



San José Environmental Services Department

ESD2017

Annual Report



Environmental Services





Kerrie Romanow
Environmental Services
Director

Our Mission

Delivering world-class utility services and programs to improve our health, environment and economy.

Our Vision

A place where people do great work and make a difference.

Greetings from the Director

Every year I grow more grateful for the amazing staff of the Environmental Services Department (ESD), the San José community, and our many partners.

The **team at ESD** is resourceful and tireless in protecting the environment, improving public health, and providing a strong foundation for the San José economy. ESD staff run a first-rate wastewater treatment facility, provide clean drinking water, deliver recycled wastewater, oversee garbage collection and recycling, safeguard local waterways, and spearhead creative renewable energy programs, among many other vital services.

It's so rewarding to see how San José residents of diverse backgrounds respond to our work. Residents have embraced programs to collect household hazardous waste and **get junk off city streets** to keep their neighborhoods safe and free of blight. They've shown tremendous support for the City's new green utility, San José Clean Energy, which will help the City meet its ambitious sustainability goals. And enthusiastic visitors have **toured the San José-Santa Clara Regional Wastewater Facility**, learning about our \$1.4 billion Capital Improvement Program.

We owe much of our success to close collaboration with community partners, working together on many separate efforts that benefit the entire city. I wish I had the space to list every one of them here, but I'll highlight a few. The city's top sports franchises — the Sharks and Earthquakes — have helped us get the word out on important programs to **prevent pollution** and reduce waste. We are fortunate to have **committed volunteers** who remove tons of trash from San José creeks. We also have teamed up with San Jose State University to reduce waste when students move out at the end of the school year.

That's just a taste of what we accomplished together last year. Read on for the full story!

Kerrie



What Do We Do? Make a Difference.

The Environmental Services Department's programs and services affect everybody in San José.

ESD's waste management programs support residents and businesses by providing reliable trash-removal services and intelligent recycling initiatives. Protecting and enhancing our watersheds make San José a more attractive place to live and work while keeping San Francisco Bay clean.

Our meticulous water-quality testing makes sure water is safe to drink, while our sustainability programs deliver a cleaner, greener future.

The San José-Santa Clara Regional Wastewater Facility uses an elaborate [tertiary treatment process](#) to produce exceptionally clean wastewater, protecting public health and the environment and contributing to a [thriving ecosystem](#) in the southern Bay. Bald eagles and peregrine falcons soar above the lagoons and marshes, while dozens of fish species dart through the water below.





Ashwini Kantak
Environmental Services
Assistant Director

Big Strides on Infrastructure Program

The City of San José has embarked on the biggest public works project in the history of the South Bay, a \$2 billion program to remake the [San José-Santa Clara Regional Wastewater Facility](#) (RWF) over the next three decades.

Situated on 2,600 acres on the southern rim of San Francisco Bay, the RWF is the largest advanced wastewater treatment facility on the West Coast, serving 1.4 million residents and thousands of businesses in a 300-square-mile region of the South Bay.

After 61 years of continuous operation, the wastewater facility requires a suite of upgrades to replace aging infrastructure, incorporate new and more efficient technology, and maximize resource recovery. The City is now in the heart of the rebuilding campaign: a 10-year, \$1.4 billion Capital Improvement Program (CIP) to enhance the RWF by improving performance and reliability.

Developing and executing such a complicated program, while running the wastewater facility 24 hours a day, seven days a week, is a daunting task, one that requires a unique blend of technical expertise and ingenuity, not to mention spirit and dedication.

I am incredibly proud of the hundreds of staff who have stepped up to this challenge so brilliantly. I want to thank all the men and women on our RWF operations and maintenance and CIP teams. We have already reached several important milestones in this vital project, with many more on the way!

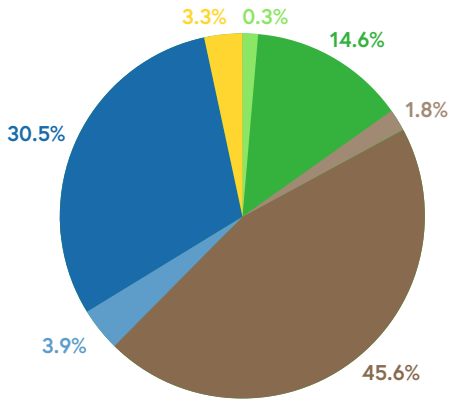
A handwritten signature in blue ink that reads "Ashwini".

Ashwini



Budget at a Glance

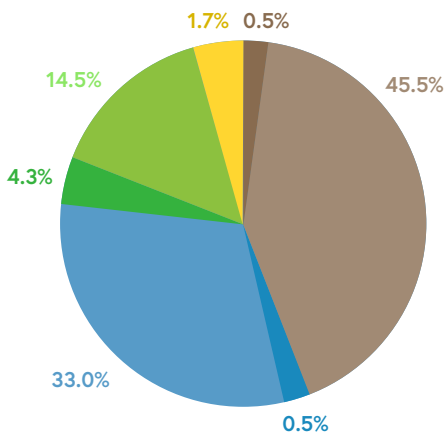
Fiscal Year 2016-17 Summary



Expenditures by Core Service

● Natural and Energy Resources Protection	\$ 769,559
● Potable Water Delivery	\$ 37,729,702
● Recycled Water Management	\$ 4,590,890
● Recycling and Garbage Services	\$ 117,322,601
● Stormwater Management	\$ 10,107,952
● Wastewater Management	\$ 78,637,445
● Strategic Support	\$ 8,595,112

Total \$ 257,753,261



ESD Funding Sources

● General Fund	\$ 1,372,274
● Integrated Waste Management Fund	\$ 117,002,508
● Sewer Service & Use Charge Fund	\$ 1,341,649
● SJ/SC Treatment Plant Operating Fund	\$ 85,209,484
● Storm Sewer Operating Fund	\$ 10,961,843
● Water Utility Fund	\$ 37,509,083
● Capital Funds	\$ 4,356,420

Total \$ 257,753,261

**540
TOTAL
STAFF**

The Environmental Services Department consists of more than 500 full-time employees across multiple divisions, all dedicated to improving the health, environment and economy of San José.





Jeff Anderson
Integrated Waste Management
Interim Deputy Director

Keeping Our City Clean

The Integrated Waste Management Division oversees garbage collection, recycling, and innovative programs to enhance quality of life.

Integrated Waste Management (IWM) administers waste removal in San José, managing contracts with four residential haulers and one commercial hauler that serve more than 8,000 businesses, 215,000 single-family dwellings, 106,000 multifamily dwellings, and 200 City facilities. Residential services include curbside garbage and recyclables; household hazardous waste dropoff; and [free junk pickup](#).

The IWM team is flexible and forward-thinking, devoted to reducing waste and diverting material from landfills through innovative programs and partnerships with organizations such as the San Jose Giants and San Jose Earthquakes.



IWM also has taken a lead role in the City's campaign against blight. The division has formed RAPID ([Removing and Preventing Illegal Dumping](#)), a dynamic, nine-member team that clears trash from city streets. And it established a popular Junk Pickup program that provides residents a free and easy way to get rid of unwanted items.

PICK UP LITTER

PUT LITTER IN THE TRASH CAN
www.MyWatershedWatch.org

Chris Wondolowski
Forward
#8



Fiscal Year 2016-17 Highlights



More than two-thirds of waste — 68 percent — was diverted from landfills and recycled, well above the 50 percent diversion rate required under state law.

With the help of partner Zero Waste Energy Development, which uses dry anaerobic digestion to process organic waste from San José restaurants, 67,322 tons of organic waste were kept out of the landfill in 2016.

The **RAPID** team cleaned 6,880 sites, removing an average of 15 tons of garbage per week. The Junk Pickup program made approximately 31,000 appointments with residents, more than double the number from the previous fiscal year, and collected 3,079 tons of junk.

The household hazardous waste (HHW) facility at the San José Environmental Innovation Center saw a record 15,224 appointments, up nearly 10 percent from the previous fiscal year, and 663 tons of HHW material were collected.

75%
RECYCLING
RATE

Three-quarters of construction and debris materials in San José are recycled under a program that incentivizes developers to use haulers who minimize landfill waste.

Recognition



“ SJSU's partnership with ESD enables students to provide a service to the community and local government. Integrated Waste Management staff have been fantastic to work with: creative, committed and solution-minded. ”

—Bruce Olszewski,
Director of the Center
for Development of Recycling,
San Jose State University



Amit Mutsuddy
Wastewater Management
Deputy Director

Protecting the Bay

The San José-Santa Clara Regional Wastewater Facility provides world-class wastewater treatment for San José and surrounding communities.

The Wastewater Management group operates and maintains the [San José-Santa Clara Regional Wastewater Facility \(RWF\)](#), which supplies sophisticated tertiary wastewater treatment to more than 1.4 million residents and 17,000 businesses in the Santa Clara Valley.

Wastewater Management consists of three divisions: Wastewater Operations, Energy and Automation, and Facility Maintenance.

More than 200 passionate and dedicated employees run the wastewater facility, which operates around the clock, 365 days a year, discharging more than 80 million gallons of clean, treated wastewater daily into the southern reaches of San Francisco Bay.

First commissioned in 1956, the RWF is owned by the cities of San José and Santa Clara. The wastewater facility also serves five tributary agencies and sanitary districts:

- City of Milpitas
- Cupertino Sanitary District
- West Valley Sanitary District
- County Sanitary District No. 2-3
- Burbank Sanitary District



Wastewater facility staff pride themselves on scrupulous adherence to effluent regulations in order to protect public health and benefit [wildlife](#).



Fiscal Year 2016-17 Highlights



The wastewater facility treated 96 million gallons of wastewater per day in 2016, discharging an average of 81 million gallons per day of treated effluent into the Bay.

The RWF maintained successful, uninterrupted operations while accommodating a \$1.4 billion Capital Improvement Program (CIP) to rebuild the facility. The CIP required 127 shutdowns of varying lengths and complexities, including multiple facilitywide power blackout tests for [new emergency generators](#).

Operations and maintenance staff completed numerous important projects to ensure the optimal functioning of the wastewater facility, including the construction of new pumps, replacement of flow meters and valves, and installation of new natural gas meters. Staff also relocated the operations control center and computer room.

81
MILLION
GALLONS

The average amount of treated wastewater discharged daily from the RWF in 2016 into San Francisco Bay, enough to fill 123 Olympic-size swimming pools.

“*Effluent from the San José-Santa Clara Regional Wastewater Facility is the largest source of fresh water to the lower south San Francisco Bay, supporting a low-salinity habitat that is rich in estuarine species. Without this water, many species that make the Alviso Marsh their home, including some of conservation concern, would not survive.*”

—James Hobbs,
Assistant research scientist,
UC Davis

Recognition





Linda Charfauros
Administrative Services
Division Manager

Budgeting and Essential Support

The Administrative Services Division performs vital functions ranging from recruiting and training new staff to information technology.

Administrative Services provides strategic support for ESD, fulfilling essential behind-the-scenes functions that ensure the department runs smoothly.

The experts of Administrative Services develop, monitor and manage the department's operating and capital budgets, while forecasting the department's five main operating funds.



The division also handles fiscal and accounting matters, from timekeeping to preparing complex financial statements.



Administrative Services has an information technology group that manages customer support for desktop equipment, servers and ESD's network. The group also manages and customizes computer applications.

The division's Employee Services team oversees recruiting, onboarding and training of new staff. This unit also addresses human resources questions and tasks.

A contracts team helps ESD staff procure consulting services through a competitive process.

5%
DECLINE IN
VACANCY

The vacancy rate at ESD dropped from 17 to 12 percent after a successful recruitment effort to fill many open positions.

Fiscal Year 2016-17 Highlights

The division's budget team developed the ESD budget, a critical funding roadmap for citywide and department priorities.

Employee Services staff lowered ESD's vacancy rate, which has been affected by staff retirements, from 17 percent to 12 percent. ESD hired nine environmental inspectors and seven lab technicians, among other positions.

The division maintained a strong focus on professional development, conducting 29 classes and one academy with a total attendance of 589. Many of the classes were taught by ESD staff, allowing for onsite skills development and the transfer of institutional knowledge.



Information technology staff developed an Environmental Services Information Technology Master Plan. The document includes guiding principles and objectives for selecting and prioritizing the department's IT projects as well as performance indicators for measuring the plan's success.

“ *The Water Career Pathways externship hosted by ESD connected teachers to water careers in San José and helped me learn about local water issues and apply them to my classroom. It was heartwarming to see the seriousness with which people take the responsibility of caring for our water supply.* ”

—Gary Liu,
Teacher,
Calero High School, San José

Recognition





Julia Nguyen
Capital Improvement Program
Deputy Director

Building the Future

The San José-Santa Clara Regional Wastewater Facility Capital Improvement Program is making one of the nation's top wastewater facilities even better.

The Capital Improvement Program (CIP) is responsible for planning, coordinating and delivering major capital improvement projects for the Regional Wastewater Facility (RWF).

The CIP is well into implementation of a 10-year, \$1.4 billion construction effort to rehabilitate and replace aging infrastructure and improve treatment processes with new technology. These improvements will boost reliability and operational flexibility while

preparing the wastewater facility for regulatory changes, maximizing community benefits, and improving wildlife habitat.



The project is the largest capital improvement project in San José, representing an exciting opportunity and rewarding challenge for CIP's energetic staff.

Master planning of the initiative took place from 2007 to 2010, followed by environmental review and final approval of the Plant Master Plan in late 2013. The 10-year CIP, consisting of 33 project packages, was initiated in fiscal year 2014-15. Most construction work is scheduled for completion by 2023-24.

Recognition



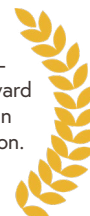
WINNER

Achievement Award for Organizational Excellence from the California Association of Sanitation Agencies.



WINNER

National Environmental Planning Award from the American Planning Association.



WINNER

Award of Merit in Green Community Planning from the Northern California chapter of the American Planning Association.



Fiscal Year 2016-17 Highlights

CIP staff advanced 23 active projects totaling approximately \$1 billion through various phases of development. Thirteen projects advanced through the feasibility/development phase, three projects went through detailed design, and seven projects were in active construction.

The Digester Gas Compressor Upgrades and [Emergency Diesel Generators](#) projects completed major construction. The four new diesel generators will enable the facility to continue operations for 72 hours if the RWF loses power in an emergency or is disconnected from the local power grid.

Detailed condition assessments got underway on the Blower Improvements, Filter Rehabilitation, Advanced Facility Control and Meter Replacement, and Facility-wide Water Systems Improvement projects.

Design progressed on the new 12.5-megawatt Cogeneration Facility that will replace aging engine generators and allow the RWF to continue to reliably produce its own energy using biogas and natural gas.

Seven projects were under construction with a total value of \$205 million, including the [Digester & Thickener Facilities Upgrade](#), Digester Gas Compressor Upgrades, Emergency Diesel Generators, Plant Instrument Air System Upgrade, and Iron Salt Feed Station.

**\$205
MILLION**

The total value of seven CIP projects under construction at the Regional Wastewater Facility as of summer 2017, modernizing the RWF and supporting the local economy.

“ I am proud of the way in which RWF operations and maintenance staff, CIP staff, the construction management group, and vendors have worked as a team to overcome challenges and move this important program forward. Their ability to solve problems under tight deadlines is a testament to their dedication, flexibility and willingness to collaborate even in stressful situations. ”

—Tim Lewis,
Operations manager,
Regional Wastewater Facility





Jeff Provenzano
Water Resources
Deputy Director

Clean and Safe Water

The Water Resources Division provides drinking water to 12 percent of San José residents and recycled wastewater for industrial and agricultural use.

Water Resources ensures a high-quality water supply for our community. Staff are committed to excellence, knowing how essential water is to people's daily lives.

The division operates the San José Municipal Water System, which provides a safe and reliable source of clean drinking water to more than 100,000 customers in San José.

Muni Water delivers water to four service areas: North San José/Alviso,

Evergreen, Edenvale and Coyote Valley. Water sources vary by service area and include Hetch Hetchy, groundwater and local reservoirs.



The division also runs South Bay Water Recycling (SBWR), a recycled water wholesaler serving four water retailers: Muni Water, San Jose Water Company, Santa Clara and Milpitas. SBWR provides recycled water from the San José-Santa Clara Regional Wastewater Facility for irrigation and industrial use to roughly 850 customers in the South Bay. It is the largest recycled water system in Northern California.

**100
MILLION
GALLONS**

The amount of clean drinking water distributed annually to San José customers.

Fiscal Year 2016-17 Highlights

Muni Water's customers demonstrated their commitment to conservation by **reducing water use** by 27 percent in 2016, exceeding conservation targets. Even though water supply levels have returned to normal and the call for water use reductions in San José has ended, it's important to make efficient water use a part of our daily lives.

The division completed a steel reservoir replacement project that upgraded six water tanks that together hold up to 14 million gallons of water. The project involved replacing the interior lining of the tanks.

Muni Water staff collected and analyzed more than 5,000 water samples to ensure customers received a safe and secure water supply.

SBWR delivered its highest volume of recycled water to date: 11 million gallons per day. That's about 4 billion gallons per year, representing a revenue stream of \$9.6 million, making SBWR a cost-neutral, self-sustaining program. Every gallon of recycled water SBWR customers use represents a gallon of drinking water saved.



“ We drink a lot of water in our family, avoiding soda and sugary drinks. I've been to other cities where I didn't like how the water tasted or smelled. But the water from our tap is clean and tastes good. ”

—Jayant Mistry,
Muni Water residential customer



Napp Fukuda
Watershed Protection
Deputy Director

Conserving Our Waterways

The Watershed Protection Division keeps trash and toxins out of creeks and the Bay.

Watershed Protection preserves the aquatic resources of San José and helps residents and businesses understand how their activities and choices affect the regional watershed and San Francisco Bay.

The division is responsible for overseeing the regulatory compliance of the storm sewer system, keeping pollution from entering waterways and flowing to the Bay. Staff are devoted to the health of the local ecosystem, facilitating activities such as creek cleanups to remove trash and debris from local waterways.

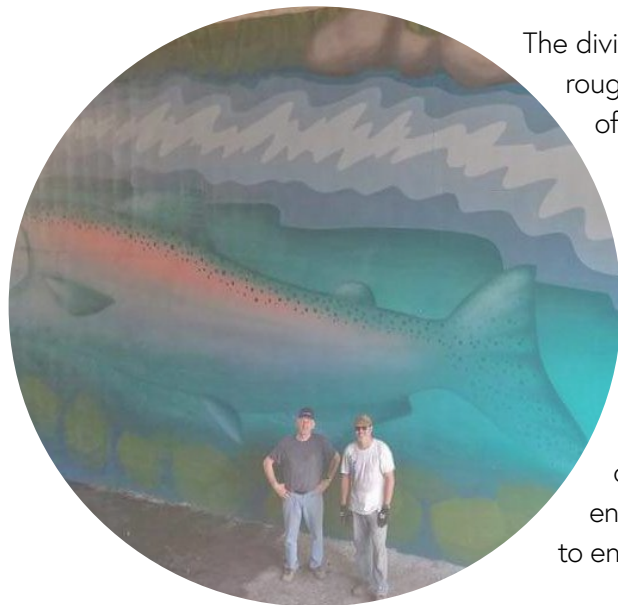


Watershed Protection staff are mobile and hands-on, inspecting thousands of businesses to keep pollutants, including mercury in dental amalgam, out of wastewater. This effort includes working with restaurant owners to reduce fats, oils and grease that are discharged into the sanitary sewer system. These materials can cause sewage overflows that harm local creeks.

The division also performs laboratory services, testing water from creeks and the San José-Santa Clara Regional Wastewater Facility (RWF) to ensure effective operation of the RWF's treatment processes and compliance with environmental quality regulations.

FY 2016-17 Highlights

Watershed Protection exceeded a state mandate of 70 percent for reducing the trash load entering local waterways from the stormwater system by 2017. This achievement was due in part to the underground installation of 11 [large trash-capture systems](#) — bringing the total installed to date to 21 — and partnering with nonprofits on [litter pickup events](#).



The division administered roughly 13,000 inspections of San José businesses to make sure they were complying with regulations to keep toxins and pollutants out of the Bay.

Staff conducted more than 50,000 analyses of water samples to ensure rigorous adherence to environmental controls.

“ We would not have been as successful in removing 182 tons of harmful trash from the Guadalupe River watershed since 2013 without the continued support of ESD in the form of resources, coordination and problem-solving. ”

—Steve Holmes,
Executive director,
South Bay Clean Creeks Coalition

79%
TRASH
REDUCTION

The reduction in the trash load entering the storm sewer system in San José was 79 percent, exceeding a 70 percent state mandate.

Recognition





Ken Davies
Sustainability and Compliance
Division Manager

Energy and Regulations

The Sustainability and Compliance Division pursues energy efficiency and scans the evolving regulatory landscape.

Sustainability and Compliance is responsible for managing green energy programs and ensuring the department adheres to a host of regulatory requirements.

The ingenious sustainability staff envision our future, advancing the City's goals of improving energy efficiency and boosting the use of renewable energy. Programs include Silicon Valley Energy Watch, which ESD administers to provide PG&E customers in Santa Clara County with resources and information to reduce energy consumption and save money on their bills.



Diligent members of the compliance team keep their eyes on present and future regulations, overseeing the department's strict adherence to standards including:

- The National Pollutant Discharge Elimination System (NPDES), which regulates the effluent discharged from the San José-Santa Clara Regional Wastewater Facility (RWF).
- Title V of the Clean Air Act, which regulates air pollution produced in the operation of the RWF.
- Workplace health and safety regulations, such as those enforced by the federal Occupational Safety and Health Administration.



Photo at center by Ron Lam.

Fiscal Year 2016-17 Highlights

The City Council unanimously approved the creation of San José Clean Energy, a community choice energy program that will enable customers to increase their renewable energy consumption while keeping power rates low.



In partnership with the Mayor's Office, ESD began developing Climate Smart San José to reduce greenhouse gas emissions, ensure a long-term water supply, and improve quality of life.

Compliance staff earned renewal in March of the Title V permit to operate the Regional Wastewater Facility.

The division continued to manage RWF bufferlands to mitigate any environmental impacts from the Capital Improvement Program. It also entered into a five-year agreement with the Santa Clara Valley Habitat Agency to manage 201 acres of western burrowing owl habitat on the bufferlands and help the population continue to thrive.

28
MILLION
KILOWATTS

The amount of energy saved from April 2015 through December 2016 as a result of the Step Up and Power Down program.

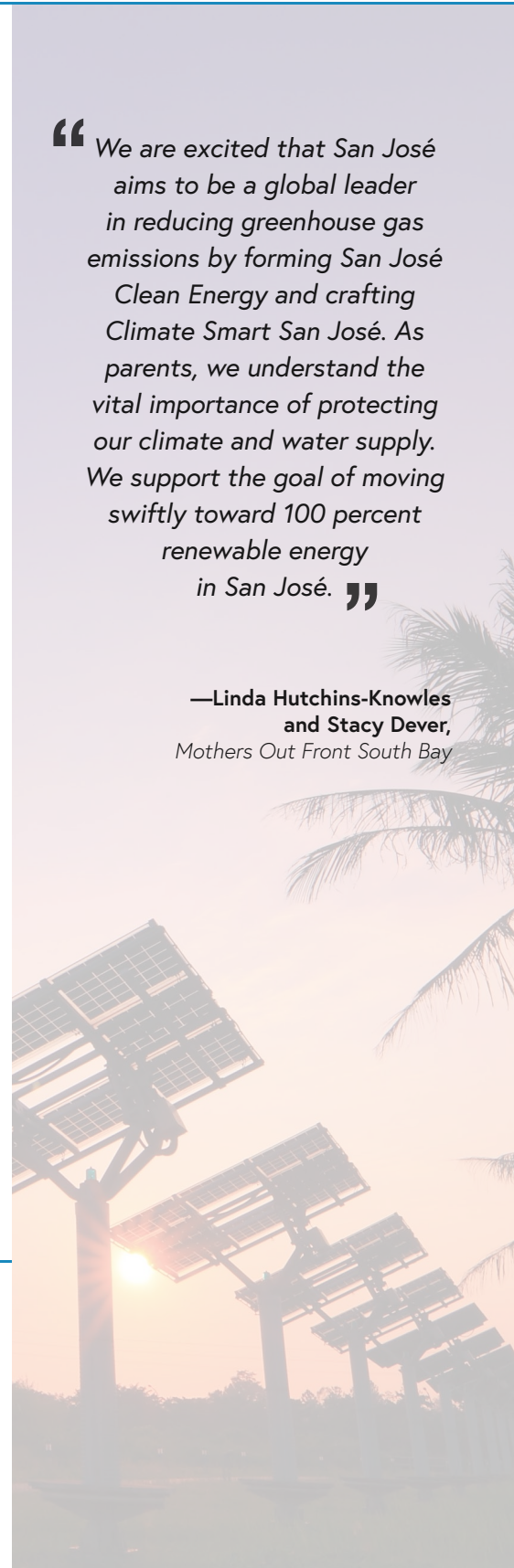
Recognition

WINNER
Earned \$1.2 million by increasing energy savings of San José businesses through the Step Up & Power Down program.

WINNER
Received a grant from the City Energy Project to reduce energy consumption in large buildings.

“ We are excited that San José aims to be a global leader in reducing greenhouse gas emissions by forming San José Clean Energy and crafting Climate Smart San José. As parents, we understand the vital importance of protecting our climate and water supply. We support the goal of moving swiftly toward 100 percent renewable energy in San José. ”

—Linda Hutchins-Knowles and Stacy Dever,
Mothers Out Front South Bay



Our Mission

Delivering world-class utility services and programs to improve our health, environment and economy.

Our Vision

A place where people do great work and make a difference.

www.sjenvironment.org

Follow us on social media @sjenvironment



Photo on bottom of front cover by Janet Hayes.

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