



Sustainable Santa Fe

Sustainability Benchmarks Report 2015

Executive Summary

The role and responsibilities of the Sustainable Santa Fe Commission is to advise the Governing Body of the City of Santa Fe on the programs, policies and projects that will help to improve the City's environment, ensure the long-term sustainability of the city, and to protect the health and wellbeing of its people. In 2008, the Commission crafted the *Sustainable Santa Fe Plan* which served as the basis for identifying, developing and implementing a variety of sustainability programs. It has once again been tasked by the Governing Body to work with the city staff to develop a *25-year Sustainable Santa Fe Plan* with the overall goal of the city achieving carbon neutrality by 2040.

This report is designed to identify and establish a set of statistical benchmarks in a variety of sustainability measurements that will be key in achieving the goal of carbon neutrality, and will help to better inform the development of the *25-year Sustainable Santa Fe Plan* and annual performance metrics.

In many instances, the baseline data and related indicators in this report are presented for the very first time, while others may have been tracked and compiled over several years. Given such inconsistency of measurement between indicators, it may be advantageous to utilize the baseline year established for each indicator reflected in this report, rather than attempting to establish a common year for all indicators.

While this report contains many basic measurements, it will be necessary to expand the data collected to include other sustainability-oriented indicators, and/or develop the necessary calculations and analysis needed to gain greater insights into cause and effect relationships, annual results, goal setting, and establishing the programs and policies that will assist the city in achieving carbon neutrality.

A useful tool in identifying future indicators and measurements may be the *Sustainability Tools for Assessing and Rating Communities* (STAR Communities) national certification program used by other cities. It is the, "nation's first framework and certification program for local sustainability, built by and for local governments and the communities they serve. The Rating System encompasses economic, environmental, and social performance measures for both local governments and the broader community." STAR Communities is a Washington, DC-based 501(c)(3) nonprofit organization that works to evaluate, improve and certify sustainable communities.

In 2012, Santa Fe was selected as a pilot community for the STAR Communities program, and took part in an initial test period for its rating system. The Sustainable Santa Fe Commission's participation in that program and access to that assessment tool helped to identify the areas of assessment in this report based on the unique characteristics of the city, its size, and the quality and scope of data currently available.

This report contains 30 measurements in the areas of Energy, Water, Land Management, Transportation, Waste and Recycling Management, and Jobs, Education and Training Programs. Each section establishes a current performance baseline for each indicator within the area of sustainability assessed, and provides a detailed examination of each.

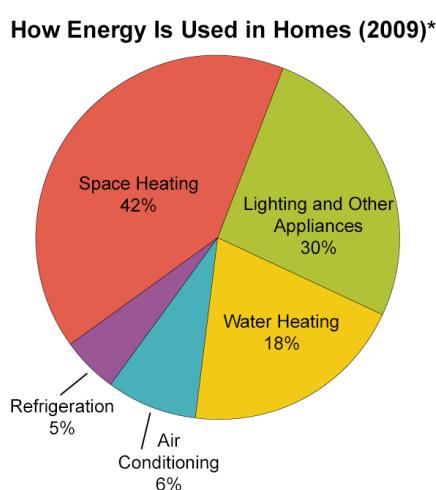
Energy Efficiency & Renewable Energy

Area of Sustainability	Indicator	Assessment
Energy	Energy Consumption: Community	Unable to Determine
	Energy Consumption: City Government	Performing
	Greenhouse Gas Emissions: Overall	Unable to Determine
	Carbon Dioxide Emissions (CO2): Overall	Unable to Determine
	Renewable Energy Generation: City Government	Performing
	Renewable Energy Generation: Community	Needs Improvement

The nation's energy use is highest among buildings, which consume about 40% of all energy used in the United States. This power is generated predominately by greenhouse gas emitting coal and natural gas sources. Of the remaining 60%, transportation accounts for 28% of energy use while industry and manufacturing consume 32%.

In residences, space heating, lighting and other appliances account for the largest amounts of energy used, with water heating contributing the third highest. In commercial buildings, space heating and lighting also account for the largest amounts of energy used, while water heating, air conditioning and other building functions consistently round out the rest. It should be noted that in commercial buildings, particularly office spaces, computer and office equipment account for a low amount of energy used.

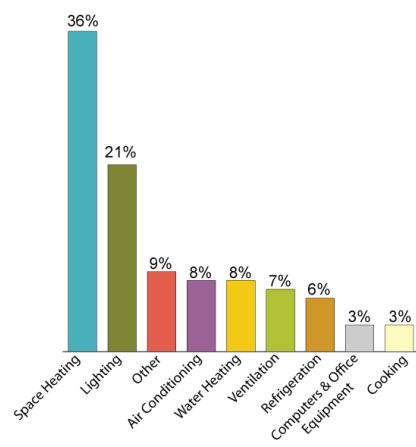
These statistics can help to identify which energy efficiency strategies can best be employed to help conserve energy in homes and commercial buildings, as well as the types of renewable energy technologies that may best be employed to help reduce energy produced by traditional fossil fuel sources.



* 2009 is the most recent year for which data are available.

Source: U.S. Energy Information Administration, *Residential Energy Consumption Survey (RECS) 2009*.

Energy Use in Commercial Buildings, 2003

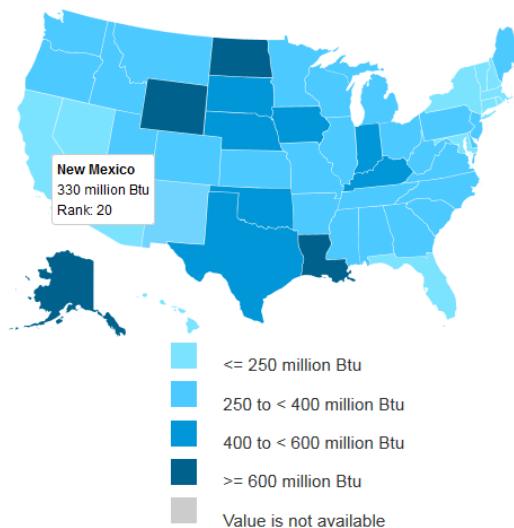


Source: U.S. Energy Information Administration, 2003 *Commercial Building Energy Consumption Survey*, Table E1A (September 2008).

Energy Consumption: New Mexico and City of Santa Fe (2012)

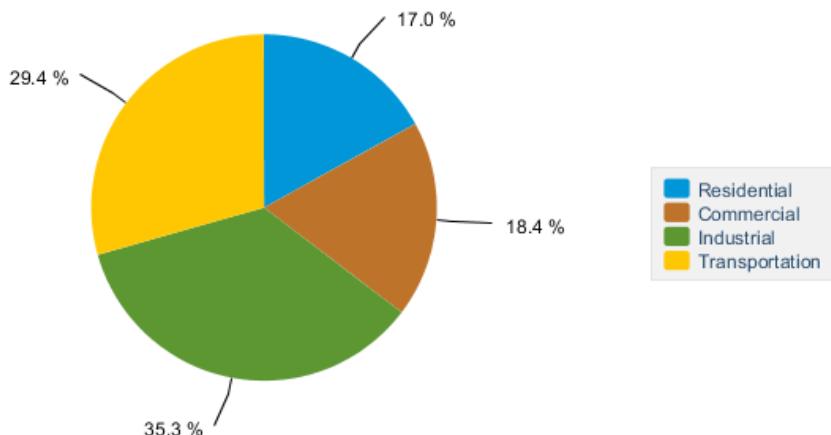
According to the Energy Information Administration (EIA), New Mexico's energy consumption in 2012 totaled 687 trillion Btu, ranking it 20th in the nation, and the state's energy consumption per person was 300 million Btu.

Figure 1 shows energy consumed by sector, which, in New Mexico's case, reflects residential usage below the national average, but above average usage in the industrial sector. Those figures may be reflective of the state's low population combined with large industrial manufacturing and processing centers in the oil, gas, power generation, and technology industries located throughout the state. To note, as reflected in Figure 2, coal and natural gas were the leading fuels consumed.



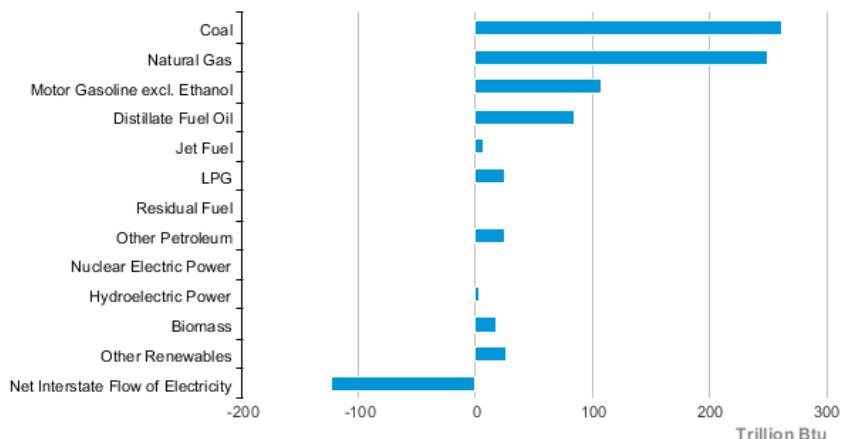
Energy Information Administration, State Analysis, 2012

Figure 1. New Mexico Energy Consumption by End-Use Sector, 2012



Source: Energy Information Administration, State Energy Data System

Figure 2. New Mexico Energy Consumption Estimates, 2012



Source: Energy Information Administration, State Energy Data System

The City of Santa Fe is unable to accurately track data related to citywide energy consumption. This is due in large part to the local utility's policy of not sharing such data with city officials, citing the propriety nature of that information.

However, an approximate figure of city energy consumption can be calculated by multiplying the City of Santa Fe's 2010 U.S. Census population of 68,000 people, with that of the state's per capita energy consumption of 300 million Btu, which totals 20.4 trillion Btu, or approximately 3% of New Mexico's total.

Reducing commercial building and residential energy demand can be achieved by employing a variety of strategies such as creating and offering energy efficiency programs, incentives and rebates; installing renewable energy systems such as solar PV; educating and informing the public about the benefits of such programs and renewable energy technologies; and working with the local utility and gas company to identify other reduction strategies. Such strategies can not only help homeowners and businesses save energy, but they can also have a positive impact on reducing carbon emissions.

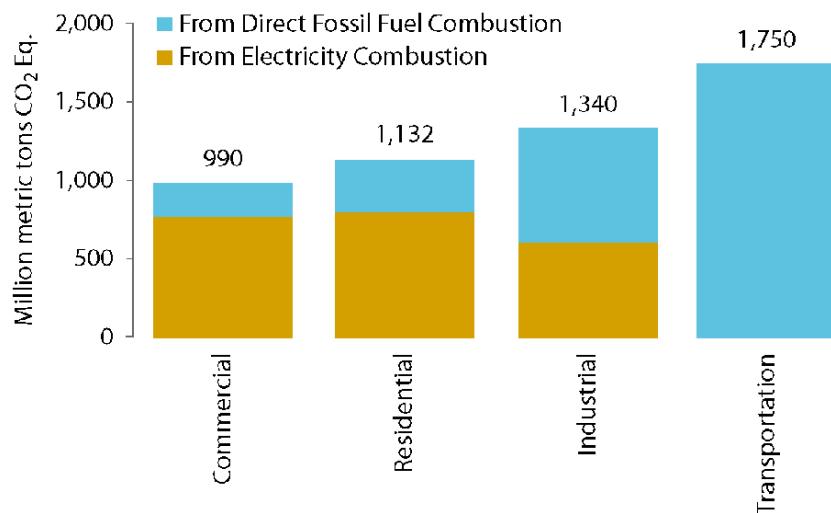
Greenhouse Gases (GHG)

The greenhouse effect is actually a naturally occurring phenomenon that is essential to keeping the Earth's surface warm. Like a greenhouse window, greenhouse gases allow sunlight to enter and then prevent heat from leaving the atmosphere. These gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and water vapor. Human activities — especially burning fossil fuels — are increasing the concentrations of many of those gases, thus amplifying the natural greenhouse effect.

Carbon Dioxide

As reported by the Environmental Protection Agency, U.S., Figure 3 shows the relative contribution of carbon dioxide emissions in 2009 (the most current year available) from four end-uses: residential, commercial (e.g., retail stores, office buildings), industrial, and transportation. Electricity consumption accounts for the majority of energy use in the residential and commercial sectors.

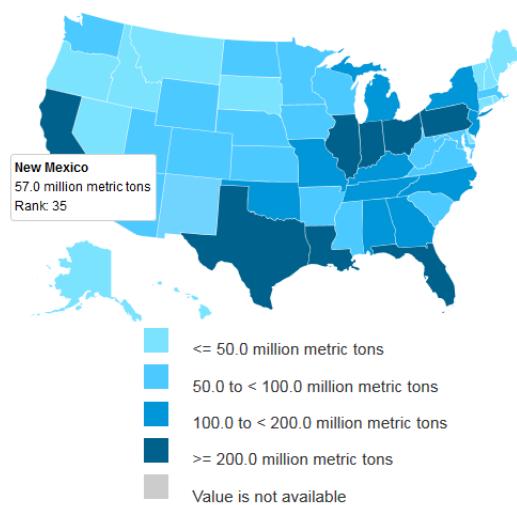
Figure 3. U.S. Greenhouse Gas Emissions, 2009.



Source: EPA, 2014 (2009 data, most current available).

According to the EIA, New Mexico's total carbon dioxide emissions in 2011 was 57 million metric tons.

Figure 4. Carbon Dioxide Emissions, Total, New Mexico, 2011.



The City of Santa Fe does not track carbon dioxide, methane, or nitrous oxide emissions, which would enable an accurate calculation of the city's CO₂ emissions. To note, the New Mexico Environment Department is federally mandated to monitor ozone and particulate matter levels in Santa Fe, considered by the U.S. EPA to be pollutants that are the most injurious to human health.

However, although there is a lack of CO₂ emissions data for the city, it is still possible to calculate approximate totals of per capita CO₂ emissions in New Mexico and in Santa Fe, using 2010 U.S. Census population data and the 2011 total amount of carbon dioxide emissions in New Mexico, as calculated by the Energy Information Administration.

Figure 5. Approximate 2011 Total CO₂ Emissions per Capita, New Mexico.

	Total CO ₂ Emissions	2010 Population	CO ₂ Emissions per Person
New Mexico	57 million metric tons	2.06 million	27.67 metric tons

Sources: 2010 U.S. Census; Energy Information Administration, State Analysis, 2011.

Figure 6. Approximate 2011 Total CO₂ Emissions, City of Santa Fe.

	2010 Population	Total CO ₂ Emissions
City of Santa Fe	68,000	1.9 million metric tons

Sources: 2010 U.S. Census; City Analysis.

However, it is critically important for the city to accurately calculate and track its CO₂ emissions, if it is to achieve any goal of reducing its carbon footprint. Methodologies used to collect data and calculate emissions can be complicated, cumbersome, and often do not align with methodologies used by other cities, states or even countries. Therefore, it is important that Santa Fe utilize a tool that has been specifically designed to more easily track and calculate emissions data, and is being used as a de facto standard for CO₂ reporting.

GHG Protocol for Cities

The World Resources Institute, C40 Cities Climate Leadership Group and ICLEI (Local Governments for Sustainability) have partnered to create a GHG Protocol standard for cities known as the “Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC).”

The GPC is designed to provide cities with the standards and tools needed to measure emissions and build more effective reduction strategies; establish measurable and more ambitious emission reduction goals; and track progress more accurately and comprehensively.

According to the protocol’s website, “the GPC provides a robust framework for accounting and reporting city-wide greenhouse gas emissions. It seeks to:

1. Help cities develop a comprehensive and robust greenhouse gas inventory in order to support climate action planning.
2. Help cities establish a base year emissions inventory, set reduction targets, and track their performance.
3. Ensure consistent and transparent measurement and reporting of greenhouse gas emissions between cities, following internationally recognized greenhouse gas accounting and reporting principles.
4. Enable city inventories to be aggregated at subnational and national levels.
5. Demonstrate the important role that cities play in tackling climate change, and facilitate insight through benchmarking – and aggregation – of comparable data.

In order to more effectively use the GPC, methods in collecting a host of city data related to transportation, waste, industrial processes, agriculture, forestry and land use, will have to be created, in addition to requiring the local utility to report residential and commercial electricity use to the city on an annual, if not monthly, basis.

City of Santa Fe: Facilities

Since 2007, the City of Santa Fe has completed 13 renewable energy and energy efficiency projects, largely funded through \$1.3M in Federal American Recovery and Reinvestment Act (ARRA) funds or Power Purchase Agreements. Projects include:

Energy Efficiency

- Lighting retrofits at 26 City buildings
- HVAC & Building Controls at the
- Boiler upgrades
- Building envelope upgrades

Renewable Energy

- Buckman Direct Diversion Project: 1.0 megawatt (MW) photovoltaic (PV) system and an additional 1.5 MW PV system located at Booster 2A.
- Transit Division: 165 kilowatt (kW) PV system.
- Community Convention Center: 91 kW PV system.
- Fire Station #3: solar thermal system for heating water and photovoltaic (PV) system.
- Canyon Road Water Treatment Plant: 100 kW hydroelectric plant.
- Wastewater Treatment Plan: 1.1 MW PV system and a 100 kW PV system located at the Compost Facility.
- Water Division Administration Building: 81 kW PV system that also powers two electric vehicle charging stations.
- Genoveva Chavez Community Center: 600 kW PV system.



Buckman Direct Diversion

The ten projects total 4.8 MW of renewable energy based electricity, which accounts for 25% of the electricity used by city facilities.

Additionally, ARRA funds have been leveraged to assist in the purchase of eleven compressed natural gas (CNG) solid waste vehicles.



Convention Center



Transit Division

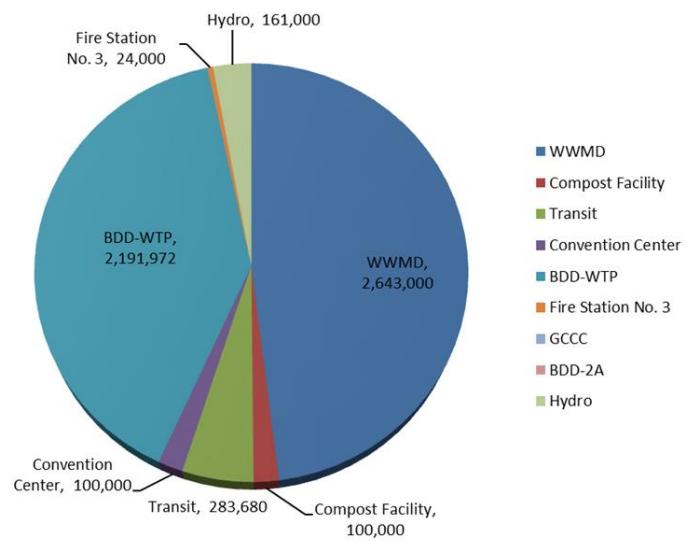


Wastewater Treatment Facility

Annual Kilowatt Hours Generated

In 2013, the city's annual kilowatt hours generated exceeded 5.5 million, as reflected in Figure 7.

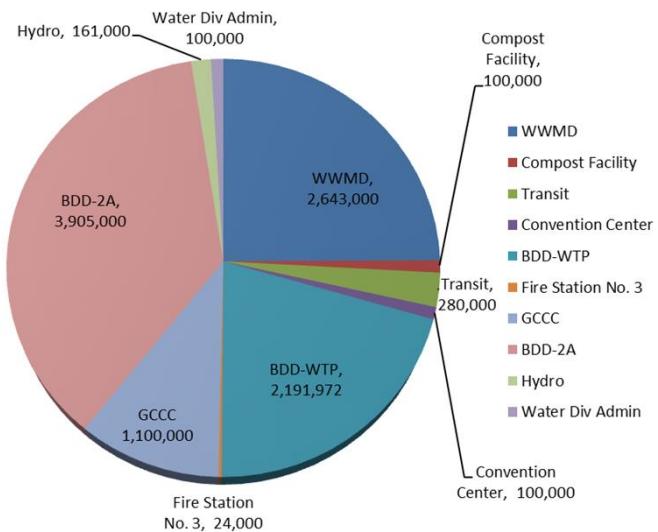
Figure 7. Annual Total Kilowatt Hours Generated, City of Santa Fe Renewable Energy Systems, as of 2013



Source: City of Santa Fe, Public Utilities Division, 2014.

In 2014 and early 2015, the additions of the 600 kW PV array at the Genoveva Chavez Community Center, the Water Division Administration Building's 81 kW PV array, and the 1.5 MW PV array at Buckman Direct Diversion Booster 2A Station, are projected to increase 2015 total annual production to 10.6 million kWh, meeting approximately 25% of all city facility power needs, as reflected in Figure 8.

Figure 8. Projected Annual Total Kilowatt Hours Generated, City of Santa Fe Renewable Energy Systems, 2015 (Q1)



Source: City of Santa Fe, Public Utilities Division, 2014.

Commercial and Residential Solar Energy Installations: City of Santa Fe

The overall, steady decline in costs of solar energy systems, specifically that of PV systems, combined with advantageous state and federal tax incentives, have resulted in exponential growth of solar systems being installed by homeowners and businesses.



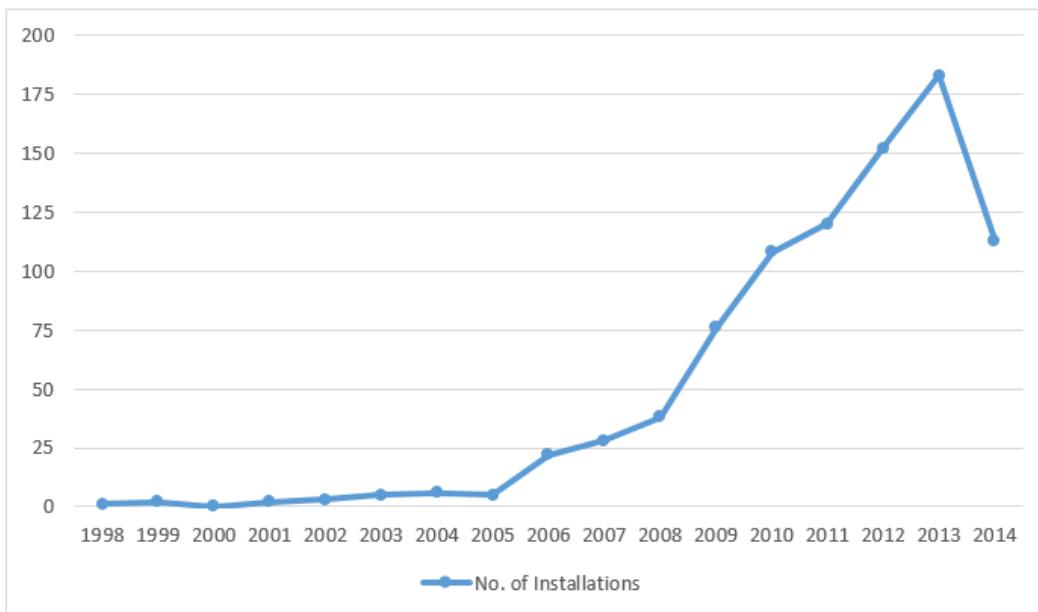
As shown in Figures 9 and 10, annual growth of PV systems in the Santa Fe County have grown exponentially since 1998. To note, solar installation data is compiled at the county level by zip codes. In order for solar installations within city limits to be separated out, street addresses would have to be analyzed. For the purposes of this report, Santa Fe County data is represented, given the zip codes used fall within Santa Fe's metropolitan area.

Figure 9. Total Number of Solar PV Systems, 2014, Santa Fe County

	Total kW	Customers	Avg. kW per Customer
Less than 10 kW	3,752	857	4.3
Larger than 10 kW	4,694	59	72
Total	7,856	916	9.5

Source: Energy, Minerals and Natural Resources Department (EMNRD), State of New Mexico, 2014; Public Service Company of New Mexico, 1998-2013.

Figure 10. Annual Solar PV Installations, Residential & Commercial Units



Source: Ibid.

Overall, there are approximately 56,000 commercial and residential electricity accounts in the Santa Fe metropolitan area, served primarily by the Public Service Company of New Mexico. The 826 customers with solar PV systems in Santa Fe calculates to 1.5% of the total number of electricity accounts.

Solar power provides a host of energy and environmental benefits. As such, it is important for installation rates to continue rising, especially in light of state and federal tax credits expiring at the end of 2016, unless renewed by the state and federal government. By way of example, in order for Santa Fe County to achieve a 10% penetration rate by 2020, approximately 5,600 PV installations, or about 1,000 new systems per year for the next five years, would have to occur. Given the current average price of a residential PV system is approximately \$20,000, a rate of 1,000 new systems being installed per year would equal about \$20 million of annual investment in Santa Fe County's solar energy industry.

Water

Area of Sustainability	Indicator	Assessment
Water	Gallons per Capita per Day	Performing
	Total Water Production	Performing
	Renewable Water Sources	Performing
	Efficiency Incentives	Performing
	Education	Performing

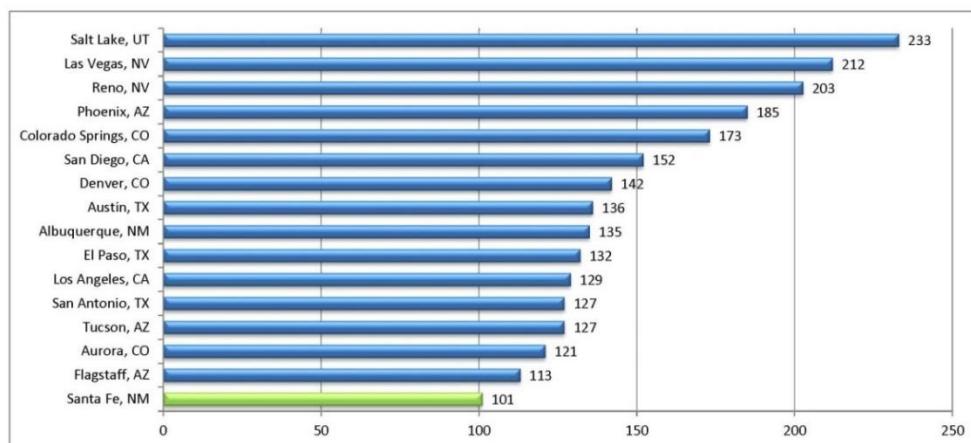
Drought prone areas, such as Santa Fe, have been leaders in water conservation out of necessity; drought is a strong motivating factor for local governments to enact water conservation programs, however, a reactionary approach is not always beneficial to the community nor is it well received. A careful, well planned strategy, is necessary for water conservation to become a way of life in any community.

The City of Santa Fe has built a successful water conservation program based incremental steps. The City has enacted a number of ordinances requiring conservation measures, restricting water use in emergency conditions, requiring developers to create water budgets, regulating landscape and site design, as well as creating incentive programs. Water rates set by the governing body have also played a key role in reducing consumption.

The Water Conservation Program has expanded and diversified over the years to include public outreach, educational activities and events, as well as leading by example with a demonstration garden that includes rainwater harvesting, themed plantings, and efficient irrigation system featuring a weather-based controller.

Despite record breaking heat and drought conditions over the last four years, Santa Fe's Water Conservation Program continues to be one of the leaders in the Southwest with respect to both comprehensiveness and effectiveness, as measured by one of many indices: of gallons per capita per day (GPCD).

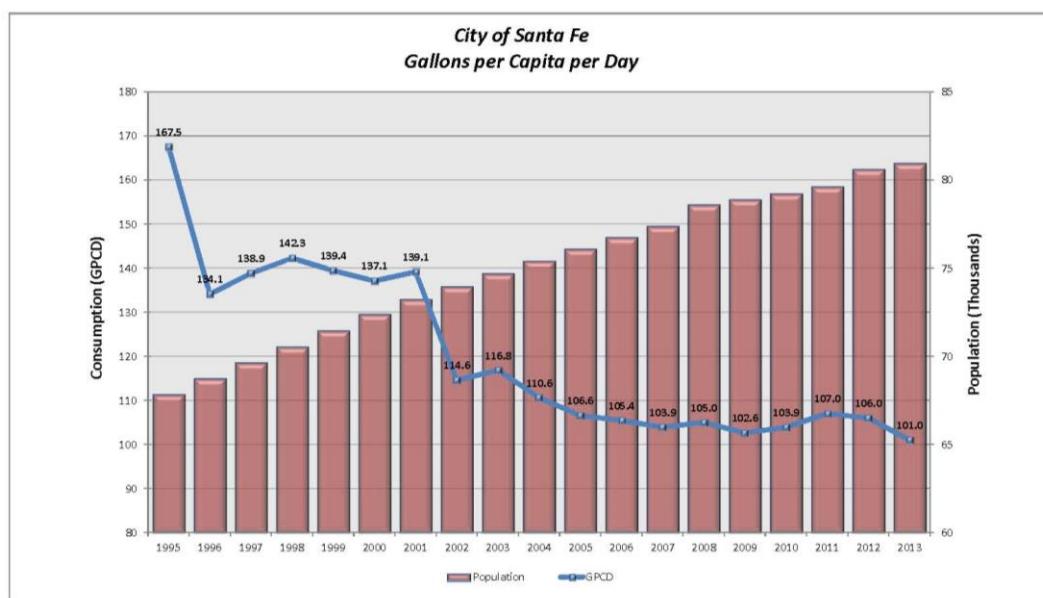
Figure 11. Gallons per Capita per Day (GPCD) for Select Western Cities, 2013



Water Use per Capita

One of the most commonly used metrics for measuring water conservation effectiveness is gallons per capita per day (gpcd), which is derived by dividing the amount of water produced by the population. The City of Santa Fe has been tracking this metric since 1995, initially utilizing a methodology created by the Water Division, and now using the GPCD Calculator created by the New Mexico Office of the State Engineer (NM OSE). The GPCD Calculator provides a standardized methodology for calculating GPCD, so comparisons between communities are more “apples to apples” than when each community uses its own methodology.

Figure 12. Gallons per Capita, per Day, City of Santa Fe, 1995-2013



Source: City of Santa Fe Water Division, 2014.

Total Water Production

The total production is another way to measure conservation. In 2013, total production was 9,414 acre-feet of water, compared to 13,180 acre-feet in 1995 (a 29% decrease in production) while during the same time period the number of customers served by the Water Division increased from 67,839 to 80,955 (a 16% increase in population).

Renewable Water Sources

Since 2002, the City has added additional sources of water to the portfolio, creating a diverse and robust mix which includes both renewable and non-renewable resources. Groundwater drawn from aquifers, such as the City Wells and Buckman Wells, can be considered to be non-renewable as it does not replenish quickly. For that reason, renewable surface water sources, such as the Santa Fe River

watershed and San Juan-Chama river water via the Rio Grande, which are replenished each year from melting snowpack, are the preferred sources of water. Since the Buckman Direct Diversion began production in 2011, the City of Santa Fe has been able to rely more upon surface water, with 79% of the water coming from surface water in 2012, compared with 54% in 2010.

With periods of drought becoming more frequent and prolonged, having a diverse portfolio allows the City to “rest” the aquifers when surface water is plentiful, retaining groundwater capacity for times when surface water is unavailable.

Efficiency Incentives

One of the earliest incentive programs, begun in 2002, set a goal to retrofit 10,000 high-water use toilets (3.5 gallons per flush or more) with 1.6 gallon per flush (gpf) models. It is estimated that the City saved 1 acre-foot of water per day as a result of the toilet retrofit program.

Since that time a variety of rebates and incentives have been offered to encourage the replacement of high-water use fixtures and appliances with high-efficiency technologies, including high-efficiency toilets, water-free urinals, and high-efficiency clothes washers. Rain water harvesting has also been encouraged, with incentives offered for both rain barrels and systems which incorporate cisterns.

Figure 13. Residential Rebates, City of Santa Fe

Residential Rebates			
Fixture/Appliance	Rebate Amount \$	Number of rebates	Estimated Water Savings*
Phase 1 (2004-2009)			67.26 AF
Washing Machine	\$100	2,462	61.14
Rain Barrels	\$30	1,711	0.26
Hot Water Recirculators	\$100	265	5.73
			20.0858 AF
HET Residential	\$175	236	1.2508
HE Clothes Washer	\$480	782	18.2206
HE Clothes Washer	\$180	35	0.3080
Rain Barrel 50-99 gallon	\$12	415	0.0120
Rain Barrel 100-199 gallon	\$25	45	0.0075
Rain Barrel 200-499 gallon	\$50	19	0.0589
Water Harvesting	\$400	2 (15,200 gallons total)	0.2280
			20.375075 AF
Phase 3 (2011 – ongoing)**			
HET	\$175	695	3.6835
HE Clothes Washer (Tier 3)	\$350	666	15.5178
HE Clothes Washer	\$150	106	0.9328
Rain Barrel 50-99 gallon	\$12	83	0.0664
Rain Barrel 100-199 gallon	\$25	7	0.0105
Rain Barrel 200-499 gallon	\$50	5	0.0155
Cistern (500 gallons or more)	\$0.25 x gallon	6 (9,905 gallons total)	0.148575
Irrigation Efficiency	\$40 - \$750	1	

*Estimate based on ten year life span. **Number of rebates processed through December 31, 2013.

Source: City of Santa Fe Water Division, 2014

Figure 14. Commercial Rebates, City of Santa Fe

Commercial Rebates			
Fixture/Appliance/Process	Rebate Amount \$	Number of Rebates	Estimated Water Savings*
Phase 1 (2004-2009)			9.8 AF
Washing Machine	n/a	0	
Rain Barrels	n/a	0	
Air Cooled Ice Machines	\$400	6	0.67
Commercial Dishwasher	\$400	1	2.53
Pre-rinse Spray	\$25	30	6.6
Phase 2 (2010)			12.3768 AF
HET Tank-type	\$504	192	3.2256
HET Hotel/Motel	\$504	459	1.0098
HET Flush-o-meter	\$504	197	6.6192
Water Free Urinal	\$630	24	1.0080
HE Clothes Washer-replaces top-loader	\$480	2	0.0466
HE Clothes Washer-replaces front-loader	\$180	2	0.0176
CPE	\$874	1	0.4500
Phase 3 (2011 – ongoing)**			2.4216 AF
HET Hotel/Motel	\$125	822	1.8084
HET Tank-type	\$250	20	0.336
Flushometer	\$500	2	0.0672
Water Free Urinal	\$500	5	0.21
Clothes Washer (Tier 3)-replaces top-loader	\$350	0	
Clothes Washer-replaces front-loader	\$150	0	
Rain Barrel 50-99 gallon	\$12	0	
Rain Barrel 100-199 gallon	\$25	0	
Rain Barrel 200-499 gallon	\$50	0	
Cistern (500 gallons or more)	\$0.25 x gallon	0	
COM Process Efficiency Rebate	\$375 per 0.025 AF	0	

*Estimate based on ten year life span. **Number of rebates processed through December 31, 2013.

Source: City of Santa Fe Water Division, 2014.

Water Education

Community participation is essential to development of a successful water conservation program. The Water Conservation Office has created a number of education and outreach initiatives, ranging from long-term children's programs such as the Water Fiesta (11 years in 2013) and Poster Contest (10 years in 2013), to professional development through Project WET (Water Education for Teachers) workshops and Qualified Water Efficient Landscaper (QWEL) training and certification.

Land Management

Area of Sustainability	Indicator	Assessment
Land Management	Conserved City Land	Needs Improvement
	Parkland	Performing
	Urban Growth	Needs Improvement
	Mixed Use Land Development	Needs Improvement
	Santa Fe River Watershed	Needs Improvement
	Food Security	Needs Improvement
	Community Gardens	Needs Improvement

For over 400 years, the land in and around Santa Fe has met Santa Fe's food and water needs, ensuring the community's overall well-being, along with serving as the foundation for its economic vitality. As the effects of global warming continue to have an unpredictable impact on weather patterns, drought, wildfires, soil health, and food systems, land management practices are becoming increasingly important in helping to adapt to, and mitigate, such impacts.

Open Space Conservation

Conserving land is more than preventing development. In many cases, conserved land is critical in rehabilitating ecological systems. For example, conservation action focused on landscape renewal creates the space needed for floodwaters and aquifer infiltration, wildfire, and migrating wildlife, while also providing opportunities for human needs as well. When the conserved land is sustainably managed in a way that protects and builds healthy soil, the land also contributes to aquifer recharge, carbon sequestration, and erosion control.

Figure 15. Conserved Land, Santa Fe County, 2009

Existing Conservation Uses	Acres
U.S. National Forest Service Land	241,368.0
U.S. National Park Service Land	1,068.7
U.S. Federal Dam and Reservoir Sites	2,115.8
New Mexico State Parks	349.5
Santa Fe County Open Space*	5,203.4
City of Santa Fe Open Space*	324.3
Private Conservation Organization Land**	11,527.5
Natural Open Space Tracts in Private Development Projects	16,253.3
TOTAL:	278,210.6

Source: 2013 Santa Fe County Sustainable Growth Management Plan.

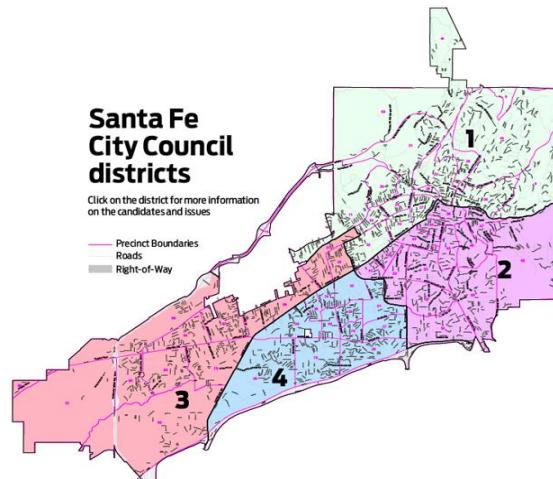
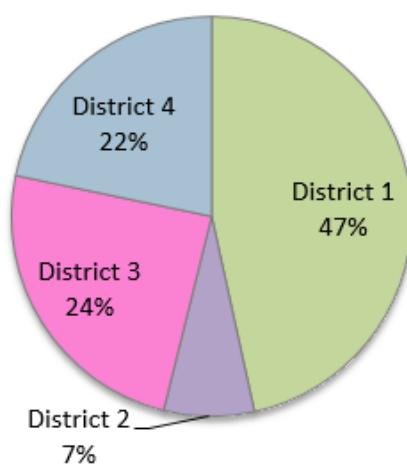
Land conservation easements also provide many public benefits such as:

- Protecting water quality.
- Conserving wildlife habitat.
- Preserving open space, and dark skies.
- Preserving working farmland, ranchland, and timberland.
- Maintaining character of rural communities.
- Buffering public lands.
- Maintaining landscapes for tourism.

Parkland

Parkland helps to support the well-being of the public while mitigating carbon pollution. According to the *2013 Santa Fe Trends* report, the city's goal is to provide five acres of developed parkland per 1,000 residents. In 2012, the ratio of parkland per 1,000 residents was 4.8 acres, however, in 2013 Santa Fe annexed a section of county land, and as a result, the ratio dropped to 4.2 acres. Of that parkland, 47% of it is in City Council District 1, located on the north side of Santa Fe.

Figure 16. Acres of Parkland by City Council District, 2013



Source: City of Santa Fe, Data Analysis.

In 2012, voters approved bond funds to expand the number of parks and trails within the city. Several new parks are planned on the south side of Santa Fe in and around the Tierra Contenta development, and new trails and other improvements are planned throughout the city.

Urban Growth

In order to maintain and encourage conserved land and open spaces, it will be necessary to implement smart growth policies to better manage sprawl. Santa Fe has an opportunity to make the city more climate resilient and economically robust by incentivizing and encouraging growth focused on compact, self-contained communities. In doing so, benefits are realized by:

- Accommodating current and future population growth.
- Increasing diverse housing options for future home owners who may show a preference for diverse, closed-in community living, such as young professionals and those desiring to age in place.
- Supporting local economic activity and growth.
- Reducing reliance on automobiles by encouraging use of public transportation, resulting in reduced infrastructure maintenance costs.
- Improving food security by incorporating local food production into community planning.
- Siting amenities and services nearby.
- Reducing environmental impact.

Mixed Use Land Development

Santa Fe's Metropolitan Planning Organization (MPO) Master Plan recommends high-density, mixed-use development as an essential strategy to support all methods of sustainable transportation in Santa Fe, but does not include any particular incentives or specific initiatives to scale-up alternative forms of transportation. To meet national standards for sustainable community development, Santa Fe would need to identify areas to develop as Complete and Compact Communities (CCC) and adopt regulatory strategies that incentivize increased residential and employment densities and mixed-use development in transit-served areas. Creating and supporting mixed-use development initiatives would reduce the number and distance of car trips, and facilitate walking and biking.

A host of best practices and resources for incentivizing dense, mixed use development can be found online such as:

- *Smart Codes: Model Land-Development Regulations*, the 2003 American Planning Association's PAS Report 556.
- *The Sprawl Repair Manual*, 2010.
- *Land Use and Driving*, Urban Land Institute, 2010. (<http://uli.org/wp-content/uploads/ULI-Documents/Land-Use-and-Driving-Low-Res.pdf>)
- *Cost-Effective GHG Reductions through Smart Growth & Improved Transportation Choices*, Center for Clean Air Policy, Transportation and Climate Change Program, 2009. (<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.176.7920&rep=rep1&type=pdf>)

In May of 2014, the MPO conducted a community meeting at Santa Fe's Southside Library focused on development. Residents reported the need for more grocery stores, medical services, jobs, and other amenities, and the ability to safely walk to them. This is reflected in the Public Input data section included in Phase 1 of the Pedestrian Master Plan.

Santa Fe River Watershed

In order to better manage the anticipated reduction of water supply within the city, the 2009 Santa Fe Municipal Watershed Management Plan established a 20 year plan to better manage the Santa Fe Watershed. The plan addressed four areas:

1. Water management.
2. Vegetation management to reduce fire potential.
3. Increased public awareness and outreach.
4. Financial management, based on a "Payment for Ecosystem Services" model through the "Water Source Protection Fund."

According to "Forest and Water Climate Adaptation, A Plan for the Santa Fe Watershed," written and published by the Santa Fe Watershed Association, the projected changes in volume and timing of available water from the Santa Fe Watershed include:

- 11-18% decrease in stream flow above the city's McClure Reservoir by 2060.
- 20-70% reduction in March snowpack by 2050, and up to 100% reduction by 2070.
- Reduction of Middle Rio Grande water of 14% by 2030, and 29% by 2080.
- Spring snowmelt runoff 15-35 days earlier, resulting in the McClure and Nichols reservoirs filling quickly or overflowing in the spring, and less water available overall during summer.
- Increased risk of catastrophic forest fires and resulting soil erosion into reservoirs.
- Higher frequency of spring floods from more violent and heavy thunderstorms, resulting in more property damage.

To prepare for these changes, the Santa Fe Watershed Association, a local non-profit organization focused on maintaining and improving the Santa Fe River watershed, has established a set of strategies designed to:

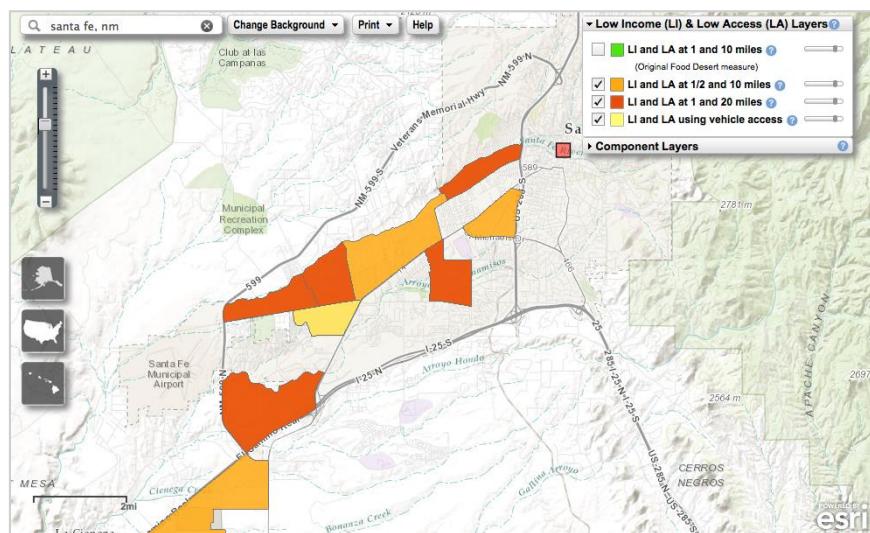
1. Increase the water security and ecological integrity of the Santa Fe Watershed through water conservation and reuse, infiltration, groundwater recharge, and increased aquifer storage and recovery.
2. Collaborate with the U. S. Forest Service, the City of Santa Fe and other organizations to improve forest health for resilience in the face of climate change.
3. Encourage proper forestry practices and conservation easements on private lands to ensure healthy tree spacing, adequate irrigation, and removal of pest infested trees.
4. Create a 75-year plan for a healthy urban forest that sequesters carbon, reduces the heat island effect, absorbs storm water, controls erosion, keeps moisture in the local environment, and improves air quality.

By partnering with the City of Santa Fe to implement programs and policies so support such strategies, long-term benefits can be realized.

Food Security

According to *Planning for Santa Fe's Food Future*, a 2014 report by the Santa Fe County Food Policy Council, there are at minimum 21,270 Santa Fe residents (15% of the population) who are "food insecure," meaning they do not have regular, reliable access to food. Many of these residents also live in "food deserts," where access to food is limited because of distance between where they live and food retailers. Figure 17 below shows a map of food deserts in Santa Fe. Red areas denote low-access to food as a significant number of low-income residents live more than 1 mile away from a supermarket; orange areas show low-income residents who live more than a half mile from a supermarket.

Figure 17. Food Deserts, City of Santa Fe, 2014

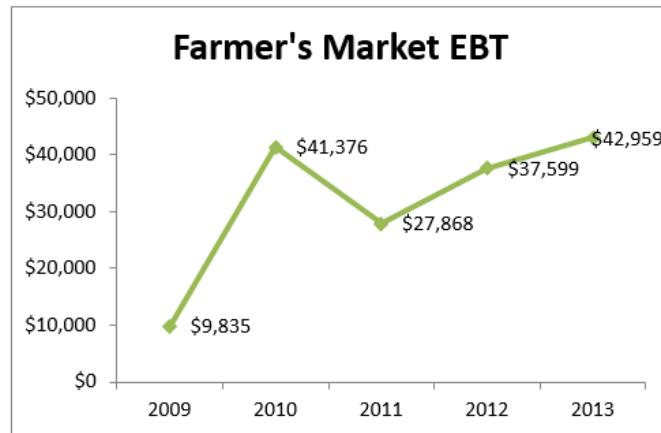


Source: U.S. Department of Agriculture, Economic Research Service, Food Access Research Atlas.

The recommendations in the Food Council's report are designed to help alleviate food insecurity, improve the public's overall health, and contribute to improving the local economy, all through emphasizing access to food, learning about healthy food, and increasing local production of food, which can contribute to mitigating climate change by reducing emissions associated with transporting food. In 2012, the EPA estimated that 22% of all global emissions stemmed from transporting food around the world.

The Santa Fe Farmer's Market has significantly contributed to improving local food security. The average distance food travels to the market is 80 miles, with a large portion of food sold there being produced within a 40 mile radius. The market has also increased access to fresh, healthy food for low-income residents through the Supplemental Nutrition Assistance Program (SNAP). In 2013, \$42,959 of local food was purchased from local farmers by SNAP recipients, thanks to the market's dollar-for-dollar EBT match program.

Figure 18. Santa Fe Farmer's Market, EBT

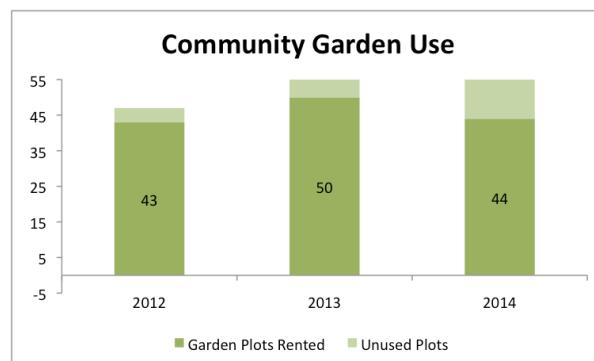


Source: Santa Fe Farmers' Market Institute.

Community Gardens

Community gardens not only provide sustainable food systems, but they also provide a place for people to learn firsthand about the importance of growing food. In 2014, 44 plots, or 80% of available community garden plots, in Santa Fe were being used, an 11% decrease from 2013, as reflected in Figure 19.

Figure 19. Community Garden Use, City of Santa Fe



Source: City of Santa Fe, Parks Division.

The Food Policy Council's report contains a set of recommendations for growing food and expanding community gardens throughout Santa Fe:

- Increase the impact and efficiency of community gardens.
- Develop on-site gardens at senior centers to increase the availability of fresh and local foods for seniors.
- Increase the number of school gardens aimed at helping youth learn about food, farming, and healthy lifestyles.

- Conserve water through educational programs, incentives and policies.
- Increase the viability and presence of local gardens, farms and ranches.
- Develop agricultural incentives and innovative programs to support small farmers and maximize food production/ distribution in our regional foodshed.
- Adopt sustainable land/resource management practices at a regional scale.
- Prioritize sustainability and agriculture in future development in Santa Fe City and County.

Transportation

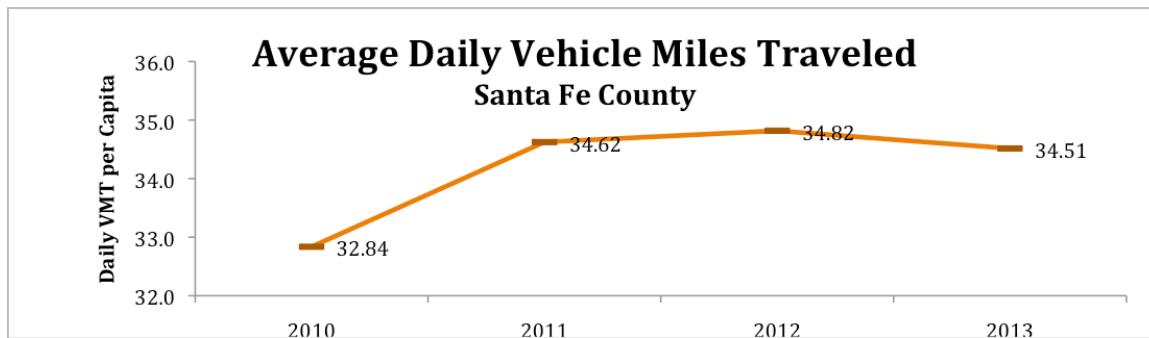
Area of Sustainability	Indicator	Assessment
Transportation	Average Daily Vehicle Miles Traveled	Needs Improvement
	Bicycling and Walkability	Needs Improvement
	Public Transit	Needs Improvement
	Personal Vehicles	Needs Improvement
	Electric & Hybrid Vehicles	Needs Improvement

The New Mexico Environmental Department estimates that transportation by motor vehicles accounts for 17% of greenhouse gas produced annually in New Mexico. Providing a variety of efficient and affordable low- or zero-emission transportation options is essential to reducing that environmental impact.

Average vehicle miles traveled (VMT) per capita has been dropping consistently for last nine years (2005-2014). In 2013, U.S. average daily VMT was 25.76. VMT is the nationally recognized indicator and standard of transportation-produced emissions. The City of Santa Fe does not collect data on vehicle miles traveled. However, Santa Fe County does track such data, and it is reflected in Figure 20; Santa Fe County has averaged a VMT of about 35 miles per capita. However, this is an imperfect proxy because county residents are more likely to have a higher per capita VMT than city residents, and most investments in walking, biking, and public transit amenities would primarily benefit city residents. Regardless, as city residents account for the majority of Santa Fe County's population, it is likely that their VMT exceeds the national average.

Investments in amenities and infrastructure that promote walking, biking and public transit could continue to reduce VMT. Philadelphia, for example, documented a decreased VMT from 2005 to 2010 by 7.4% as a result of implementing such strategies according to the "2013 Philadelphia Greenworks Progress Report," published by the Mayor's Office of Sustainability.

Figure 20. Average Daily Vehicle Miles Traveled, Santa Fe County



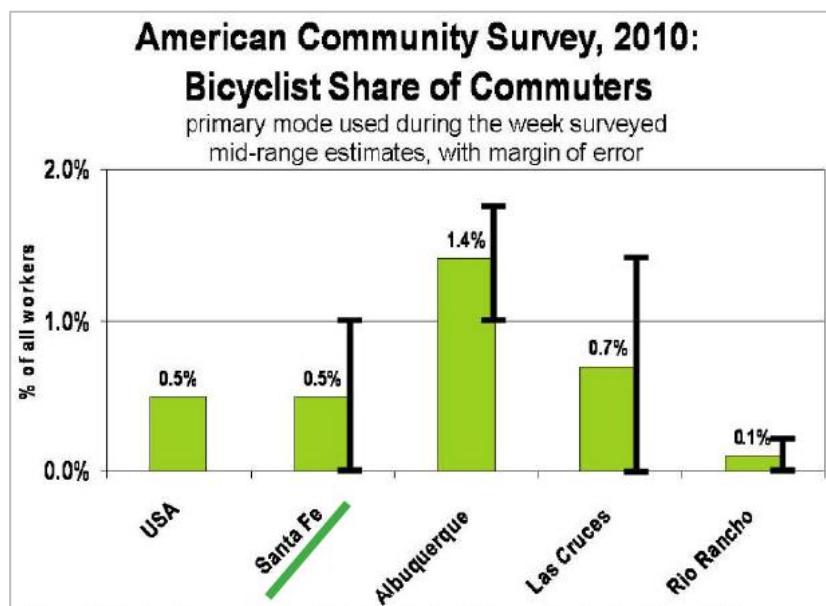
Source: New Mexico Department of Transportation.

Bicycling and Walkability

The MPO has developed master plans for supporting and increasing both bicycle use and walkability in Santa Fe. These two forms of transportation not only prevent carbon dioxide emissions from vehicle use, but also indirectly impact overall emissions by reducing traffic congestion. Additionally, walking and biking reduce obesity, promote healthier lifestyles, reduce transportation costs for residents who cannot afford or operate a car, support the local economy, create safer communities, and reduce demand for parking lots thereby increasing the attractiveness of the city.

The 2012 Santa Fe MPO Bicycle Master Plan sets ambitious goals for increasing bicycle-friendliness in the Santa Fe area. Approximately .5% of Santa Fe residents in 2013 used reported using a bicycle as their primary mode of transportation during the week. Santa Fe MPO's target for 2020 is 1% of population as shown in Figure 21. Currently, Santa Fe contains 26 miles of paved hike/bike trails. Some national leaders of bicycle-friendly communities include: Boulder CO (9.9%), Berkeley CA (8.0%), Portland OR (6.0%), Missoula MT (5.4%), and Flagstaff AZ (5.1%).

Figure 21. Bicyclist Share of Commuters, City of Santa Fe, 2013



Source: 2010 American Community Survey.

To achieve the 1% goal, the MPO has established a set of Bicycle Targets to be achieved by 2017:

- 15 miles of new bike lanes or shoulders.
- 100% of new major roads have bike lanes or shoulders.
- 30 miles of paved arterial multi-use trails in the MPO area.
- 100% of new major multi-use trails are built compliant with the American Association of State Highway and Transportation Officials (AASHTO) standards.
- Identifying urban population living within one mile of a bikeway that is directly connected to the core bikeway system.

- Identifying urban population living within one mile of a multi-use trail that is directly connected to the core trail system.
- Identifying urban population that can access shopping, school, park, playground, playing fields, recreational facilities, and outdoor recreation areas, including recreational trails, by bicycle.
- Identifying public facilities that are easily accessible by bicycle from the core bikeways network.
- 1.0% of commuters use a bicycle as the primary means of commuting.

The National Association of Realtor's 2011 *Community Preference Survey* reveals that most Americans would like to live in walkable communities where shops, restaurants, and local businesses are within an easy walk from their homes. The survey also indicates that most Americans would choose a smaller home and smaller lot if it would keep their commute time to 20 minutes or less. According to Walk Score, a national organization that scores city walkability metrics, Santa Fe has a low walk score of 36 on a scale of 1 to 100, and is a car-dependent city; Figure 22. By comparison, Albuquerque has a walk score of 40, and Boulder, CO has a walk score of 56.

The Santa Fe MPO is developing a Pedestrian Master Plan to make walking a more viable transportation option, of which Phase One, a study to identify existing conditions and engage public input, has been completed. The survey found 50% of respondents indicated that improving sidewalks, better connectivity, and more destinations within walking distance were the primary improvements that would make a difference. Respondents also indicated that priority should be given to improving the availability and quality of sidewalks and safe walking routes to transit stops, as well as providing an adequate shelter at said stops.

Figure 22. Walk Score, City of Santa Fe, 2014



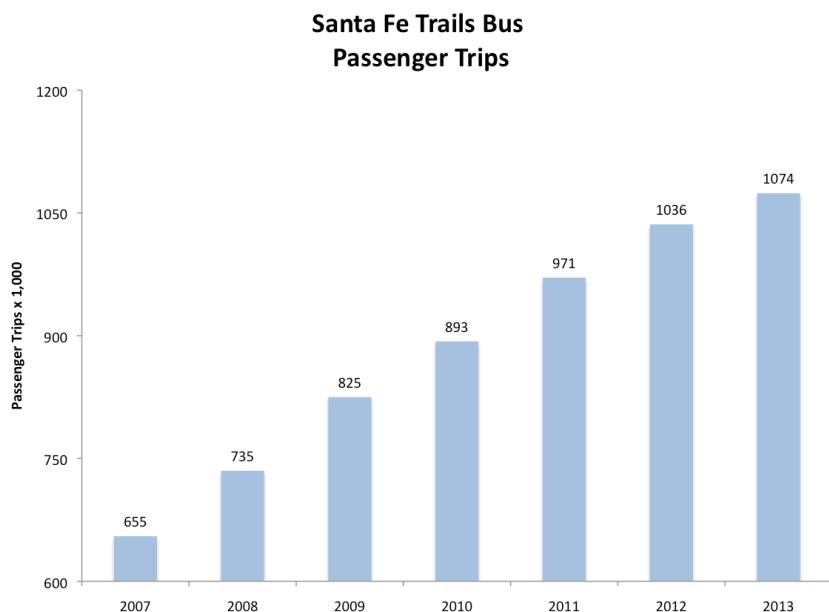
Source: WalkScore.com, 2014.

Public Transit

Public transportation, such as the City of Santa Fe's compressed natural gas (CNG) powered bus system, produces less carbon pollution than individuals driving cars. As more residents and tourists choose public transit, total greenhouse gas emissions are reduced.

Many low-income residents depend on public transit for their basic transportation needs. While the city's population has increased less than 1% since 2007, bus passenger trips have increased 64%, with 2013 representing the highest ridership in the service's 21 years of operation, according to Santa Fe Trails Bus Service, City of Santa Fe.

Figure 23. Annual Passenger Trips, Santa Fe Bus Trails Service



Source: Santa Fe Trails, 2014.

Personal Vehicles

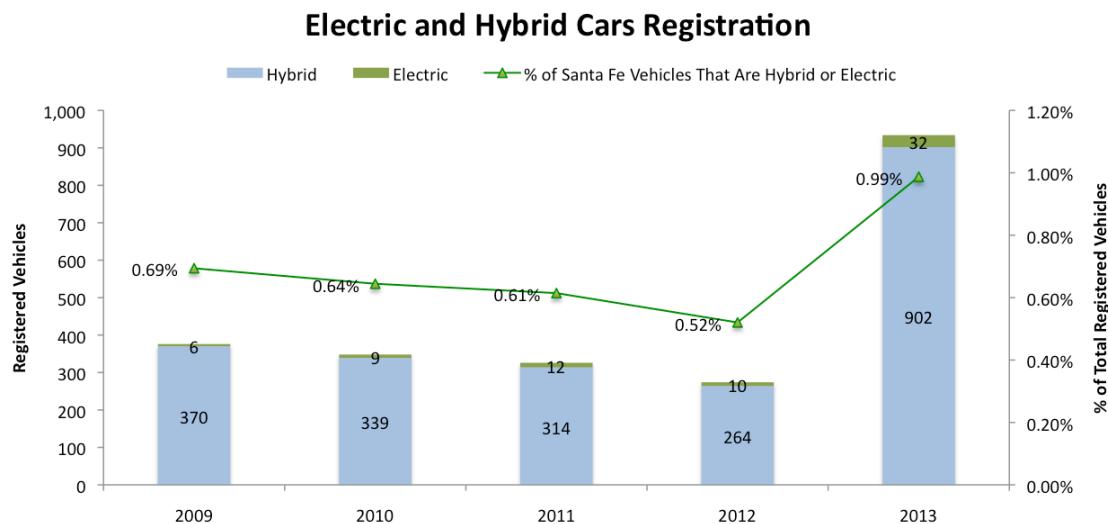
Even as Santa Fe residents enjoy the benefits of improved alternative transportation infrastructure and increased mixed-use development, personal vehicles will remain a necessity. Even so, the environmental impact of personal vehicles can be significantly mitigated by using low or zero emissions vehicles.

The average car in Santa Fe emits about 5.3 metric tons of CO₂ per year. The national average is 4.75 tons (source: EPA, Greenhouse Gas Equivalencies Calculator). Because our average VMT is higher than the national average, our estimated CO₂ emissions per vehicle per year is higher, too.

Promoting hybrid and electric personal vehicles can substantially reduce a community's carbon footprint. A hybrid car in Santa Fe, such as the Prius, would contribute about 2.21 tons of CO₂ annually. The emissions associated with electric vehicles, however, vary based on the source of their electricity. A

completely solar-charged EV would be virtually carbon neutral, while one charged on the average U.S. electric grid would contribute about 3.1 tons of CO₂ (source: EPA). Already, 1% of registered vehicles in Santa Fe are low-emission, which prevented 2,859 tons of CO₂ in 2013. Incentivizing electric vehicle ownership and supporting a car-sharing program would further encourage adoption of low-emissions vehicles in the city.

Figure 24. Annually Registered Electric and Hybrid Automobiles, City of Santa Fe



Source: New Mexico Motor Vehicles Association.

Electric Vehicles

Electric Vehicles have the potential to significantly decrease community-wide CO₂ emissions. Santa Fe would benefit from an EV plan focused on three primary areas:

1. Creating infrastructure and incentives for investment.

- Standardize payment, signage, etc., for public charging stations.
- Identify optimal locations, such as libraries, community centers, workplaces, public transportation hubs, multi-family residences, etc. for charging stations.
- Design zoning codes to promote EV infrastructure development, such as requirements for EV charging spaces in new housing developments, requiring EV charging stations to be factored into calculation of required public parking spaces.

2. Creating incentives to increase EV ownership.

- Local tax rebates, or sales tax exempt purchases of EVs.
- Discounted public parking fees.
- Preferential public parking spaces.

- Reduced fee EV charging stations.

4. Other actions.

- Transition City-owned fleet vehicles to EVs.
- Create incentives for visitors and tourists to rent EVs while they stay in Santa Fe.

Waste & Recycling

Area of Sustainability	Indicator	Assessment
Waste & Recycling	Waste Produced	Needs Improvement
	Recycling Rate	Needs Improvement
	Compost Production	Needs Improvement

In 2014, the City of Santa Fe and Santa Fe County each contracted with Leidos Engineering, a waste management consulting firm, to audit and assess their waste management practices, policies, costs, and processing rates. The audit determined that in fiscal year (FY) 2013, the City of Santa Fe generated 59,058 tons of waste material, and recycled 5,434 tons of material, or about 8.4% of its total waste stream. By comparison, according to data from the EPA and the NM Environment Department, New Mexico's recycling average was 19.6% in 2012.

However, 22% of the recyclables collected was glass, which artificially inflates the overall recycling rate because the city uses weight in determining the amount of waste diverted to recycling.

The audit also reported that of the 27,413 residential customers the city served in 2014, a little over half of them actually put out their recycling bins for pick up, yet nearly all of them set out their garbage bins.

The Solid Waste Management Agency (SWMA), a public entity created by the city and county in 1996 via a joint powers agreement, whose duties are to process the region's waste and recyclable materials at both the Buckman Road Recycling and Transfer Station (BuRRT) and the Caja del Rio Landfill, reported that in FY 2014, the agency collected \$773,500 in revenue from selling 7,424 tons of recyclable material, and collected \$5.4 million from landfill fees.

In 2008, the city adopted a resolution establishing the goal of reaching a 33% recycling rate by the year 2012. Critics of the city's low recycling rate point to the fact that there is confusion about what can and can't be recycled. Certain numbered plastics qualify for recycling, but others do not. Certain kinds of cardboard can be recycled, but others cannot. Residents are provided two recycling bins, one of which can only contain glass because BuRRT does not have the ability to automatically sort out glass from other recyclables.

Additionally, commercial recycling rates in the city are not reported or calculated, so they are not included in the city's 8% recycling rate. County recycling services are collected by private waste collection companies; according to the Leidos audit, the average recycling rate for Santa Fe County is 18.5% for years 2011 and 2012.

To help increase the city's recycling rate, the audit recommends that a "single-stream" recycling program be instituted. That would enable residents to throw all of their recyclable materials into a single bin, without sorting or worrying about which materials can or cannot go into the bin.

However, single-stream recycling will require additional investments to be made in the BuRRT facilities, specifically the upgrade of machinery that can help to better process the additional amount of material to be received.

At the time of this writing, city officials are working with SWMA to address the details associated with implementing single-stream recycling.

Compost

In early 2014, the City of Santa Fe entered into a professional services agreement with Reunity Resources, a local nonprofit that collects food scraps from commercial entities, to lease 64-gallon carts that the nonprofit will use to collect the scraps. Reunity then takes the waste to a third party to compost the material. The organization's goal is to convert approximately 2 million pounds of waste into compost. According to Reunity Resources website, its program is only second to New York City's in size and diversion volume, and since April 2014, 500,000 pounds of food waste has been diverted from the landfill, which equates to approximately 250,000 pounds of CO₂ that has been mitigated.

Jobs, Education & Training Programs

Area of Sustainability	Indicator	Assessment
Jobs, Education and Training Programs	Quantifiable Sustainability Related Jobs	Unable to Determine
	Education and Training Programs (grades 9-12 & college)	Performing
	Education (K-8)	Needs Improvement

Currently, the City of Santa Fe doesn't collect data related to the number of environment, sustainability, renewable energy related jobs in the city. Although it is possible to extrapolate data from calculations based on the number of jobs per kilowatts/megawatts of renewable energy installed, or by directly contacting renewable energy companies to count number of employees, the results would be approximate, given the number and different types of jobs in the sustainability field.

However, an accurate way to measure and track such jobs would be for the city to utilize NAICS or SIC codes in its business registration process, enabling companies and nonprofits in the environment, sustainability, renewable energy fields to self-identify and classify themselves as such, while providing employee numbers. Direct outreach to those companies and nonprofits is still advisable, in that it will help to confirm, or even improve upon, data obtained through NAICS/SIC codes.

Solar Energy

Given that solar energy is the most predominant renewable resource in Santa Fe, comparing national and state solar industry job statistics can provide a glimpse into how much of an impact the industry may have on the city.

The Solar Foundation (TSF) is a 501(c)(3) nonprofit whose mission is to increase understanding of solar energy through strategic research that educates the public and transforms markets. Recently, the organization released its fifth annual update of employment, trends, and projected growth in the U.S. solar industry, *The State of the Solar Workforce in America, National and State Solar Jobs Census 2014*. The following are highlights from the 2014 report:

- 31,000 new solar jobs since 2013.
- Nearly 174,000 solar workers in the nation.
- 21.8% growth since 2013.
- 86% growth since 2010.
- 2015 Expected Growth: 36,000 new jobs (20.9%).



Graphic: The Solar Foundation, 2014.

In the report, TSF also provided employment by sector breakdown, as shown in Figure 25.

Figure 25. National Solar Industry Employment by Sector, 2014

	Employment	% of Total Employment
Installation	97,031	55.8%
Manufacturing	32,490	18.7%
Sales & Distribution	20,185	11.6%
Project Developers	15,112	8.7%
All Other	8,989	5.2%
Total	173,807	100.0%

Source: The Solar Foundation, 2014.

The report also included diversity in the solar workforce, as noted in Figure 26.

Figure 26. Workforce Diversity, National Solar Industry, 2014

	2013	2014
Women	18.7%	21.6%
Latino or Hispanic	15.6%	16.3%
Veterans of the U.S. Armed Forces	9.2%	9.7%
Asian or Pacific Islanders	6.7%	7.0%
African-American	5.9%	6.0%

Source: The Solar Foundation, 2014.

And lastly, related to demographics, the report included the differing levels of education and experience of newly hired employees in the solar industry, as reflected in Figure 27.

Figure 27. New Hires' Experience and Education, National Solar Industry, 2014

Sector	% with Experience	% with Bachelor's or Higher	% with Associate's or credential but not BA
Overall	67.3	21.4	5.9
Installation	68.4	10.9	2.6
Manufacturing	59.9	40.7	17.3
Sales	45.5	43.9	20.4
Developers	85.5	70.3	12.9

Source: The Solar Foundation, 2014.

The report also included state-level job census data, and broke the data into three “Top Fives”:

<u>Solar Jobs, Overall</u>	<u>Growth Rate</u>	<u>Jobs per Capita</u>
1. California	1. Nevada	1. Nevada
2. Massachusetts	2. Minnesota	2. Vermont
3. Arizona	3. Illinois	3. Hawaii
4. New York	4. North Carolina	4. California
5. New Jersey	5. Texas	5. Massachusetts

Details related to the overall top three states are shown in Figure 28.

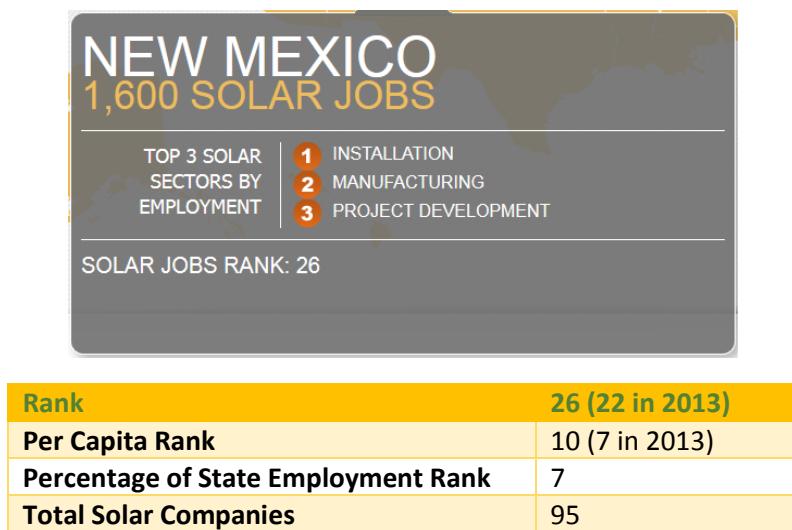
Figure 28. Employment Details, Top Three Solar States, 2014



New Mexico Solar Industry Jobs

Data for solar industry jobs in New Mexico in as follows:

Figures 29 and 30. Solar Industry Employment Details, New Mexico, as of November 2014



Source: The Solar Foundation, State Solar Jobs Census, 2014.

Education and Training Programs

As the use of renewable energy in Santa Fe continues to expand, particularly that of solar power, the number of jobs should continue to also increase. So, not only is it important for accurate job counts to be collected, but it will also be important to have insight into the number of participants taking part in job training and education programs.

Santa Fe Community College has what is arguably the most robust sustainable and renewable energy curriculum and training program in the state. From biofuels to aquaculture, the college is one of the leading institutions in the southwest training people to fill the jobs of tomorrow.

Figure 31. Enrollment, SFCC Trades and Technologies Center

Academic Year	Declared Majors in Sustainability Related Field	Program Enrollment
2014	174	403
2013	159	344

Source: Santa Fe Community College.

Yet, institutes of higher education are not the only source for individuals seeking careers in sustainability related fields. High schools and vocational training centers are also meeting those needs, such as the Academy of Sustainability at Santa Fe High School, Santa Fe's first solely dedicated sustainability education academic high school program with an enrollment of 290 students in its first year. Such programs provide a direct path into a career, in addition to helping establish a foundation upon which advanced education and training can build upon.

Community organizations and local nonprofits also contribute to sustainability education and training. Youth Works and Earth Care are two organizations that offer specific environmental job training programs for young adults that leverage federal funds from the Corporation for National and Community Service. In 2014 Youth Works trained and employed 17 Environmental Corps Members, and Earth Care trained and employed 25 Food Security and Environmental Stewardship AmeriCorps Members and 11 Youth Allies for Sustainability Interns.

Additionally, the Santa Fe Watershed Association's Climate Masters Program provides adult education in the areas of climate change mitigation and adaptation. The 2014 program trained 10 community members in climate education and advocacy.

K-12 Sustainability Education

Many private and public schools in Santa Fe provide some level of environmental science education. However, there is not a standardized sustainability or climate related curriculum that schools must implement and adhere to. In the past, the Santa Fe Public Schools (SFPS) district has partnered with organizations like Earth Care to provide professional development training to teachers to support the integration of sustainability and climate change education into classroom courses. However, due to funding cuts and budgetary constraints, such teacher-training resources are not currently being offered.

School Garden-based Environmental Education

Several of the city's nonprofit organizations have worked with SFPS over the last 10 years to install school gardens. From 2009-2013, Earth Care provided full-time school garden and environmental stewardship educators for five schools reaching over 3,500 students per year with garden-based environmental education. Funding for the full-time educators is no longer available, so those positions do not currently exist.

In 2014, Acequia Madre and Monte Del Sol Charter School were the only two public school's that employed a paid garden coordinator. At Acequia Madre, every student participates in weekly garden classes, and at Monte Del Sol, select classes work in the garden and the school has a garden club. Earth Care continues to provide part-time, volunteer internships at five school gardens.

The garden education programs include:

- | | |
|----------------------------------|--------------------------|
| 1. Acequia Madre Elementary | 7. Kearney Elementary |
| 2. Amy Biehl Community School | 8. Nava Elementary |
| 3. Aspen Community Magnet School | 9. Salazar Elementary |
| 4. Carlos Gilbert Elementary | 10. Santa Fe High School |
| 5. Eldorado Community School | 11. Sweeney Elementary |
| 6. Gonzales Community School | 12. Tesuque Elementary |

Afterschool Programs

Global Warming Express and Earth Care offer afterschool programs that are focused on sustainability and climate education. Currently, these programs reach 155 students.

A Commitment to Sustainability

Significant progress in renewable energy use and resource conservation and management in Santa Fe's public schools has been achieved under the leadership of SFPS's Energy & Water Conservation Program Coordinator. According to the Santa Fe Public Schools District, since 2010, SFPS has:

- Reduced water consumption by 43%; natural gas consumption by 23%; electricity consumption by 11%; waste-to-landfill by 30%.
- Installed nearly 464 kW of solar energy eight campuses.
- Required recycling at every facility, achieving a 26% diversion rate.
- Instituted zero waste-to-landfill electronics recycling.
- Developed food waste composting at 12 school facilities.
- Built two schools using geothermal technology, one rated LEED Gold.
- Received Energy Star rating on 15 schools in 2014.
- Begun assessing every SFPS property for solar energy capacity.
- Saved more than \$750,000 in Operational Budget.

Conclusion

The measurements and data in this report are designed to help to serve as the foundation upon which the City of Santa Fe creates its 25-year Sustainability Plan. It is the intent of this report to identify and assess many primary areas of sustainability that can presently be measured in order to assess the current environmental health and wellbeing of the community. Certainly, there are additional areas of focus that can be identified, assessed and measured which should be included in the 25-year plan to further help the city achieve its goal carbon neutrality by 2040. This report is the first step to that end.

The City of Santa Fe has already taken many admirable steps towards leading our community by example in the area of sustainability. It is our hope that this benchmark report will serve as the basis for the development of an annual or bi-annual scorecard program that will simultaneously engage the City departments internally in the regular tracking of sustainability data as well as the identification of annual targets toward the implementation of the updated 25-year Sustainable Santa Fe Plan. This scorecard program will also serve as an educational and motivational tool for the public to push our community's sustainability objectives forward systematically toward the realization of carbon-neutrality and greater health, economic and social justice opportunities, and resilience in the face of a changing climate.

- **Sustainable Santa Fe Commission, 2015**

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