



Environment

Section Highlights

Air Quality (2020)

most days "moderate"

Solid Waste Disposal (2010 - 2019)

up 25%

Pollutant Discharge Reports (2019 - 2020)

down 18%

Estimated Average Water Consumption (July 2020)

143 gallons
per capita per day

Success Story

The San Bernardino County Flood Control District was recognized with the 2020 Management and Administration Award from the National Association of Counties (NACo) for their *Homeless Encampment Clean-Up Program*. The award honors innovative and effective county government programs that strengthen services for residents. The Homeless Encampment Clean-Up Program cleans up flood control facilities such as channels, basins, and streambeds littered with trash and debris from homeless encampments that present potential for environmental concerns in addition to compromising the safety of the homeless individuals living in these facilities. The team has collected over 695 tons of trash and debris, equating to over a million pounds or 79,925 trash bags full of trash over a year.



Region Number One in Residential Solar Power

New policies and innovations are driving a shift from the use of carbon-based energy sources to alternative sources, clean technology, and increased energy efficiency. This indicator uses the Green Innovation Index to measure San Bernardino County's progress in achieving sustainable economic growth. The Green Innovation Index provides statewide rankings of 26 metro areas on several measures of green innovation: installed solar capacity, clean vehicle rebates, and electricity consumption per capita.¹



TREND

In 2018, Riverside-San Bernardino ranked first out of 26 California metro areas for the most kilowatts of installed residential solar power. Riverside-San Bernardino was also a statewide leader in commercial and industrial solar power installations, ranking 2nd on both categories. Riverside-San Bernardino continues to hold its position as 5th out of 26 in the number of clean vehicle rebates issued in 2018. In terms of the lowest residential electricity consumption per capita, Riverside-San Bernardino ranked 18 out of 26 metros in 2017, which is an improvement over the prior year (20th), but a drop since 2015 when the region ranked 14th. The region is 7th in the state for the lowest non-residential electricity consumption in 2017 – a slight improvement from 8th the previous year.

RIVERSIDE-SAN BERNARDINO HOLDS POSITION AS TOP REGION FOR SOLAR POWER

Selected Metro Area Comparison of Green Innovation Metrics Ranking Among 26 California Metro Areas, 2017 or 2018

	Riverside-San Bernardino	Los Angeles-Orange County	San Diego
Most Solar Installations: Residential	1	3	1
Most Solar Installations: Commercial	2	4	1
Most Solar Installations: Industrial	2	11	13
Most Clean Vehicle Rebates	5	1	4
Lowest Electricity Consumption per Capita: Non-Residential	7	14	5
Lowest Electricity Consumption per Capita: Residential	18	3	5



Note: Solar installation and clean vehicle rebate data are from 2018. Electricity consumption data are from 2017.

Source: Next10, California Green Innovation Index, 2019 (www.next10.org)

¹The 2020 Green Innovation Index report from Next10 did not include regional data rankings as in previous years; therefore, the data in this indicator are the same as those reported in the 2019 Community Indicators Report. Regional rankings may be conducted in subsequent Green Innovation Index reports.



Air Quality Extremes in 2020: More “Good” Days and More “Unhealthy” Days

Poor air quality can aggravate the symptoms of heart and lung ailments, including asthma. It can also cause irritation and illness among the healthy population. Long-term exposure increases the risks of lung cancer, cardiovascular disease, and many other health conditions. Poor air quality can also put children’s lung development at risk. This indicator uses the Air Quality Index (AQI) to measure air quality in San Bernardino County, neighboring California counties and peer regions outside of California.



TREND

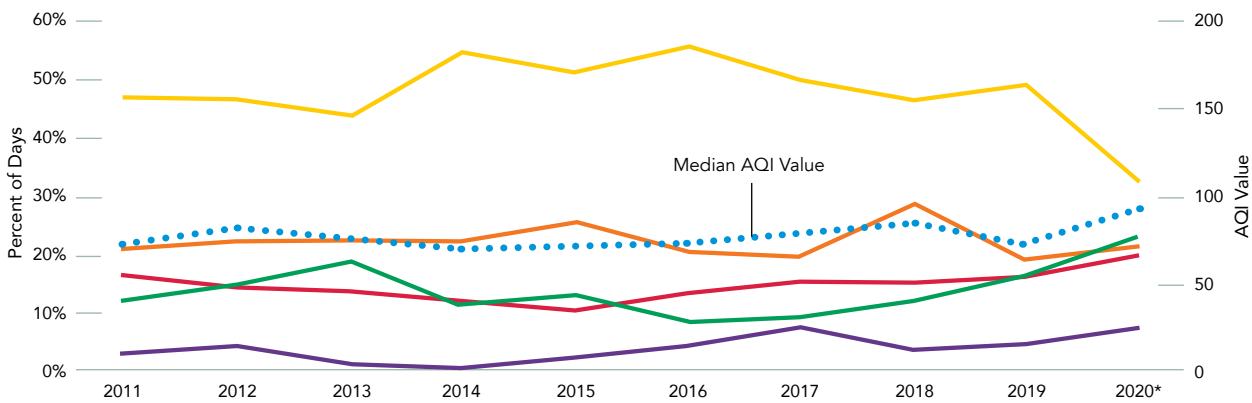
The most common air quality status for San Bernardino County is the “moderate” range. In 2020, one-third of days (32%) were in the “moderate” range, which was substantially fewer than the 48% of days reported in 2019. The second most common air quality status in 2020 was “good,” which accounted for 22% of days of the year, which is an improvement compared to 2019 when 15% of days were “good.” One in five days (or 21% of days) were considered “unhealthy for sensitive groups” in 2020, which was similar to the percentage in 2019 (19%). Meanwhile, 20% of days were “unhealthy” in 2020, compared to 15% in 2019. Air that was “very unhealthy” rose from 2% of days in 2019 to 6% of days in 2020. Overall, the median Air Quality Index value increased in 2020 to 97, up from 80 in 2019. Both values are in the “moderate” range.

“MODERATE” AIR QUALITY DAYS REPLACED BY MORE DAYS AT THE EXTREMES

Air Quality Index in San Bernardino County, 2011-2020

Percentage of Days When Air Quality Was...

Good Moderate Unhealthy for Sensitive Groups Unhealthy Very Unhealthy



* Data for 2020 are considered preliminary. The percentages were calculated on 305 days with AQI data in 2020 and 365 (or 366) days with AQI data for the remainder of years shown. The 2020 data were retrieved January 14, 2021.

Source: U.S. Environmental Protection Agency, Air Data (www.epa.gov/outdoor-air-quality-data)



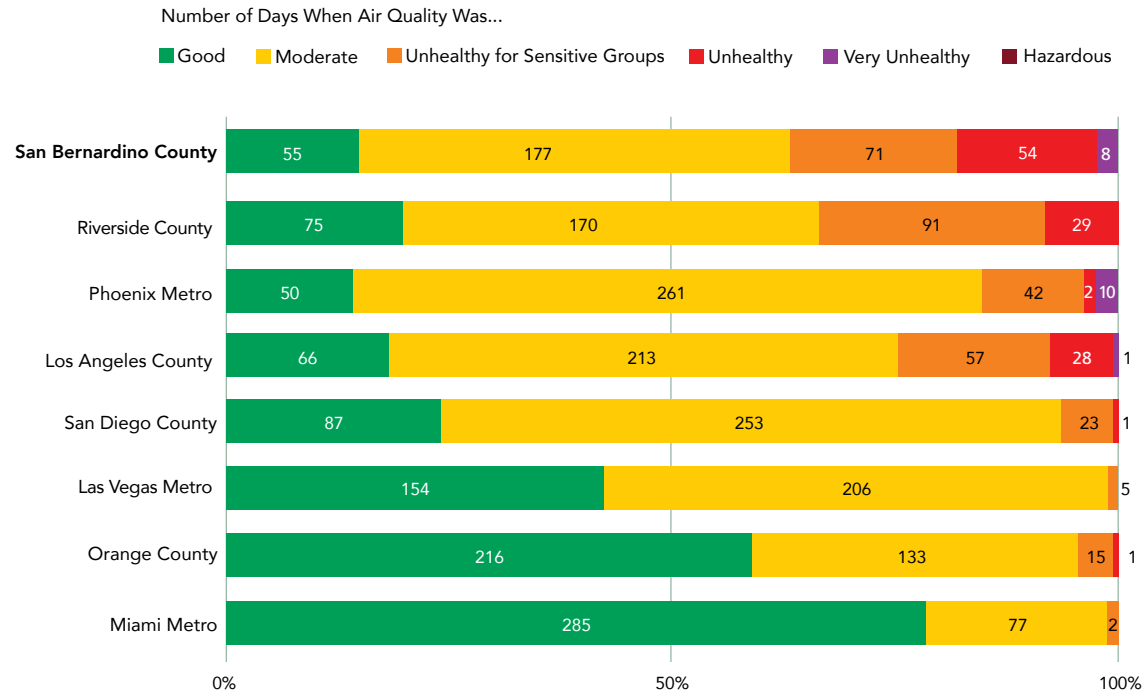
GEOGRAPHIC COMPARISON

Looking at peer regions, there is variation in the number of days each region experiences in the five Air Quality Index categories – from “good” to “very unhealthy.” However, the median Air Quality Index value, which takes into account all daily AQI readings in a given year, was higher in San Bernardino County in 2019 than all regions compared. Regional comparison data from 2019 are presented due to the preliminary status of 2020 data.



OVERALL, SAN BERNARDINO COUNTY EXPERIENCES POORER AIR QUALITY THAN COMPARISON REGIONS

Regional Comparison of the Air Quality Index, 2019



Note: The regions are sorted from top to bottom according to the median air quality index value in each region, from highest to lowest. These data are based on hourly monitor data to assess air quality, resulting in more days of unhealthy air than data that is used by air quality management districts for regulatory compliance, which uses 24-hour monitor values.
 Source: U.S. Environmental Protection Agency, Air Data (www.epa.gov/outdoor-air-quality-data)



Solid Waste Disposal Reaches 10-Year High; Pandemic Contributes to Lower HHW Collections

Reducing solid waste production and diverting recyclables and green waste extends the life of landfills, decreases the need for costly alternatives, and reduces environmental impact. California set an ambitious goal of diverting 75% of waste away from landfills by 2020 through source reduction, recycling, and green waste composting. Although California did not meet this statewide goal, the state is preparing for the implementation of Senate Bill 1383, which will rapidly increase the recycling of organic waste and help California meet the 75% goal. Collection of household hazardous waste (HHW) – such as oil, paint, electronics, thermostats, batteries, and fluorescent tubes – helps protect the environment and public health by reducing illegal and improper HHW disposal. This indicator measures the tons of commercial and residential solid waste generated in San Bernardino County destined for disposal in-county and out-of-county. It also measures the pounds of HHW collected and the number of annual participants in the HHW program.



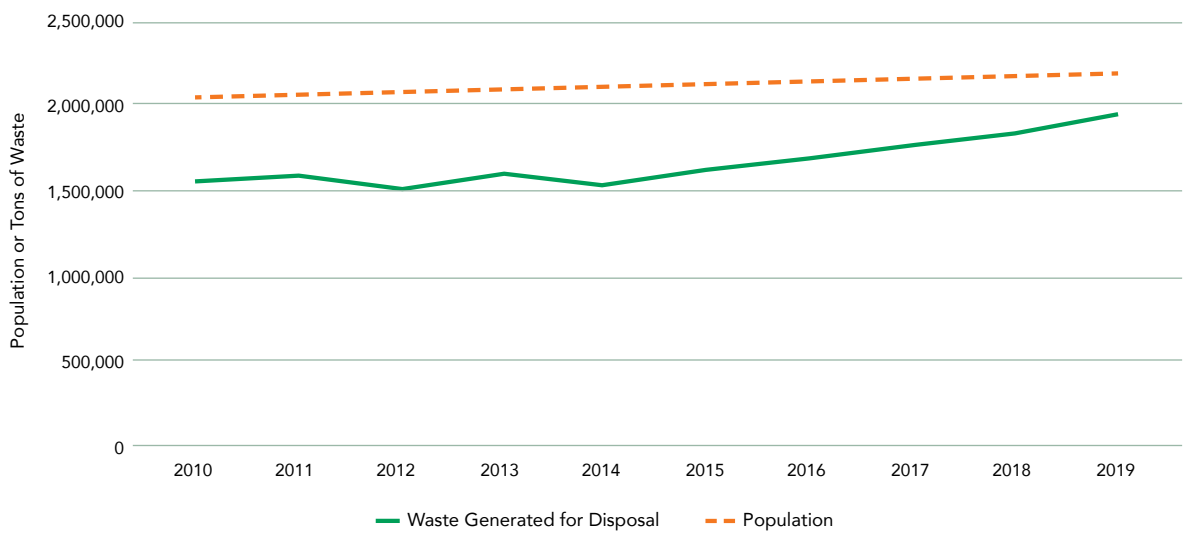
TREND

Solid waste disposal has grown steadily since 2014, reaching a 10-year high in 2019. San Bernardino County residents generated and disposed approximately 1.95 million tons of waste in 2019 – an increase of 25% since 2010. Over the same period, San Bernardino County’s population grew an estimated 6%. While population growth can have some impact on disposal trends, economic factors and waste diversion programs are the primary drivers behind the amount of waste disposed.

The number of households bringing HHW to regional collection centers in 2019/20 was substantially less than the prior year, due in large part to the short-term closure of several HHW collection sites as a result of the coronavirus pandemic. Despite this exceptional year, participation remained higher than 10 years ago. The number of HHW pounds collected in 2019/20 was down somewhat, likely due to collection site closures and fewer participants. However, despite the drop in participation, the average amount each participating household contributed – 58 pounds – remained high. This was the same amount contributed per participating household in 2018/19.

SOLID WASTE DISPOSAL HAS INCREASED STEADILY SINCE 2014

Solid Waste Generated for Disposal Compared to Population Growth in San Bernardino County, 2010-2019

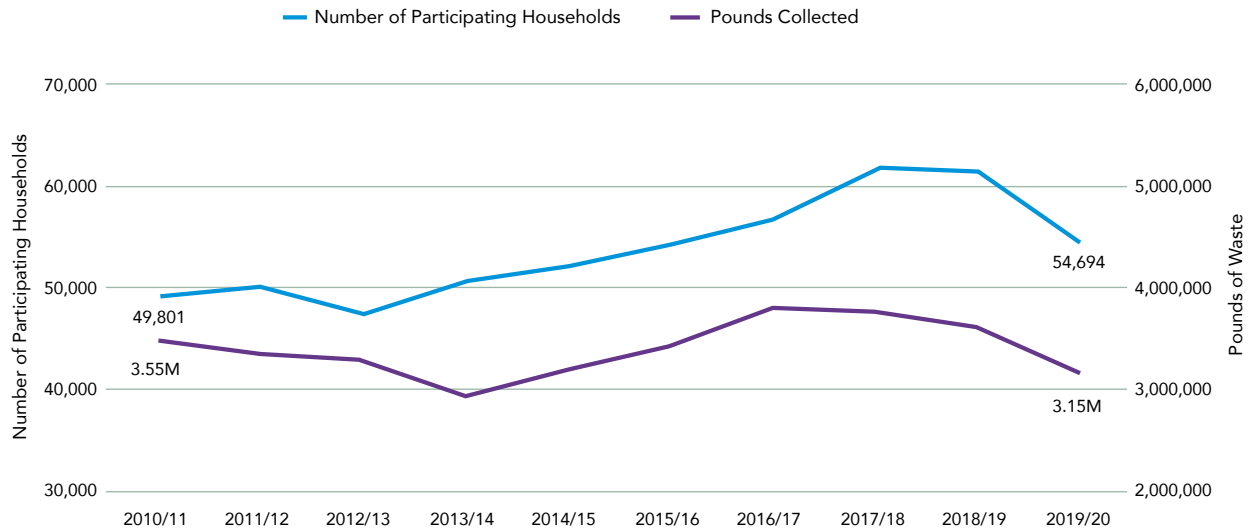


Note: Solid waste generated for disposal includes cities and unincorporated areas.
Sources: San Bernardino County Department of Public Works; California Department of Finance, Table E-2 (www.dof.ca.gov)



PANDEMIC CONTRIBUTES TO DECLINE IN HHW PARTICIPATION

Household Hazardous Waste Program Participation and Pounds of Waste Collected in San Bernardino County, 2011-2020



Note: Chart includes San Bernardino County unincorporated areas and all cities except Fontana.
Source: San Bernardino County Fire Department

GEOGRAPHIC COMPARISON

In 2019, San Bernardino County residents and businesses produced slightly less waste than California overall (0.9 tons per person in San Bernardino County compared to 1.0 tons per person in California).¹ In terms of HHW, San Bernardino County's per capita HHW collection rate (1.5 pounds per person) was lower than California's (3.3 pounds per person).²

Recycling Program Promotes Sustainable County

The County Solid Waste Management Division of the Public Works Department offers a program called the Comprehensive Disposal Site Diversion Program (CSDSP) at each one of the County's five regional landfills and at some of the nine transfer stations. The County's CSDSP program removes materials from select loads for reuse or recycle. The objective of this program is to increase recycling efforts in order to meet the waste reduction goals set by Assembly Bill 939 (AB 939), which requires a 50% diversion of municipal solid waste away from disposal. During 2019, the CSDSP prevented 145,839 tons of waste from being disposed at San Bernardino County disposal facilities. The removal of waste from the waste stream prevented the production of over 428,766 metric tons of greenhouse gas emissions, which is the equivalent of removing 92,632 passenger vehicles from roadways for one year. This program helped the county reach its AB 939 diversion goals, with a 59 % diversion rate attained in 2019. Since its inception in 2008, the CSDSP has diverted over 1.43 million tons of materials.

Source: San Bernardino County Solid Waste Management Division

¹ California Department of Resources Recycling and Recovery (CalRecycle), Disposal Reporting System (DRS), Multi-Year Countywide Origin Summary, and Statewide Disposal, Transformation, Import, Export and ADC Disposal Summary; California Department of Finance, Report E-2 (July population estimates).

² Based on 2017/18 data from CalRecycle, Household Hazardous Waste Form 303 Collection Information, as provided by San Bernardino County Fire Department and retrieved from CalRecycle.com; California Department of Finance, Report E-5 (January population estimates).



Reports of Pollutant Discharges Down in 2020

Stormwater pollution refers to urban water runoff that picks up pollutants as it flows through the storm drain system – a network of channels, gutters, and pipes that collect rain and snowmelt. Eventually, the runoff empties untreated directly into local rivers and lakes. Pollutants in stormwater runoff, such as litter, pet waste, motor oil, paint, anti-freeze, pesticides, fertilizers, and toxic household chemicals, can have serious effects. They can contaminate drinking water supplies and harm the local environment and wildlife. Trash and debris accumulated in catch basins may create foul odors and attract pests. Flooding may also occur due to blocked storm drains during heavy rain events. Effective stormwater management reduces pollution, blocked drains, and flooding. To track stormwater quality management in the Santa Ana River watershed, this indicator shows reports of illegal discharges of pollutants into surface waterways and storm drains. Also measured are enforcement actions and facility inspections.



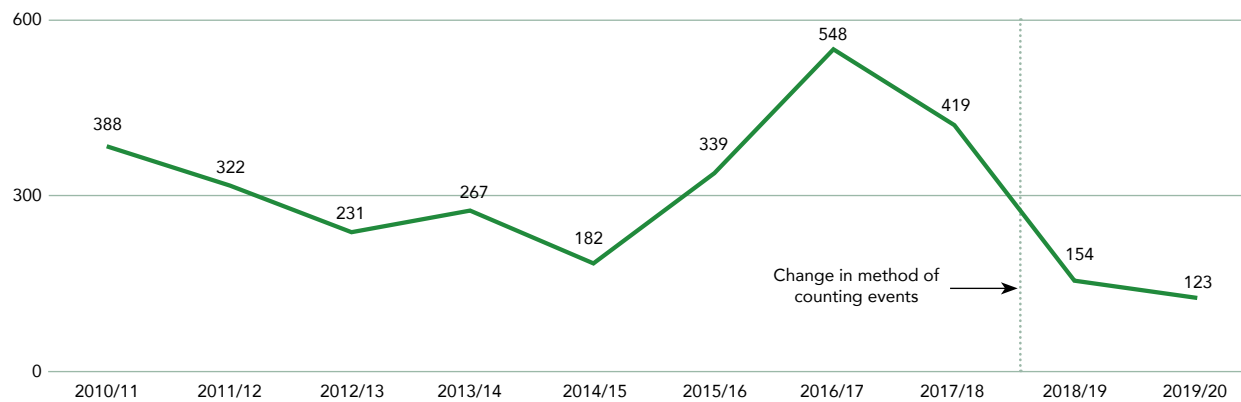
TREND

The year 2018/19 marked a shift in how illegal discharge events were recorded, leading to the appearance of fewer events compared to previous years. After dumping and debris events were omitted from the count beginning in 2018/19, there were 154 illegal discharges and spill events in 2018/19 and 123 in 2019/20. There were 11 illegal discharges requiring enforcement action, such as a notice of violation, fines, or verbal outreach and education. This equates to 9% of all illegal discharges reported.

San Bernardino Areawide Stormwater Program members conducted 3,262 inspections of industrial and commercial facilities and construction sites in 2019/20. This number of inspections represents a decline of 22% since 2018/19, which can be attributed to business closures as a result of the pandemic. Of the total number of inspections in 2019/20, 318 inspections (or 10%) resulted in deficiencies requiring corrective action.

REPORTED ILLEGAL DISCHARGE EVENTS DOWN IN 2019/20

Illegal Discharge, Dumping, and Spill Events in the Santa Ana River Basin (San Bernardino County portion), 2011-2020



Note: Reporting from 2018/19 onward does not include dumping events and, therefore, should not be compared to prior years.

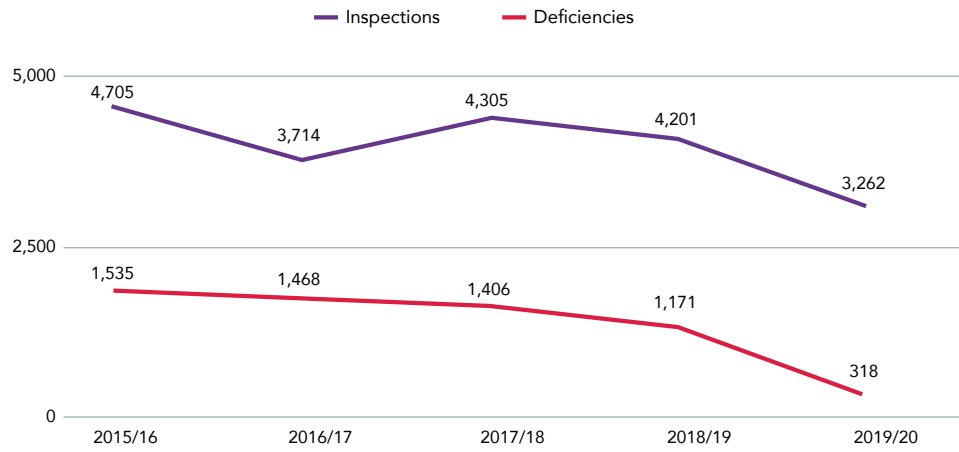
Source: San Bernardino County Flood Control District Stormwater Program, Annual Report

What Contributes to Illegal Discharge Reporting?

Increases in reports of illegal discharges can be attributed to population growth and greater public awareness that leads to more incident reporting, while decreases can be attributed to fewer severe weather events leading to debris blockage as well as improved public compliance with posted signs and laws related to dumping.



LARGELY DUE TO PANDEMIC-RELATED BUSINESS CLOSURES, INSPECTIONS FALL
San Bernardino Areawide Stormwater Program Inspections of Commercial, Construction, and Industrial Facilities and Number with Deficiencies Requiring Enforcement Action, 2016-2020



Source: San Bernardino County Flood Control District Stormwater Program, Annual Report



Water Usage May be Inching Up

Given San Bernardino County’s arid climate, effective water management is essential to ensure that the county has an ample water supply now and in the future. This indicator measures estimated residential water consumption in gallons per capita per day from larger water suppliers serving San Bernardino County.¹ The water suppliers providing usage data serve approximately 1,430,000 county residents (or roughly 66% of the total San Bernardino County population).²



TREND

On average, according to data by water districts reporting usage statistics, San Bernardino County residential consumers used an estimated 143 gallons per capita per day (GPCD) in July 2020, up from 132 GPCD in July 2019.³ However, since the districts that report usage vary from month-to-month, a definitive trend analysis is not possible.

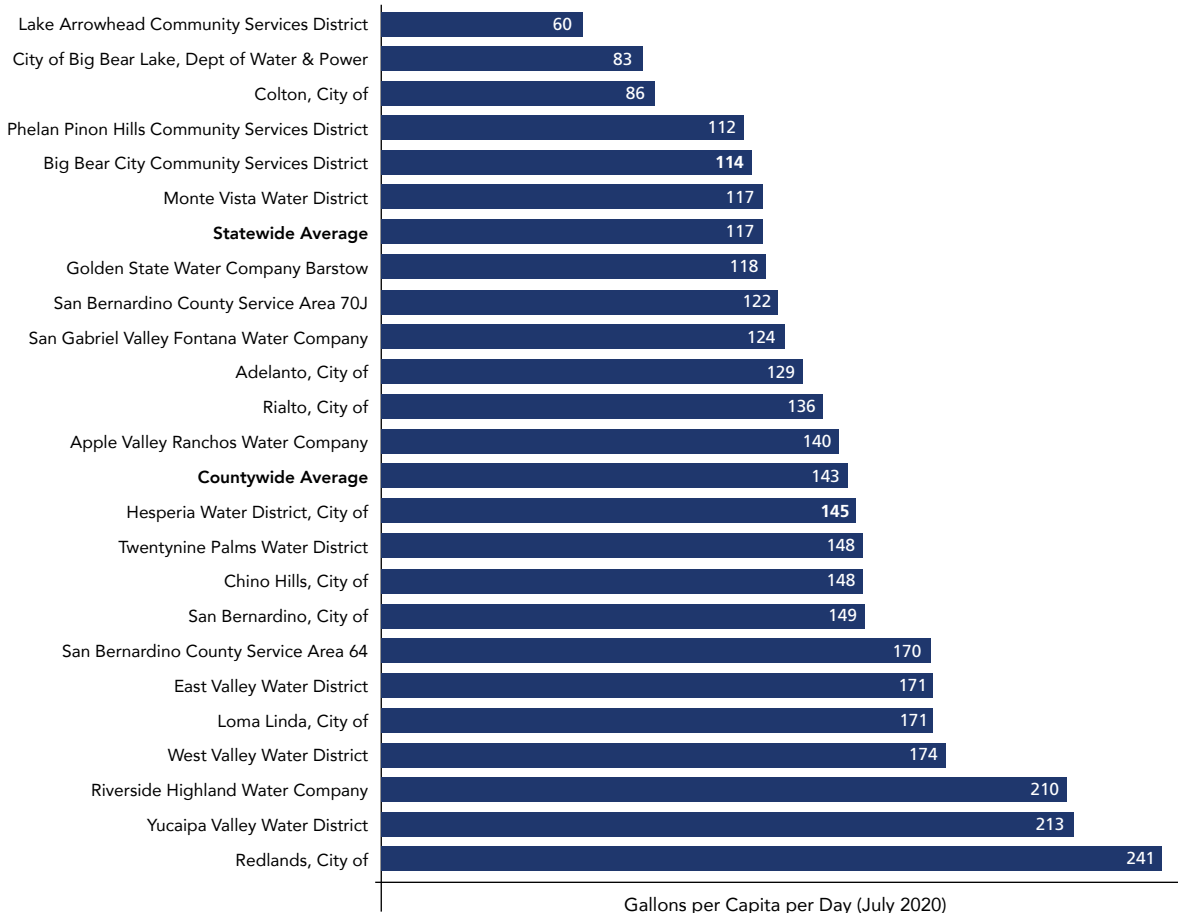


GEOGRAPHIC COMPARISON

San Bernardino County’s July 2020 GPCD rate of 143 is above the statewide July 2020 rate of 117 GPCD. Within San Bernardino County, the estimated average rate ranged from a low of 60 GPCD in Lake Arrowhead to a high of 241 GPCD in Redlands. Residential water usage can differ due to regional variations in climate, precipitation, land use, tourism, income, and local supplier water costs, usage regulations, and conservation programs.

SAN BERNARDINO COUNTY AVERAGE WATER USAGE HIGHER THAN STATE

Estimated Residential Gallons per Capita per Day Among San Bernardino County Water Suppliers Reporting for July 2020



Note: This chart includes urban water suppliers serving San Bernardino County that have more than 3,000 connections. City of Chino, Cucamonga Valley Water District, Joshua Basin Water District, City of Upland, and Victorville Water District did not submit July 2020 data to the State Water Resources Control Board.

Source: State Water Resources Control Board, June 2014 - July 2020 Urban Water Supplier Monthly Reports (www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html)

¹ As of November 2017, water usage reports to the state are voluntary for urban water suppliers. Consequently, suppliers reporting data varies from month-to-month.

² Population data are sourced to the State Water Resources Control Board and the California Department of Finance, Table E-1, January 2020

³ The countywide GPCD average was calculated by averaging the GPCD rate for each supplier and is meant to be a rough estimate of countywide usage.