

environment

Air quality has improved substantially over the past 20 years. Fully 100% of San Bernardino County jurisdictions met or exceeded their waste diversion requirement. And long-term trends suggest that the public is increasingly invested in protecting water quality: the reporting of illegal discharges of pollutants into surface waterways and storm drains is increasing, as is the proper disposal of household hazardous wastes.

Regional Solutions for Regional Waterways

Because watersheds and waterways cross city and county boundaries, the job of protecting and improving water quality requires a collaborative, multi-jurisdictional effort. The Stormwater Quality Standards Task Force fulfills this need. Over the past five years, the Task Force (which includes the San Bernardino County Flood Control District, Orange County and Riverside County flood control agencies, the Santa Ana Watershed Project Authority, and other water management and environmental agencies) has provided scientific know-how and implementation strategies to successfully monitor and clean regional recreational waterways. The result of this collaboration is a cleaner natural environment and improved public health.

Air Quality Improves Substantially Over 20 Years

Description of Indicator

This indicator measures air quality, including specific pollutants, in San Bernardino County and peer regions.

Why is it Important?

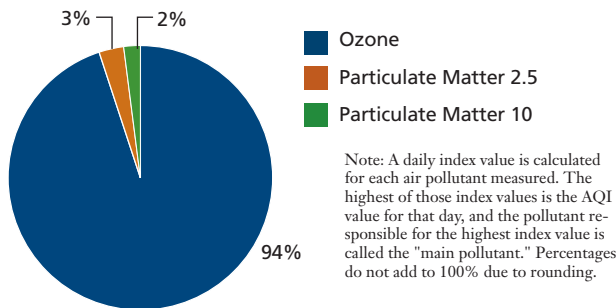
Poor air quality can aggravate the symptoms of heart or lung ailments, including asthma. It can also cause irritation and illness in the healthy population. Research suggests that children with severe asthma start suffering symptoms when air quality is in the “moderate” range. Long-term exposure increases risks for many health conditions including lung cancer and cardiovascular disease. High levels of airborne particulate matter smaller than 2.5 micrometers (PM 2.5) can have adverse effects on children’s lung development.

How is San Bernardino County Doing?

San Bernardino County’s air quality has improved substantially over the past 20 years:

- Air quality monitor data shows that San Bernardino County exceeded national air quality standards 2,034 times in 1989 compared to 692 times in 2008.
- According to the Air Quality Index, during 2008, 33% of days were in the “good” range and 29% of days were in the “moderate” range.
- 23% of days were considered “unhealthy for sensitive groups” such as asthmatics and 16% of days were in the “unhealthy” range.
- Ozone was the main pollutant followed by PM 2.5.
- Data from San Bernardino County’s 12 air quality monitors in 2008 indicate national standards for ozone were exceeded most frequently at the Lake Gregory/Crestline monitor and least frequently at the Barstow and Trona monitors.
- Among peers, San Bernardino County ranks third in the percent of days with good air, with Dallas experiencing the best air quality and Phoenix experiencing the worst.

Percent of Days in 2008 when the Main Pollutant in San Bernardino County was...



Note: A daily index value is calculated for each air pollutant measured. The highest of those index values is the AQI value for that day, and the pollutant responsible for the highest index value is called the “main pollutant.” Percentages do not add to 100% due to rounding.

From 1997 to the present, residents have indicated air quality as one of the top three negative factors in San Bernardino County according to the Inland Empire Annual Survey. However, in recent years, crime and gang activity has become the top negative issue, leaving air quality and traffic a distant second or third.

Source: U.S. Environmental Protection Agency, AirData (www.epa.gov/air/data/index.html)

Air Quality Index

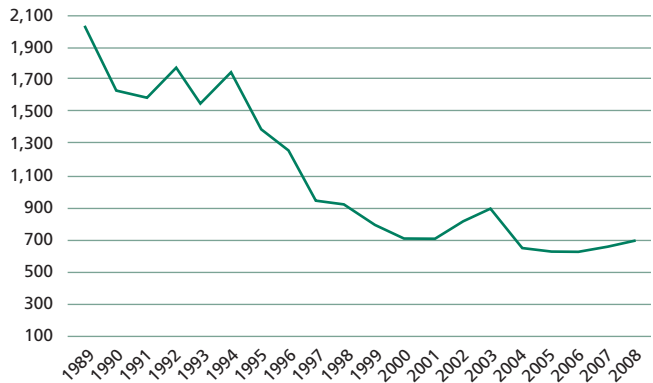
The Air Quality Index is calculated for ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. The number 100 corresponds to the national air quality standard for the pollutant.

AQI Values	Health Categories
0 - 50	Good
51 - 100	Moderate
101 - 150	Unhealthy for Sensitive Groups
151 - 200	Unhealthy
201 - 300	Very Unhealthy
301 - 500	Hazardous

Source: U.S. Environmental Protection Agency (<http://airnow.gov/>)

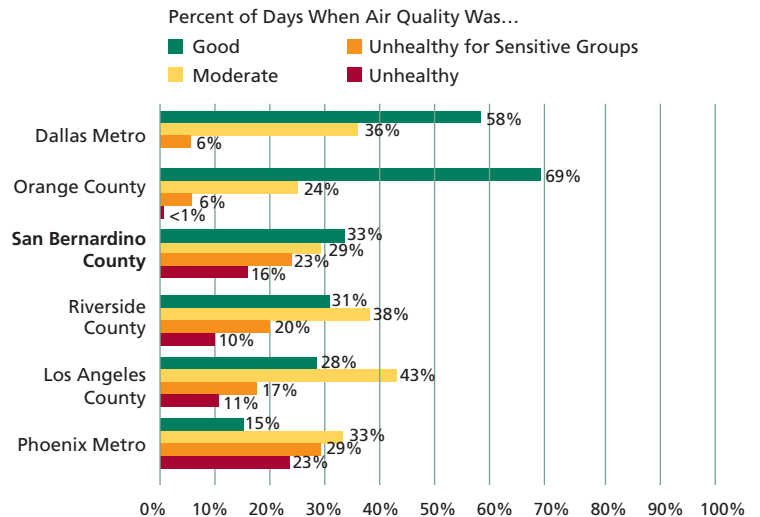
Air Quality Trend

San Bernardino County, 1989-2008 Number of Times Measured Values Exceeded NAAQS



Note: The National Ambient Air Quality Standards (NAAQS) collects air quality data at various monitoring sites throughout the County. Counts reflect the number of times a monitor has measured values exceeding the primary NAAQS in an 8-hour period.

Air Quality Index Regional Comparison, 2008



Connecting the Dots

For a generation, **Air Quality** was the most significant issue affecting our region and one for which we have made remarkable progress with a variety of initiatives including the use of **Transit**.

Solid Waste Disposal Lowest in Seven Years

Description of Indicator

This indicator measures the tons of commercial and residential solid waste generated in San Bernardino County destined for disposal in County landfills as well as out of County landfills, countywide diversion rates, the pounds of household hazardous waste collected (such as oil, paint, and batteries) and the number of annual participants in the Household Hazardous Waste (HHW) program.

Why is it Important?

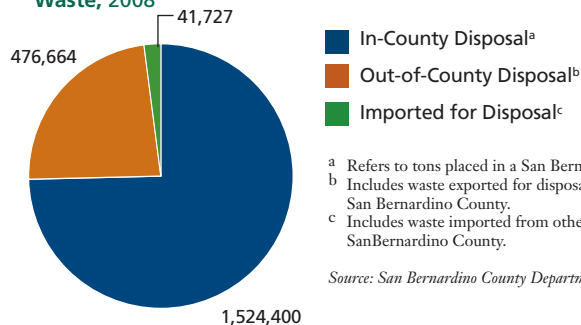
Reducing solid waste production and diverting recyclables and green waste extends the life of landfills, decreases the need for costly alternatives, and reduces environmental impact. As of 2000, all jurisdictions are required by law to divert 50% of waste from landfills. Collection of household hazardous waste helps protect the environment and public health by reducing illegal and improper HHW disposal. "E-waste" – electronic devices such as cell phones, computers and monitors that now must be recycled – contributes increasingly to the amount of HHW collected and to the cost of collection.

How is San Bernardino County Doing?

Solid waste disposal and household hazardous waste collection trends are mixed:

- Waste disposed in landfills dropped for the third year in a row, reaching the lowest level in seven years, largely due to the economic downturn.
- Over the past 10 years, tons of solid waste disposed by residents has grown an average of 1.9% each year. This rate is slower than the county's population growth rate of 2.2%.
- This trend tracks with the increasing amount of waste diverted from landfills between 1997 and 2006.
- New methods for tracking compliance with diversion requirements indicate that 100% of San Bernardino County jurisdictions met or exceeded the 50% diversion requirement in 2008.¹
- The number of annual participants bringing HHW to regional collection centers fell in 2008/09.
- This drop is primarily driven by economic factors, with pounds collected of hazardous waste peaking in 2007/08.

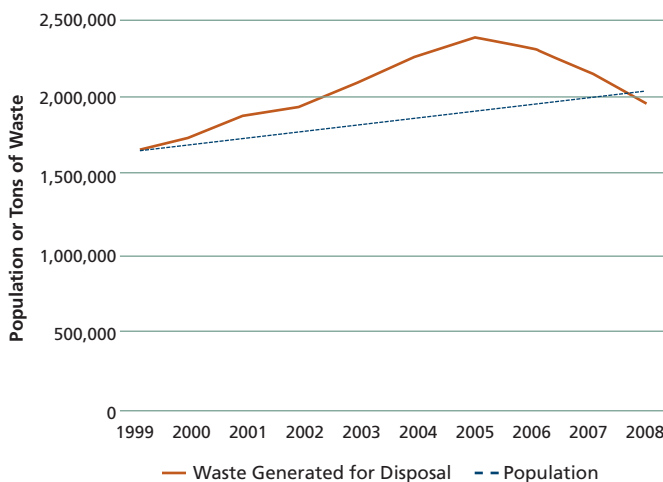
Imported Waste Disposed in County Landfills and Destination of San Bernardino County Resident-generated Solid Waste, 2008



^a Refers to tons placed in a San Bernardino County landfill.
^b Includes waste exported for disposal in other counties by cities within San Bernardino County.
^c Includes waste imported from other counties and disposed in San Bernardino County.

Source: San Bernardino County Department of Public Works

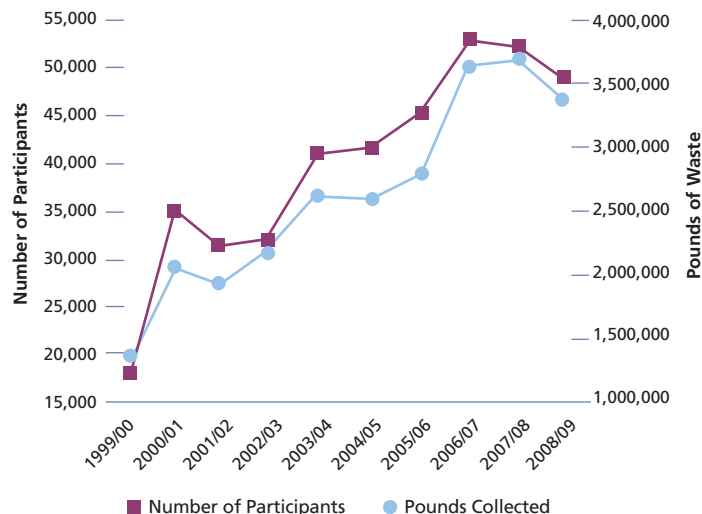
Solid Waste Generated for Disposal Compared to Population Growth, San Bernardino County, 1999-2008



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)

Household Hazardous Waste San Bernardino County, 2000-2009



Note: Chart includes San Bernardino County unincorporated areas and all the cities except Fontana.

Source: San Bernardino County Department of Public Works

¹ California Integrated Waste Management Board (www.ciwm.ca.gov)

Connecting the Dots

Solid and Household Hazardous Waste disposal, when done improperly, can affect community health. Improved handling of waste has had a positive impact on our Air Quality.

Water Consumption Declines; Dumping Reports Increase

Description of Indicator

This indicator measures urban (residential and commercial) water consumption in gallons per capita per day from a selection of water agencies serving San Bernardino County.¹ It also measures one aspect of stormwater quality management by tracking reports of illegal discharges of pollutants (such as paint or motor oil) into surface waterways and storm drains.

Why is it Important?

Given our arid climate, effective water management is essential to ensure that the county has an ample water supply now and in the future. Reducing urban runoff pollution and pathogens in surface waterways through a variety of stormwater management practices helps protect the beneficial uses of local waterways.

How is San Bernardino County Doing?

In 2008, the average water consumption per person was 212 gallons a day, for the six agencies sampled:

- Per capita water consumption varied from a high of 239 gallons per capita per day (gpcpd) to 108 gpcpd, depending on the agency.
- These rates are slightly higher than neighboring Orange County, which posted a countywide average of 179 gpcpd in 2008/09.
- Together, the six water agencies sampled serve approximately 1,177,000 residents, or 57% of the total county population.
- Water consumption fell in 2008 for the five water agencies for which trend data was available.²

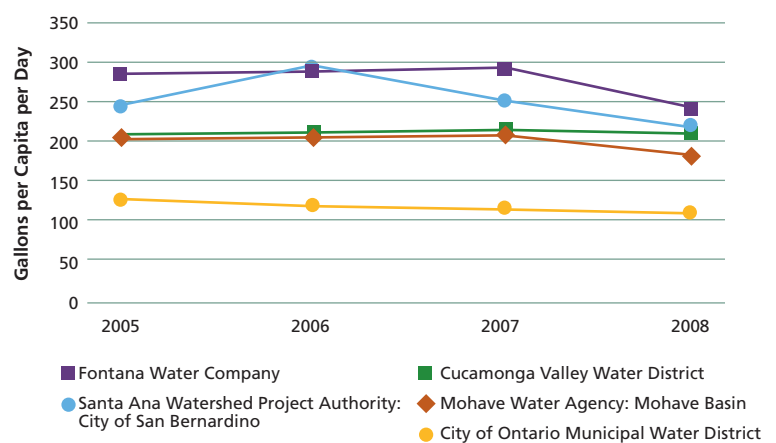
Reports of illegal discharges are trending upward:

- Since 1996, illegal discharge reports have increased 173%.
- The increase in illegal discharges is likely due to several factors including increased public awareness as well as increased incident reporting, response and tracking of public complaints.
- Rising levels of properly disposed Household Hazardous Waste (see page 51) also points to improved public awareness of the potential harm to water and the environment by improper disposal of these toxics.

Illegal Connections Could Increase Pollution in Recreational Waters

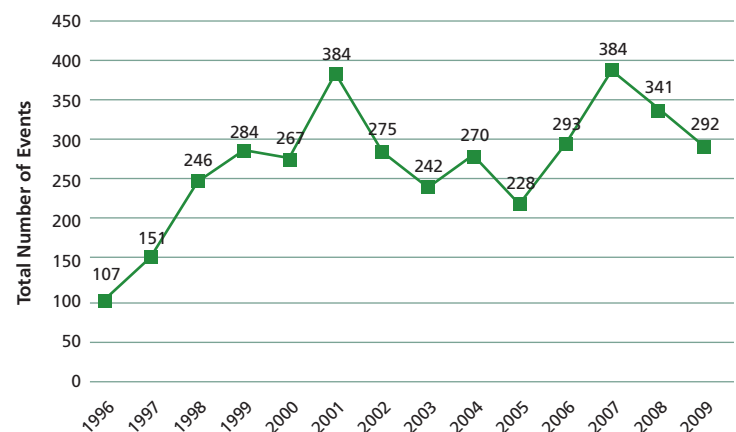
An important focus of the San Bernardino Stormwater Program is the inspection of stormwater collectors such as catch basins or inlets (the curbside opening in street gutters that leads to storm drains), open channels, and underground storm drains to find unpermitted connections to these facilities that may introduce pollutants into recreational waters. In 2009, 65% of the county's storm drain inlets were inspected, as well as 40% of debris or detention basins, 19% of open channels, and 6% of underground storm drains.

Urban Water Consumption in Gallons per Capita per Day for Selected Water Agencies Serving San Bernardino County 2005-2008



Sources: Fontana Water Company; Santa Ana Watershed Project Authority; Cucamonga Valley Water District; Mohave Water Agency; City of Ontario Municipal Water Agency

Stormwater Quality: Illegal Discharge, Dumping and Spill Events by Year San Bernardino County, 1996-2009



Source: San Bernardino County Flood Control District, San Bernardino County Stormwater Program, Annual Report 2008/09

¹ Due to the many independent water agencies serving San Bernardino County, a countywide water consumption figure is not available. Instead, data was sought from a sampling of agencies serving the larger geographic or population centers in the county.

² Only 2008 data was available for Victorville Water Agency.

Connecting the Dots

Responsible **Stormwater Quality** management is critical to success as a region and often correlates with how well a region deals with potential pollutants like **Household Hazardous Waste**.