

The Economic Benefits of the Park & Recreation System in San José, California



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The Trust for Public Land

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The logo for The Trust for Public Land, featuring a green-to-yellow gradient background with the text "THE TRUST FOR PUBLIC LAND" in white, bold, sans-serif capital letters.

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Executive summary

San José, northern California's largest city and home to many of Silicon Valley's largest employers, has a large natural and developed park system that provides beauty, recreational opportunities, access to nature, and positive environmental impacts to residents, workers, and tourists alike. With more than 3,480 acres of city parkland (and more than 12,500 acres of county and federal preserves), San José's natural spaces and facilities include one of California's oldest civic parks – Alum Rock Park, regional and neighborhood parks, dog parks, golf courses, playgrounds and picnic areas, the largest skate park in California, sports fields and courts, 57 miles of Class I trails, and the Happy Hollow Park and Zoo.¹ San José's Department of Parks, Recreation and Neighborhood Services (PRNS) also provides a diverse set of opportunities, involving sports, classes, and special events such as the Luna Park Chalk Art Festival in Backesto Park, and Viva Calle SJ, an event in 2015 that temporarily closed 6 miles of San José streets from Emma Prusch Farm Park to St. James Park's historic district. Additionally, PRNS offers grant programs that offer numerous benefits to the local community, such as the Mayor's Gang Prevention Task Force and the Anti-Graffiti Program.²

By providing park areas and access to an array of free or low-cost outdoor activities, such as biking, exercising, exploring nature, gardening, hiking, picnicking, swimming, walking, and wildlife viewing, San José generates numerous economic benefits within the local community. Parks, trails, and community centers enhance property values, provide recreational opportunities, improve human health, attract visitors, and provide natural goods and services such as filtering air pollutants and managing stormwater. The developing trail network also facilitates active transportation with daily bike commuters traveling to and from some of Silicon Valley's largest employers. These recreational assets support local jobs, boost spending at local businesses, and create local tax revenue. Specifically, these park areas produce the following economic benefits (see Table 1):

- Parks and trails increase the value of nearby residential properties because people enjoy living close to parks and trails and are willing to pay for the proximity. San José parks raise the value of nearby residential properties by \$1 billion and increase property tax revenues by **\$12.1 million** a year (see Table 2).
- Parks reduce stormwater by capturing precipitation, slowing its runoff, and reducing the volume of water that enters the stormwater system. Parks in San José provide stormwater management valued at **\$6.43 million** annually (see Table 4).
- Trees and shrubs in parks remove air pollutants that endanger human health and damage structures. Such spaces provide health benefits and reduce pollution control costs in San José by **\$1.18 million** per year (see Table 5).
- Approximately 7.7 percent of visitors to San José come to visit parks, trails, and community centers. These visitors spend **\$120 million** annually in the local economy and generate \$4.93 million in local tax revenues (see Table 6).

1 This analysis focused on publicly accessible parks in the City of San José. It included city, county, and federal parks; it did not include private open spaces or open spaces that were associated with libraries, Hayes Mansion, or school fields. The property value, stormwater management, and air pollution analyses include all parks containing a ½ acre or more of greenspace that were open as of June 15, 2015. The analyses of tourism, health, recreation, community cohesion, and economic development include all parks and community centers.

2 These programs are beyond the scope of this analysis; however, they provide tremendous value in addition to the economic benefits that have been estimated in this report.

- Residents also enjoy San José parks, trails, and community centers. Each year residents of San José receive a benefit of **\$51.2 million** for the direct recreational use of these park facilities (see Table 8).
- Independent research shows that park use translates into increased physical activity, resulting in medical care costs savings. While all San José residents who visit the city’s parks improve their health by visiting, approximately 24,000 adult residents use San José’s parks, trails, and community centers exclusively to engage in physical activity at a level sufficient to generate measureable health benefits, yielding an annual medical cost savings of **\$28.3 million** (see Table 9).
- Parks create a community cohesion benefit of people coming together to improve their parks. This “know-your-neighbor” social capital, while difficult to fully capture, can be measured in terms of the amount of time and money that residents donate to their parks. In 2014, **\$6.14 million** in volunteer time and financial contributions were donated to San José parks (see Table 10).
- San José parks, trails, and community centers provide a number of other important economic benefits that cannot be quantified at this time. These include improving quality of life and boosting the local economy by attracting businesses and residents. These benefits create substantial and sustained economic value, which unfortunately is difficult to quantify.

This study illustrates that San José parks, trails, and community centers are key economic drivers that contribute millions annually in economic benefits.

Table 1. Summary of estimated annual benefits of parks and trails³

BENEFIT CATEGORY	TOTAL
Enhanced property value	
Total additional property value	\$1,000,000,000
Additional annual property tax	\$12,100,000
Stormwater retention value	\$6,430,000
Air pollution removal value	\$1,180,000
Park tourism value	
Total park visitor spending	\$120,000,000
Local sales tax on park visitor spending	\$4,930,000
Direct recreational use value	\$51,200,000
Human health value	\$28,300,000
Community cohesion	\$6,140,000

³ All numbers in the text and tables are rounded to three significant digits unless otherwise noted. Because of rounding, some report figures and tables may appear not to sum.



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Introduction

San José, northern California's largest city and home to many of Silicon Valley's largest employers, has a large natural and developed park system that provides beauty, recreational opportunities, access to nature, and positive environmental impacts to residents, workers, and tourists alike. With more than 3,480 acres of city parkland (and more than 12,500 acres of county and federal preserves), San José's natural spaces and sports venues include dog parks, golf courses, Alum Rock Park, playgrounds and picnic areas, the largest skate park in California, sports fields and courts, 57 miles of off-road trails, and the Happy Hollow Park and Zoo. (San José's parks are shown in the map on page 6.) San José's Department of Parks, Recreation and Neighborhood Services (PRNS) also provides a diverse set of opportunities, involving sports, classes, and special events, such as the Fourth of July Festival in Guadalupe River Park, Luna Park Chalk Art Festival in Backesto Park, and temporary activation efforts like Viva Calle SJ, an event that temporarily closes 6 miles of San José streets from Emma Prusch Farm Park to the newly revitalized St. James Park. Additionally, PRNS offers grant programs that offer numerous benefits to the local community, such as the Mayor's Gang Prevention Task Force and the Anti-Graffiti program.⁴

PRNS is making strides towards its vision as a national leader of parks and recreation by cultivating healthy communities through quality programs and dynamic public spaces. PRNS



Guadalupe River Park. Parks filter and absorb stormwater otherwise bound for the city's gutters and sewer system.

⁴ These programs are beyond the scope of this analysis; however, they provide tremendous value in addition to the economic benefits that have been estimated in this report. The Mayor's Gang Prevention Task Force is coalition made up of local residents, city, county and state government leaders, school officials, community and faith-based organizations, and local law enforcement. The task force provides services including gang prevention, parent and family support, re-entry assistance, job training, personal development, and health services. PRNS is involved on the technical team that carries out the task force's anti-gang programming. The Anti-Graffiti Program recruits volunteers to assist with graffiti abatement and City staff work to provide volunteers with clean up locations and supplies.

manages 197 parks and 57 miles of trails and has won numerous awards over the last five years. For example, the City is recognized by the Federal Highway Administration for its trail planning approach by receiving the Exemplary Human Environment Initiatives award and the Transportation Planning Excellence Award (2010). The City was awarded the Best Trail and Bikeway Project in 2013 for the Lower Guadalupe River Trail by the American Society of Civil Engineers. Additionally, four trail systems within San José's trail network have been designated as part of the National Recreational Trail System, including Lower Guadalupe River Trail, Coyote Creek Trail, Highway 237 Bikeway (part of the San Francisco Bay Trail), and Penitencia Creek Trail.⁵ Beyond that, residents of San José and their visitors have access to thousands of acres of public preserves operated within the city by Santa Clara County and the U.S. Fish and Wildlife Service.

Additionally, the City of San José leases land just east of Groveland, California (about 150 miles from San José) from the U.S. Forest Service for its Family Camp at Yosemite facility. Family Camp at Yosemite provides an all-inclusive camping experience that draws resident and non-resident visitors. Campers can engage in numerous opportunities for outdoor recreation including fishing, hiking, swimming, and organized camp activities. In addition, PRNS also owns and maintains the Happy Hollow Park and Zoo, a unique facility that offers amusement rides, puppet shows, interactive play areas, educational programming, special events, and field trips.

By providing park areas and access to an array of outdoor activities, San José generates numerous economic benefits within the local community. These benefits are described and valued in the following pages.



Fowler Creek Park.

5 City of San José, "Awards & Designations" (accessed June 24, 2015, <https://www.sanJoseca.gov/index.aspx?NID=2891>).

Enhanced property value and increased tax revenues

Numerous studies have shown that parks and trails have a positive impact on nearby residential property values.⁶ All things being equal, most people are willing to pay more for a home close to a nice park. The property value added by park areas is separate from the direct recreational use value gained; property value goes up even if the resident never visits the park.

Property value in San José is affected primarily by two factors: distance from, and quality of, the park.⁶ While proximate value can be measured up to 2,000 feet from a park, most of the value—whether such spaces are large or small—is within the first 500 feet.⁸ Therefore, this analysis of enhanced property value has been limited to 500 feet. The Trust for Public Land identified all homes within 500 feet of parks. A home consists of a residential structure that is owned and taxed; thus, this analysis includes multiple unit dwellings (e.g., apartments) and single family homes.⁹ There are 40,000 homes located within 500 feet of parks in San José with a total assessed value of \$20 billion in 2014 (see Table 2).¹⁰

Moreover, people's desire to live near a park also depends on the quality of the park. Beautiful natural resource areas with public access, scenic vistas, and bodies of water are markedly valuable. Those with excellent recreational facilities are also desirable, although sometimes the greatest property values are realized a block or two away if there are issues of noise, lights, or parking. Less attractive or poorly maintained parks may provide only marginal value to surrounding property values, and in some cases, these areas may actually reduce nearby property values. Assessing the quality of parks for this type of analysis is difficult given the subjective nature of park quality and the variation in quality across time. As such, this analysis utilizes estimates from the published literature regarding the value of parks on property values. A conservative value of 5 percent has been assigned as the amount that parks add to the market value of all dwellings within 500

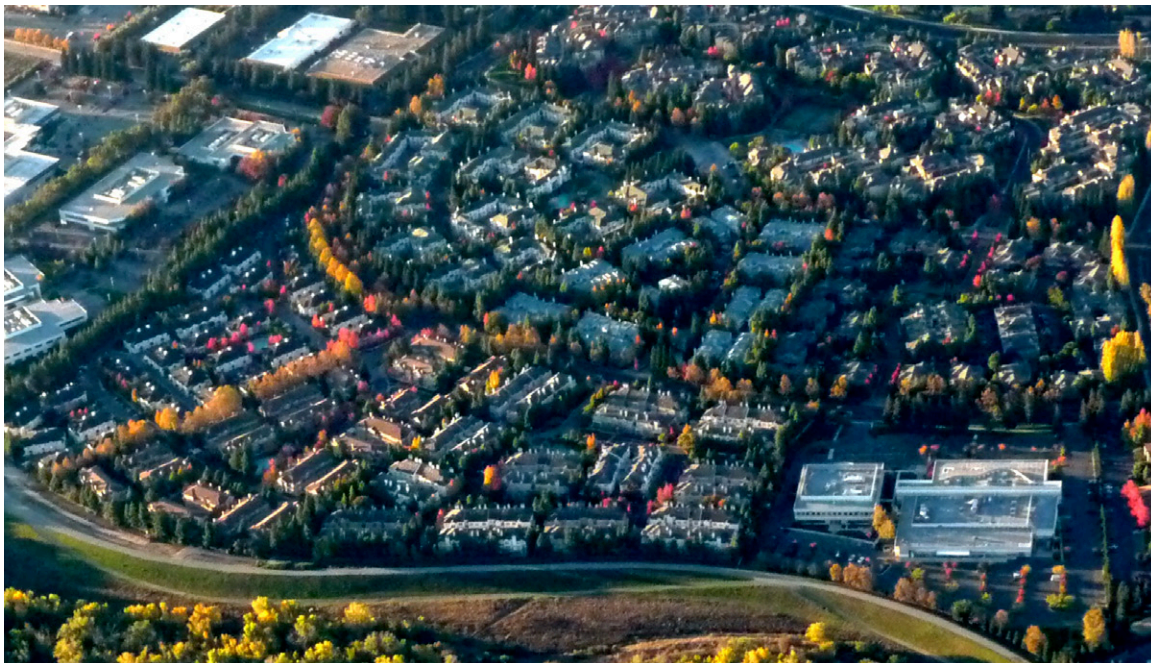
-
- 6 Virginia McConnell and Margaret Walls, "The Value of Open Space: Evidence from Studies of Nonmarket Benefits" (Resources for the Future, January 2005); John L. Crompton, "The Impact of Parks on Property Values: Empirical Evidence from the Past Two Decades in the United States" (*Managing Leisure* 10, 2005, pp. 203-218).
 - 7 Due to the overlapping nature of parks and trails in San José this analysis focused on parks. A majority of the completed off-road trail network is within parks, including: Guadalupe River Parkchain; Coyote Creek Parkchain; Penitencia Creek Parkchain; Lower Silver Creek (North); Thompson Creek Parkchain; Lake Cunningham Park; Yerba Buena Park Chain; Falls Creek Lands; Murillo Park; Umbarger Pathway; Tuscany Hills Open Space; Los Gatos Creek Parkchain; Selma Olinder Park; Saratoga Creek Parkchain; Los Alamitos/Calero Creek Trail; Almaden Lake Park; Alum Rock Park; and various small parks.
 - 8 B. Bolitzer and N.R. Netusil, "The Impact of Open Spaces of Property Values in Portland, Oregon" (*Journal of Environmental Management*, 59, 2000). John L. Crompton, "The Impact of Parks on Property Values: A Review of the Empirical Evidence" (*Journal of Leisure Research* 33(1):1-31, 2001). National Association of Realtors, *On Common Ground* (Winter 2009); John L. Crompton, *The Proximate Principle: The Impact of Parks, Open Space and Water Features on Residential Property Values and the Property Tax Base* (second edition, Ashburn, Virginia: National Recreation and Park Association, 2004); Sarah Nicholls and John Crompton, "The Impact of Greenways on Property Values: Evidence from Austin, Texas" (*Journal of Leisure Research* 37(3):321-341, 2005).
 - 9 Other property types were not considered in this analysis because sufficient data were not available to quantify the benefit. Nonresidential property types are rarely studied in the literature as they are much more difficult to statistically analyze because there are more variables that influence value and fewer real estate transactions to compare.
 - 10 In addition to the literature cited, this estimate relies on geospatial parks data provided by the City of San José PRNS, and parcel and tax assessment data provided by Santa Clara County. Assessed value is used in this analysis. Local Real Property is assessed at acquisition value and adjusted upward each year. The process that county assessors use to determine the value of real property was established by Proposition 13. Under this system, when real property is purchased, the county assessor assigns it an assessed value that is equal to its purchase price, or "acquisition value." Each year thereafter, the property's assessed value increases by 2 percent or the rate of inflation, whichever is lower. This process continues until the property is sold, at which point the county assessor again assigns it an assessed value equal to its most recent purchase price. In other words, a property's assessed value resets to market value (what a willing buyer would pay for it) when it is sold. Legislative Analyst's Office, The California Legislature's Nonpartisan Fiscal and Policy Advisor, "Understanding California's Property Taxes" (November 29, 2012, accessed August 18, 2015, <http://www.lao.ca.gov/reports/2012/tax/property-tax-primer-112912.aspx>).

feet.¹¹ A 2009 report from the National Association of REALTORS® found the premium for homes near parks can extend three blocks and start at 20 percent for those homes directly adjacent (declining as distance from the park increases).¹² This analysis estimates that an added \$1 billion in residential property value existed in 2014 because of proximity to parks in San José (Table 2).

The residential property tax rates for each parcel were used to determine how much additional tax revenue was raised by local units of government. The total value captured in additional property tax revenue derived from parks in San José is \$12.1 million each year (Table 2).¹³

Table 2. Enhanced residential property value due to proximity to parks in San José (2014)¹⁴

TOTAL ASSESSED VALUE WITHIN 500 FEET	ADDITIONAL ASSESSED VALUE DUE TO PARKS	ADDITIONAL PROPERTY TAX REVENUE DUE TO PARKS
\$20,000,000,000	\$1,000,000,000	\$12,100,000



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Coyote Creek Trail and surrounding neighborhoods. Parks enhance property values around their edges, which results in additional tax revenue.

11 John L. Crompton, *The Proximate Principle: The Impact of Parks, Open Space and Water Features on Residential Property Values and the Property Tax Base* (second edition, Ashburn, Virginia: National Recreation and Park Association, 2004).

12 National Association of Realtors, *On Common Ground* (Winter 2009).

13 These estimates are conservative for the following reasons. First, the estimates leave out all the value of dwellings located beyond 500 feet from a park, even though evidence exists for marginal property value beyond such distances. For example, one study in Portland, Oregon, found that public parks within 1,500 feet increase a home sales price by \$2,262 or 3.4 percent of the average home's value. Other studies have found that value can be measured at distances up to 2,000 feet. Second, these estimates only capture a 5 percent marginal value for parks, though studies have shown higher premiums. One study in Austin, Texas found that direct adjacency to greenbelts increased average home value by 5.7 or 12.2 percent, depending on the greenbelt. Other studies have found that parks can have up to a 20 percent premium. Therefore, these estimates provide a lower bound estimate of the "true" impact of parks on property values.

14 All numbers in the text and tables are rounded to three significant digits unless otherwise noted. Because of rounding, some report figures and tables may appear not to sum.

Managing stormwater

Stormwater management is an issue for the San José community. When rainwater flows off roads, sidewalks, and other impervious surfaces, it can cause flooding, erosion, and declines in water quality by carrying pollutants with it. Since San José does not treat its stormwater,¹⁵ untreated rainwater can flow directly into waterways, causing significant and costly ecological problems, such as algal blooms and under-cutting of creek/river banks.

The parks in San José reduce stormwater by capturing precipitation and/or slowing its runoff. Large pervious (absorbent) surface areas allow precipitation to infiltrate and recharge groundwater. Also, vegetation provides considerable surface area that intercepts and stores rainwater, allowing some to evaporate before it ever reaches the ground. In effect, parks function like mini storage reservoirs and are the original form of green infrastructure.

The former Western Research Station of the U.S. Forest Service developed a model to estimate the value of stormwater retained by parks. Inputs to the model consist of geographic location, climate region, surface permeability, acres of parkland, land cover, and vegetation types.

First, The Trust for Public Land determined the perviousness of the parks in San José using the City of San José's parks layer, the City of San José's land cover layer, and the 2011 National Land Cover Database. The City of San José's land cover data provides coverage of approximately 75.5 percent of the city's area. Since the extent of these data was not comprehensive for the entire city, the National Land Cover Database layer was used to fill in gaps in coverage. The remaining areas consist of impervious roadways, trails, parking areas, buildings, hard courts, and water surfaces. San José parks are 93.9 percent permeable and 6.1 percent impermeable (Table 3).

Second, The Trust for Public Land estimated the amount of perviousness of the rest of San José (i.e., the city without its parkland) using the same data. The pervious land consists largely of residential front and back yards, and private open space areas such as country clubs, cemeteries, public institution grounds, and office campuses. Impervious land includes sidewalks, streets, parking areas, and rooftops. San José, without its parkland, is 49 percent permeable and 51 percent impermeable. Therefore, San José's parks are more permeable than the rest of San José.

Third, the University of California, Davis, calculated the amount and characteristics of rainfall from U.S. weather data. Typically, San José receives 16.45 inches of rain per year.¹⁶ The model, which combines aspects of two other models developed by researchers at the Forest Service, uses precipitation data for San José to estimate annual runoff. The reduction in runoff attributable to parks in San José was calculated by comparing the modeled runoff with the runoff that would leave a hypothetical park site of the same size but with land cover that is typical of surrounding development (i.e., with streets, rooftops, or parking lots). In other words, this analysis does not measure all of the water that is absorbed by parks in San José, but instead the amount of water that is retained by parks above what would be retained had the park land been developed similarly to the rest of San José.

15 San José, "Stormwater Program" (accessed August 18, 2015, <https://www.sanjoseca.gov/index.aspx?NID=1844>).

16 The model uses real precipitation data from 2010. The selection of which year's precipitation data to use is based on the annual precipitation that is closest to normal with the smallest standard deviation for annual precipitation and for annual air temperature. Additionally, the year must be within the last 20 years.

The final step in determining the economic value of stormwater retention by parks in San José is to estimate the cost of managing stormwater with infrastructure (e.g., detention ponds, constructed wetlands, and infiltration basins). It is difficult to estimate the marginal cost of stormwater management because San José does not directly treat stormwater. However, San José does require treatment of stormwater from new and redevelopment activities.¹⁷ National studies have found that construction and annual maintenance costs for common stormwater best management practices range from \$0.04 to \$0.83 per cubic foot.¹⁸ To be conservative, The Trust for Public Land uses the lower bound of the stormwater treatment cost range (\$0.04 per cubic foot) to estimate the value of stormwater retention provided by parks. A total annual stormwater retention value of \$6.43 million is estimated for parks in San José (Table 4).

Table 3. Acreage and permeability of all parks in San José (2015)

ACRES OF PARKS	ACRES	PERCENT OF TOTAL AREA
With pervious soil	12,400	94%
With impervious surfaces	802	6%
Total	13,200	100%

Table 4. Annual stormwater cost savings from all parks in San José (2015)

	INCHES	AMOUNT
Rainfall	16.50	789,000,000 cubic feet
Runoff with parks	1.23	59,100,000 cubic feet
Runoff without parks	4.32	207,000,000 cubic feet
Runoff reduction from parks	3.09	148,000,000 cubic feet
Cost of treating stormwater (\$ per cubic foot)		\$0.04
Total savings from parks		\$6,430,000

17 While San José does not directly treat its stormwater, it does implement measures to prevent stormwater pollution. San José's stormwater treatment requirements are part of the California Regional Water Quality Control Board San Francisco Bay Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit. The permit covers a variety of activities such as new and redevelopment projects, industrial and commercial businesses, and municipal operations. There are costs associated with the compliance with permit requirements. For example, San José bears the cost of implementing Best Management Practices (BMPs) for municipal operations and developers bear the costs of implementing low impact development techniques for the treatment of stormwater runoff from new development or redevelopment activities. However, the direct local costs of dealing with stormwater are not available.

Sources: California Regional Water Quality Control Board, *San Francisco Bay Regional Stormwater NPDES Permit* (Tentative Order May 11, 2015, NPDES Permit No. CAS612008); Santa Clara Valley Urban Runoff Pollution Program, *Guidance for Implementing Stormwater Requirements for New Development and Redevelopment Projects* (April 2012).

18 City of Overland Park, Kansas, "Overland Park Site BMP Cost Analysis" (prepared by Olsson Associates October 31, 2007); James P. Heaney and Joong G. Lee, "Methods for Optimizing Urban Wet-Weather Control Systems" (prepared for the U.S. Environmental Protection Agency, July 2006); Ada Wossink and Bill Hunt, "The Economics of Structural Stormwater BMPs in North Carolina" (prepared for the Water Resources Research Institute of the University of North Carolina, May 2003); U.S. Environmental Protection Agency, "Preliminary Data Summary of Stormwater Best Management Practices" (August 1999); Chesapeake Research Consortium, "The Economics of Stormwater BMPs in the Mid-Atlantic Region" (August 1997); James P. Heaney, "Costs of Urban Stormwater Control" (prepared for the U.S. Environmental Protection Agency, January 2002).

Air pollution removal by vegetation

Air pollution is a significant and expensive problem associated with metropolitan growth that injures human health and damages structures. Human cardiovascular and respiratory systems are affected, with broad consequences for health care costs and productivity. In addition, acid rain, smog, and ozone increase the need to clean and repair buildings and other costly infrastructure.¹⁹

Trees and shrubs have the ability to remove pollutants from the air we breathe. Leaves absorb gases such as nitrogen dioxide, sulfur dioxide, carbon monoxide, and ozone. Particulate matter, which includes small particles of dust, metals, chemicals, and acids, can also be removed by adhering to plant surfaces. The vegetation in parks plays a role in improving air quality, helping nearby areas avoid the costs associated with pollution.²⁰

The Northern Research Station of the U.S. Forest Service in Syracuse, New York, designed a calculator for The Trust for Public Land to estimate air pollution removal by urban vegetation.



Alum Rock Park. Vegetation in San José parks helps remove air pollution.

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- 19 American Lung Association, "Ozone Pollution" (*State of the Air*, accessed October 2, 2014, <http://stateoftheair.org/2013/health-risks/health-risks-ozone.html#howharms>); American Lung Association, "Particulate Pollution" (*State of the Air*, accessed October 2, 2014, <http://www.stateoftheair.org/2013/health-risks/health-risks-particulate.html#ref31>); U.S. Environmental Protection Agency, *The Plain English Guide to the Clean Air Act* (Publication No. EPA-456/K-07-001, 2007, accessed October 2, 2014, <http://www.epa.gov/air/peg/peg.pdf>).
- 20 David J. Nowak, Satoshi Hirabayashi, Allison Bodine, and Robert Hoehn, "Modeled PM_{2.5} Removal by Trees in Ten U.S. Cities and Associated Health Effects" (*Environmental Pollution* 178, 2013, pp. 395-402.)

This program, which is based on the Forest Service’s earlier Urban Forest Effects (UFORE) and i-Tree Eco models, is location-specific, and takes into account the air characteristics of San José.²¹

The Trust for Public Land determined the amount of tree canopy cover in the parks and trails in San José using canopy data provided by San José and the 2011 National Land Cover Dataset (the most recent data available). While San José has numerous trees on private property as well as on streets, this study measures only the economic value of trees on park properties. Twenty percent of parkland is covered by tree canopy.

The i-Tree Eco model was used to estimate hourly changes in annual air pollutant removal and concentration due to air pollution particles depositing themselves onto trees, thereby decreasing the concentration of particles in the air. These changes were then summarized for a year. The calculator then estimates the value of the pollutant removal using the U.S. Environmental Protection Agency’s environmental Benefits Mapping and Analysis Program (BenMAP) and the median cost to prevent a unit of pollution from entering the atmosphere. BenMAP estimates the incidence of adverse health effects and associated monetary values resulting from changes in nitrogen dioxide, sulfur dioxide, and fine particle concentrations.²² The values for carbon monoxide and coarse dust particles were estimated using national median externality values adjusted to 2010 values using the producer price index.²³

A total value of \$1.18 million in air pollution removal was estimated for parks in San José (Table 5).

Table 5. Value of air pollution removed by all parks in San José (2014)

POLLUTANT	POUNDS REMOVED	POLLUTANT REMOVAL VALUE
Carbon monoxide	3,370	\$2,250
Nitrogen dioxide	30,000	\$11,700
Ozone	129,000	\$348,000
Coarse dust particles	27,700	\$86,700
Fine particles	5,240	\$733,000
Sulfur dioxide	3,300	\$439
Total	198,000	\$1,180,000

21 David J. Nowak, Satoshi Hirabayashi, Allison Bodine, and Eric Greenfield. “Tree and Forest Effects on Air Quality and Human Health in the United States” (*Environmental Pollution* 193, 2014, pp. 119-129).

22 Fine particles, also known as Particulate Matter 2.5 or PM2.5, are less than 2.5 micrometers in diameter and are so small they can only be detected with an electron microscope. Sources include all types of combustion, including motor vehicles, power plants, and residential wood burning. AirNow, “Particle Pollution (PM10) and (PM2.5)” (accessed May 6, 2015, <http://www.airnow.gov/index.cfm?action=aqibasics.particle>); U.S. Environmental Protection Agency, “Environmental Benefits Mapping and Analysis Program (BenMAP)” (accessed May 24, 2012, <http://www.epa.gov/air/benmap/>).

23 Coarse dust particles, also known as Particulate Matter 10 or PM10, are between 2.5 and 10 micrometers in diameter and are generated by crushing and grinding operations as well as dust stirred up by cars traveling on roads. AirNow, “Particle Pollution (PM10) and (PM2.5)” (accessed May 6, 2015, <http://www.airnow.gov/index.cfm?action=aqibasics.particle>); F. J. Murray, L. Marsh, and P. A. Bradford, *New York State Energy Plan, Vol. II: Issue Reports* (New York State Energy Office, Albany, NY, 1994); U.S. Department of Labor Bureau of Labor Statistics, “Producer Price Indexes” (accessed September 11, 2012, www.bls.gov/ppi/).

City park tourism

Tourists visit parks and trails in San José to participate in a wide variety of activities at places like Lake Cunningham State Park, with its world-class facilities and special events, History San José and Happy Hollow Park and Zoo, both located within Kelley Park, as well as the famous Rose Garden, the nationally celebrated Guadalupe River Park and its trail, and Alum Rock Park, one of the oldest municipal parks in the state of California. Though not always recognized, parks and trails play a significant role in the tourism economy of San José. Tourists' activities, the number of visitors, and tourist spending determine the contribution of parks and trails to the tourism economy. In San José, parks and many trails are owned and managed by PRNS, Santa Clara County, or Santa Clara Valley Open Space Authority. About 50 percent of San José's trails are developed on lands of other public agencies like the Santa Clara Valley Water District, Pacific Gas & Electric Company, and Caltrans (the State highway department), and operated through joint use and other agreements. Additionally there are several public-private partnerships between San José and nonprofit organizations that help supplement management.²⁴ Unfortunately, visitor numbers and tourist expenditures are not tracked by all of these agencies and organizations. Thus, it is not possible to extrapolate the number of visitors to all of the parks and trails in the city based on those numbers.



Kelley Park rose garden. Parks contribute to the tourist economy—both as event venues and as attractions in their own right.

²⁴ For more information about private groups, please see the Community Cohesion analysis, beginning on page 22.

Parks and trails are important components of the local economy. As shown in Table 6, tourists spend \$1.55 billion in San José each year.²⁵ While there has been no hard study of all the reasons tourists come to San José, information provided by Visit California reveals that 7.7 percent of visitors to California come primarily to take part in outdoor recreation.²⁶ Extrapolating this percentage to San José, approximately \$120 million in spending each year are attributable to visitors' use of the city's parks and trails.²⁷ Spending by these park-related visitors generates \$4.93 million in local tax revenue.²⁸

Table 6. Tourism spending and parks in San José (2014)

CATEGORY	
Percentage of tourists whose primary reason to visit San José is outdoor recreation ²⁹	7.7%
Total direct travel spending by visitors to San José ³⁰	\$1,550,000,000
State tourism tax revenue in San José ³¹	\$76,000,000
Local tourism tax revenue in San José ³²	\$64,000,000
Approximate spending of tourists whose primary reason to visit San José is parks and trails	\$120,000,000
Approximate local tourism tax revenue attributable to parks and trails	\$4,930,000

25 Dean Runyan Associates, *California Travel Impacts, 2014p: Selected Cities* (prepared for Visit California, May 2015).

26 TNS TravelsAmerica, *2014 Domestic Travel Report* (accessed from Visit California, June 25, 2015, <http://industry.visitcalifornia.com/Find-Research/California-Statistics-Trends/>).

27 The Trust for Public Land utilized information provided by Visit California to measure the value of parks and trails in San José's tourism economy. The Trust for Public Land estimated the visitor spending and tax revenues that are generated in San José due to its parks and trails by applying the percentage of visitors who primarily visit California to recreate outdoors to the total direct travel spending (e.g., visitor expenditures on lodging, food, and gas) and the tax revenues within San José. Direct travel spending does not represent collective profit to the city economy from park generated tourism. A portion of consumer spending covers expenses (e.g., materials and labor) and a portion represents profit.

28 Additionally, this park-related spending generates \$5.85 million in state tax revenue.

29 TNS TravelsAmerica, *2014 Domestic Travel Report* (accessed from Visit California, June 25, 2015, <http://industry.visitcalifornia.com/Find-Research/California-Statistics-Trends/>).

30 Dean Runyan Associates, *California Travel Impacts, 2014p: Selected Cities* (prepared for Visit California, May 2015).

31 Ibid.

32 Ibid.

Direct recreational use value

In addition to bolstering the tourism economy, parks and trails provide substantial economic benefits through their wide use by local residents. San José parks, trails, and community centers provide direct recreational value to residents by providing access to recreational opportunities such as walking on trails, observing nature or wildlife, visiting playgrounds, biking, and participating in team sports.

Most recreational uses in public parks, such as San José's parks, are free of charge, but economists can calculate their value by determining the consumer's "willingness-to-pay" for the same experience in the private marketplace. In other words, if parks were not available in San José, how much would residents have to pay for similar experiences in commercial facilities or venues? Rather than income, the direct use value represents the amount of money that residents save by not having to pay market rates to indulge in the park activities they enjoy. The value from nonresident park use was excluded from this analysis since it is covered in the tourism section above (see page 15).

The Trust for Public Land first determined the number of visits to San José parks and facilities through a professionally-conducted telephone survey of San José residents.³³ Respondents provided information related to their visitation of San José parks and facilities and the types of activities in which they participated. Adults with children under the age of 18 also provided information



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Alum Rock Park. If San Joséans did not have access to park and trail amenities, they would have to spend millions of dollars to obtain these benefits from the private marketplace.

³³ The survey was conducted of a statistically-representative sample of 1,000 San José residents. The survey was conducted in English, Spanish, Mandarin, and Vietnamese.

about the visitation and participation of one of their children. This random-digit-dialed survey was conducted in August 2015 and was statistically representative of San José residents with an accuracy level of plus or minus 3.1 percent.³⁴

The results of the survey indicate that 53.1 percent of adults and 44.9 percent of children have visited parks, trails, and community centers in San José in the last 12 months. The survey also indicated that the most popular activities for adults were walking or hiking, followed by picnicking, exploring nature, visiting dog parks, and running. For children, playing in playgrounds was followed by picnicking, walking or hiking, biking, and exploring nature. See Table 7 for a listing of the five most popular activities. These results are generally consistent with previous research, including recent park surveys conducted by San José and statewide statistics compiled by the Outdoor Industry Association, which estimated 59 percent of California adults participate in outdoor recreation.³⁵

Table 7. Top five activities of San José residents as determined by self-reported participation for parks, trails, and community centers in San José (2015)³⁶

ACTIVITY	PARTICIPATION (ANNUAL VISITS)		
	TOTAL	ADULTS	CHILDREN
Walk or hike	2,370,000	1,960,000	409,000
Picnic, relax, rest, sit	1,980,000	1,540,000	437,000
Explore nature, view birds and wildlife	1,740,000	1,380,000	363,000
Use dog parks	1,600,000	1,310,000	295,000
Run or jog	1,470,000	1,260,000	217,000

To be conservative for the purposes of the direct recreation use analysis, the self-reported participation data were adjusted to account for over-reporting of park use by respondents, as well as for participation in multiple activities during a single visit. Once the participation data were adjusted, The Trust for Public Land assigned dollar values to each park use by each participant in each activity. This methodology is based on the Unit Day Value method, which is used by the U.S. Army Corps of Engineers and counts park visits by specific activity, assigning each activity a dollar value. Their Unit Day Values for Recreation range from \$3.91 to \$11.70 for general park use including things like hiking on trails, and from \$15.90 to \$46.40 for specialized activities that require specialized equipment and expertise.³⁷ The Trust for Public Land utilized estimates of use value from Oregon State University's Recreation Use Values Database. This database contains

34 The Trust for Public Land typically conducts a statistically-representative survey of residents to estimate the recreational use of park facilities for which resident-specific use counts are not available. The City of San José was able to provide information about the recreational use of Family Camp facilities by residents only. Thus, a question was not included in the survey to estimate resident use.

35 Outdoor Industry Association, *The Outdoor Recreation Economy: California* (accessed June 25, 2015, https://outdoorindustry.org/images/ore_reports/CA-california-outdoorrecreationconomy-oia.pdf).

36 The original participation that individuals reported was adjusted to account for over-reporting of park use as well as their participation in multiple activities during a single visit. The numbers included in the table reflect these adjustments.

37 Bruce. D. Carlson, "Memorandum for Planning Community of Practice" (U.S. Army Corps of Engineers, Economic Guidance Memorandum, 15-03, Unit Day Values for Recreation for Fiscal Year 2015, October 28, 2014).

use values for over twenty activities and is based on over 350 economic valuation studies that estimated the use value of recreation activities in the U.S. and Canada from 1958 to 2006, adjusted to 2010 dollars; however this analysis used the values most relevant to San José.

In quantifying the benefits of resident use, The Trust for Public Land also recognized that not every visit within a given period has the same value to the visitor. In fact, additional uses of a park are less valuable than the first use. For example, an individual's first visit of the year to a playground is worth more than that same individual's 10th visit of the year.³⁸ Additionally, The Trust for Public Land also estimated an average season for different park activities to take into account reduced participation rates in the off-season. Although some people are active in parks 365 days a year, the direct use valuation does not count uses during seasons in which participation rates drop to low levels. Additionally, for activities for which a fee is charged, like golfing at a municipal golf course, the per-person fee is subtracted from the imputed value and only the "extra" value is assigned. For example, if playing golf costs \$50 at a San José golf course and \$70 at a private country club, the direct use value would be \$20.

This analysis finds the direct use value for San José is \$51.2 million for 2015 (see Table 8).

Table 8. The annual economic value of direct use of San José parks and trails by San José residents (2015)

TYPE OF USE	PERSON VISITS	AVERAGE VALUE PER VISIT	VALUE
Park and trail uses (e.g., playgrounds, trails, walking, picnicking, wildlife watching)	11,900,000	\$3.15	\$37,400,000
Recreational facility uses (e.g., pools, fitness centers, team sports)	1,940,000	\$5.15	\$9,980,000
Special uses (e.g., events, Christmas in the Park, golf courses)	252,000 ³⁹	\$14.90	\$3,770,000
Total	14,100,000		\$51,200,000

³⁸ This is consistent with the economic law of diminishing marginal utility, which recognizes that the more of a good one consumes, within a given time and holding all else constant, the smaller the gain in the total utility derived from each additional amount. Utility, in this case, is the amount of satisfaction derived from the consumption of park and trail amenities.

³⁹ This figure includes Christmas in the Park, which according to Mercury News, attracts more than 500,000 people each year. The results of The Trust for Public Land's survey are more conservative and indicate lower usage; however, if the number of person visits per year were higher, the direct use value of the parks and trails would be even larger. Leeta-Rose Ballester, "San José: Christmas in the Park Teams with Nonprofits and Local Businesses for 35-Year Celebration" (*San José Mercury News*, December 9, 2014, accessed November 3, 2015, http://www.mercurynews.com/san-José-neighborhoods/ci_27100203/san-José-christmas-park-teams-nonprofits-and-local).

Helping to promote human health

In this analysis, The Trust for Public Land measured the collective economic savings realized on an annual basis by residents of San José who use parks and trails in the city to exercise. Several studies have documented the economic burden related to physical inactivity. Many medical problems can result from, or be exacerbated by, physical inactivity. This list of medical problems includes heart disease,⁴⁰ type 2 diabetes, stroke,⁴¹ mental disorders,⁴² and some forms of cancer.⁴³ One report released in August 2009 by the U.S. Centers for Disease Control and Prevention (CDC) estimates that obesity cost the U.S. economy \$147 billion in 2008 alone.⁴⁴ Lack of exercise is shown to contribute to obesity and its many effects, and for this reason experts call for a more active lifestyle.

The CDC recognizes that physical activity helps improve overall health and reduces the risk for chronic diseases. As such, the CDC promotes physical activity guidelines, defining sufficient activity as at least 150 minutes of moderate-intensity activity per week or at least 75 minutes of vigorous-intensity activity per week, along with muscle-strengthening activities at least two days per week.⁴⁵

Having access to places to walk can help individuals meet recommendations for regular physical activity.⁴⁶ Parks have been found to be one of the most commonly reported convenient places for improved physical and mental health, especially if the space is well maintained, safe, and accessible.⁴⁷ From a public health perspective, parks provide low-cost, high-yield wellness opportunities.⁴⁸

Based on the CDC's guidelines for physical activity, The Trust for Public Land used the results of a professionally-conducted telephone survey (see page 17) to determine how many adults were using the parks at a frequency and intensity that would result in medical care cost savings. In accordance with CDC guidelines, The Trust for Public Land defined vigorous-intensity activities to include running, bicycling, swimming, and using fitness equipment or taking fitness classes at community centers. Moderate-intensity activities included walking, hiking, participating in team sports, and gardening. This analysis does not include low-heart-rate activities, such as picnicking or wildlife watching. Additionally, individuals must utilize the parks, trails, or community centers in San José exclusively to an extent that is sufficient to meet the CDC's physical activity guidelines. This

40 Jacob Sattelmair, Jeremy Pertman, Eric Ding, et al., "Dose Response Between Physical Activity and Risk of Coronary Heart Disease: A Meta-Analysis" (*Circulation*, The American Heart Association 124, 2011, pp. 789-795); Edward Archer and Steven N. Blair, "Physical Activity and the Prevention of Cardiovascular Disease: From Evolution to Epidemiology" (*Progress in Cardiovascular Diseases*, 53, 2011, pp. 387-396).

41 Larissa Roux, Michael Pratt, Tammy O. Tengs, et al., "Cost Effectiveness of Community-Based Physical Activity Interventions" (*American Journal of Preventive Medicine* 35, no. 6, 2008, pp. 578-588).

42 Joshua Hayward, Felice N. Jacka, Elizabeth Waters, and Steven Allender, "Lessons from Obesity Prevention for the Prevention of Mental Disorders: The Primordial Prevention Approach" (*BMC Psychiatry* 14, 2014, p. 254).

43 I-Min Lee, Eric J. Shiroma, Felipe Lobelo, et al., "Impact of Physical Inactivity on the World's Major Non-Communicable Diseases" (*The Lancet* 380, no. 9838, 2012, pp. 219-229).

44 Centers for Disease Control and Prevention, "Adult Obesity Causes and Consequences" (accessed December 15, 2015, <http://www.cdc.gov/obesity/adult/causes.html>).

45 Centers for Disease Control and Prevention, "How Much Physical Activity Do Adults Need?" (accessed January 27, 2015, <http://www.cdc.gov/physicalactivity/everyone/guidelines/adults.html>).

46 B. Giles-Corti and R. J. Donovan, "The Relative Influence of Individual, Social, and Physical Environment Determinants of Physical Activity" (*Social Science and Medicine* 54, 2002, pp. 1793-1812).

47 K. E. Powell, L. M. Martin, and P. P. Chowdhury, "Places to Walk: Convenience and Regular Physical Activity" (*American Journal of Public Health* 93, no. 9, 2003, pp. 1519-1521).

48 M. A. Barrett and Daphne Miller, "Parks and Health: Aligning Incentives to Create Innovations in Chronic Disease Prevention" (*Preventing Chronic Disease*, Centers for Disease Control and Prevention, 2014, DOI: <http://dx.doi.org/10.5888/pcd11.130407>).

analysis finds that 24,000 adult residents in San José improve their health to a degree that meets the CDC's physical activity guidelines by using parks, trails, and community centers in San José exclusively. This number does not include individuals who use San José parks in conjunction with other resources to participate in adequate levels of physical activity to meet the CDC's thresholds.

Based on previous work in health care economics, The Trust for Public Land assigned a value of \$1,100 as the annual medical cost savings between those in San José who exercise regularly and those who do not. This value was chosen based on a careful review of health care economics literature that focuses on the cost difference between physically active and inactive persons. The cost savings was based on the National Medical Expenditures Survey and has been widely cited in the literature.⁴⁹ The medical care cost savings were adjusted for inflation and brought to 2014 dollars.⁵⁰ For persons over the age of 65, health care cost savings are doubled because seniors typically incur two or more times the medical care costs of younger adults.⁵¹ This doubling of health care cost savings is conservative. For example, one study found that average health care expenses for adults over 65 were over three times those of working-age people.⁵²

In 2015, the combined health savings from park and trail use for the residents of San José was \$28.3 million (Table 9).⁵³

Table 9. Estimated health benefits of physical activity in San José parks (2015)

CATEGORY	
Adults 18-64 Years of Age	
Number of adults (18-64) physically active in parks*	22,500
Average annual medical care cost difference between active and inactive persons between 18 and 64 years old	\$1,100
Subtotal of health care benefits (18-64)	\$24,800,000
Adults 65 Years of Age and Older	
Number of adults (65+) physically active in parks*	1,570
Average annual medical care cost difference between active and inactive persons over 65 years old	\$2,210
Subtotal of health care benefits	\$3,470,000
Total annual value of health benefits from parks	\$28,300,000
Total adults active in parks*	24,000

* Calculations are based on persons using San José parks, trails, and community centers exclusively to engage in sufficient levels of moderate and/or vigorous activity that meet the CDC's physical activity guidelines.

49 M. Pratt, C. A. Macera, and G. Wang, "Higher Direct Medical Costs Associated with Physical Inactivity" (*Physician and Sportsmedicine* 28, no.10, 2000, pp. 63-70).

50 The unadjusted medical cost consumer price index was used to account for inflation. U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index for all urban consumers, not seasonally adjusted, U.S. City Average for Medical Care (accessed February 4, 2015, <http://data.bls.gov/pdq/querytool.jsp?survey=cu>).

51 Roland D. McDevitt and Sylvester J. Schieber, *From Baby Boom to Elder Boom: Providing Health Care for an Aging Population* (Washington, DC: Watson Wyatt Worldwide, 1996).

52 U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, "The High Concentration of U.S. Health Care Expenditures" (accessed September 18, 2013, <http://www.ahrq.gov/research/findings/factsheets/costs/expriach/index.html#HowAre>).

53 This estimate is conservative because it does not include health care cost savings that result when children use these resources to an extent that makes them healthier; however it has been shown that parks can increase the physical activity of youth.

Community cohesion

Parks are key sources of community, along with schools, churches, and other social gathering spaces. Studies show that these institutions and places can make a neighborhood stronger, safer, and more successful.⁵⁴ This network, for which urbanist Jane Jacobs coined the term “social capital,” is strengthened in some communities by parks. Parks offer opportunities for people of all ages to communicate, compete, interact, learn, and grow. The acts of improving, renewing, or even saving a park can build extraordinary levels of social capital in a neighborhood that may be suffering from fear and alienation partially owing to the lack of safe public spaces. Local groups and organizations, such as the Guadalupe River Park Conservancy, the Happy Hollow Park Foundation, the San José Parks Foundation, and the South Bay Clean Creek Coalition, have garnered support for parks and enhanced the recreational, educational, and cultural assets in San José by encouraging and soliciting support of the community’s park resources.

The economic value of social capital is difficult to fully capture, but it is possible to measure the amount of time and money that residents donate to their parks. Hundreds of San Joséans do everything from picking up trash and pulling weeds to planting flowers, raising playgrounds, teaching



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San Jose Municipal Rose Garden. People come together in parks, and this social capital can be measured economically in volunteer hours and the contributions of non-profit groups.

⁵⁴ Puget Sound Regional Council, *Sustainable Parks and Open Space* (accessed September 22, 2014, http://www.psrc.org/assets/11774/Sustainable_Parks_and_Open_Space.pdf?processed=true).

about the environment, and educating public officials. Additionally, individuals and organizations make financial contributions toward improving park resources.

The Trust for Public Land calculated the financial contributions made to “friends of parks” groups, community park organizations, and nonprofits for park purposes in 2014, the most recent year for which data are available. The Trust for Public Land also included all the hours of volunteer time donated directly to the city’s adopt-a-park program, the Senior Nutrition Program, and special events at community centers, including senior and leisure programs, as well as volunteer time donated to park organizations. This number of volunteer hours was then multiplied by the value of a volunteer hour in California in 2014 – \$26.87 – assigned by Independent Sector.⁵⁵

Overall San José has a high rate of volunteering. In 2014, San José ranked 11th among the 51 largest cities for residents volunteering. Parks generate a noteworthy portion of volunteer hours and financial contributions.⁵⁶ In 2014, the financial contribution to San José parks was \$1.99 million and 154,000 hours of volunteer time were donated.⁵⁷ Therefore, the combined social capital value was \$6.14 million (see Table 10).

Table 10. Community cohesion value for San José (2014)

CATEGORY	
Dollars donated	\$1,990,000
Hours of time donated	154,000
Value of a volunteer hour, 2014	\$26.90
Value of hours donated	\$4,150,000
Total	\$6,140,000

⁵⁵ Independent Sector, “The Value of Volunteer Time” (accessed November 4, 2015, https://www.independentsector.org/volunteer_time).

⁵⁶ Corporation for National and Community Service, “Volunteering and Civic Engagement in San Jose, CA” (accessed December 14, 2015, <https://www.volunteeringinamerica.gov/CA/San-José>).

⁵⁷ Information about donated volunteer hours and financial contributions were provided to The Trust for Public Land by San José park support organizations including: California Native Plant Society (Santa Clara Valley Chapter); Christmas in the Park; City of San José Parks, Recreation, and Neighborhood Services; City of San José Recreation and Community Services Division; Friends of Coyote Creek Watershed; Friends of Lake Cunningham Regional Park; Guadalupe River Park Conservancy; Keep Coyote Creek Beautiful; Martin-Fontana Parks Association; San José Parks Foundation; San José Sharks Foundation; Santa Clara Valley Open Space Authority; and South Bay Clean Creeks Coalition. This analysis does not include volunteer information for the Happy Hollow Park and Zoo, PRNS’s Community Gardens Program or the PRNS’s Anti-Graffiti and Anti-Litter Initiatives. Information on these programs is available from PRNS upon request.

Economic development

Quality of life plays a critical role in San José's economic development because the most sought-after employees in today's economy consider more than salary when choosing places of employment. For example, one survey of high-tech workers found that a job's attractiveness increases by 33 percent in a community with a high quality of life.⁵⁸

Park amenities, such as those provided by San José, can enhance a community's quality of life. Skilled workers are attracted to places with parks, clean air and water, and diverse opportunities for outdoor recreation. San José, which has a host of parks and trails with beautiful scenery and ample recreational opportunities, makes the area an attractive place to live and work.

Additionally, businesses are drawn to these places to recruit the best workers. Companies, particularly those involved with the knowledge-economy, are increasingly moving to places with access to nature and outdoor spaces. One article explains that the debates about public lands "often miss this fundamental nexus between beautiful places, quality of life and economic opportunity. Lazy discourse often pegs public lands as a drag on local economies. In reality, they are a boon, luring new companies, top talent and local investment."⁵⁹ A study by Headwaters Economics described



Emma Prusch Farm Park.

58 Garry Sears and Daniela De Cecco, "High-Tech Labour Survey: Attracting and Retaining High-Tech Workers" (*KPMG and CATA Alliance*, June 5, 1998).

59 GreenBiz, "For Today's Companies, Nature Is a Top Recruiter" (accessed September 2, 2015, <http://www.greenbiz.com/article/todays-companies-nature-top-recruiter?src=nws8-20>).



Guadalupe River Trail. The recreation and transportation opportunities provided by local trails make San José an attractive area for families and businesses.

that in “today’s economy, the bulk of economic value of public lands lies in its ability to attract people—and their businesses—who want to live near protected lands for quality of life reasons.”⁶⁰

This is particularly important in Silicon Valley, where a large concentration of high-technology engineering, computer, and microprocessor companies has been recognized for its role in driving the economy.⁶¹ Over half of the 15 largest employers in San José are high-tech or information technology companies. Additionally, the 15 major high-tech employers account for approximately 39,400 San José jobs.⁶²

⁶⁰ Headwaters Economics, *The Economic Benefits of the Land and Water Conservation Fund* (November 2009, http://headwaterseconomics.org/pubs/protected-lands/LWCF_Economic_Benefits.pdf).

⁶¹ Forbes, “San José, CA” (accessed June 25, 2015, <http://www.forbes.com/places/ca/san-josé/>).

⁶² City of San José, “Fact Sheet” (accessed June 25, 2015, <https://www.sanjoséca.gov/DocumentCenter/View/780>).

Conclusion

This study of San José's parks definitively shows benefits due to increased tax revenue from tourism and property taxes; reduced health, and recreation costs from the provision of publicly available amenities; higher property values at the time of sale; a more socially interconnected citizenry, and an enhanced community ability to deal with the environmental challenges of stormwater management and air pollution.

While reams of urban research have been carried out on the economics of housing, manufacturing, retail, and even the arts, this is the first comprehensive study on the worth of San José's park system. The Trust for Public Land believes that answering this question—"How much value does a city park system bring to a city?"—is profoundly useful. With parks being assigned an economic underpinning, urban analysts can better understand how they fit into the equation of making cities work. With this kind of knowledge, the mayor, the city council, park advocates, and developers may find the solid, numerical motivation to strategically acquire parkland in balance with community development projects.

Research by economists Gerald Carlino and Albert Saiz has concluded that metropolitan areas rich in amenities such as parks, historic sites, museums, and beaches have disproportionately attracted highly educated individuals and experienced faster housing price appreciation. Additional research by such academics as John Crompton and Hank Savitch have indicated that great parks, trails, and recreational amenities are key ingredients to attracting talent and distinguishing a city as a good place to live. This is certainly the proven case for San José.

Determining the economic value of a city park system is a science still in its infancy. More research and analysis are needed regarding park usership, park tourism, adjacent property transactions, water runoff and retention, and other measures. In fact, every aspect of city parks, from design to management to programming to funding to marketing, will benefit from deeper investigation and analysis. This study is offered as a mechanism to begin a conversation about the present and future role of parks within the life—and economy—of San José.

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