw imported, treated imported, local surface, local groundwater, recycled)
	water upstream and supply energy use	1) default California Energy Commission's 2006 statewide water-related energy use study, OR 2) default energy intensity (energy use per unit of water) - from SDCWA + MWD Urban Water Management Plans	default energy intensity (energy use per unit of water) - from SDCWA + MWD Urban Water Management Plans
	Water treatment energy use	1) default California Energy Commission's 2006 statewide water-related energy use study, OR 2) weighted by supplier amounts and types and based on energy use information provided by water treatment facility for that city	weighted by supplier amounts and types and based on energy use information provided by water treatment facility for that city
	Water distribution energy use	1) default California Energy Commission's 2006 statewide water-related energy use study, OR 2) weighted by supplier amount and distribution energy provided by each water supplier.	weighted by supplier amount and distribution energy provided by each water supplier.
Wastewater	Production (gallons)	1)water use in jurisdiction and ratio of water use and wastewater production, OR 2) Provided by city and/or wastewater treatment agency for the city	Provided by city and/or wastewater treatment agency for the city
	Emission factors (only from combustion of methane produced, process emissions and fugitive methane emissions)	Provided by wastewater treatment agency (Encina WPCF and Point Loma WWTP)	no change

Note

These methods and data sources are relevant to the 15 Roadmap cities under SANDAG's ReCAP program. The methods and data sources used for the 2012 and 2016 inventories may have changed and are indicated above. The methodologies used are described in detail in ReCAP 2018. Non-Roadmap jurisdictions (County, San Diego, Chula Vista) may have different baseline years, methods or other sources of data