

Nineteenth Annual Indicators Report



Fall 2015 • Key Indicator: Water



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Our mission is to stimulate community action on issues relating to sustainability by providing accurate, timely, and empowering information.

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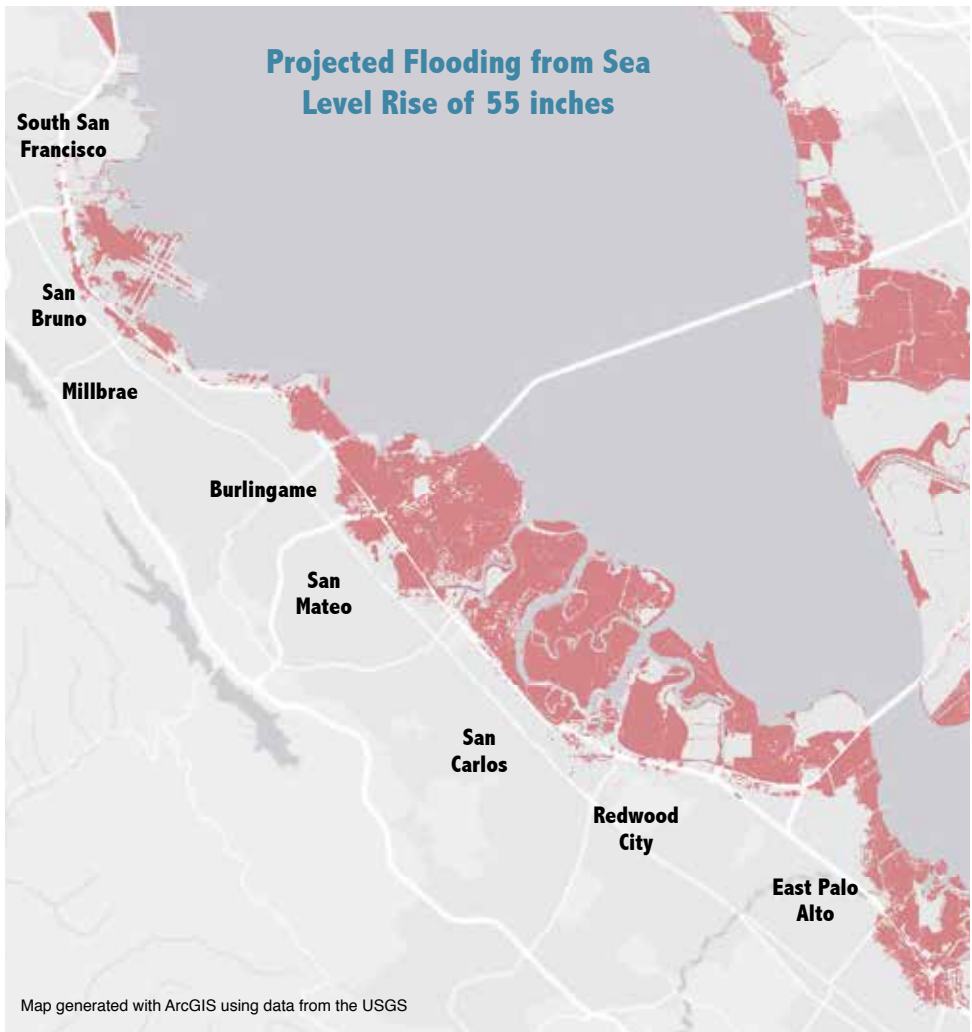
Our Fall 2015 Update is Now Available
sustainablesanmateo.org

Water Management

Sea Level Rise and Flooding

San Mateo County is preparing to meet the challenge of sea level rise. Within the region, our county faces the greatest risk from sea level rise, due to the high number of valuable assets located in low-lying areas. Homes, including those in under-served neighborhoods, commercial buildings, streets, highways, railroads, airports, water treatment plants, a power plant, wetlands, beaches, public access areas, and hazardous material sites are vulnerable. Damage to these sites will affect the entire region and state due to the loss of jobs and tax revenue, impaired transportation, and decreased water quality.

From 1897–2006, measurements at the San Francisco tide gauge show a sea level increase of 8 inches. Scientific projections for sea level rise in the Bay Area by the end of this century are between 55 inches (Pacific Institute, 2012) and 66 inches (National Research Council, 2012). In response to the rising water, the San Mateo County Office of Sustainability has partnered with the California State Coastal Conservancy to conduct the San Mateo County Sea Level Rise Vulnerability Assessment.



Green Infrastructure for Water Management

Sea Level Rise Responses

Wetland restoration provides a natural buffer against tides and potentially sea level rise. Though much of the county's marshland has been lost, the Bair Island Restoration Project is near completion on the shore of Redwood City.

Urban Planning

Green streets integrate trees and water-absorbing landscapes or other pervious surfaces into streets, sidewalks, and parking lots to filter and dissipate stormwater. Within the county, green streets projects have been implemented in Burlingame, Daly City, San Bruno, San Carlos, Moss Beach, and Brisbane.

Water Recycling

Non-potable recycled water is produced and distributed locally by Redwood City and Daly City for use in landscaping.

Brisbane City Hall Rain Garden



Photograph by Matt Fabry

Water and Energy Systems

Water–Energy Nexus

Water and energy use are interrelated. Energy is needed to extract, clean, pressurize, and transport water, as well as heat or cool it for commercial and residential use. Water or steam is used to propel turbines that produce hydropower and thermoelectric power. It is also a vital element of nuclear power production and natural gas extraction. In contrast, renewable energy sources tend to consume less water. Learn more about California’s use of water in the power production process on the Water–Energy Nexus page of our website.

The chart to the right illustrates how energy is expended in the delivery, use, reuse, and disposal of water in our daily lives. The energy intensity of the water use fluctuates depending on water sources, end location, and technology. According to the U.S. Energy Information Administration, the average residential utility consumer uses 10,932 kWh of electricity per year. Overall, the most energy is used by commercial and residential consumers to heat, cool, and pressurize water.

Given the relationship between water and energy use, conservation of one resource will in turn conserve the other.

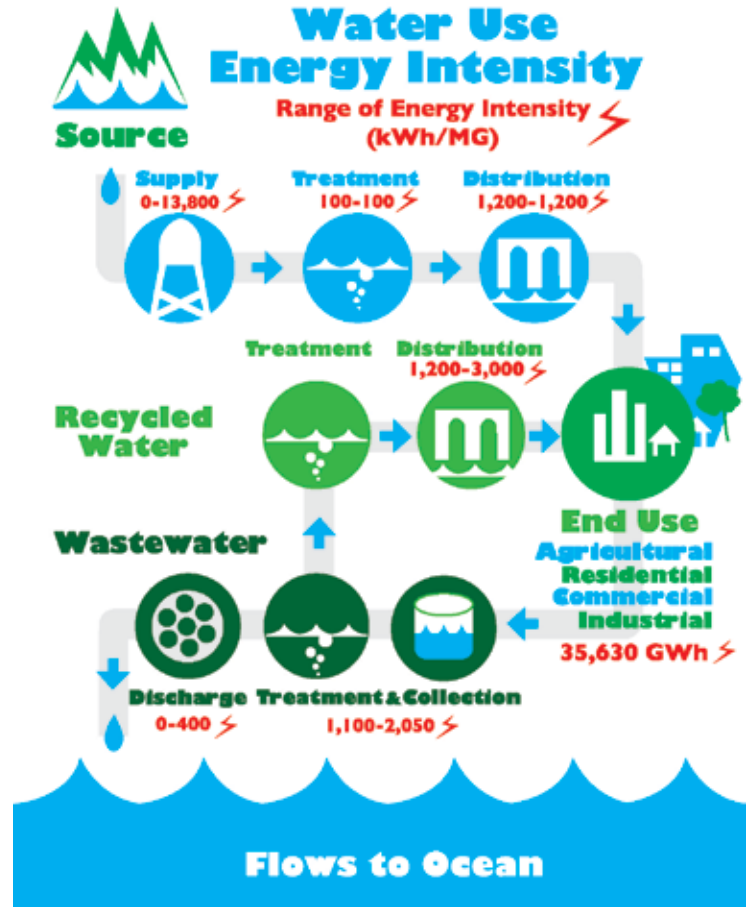
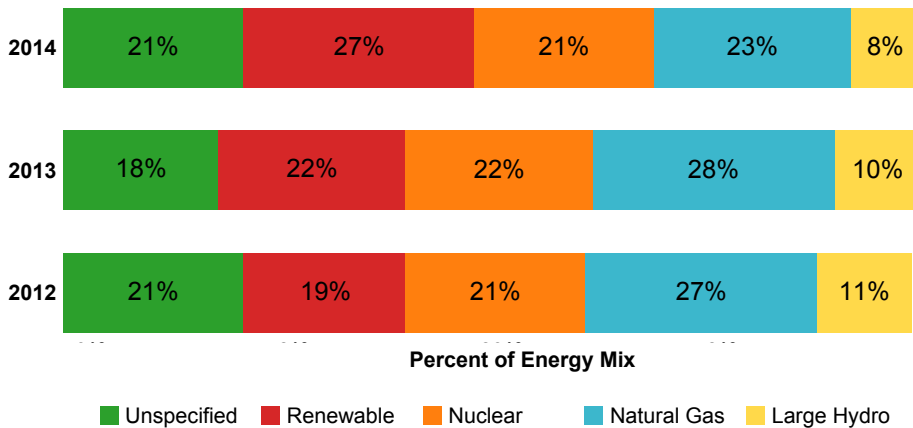


Image by Derrick Chinn

PG&E Energy Mix • 2012–2014



Data Source: California Energy Commission

Energy Use

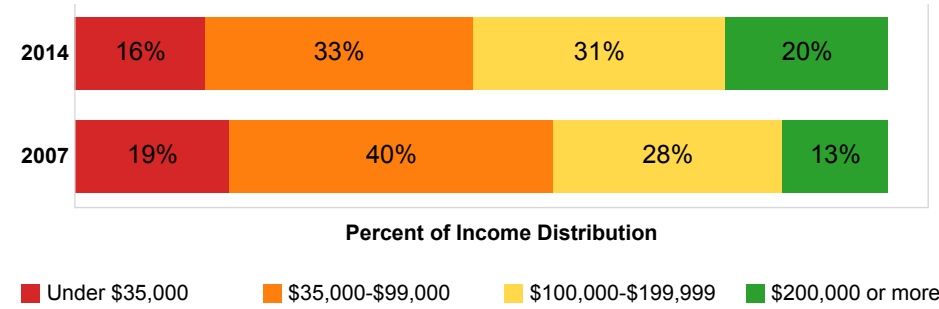
Renewable energy use increased by 23% last year in PG&E’s energy mix and 16% the year before. This upward trend is in line with the state’s goal to increase renewable energy use to 50% by the year 2030.

Geothermal and hydroelectric facilities that generate 30MW or less are considered renewable energy sources by California’s standards. Hydroelectric production is highly dependent on precipitation to feed river flows and reservoirs. 2014 showed a 20% decrease in energy from hydroelectric facilities.

Learn about sea level rise, horizontal levees, recycled water, and alternative energy on our website • sustainablesanmateo.org

Indicators Highlights: Income, Commute, Solid Waste

San Mateo County Income Distribution • 2007 and 2014



Data Source: US Census Bureau, ACS 1 Year Estimates

Income

Median household income in San Mateo County rose to \$101,051 in 2014, an 11% increase from last year and 22% compared to 2007. In 2014, there was a 3% increase in the median household income in California and across the nation.

Though poverty rates in the county continue to decrease, the number of children in poverty in female-headed households increased in 2014. Learn more on our website.

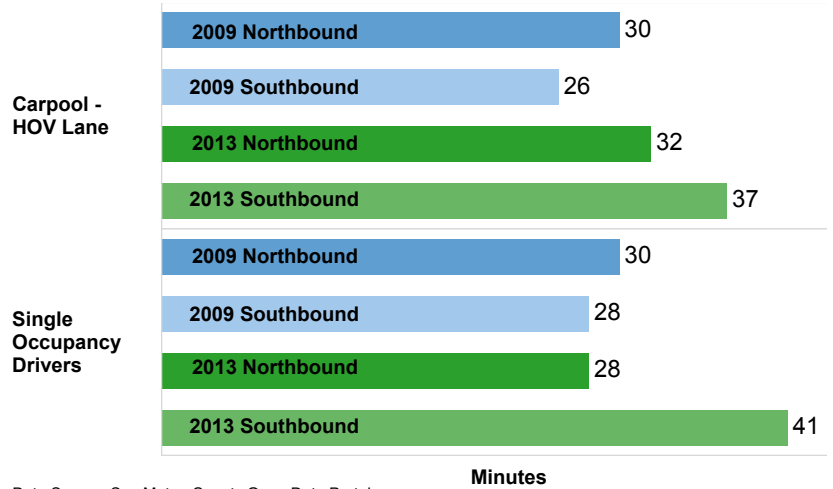
Commute

In 2013, southbound single occupancy drivers traveling in the morning were on the highway an average of 11 minutes longer, an increase of 46% compared to 2009.

In January 2015, Caltrain had the highest ridership of all the public transportation modes in the county with 59,916 passengers per week. Commute times are faster on bullet trains and 16 bullet trains make 92 stops in San Mateo County each morning.

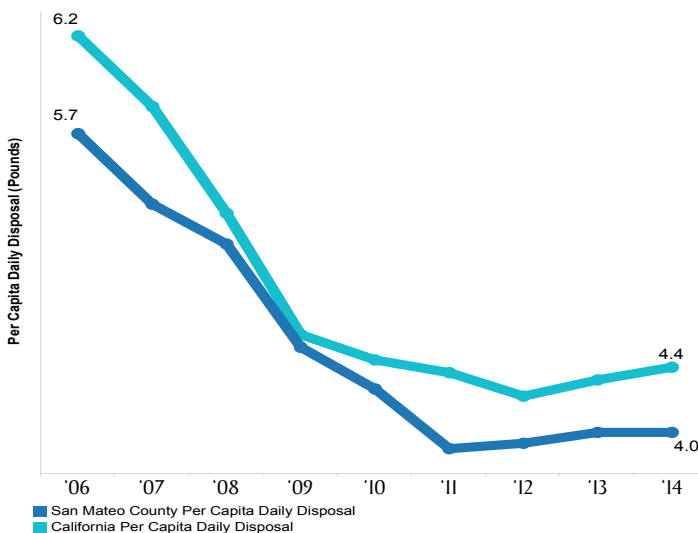
To learn more about transportation in San Mateo, find our 2014 report with transportation as a key indicator in our website archives.

Average Morning Commute Time on Highway 101 2009 and 2013



Data Source: San Mateo County Open Data Portal

Per Capita Solid Waste Disposal • 2006–2014



Data Source: California Department of Resources Recycling and Recovery (CalRecycle)

Solid Waste

This measure of solid waste includes everything that goes to the landfill, materials used to temporarily overlay exposed landfills, and items that are collected by CalRecycle's recycling program.

The per capita statistic has slightly increased from 2013–2014 largely due to the presence of expanding businesses and more recycling programs.

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