



2019 Semi-Annual Sustainability and Climate Action Report

June 2019

County of Santa Clara Office of Sustainability

Cover Images

Top Left: Guadalupe Parkway Solar Project.

Center: UC Master Gardener's demonstration gardens at Martial Cottle Park.

Right: County operations Electric Vehicle Charging.

Bottom Left: VTA Light Rail train in downtown San Jose.

Center: Goats grazing at Muriel Wright Center.

Right: Santa Clara Valley foothills from Ed Levin Park.

(this page intentionally left blank)

TABLE OF CONTENTS

INTRODUCTION	5
Part I - Sustainability Master Plan Progress	10
Part II – Environmental Stewardship Goals and Programs	16
<i>A. Natural Resources and Environment</i>	16
A.1. Solid Waste	16
A.2. Water	18
A.3. County Trails	19
A.4. Trees and Sustainable Landscapes	20
<i>B. Built Environment</i>	25
B.1. Lighting Installation	25
B.2. Sustainable Buildings	26
B.3. Land Use Planning	27
<i>C. Climate Change and Defense</i>	28
C.1. Greenhouse Gas Reduction Goals and Monitoring	28
C.2. Energy Efficiency and Conservation	32
C.3. Clean Energy	37
C.4. Transportation	41
C.5. Climate Change Preparedness	44
<i>D. Public Health, Safety, and Equity</i>	47
D.1. Toxics Reduction	47
<i>E. Economy and Innovation</i>	49
E.1. Green Workforce Development	49
<i>Summary</i>	50
<i>Appendix</i>	51

INTRODUCTION

The County of Santa Clara is committed to “building and maintaining a healthy and safe community for current and future generations through preserving natural resources and the environment, fostering a healthy economy, and meeting the basic needs of all residents with respect and cultural awareness.”¹ These three elements – a healthy environment, vibrant economy, and social equity – provide the County’s vision for “sustainability.” Sustainability supports the County, its businesses and its residents’ abilities to meet the needs of today without compromising the ability of future generations to meet their needs.

Because the County of Santa Clara Board of Supervisors recognized that the interrelationships among these elements are more important than any one element, the Board mandates the County to develop public policy and programs that pursue a thoughtful, balanced approach when interests compete.² This balanced approach should focus new programs and policies primarily on shared interests, whenever possible.³ Our County is asked to “think sustainably” and utilize, when appropriate, an inclusive collaborative process that aims to produce visionary decisions today that will ensure a viable, thriving community for the future.⁴

The Board further recognized three essential characteristics to fully integrating the County’s commitment to sustainability:

- (1) A focus on serving the community, enhancing the economy, protecting local environmental resources and establishing a vision of sustainability for all programs and policies that the County will adopt;
- (2) Actions to build a sustainable governmental agency with a sound financial foundation, a diverse, innovative, productive workforce and a light environmental footprint; and,
- (3) Leadership in the community and the region with elected officials and staff working collaboratively with other counties, cities, agencies and organizations to develop solutions that provide wide-reaching benefits, and by setting an example of thoughtful, innovative, balanced approaches to policy and programs.⁵

¹ Santa Clara County Board of Supervisors Policy Manual, Part. 8.1, Sustainability, p. 8-1 (Adopted 4-27-10).

² *Ibid.*

³ *Ibid.*

⁴ *Ibid.*

⁵ *Ibid.* at 8-1, 8.2.

The County's public servants are eager to advance a healthier environment, a vibrant economy, and social equity. Within each department, County employees are actively pursuing ways to do so. Furthermore, the County is currently developing a Sustainability Master Plan and management system that will actualize coordinated collaboration and strategically balance and advance sustainability and climate defense.⁶

Semi-Annual Report Scope and Organization

On April 3, 2018,⁷ the County of Santa Clara Board of Supervisors (Board) adopted recommendations from the Finance and Government Operations Committee (FGOC) and the Housing, Land Use, Environment, and Transportation (HLUET) Committee to revise the Office of Sustainability's scope and schedule for reporting sustainability and climate defense progress. This *2019 Semi-Annual Sustainability and Climate Action Report (Semi-Annual Report)* conforms to the Board's new direction and describes progress through to May 30, 2019 toward achieving the County's:

- Environmental Stewardship Goals;
- sustainability and climate defense goals, policies, programs, and projects;
- Sustainability Master Plan.

Part I of this *Semi-Annual Report* provides an update on the County Sustainability Master Plan (SMP)⁸ and the efforts underway toward integrating sustainability principles, practices, and measures across the County organization, departments, and offices.

Part II provides a 2018 year-end update on the County's eleven Environmental Stewardship Goals (ESGs), and a 2019 mid-year update on the programs, activities, and initiatives underway that advance goal progress.

Schedule, Design, and Content of the Semi-Annual Report

Previously, the Office of Sustainability (OOS) delivered semi-annual reports updating FGOC on County sustainability and climate defense programs. The OOS also reported monthly to the HLUET Committee on the County's progress toward

⁶ Climate defense includes greenhouse gas emissions mitigation and climate change planning, adaptation, and resilience.

⁷ Item No. 16.

⁸ See the SMP Framework, which describes the SMP and management system, *available at*:

http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=SplitView&MeetingID=9946&MediaPosition=&ID=90605&CssClass=

achieving the eleven ESGs. A comprehensive ESG update was also prepared annually for both FGOE and HLUET.

To harmonize and consolidate sustainability and climate action reporting, the FGOE and HLUET committees agreed to one semi-annual (i.e., mid-year) and an annual (end-of-year) report that combined ESG and programs updates, thereby streamlining overall reporting while obtaining a more comprehensive report.

With this consolidation, the report format was modified to accommodate the expanded report scope and the categories being contemplated for the SMP's overall organization to improve goal-achievement. Although many sustainability and climate defense initiatives can be placed under various classifications, the five key categories being used to organize the County's sustainability and climate defense efforts are:

- Natural Resources and Environment
- Built Environment
- Climate Change and Defense
- Public Health, Safety, and Equity
- Economy and Innovation

Therefore, each ESG and sustainability program has been assigned a key category and is presented under that applicable category.

Because the data necessary to generate performance graphs and charts is typically collected annually, the graphs and charts in this *Semi-Annual Report* show information through December 2018, unless otherwise specified. Program and SMP progress is provided through May 30, 2019.

ENVIRONMENTAL STEWARDSHIP GOALS MATRIX

The *Environmental Stewardship Goals Matrix* below provides a cross-reference for the ESGs and accompanying programs.

ESG #	Goal	Category	Part II Reference
1	Ensure that 100% of light fixtures owned and operated by the County, in buildings, on streets, and in parks are at the highest energy efficiency standard.	Built Environment	B.1.1.
2	Reduce per capita energy use by 50%.	Climate Change and Defense	C.2.1.
3	Receive 100% of our electrical power from clean renewable sources.	Climate Change and Defense	C.3.1.
4	Ensure that 100% of County buildings are LEED certified and require LEED standards for construction in county land use jurisdictions.	Built Environment	B.2.1.
5	Divert 100% of county waste from landfills and convert waste to energy.	Natural Resources and Environment	A.1.1.
6	Reduce our consumption of water by 20% and recycle or beneficially reuse 100% of our waste water.	Natural Resources and Environment	A.2.1.
7	Adopt a County General Plan with measurable standards for sustainable development.	Built Environment	B.3.1.
8	Ensure that 100% of public fleet vehicles are electric, hybrid electric or run on alternative fuels.	Climate Change and Defense	C.4.1.
9	Work with local governments and regional authorities to ensure that all existing County trails are interconnected with local and regional trails.	Natural Resources and Environment	A.3.1.
10	Plant 1,000 trees in unincorporated urban county pockets and work with local governments and agencies to build a comprehensive urban forest.	Natural Resources and Environment	A.4.1.
11	Increase the available blue and white collar “clean and green workforce” course/trainings available regionally and in Santa Clara County and help place 20,000 trainees and graduates in the regional labor force by the end of 2013.	Economy and Innovation	E.1.

SIZE AND SCOPE OF COUNTY OPERATIONS

County Size and Scope	FY 2017-2018	As of Dec 2018
Total Number of Employee Positions	18,354 ⁹	19,900
Total Acres of Land Managed ¹⁰	2,747,601	2,747,661
Total Number of Buildings Owned (FAF only)	239	249
Total Number of Buildings Leased (FAF only)	62	62
Total Building Gross Square Feet (Owned, FAF Only)	5,185,000	6,079,621
Total Building Gross Square Feet (Leased, FAF Only)	1,430,000	1,463,500
Total Number of Fleet Vehicles Owned ¹¹	1645	1701
Total Number of Fleet Vehicles Leased	0	0
Total dollar value of contracts awarded (Millions \$)	544.1	Not requested

⁹ County of Santa Clara, FY18 Adopted Budget.

¹⁰ Facilities and Fleet Department (FAF), Parks and Recreation Department (PRK), and Roads and Airport Department (RDA) managed land / facilities.

¹¹ FAF and PRKs fleet vehicles only; does not include RDA.

Part I - Sustainability Master Plan Progress

On April 3, 2018,¹² the County of Santa Clara Board of Supervisors adopted the *Sustainability Master Plan Framework (Framework)*, which outlines the development of a Sustainability Master Plan (SMP) and management system to further the County's sustainability vision and goals. One of the primary objectives of the SMP is to develop effective mechanisms for both intra-County and regional collaboration to advance sustainability and climate defense. The *SMP Framework* is designed to result in the structures and means to increase collaboration for improved sustainability. Through increased collaboration, the County can better: prioritize and streamline efforts; leverage expertise and relationships; increase staff and community awareness; promote sustainable thinking; reduce redundancies; and support balanced sustainable decision-making.

Part II – Environmental Stewardship Goals and Programs shows that the SMP process is already fostering improved County coordination and collaboration on programmatic activities that impact sustainability. SMP progress is as follows:

(1) SMP County Coordination and Collaboration

- Sustainability Master Plan – Raimi + Associates

OOS contracted with Raimi + Associates (Raimi) in September 2017 to assist with the development of the SMP. However, the *SMP Framework* included a sustainability management system as a new element that was absent in Raimi's original work scope. Therefore, following Board approval of the *Framework* in April 2018, OOS worked with Raimi to amend the contract scope so that it aligns with the approved *Framework*. The contract amendment executed on November 29, 2018 extends the Raimi contract to June 30, 2020.

- Sustainability Training and the Sustainable County Working Group

On May 17, 2018, OOS staff received comprehensive, day-long training on the SMP and the sustainability management system's development. Following this training, OOS in consultation with Raimi assembled a list of departments and offices whose programs, activities, goods, or services are anticipated to most significantly impact County sustainability goals. The directors of these departments and offices were emailed and requested to assign a Sustainability Coordinator, who would participate in a Sustainable County Working Group (SCWG) and be a liaison to OOS. Departments and offices were also requested to complete an initial "sustainability survey" to identify the key five to ten programs,

¹² Item No. 16, available at: http://sccgov.iqm2.com/Citizens/Detail_Meeting.aspx?ID=9946.

activities, goods, or services within their areas that positively or negatively impact County sustainability.¹³

The survey information was used to inform the first SCWG meeting on June 7, 2018. The meeting agenda covered an overview of the County’s commitment to Sustainability, an update on the approved *Framework* and strategy, and a discussion of the roles and responsibilities of the Sustainability Coordinators. The following departments were invited to this initial SCWG meeting, and have assigned coordinators and completed surveys:

Department / Agency¹⁴	Assigned Coordinator	Completed Survey	Attended Training
Child Support Services	Y	Y	Y
Consumer and Environmental Protection Agency (CEPA)	Y	Y	Y
County Executive Office (CEO) – Procurement Office (Procurement)	Y	Y	Y
CEO - Risk Management Office	Y	Y	N
CEO - Office of Budget & Analysis	Y	n/a*	N
CEO - Office of Cultural Competency	Y	Y	Y
Department of Planning and Development (Planning)	Y	Y	Y
Employee Services Agency	Y	Y	Y
Facilities and Fleet Department (FAF)	Y	Y	Y
Finance Agency	Y	Y	N
Technology Services and Solutions (TSS) ¹⁵	Y	Y	Y
Office of Emergency Management (OEM) ¹⁶	Y	Y	Y
Parks and Recreation Department (PRK)	Y	Y	Y
Roads and Airports Department (RDA)	Y	Y	Y
Public Health Department (PHD)	Y	Y	Y
Health and Human Services (HHS)	Y	Y	Y
Social Services Agency (SSA)	Y	Y	Y
Supportive Housing	Y	Y	N
Local Agency Formation Commission (LAFCO)	Y	Y	Y
*n/a: indicates department was not asked to return the survey at this time.			

¹³ For more information see: Annual Sustainability and Climate Action Report, Appendix, available at: <http://sccgov.iqm2.com/Citizens/FileOpen.aspx?Type=4&ID=183597&MeetingID=11320>.

¹⁴ Acronyms listed above for various departments will be used throughout this document. This Table can be used as a quick reference.

¹⁵ Formerly Information Services Department (ISD).

¹⁶ Formerly Office of Emergency Services (OES).

Additionally, the OOS Director presented SMP “awareness” training at the June 22, 2018 Executive Circle/Executive Leadership Meeting, and to the TSS on September 21, 2018. In January 2019, OOS and FAF collaborated with the County Executive Office’s (CEO) Learning and Employee Development (LED) office to create an “introduction to County sustainability” segment, which is now part of a new employee orientation training video.

- One-on-One Departmental Interviews and Training

From April 2018 through December 2018, in anticipation of the new contract amendment that was executed in November 2018, OOS and Raimi began to prepare for one-on-one interviews that OOS would conduct with each County department. The purpose of these interviews is to identify the sustainability impacts of each department’s activities, and the County programs already in place that enhance sustainability and climate defense. OOS and Raimi worked together to develop a department interview “toolkit” and to clarify the long-term SMP strategy and ultimate deliverables.

On October 24, 2018, to test the new interview toolkit and discussion structure, OOS and Raimi facilitated interviews with designated staff from the FAF and the PHD. Prior to the interviews, departments were asked to complete a pre-interview worksheet on departmental activities to identify their sustainability impacts. These worksheets were used as a starting point for the departmental discussions. Following the first round of interviews, OOS and Raimi worked to revise and improve the worksheet and interview structure.

The revised protocols and toolkit were used in interviews conducted between February 1, 2019 and February 20, 2019 with RDA, Procurement, CEPA, and all offices of the CEO’s Social Equity Division. In March 2019, additional interviews were conducted with the departments of: Planning; PRK; LAFCO; and the OEM. Subsequently, OOS sent the pre-interview worksheet to all remaining departments that participated in the initial SCWG training. Thereafter, OOS attempted to schedule additional meetings during April and May 2019. However, scheduling conflicts resulted in additional interviews being scheduled in June with the Library, TSS, OPA, and FAF’s Fleet division. The remaining departments that need to be trained and/or interviewed include:

- Internal Support

- Employee Service Agency
- Finance Agency
- Learning Organization; Learning and Employee Development; Wellness
- Risk Management Department

Community-Facing

- Health and Hospital System
- Office of Public Affairs
- Office of Supportive Housing
- Office of Veteran’s Services
- Social Services Agency

Law Enforcement and Emergency Response

- Office of the Sheriff
- Pretrial Services
- Probation Department
- Public Defender’s Office
- Reentry Services
- Santa Clara County Fire Department

Currently, Raimi and OOS are compiling information already gleaned from the completed departmental interviews into a matrix of existing County programs and activities related to sustainability and climate defense. An emerging example of this matrix can be found in this *Semi-Annual Report’s* Appendix. Additionally, OOS has worked to develop a structural format to assemble County activities by goals, strategies, objectives, targets, and programs. An example of the structure is shown in Figure 1.

Goals, Objectives, Strategies

Climate Defense		
Goal #1: Climate Mitigation		
Strategy Areas	Clean Energy	Transportation
Objective and Target	The County is carbon neutral by 2045.	The County is carbon neutral by 2045.
Objective and Target	By December 2019, all County operational electricity will come from 100% renewable sources.	By 2033 diesel is eliminated from all County fleets and operations.
Sustainability Program	Renewables for Revenue solar projects	Diesel free by ‘33
Sustainability Program	County Electric Utility Services – Procure 100% renewable service options and Renewable Energy Certificates.	County Fleet Electric Vehicle Program

Figure 1: Example of SMP Goal Organization

The completed matrix is intended to organize and display the breadth of the County’s sustainability and climate defense activities and to inform future Board recommendations, the SMP report, and the Sustainability Management System’s structure.

(2) SMP Community Partnerships

- Community Climate Action Plan

In addition to the *SMP Framework’s* focus on the County’s internal operations and coordination, the *Framework* also includes consideration of the County’s external partners and the County’s important role in regional and community leadership to encourage collaboration and innovative solutions. The *Framework* process aims to identify ways that the County continues to lead, collaborate, and encourage counties nationwide, cities within the County of Santa Clara, other public agencies, and community partners to tackle shared sustainability and climate defense goals. It also aims to identify public outreach opportunities that can be leveraged to educate our community about the County’s sustainability and climate defense efforts and how they can assist. Consequently, a Community Climate Action Plan (CCAP) is a critical component of the *SMP Framework* process.

The County’s CCAP aims to support the County in developing effective mechanisms for local and regional collaboration, community engagement, and sustainability improvements related to climate defense. The final deliverables will include a county-wide greenhouse gas (GHG) emissions inventory, an organizational “relational network map,” and recommended strategies for the prioritization of and engagement with local and regional climate defense activities.

The CCAP is expected to:

- Leverage the best knowledge and information available;
- Develop a county-wide GHG emissions baseline by leveraging ongoing work occurring within Santa Clara County;
- Identify the key local and regional organizations working on sustainability efforts related to climate defense and these organizations’ primary initiatives, strategies, and activities;
- Clearly articulate the County’s specific roles, authorities, and ability to influence local and regional initiatives, strategies, and activities for improved climate defense through decarbonization, climate planning, resilience, and adaptation;
- Recommend and prioritize the local and regional sustainability climate defense initiatives, strategies, and activities that the County should be most engaged in supporting; and,

- Recommend the County’s role relative to each identified recommended initiative, strategy, or activity.

On May 8, 2019, OOS released a Request for Proposal (RFP) on BidSync¹⁷ to hire a consultant to support the CCAP’s development. OOS anticipates awarding this contract by September 2019.

- Sustainability Outreach

OOS has developed two separate one-page handouts to highlight County sustainability and climate defense activities to use for public outreach. These handouts accompany this *Semi-Annual Report* as separate attachments to the legislative file.

¹⁷ The web-based platform the County uses to distribute solicitations. The BidSync portal can be accessed at: <https://www.sccgov.org/sites/proc/DoingBusinesswiththeCounty/Pages/current-solicitations.aspx>.

Part II – Environmental Stewardship Goals and Programs

A. Natural Resources and Environment

A.1. Solid Waste

A.1.1. ENVIRONMENTAL STEWARDSHIP GOAL #5

Divert 100% of County waste from landfills and convert waste to energy.

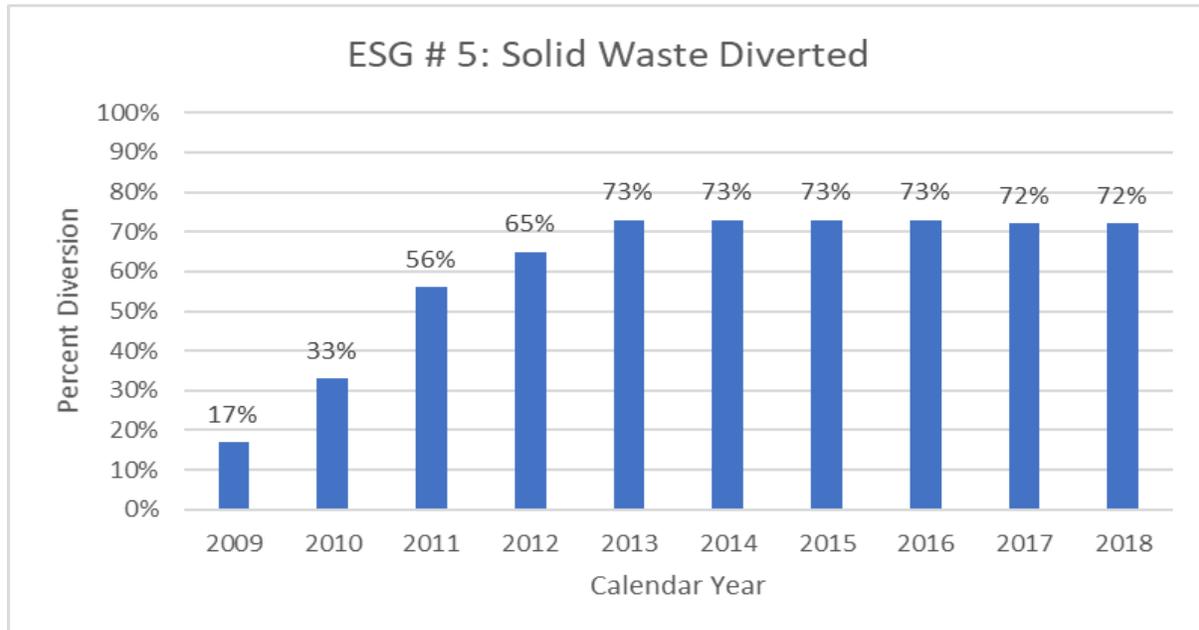


Figure 2: Waste Diversion Percentages at County Facilities.

A.1.2. SOLID WASTE PROGRAMS

(1) Zero Waste Program for County Facilities

Republic Services, the contracted hauler responsible for County sites in San Jose and Milpitas, reported a 72 percent waste diversion rate for both planned and unplanned services, as shown in Figure 2. This is a 55 percent increase in solid waste diversion from the 17 percent diversion rate in 2009.¹⁸

FAF is currently working to procure a new solid waste contract because the current contract with Republic expires in September 2019. OOS, FAF, CEPA, RDA, HHS, and Procurement (the Solid Waste team), closely collaborated on defining the new solid waste contract's objectives and the best ways to structure a Request for Proposal (RFP). Other departments that were consulted included PRK and the

¹⁸ Previously, FAF produced and submitted to the Board a semi-annual Zero Waste Report. FAF solid waste reporting has now been incorporated into the OOS semi-annual and annual reports. Additional details regarding the Zero Waste Report can be found within the February 8, 2018 FGOC Meeting Minutes, *available at*: http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?&ID=89825 (as of 6/5/18).

Sheriff's Office. Procurement worked with OOS to host meetings with five solid waste vendors¹⁹ on January 23, 2019 to discuss the objectives and answer questions defined by the Solid Waste team.

Currently, FAF is using the information gathered from the vendor meetings to develop the RFP for solid waste management services at County facilities. FAF expects to release the RFP in the Second Quarter of FY 2019/2020. The team's proposed objectives for the new contract are as follows:

- Provide timely, cost effective collection while diverting 100 percent of county waste from landfills;
- Convert waste to energy;
- Collect accurate data on solid waste;
- Reduce the carbon footprint (e.g., GHG emissions) resulting from waste management activities;
- Implement innovative technologies that increase diversion with the production of biogas, ethanol, biodiesel, hydrogen, syngas, or other similar waste to energy resources for all or part of the waste stream;
- Provide the opportunity for innovative waste pilots including, but not limited to, Zero Waste practices, organics management, and/or recycling processing;
- Minimize pests and odors related to solid waste management at County facilities.

The current contract with Republic, which expires in September, is being extended for an additional year. This will allow the County adequate time to evaluate the RFP responses and award a solid waste contract that incorporates new legislative requirements and responds to the County's goals and objectives.

¹⁹ Recology, Waste Management, Republic, GreenWaste and Green Team.

A.2. Water

A.2.1. Environmental Stewardship Goal #6

Reduce our consumption of water by 20% and recycle or beneficially reuse 100% of our waste water.

FAF reports annually on facility water consumption because, currently, County facilities' water usage entries are entered manually, which is an extremely time-consuming process. Therefore, updated water consumption data will be provided in the 2019 *Annual Sustainability and Climate Action Report* in December.

Overall, despite an increase in the County real estate portfolio which includes office buildings, detention facilities, and health clinics, water usage only slightly increased in 2018. Figure 3 shows the year-end consumption of potable water in FAF serviced facilities' of 192,951 centum cubic feet (CCF).²⁰ This is a decrease of 40.7 percent compared to the 2009 baseline of 325,507 CCF, but an increase of 1.3 percent compared to 2017. Recycled water use in 2018 increased by 1,062 CCF compared to the 2009 baseline.

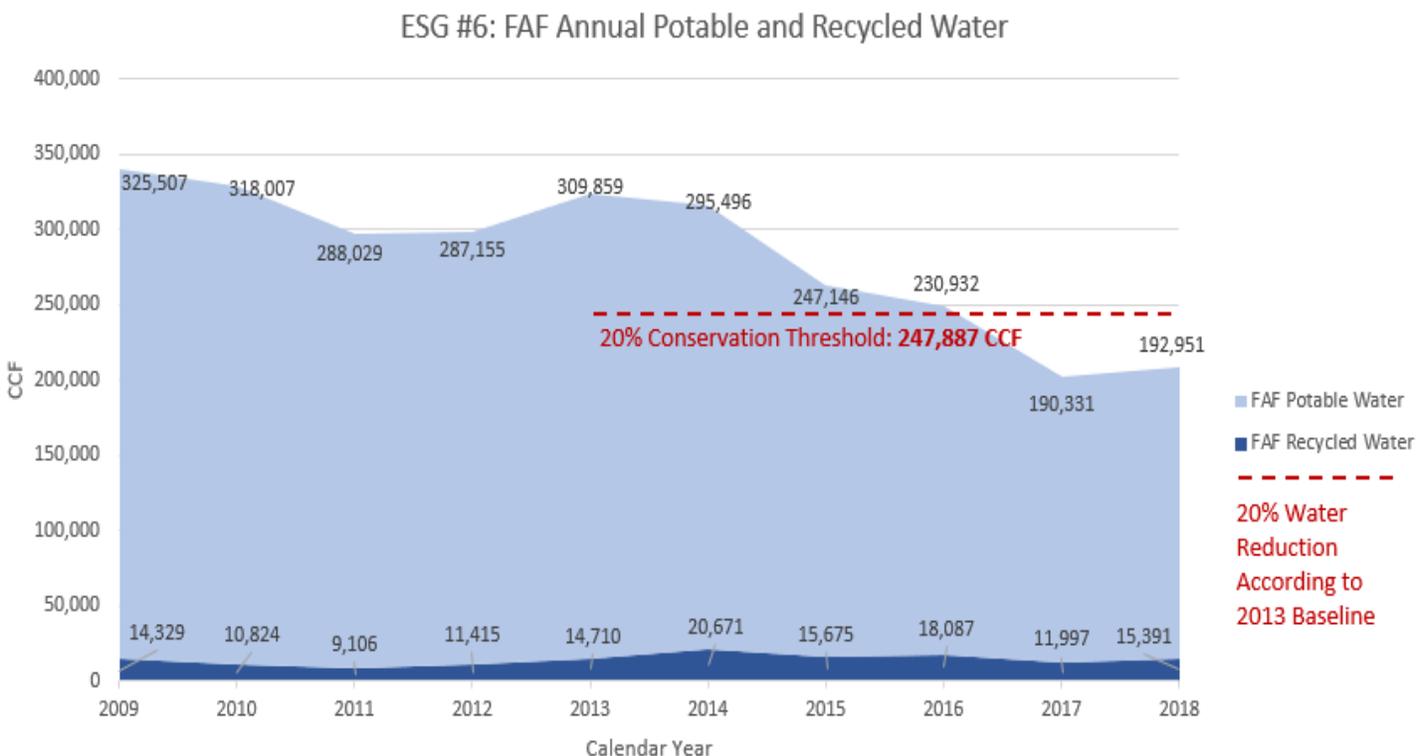


Figure 3: FAF-Serviced Facilities Potable and Recycled Water Usage.

²⁰ One CCF is equivalent to 748 gallons.

A.2.2. WATER PROGRAMS

(1) Recycled Water

Recycled water use preserves the drinking water supply and helps the County achieve cost savings because recycled water is typically 10 percent less expensive than potable water. There are currently six facilities that use recycled water, including the new Downtown Health Center. *A Landscape Inventory and Operational Needs Assessment (Landscape Assessment)* was completed on May 30, 2019 (see Sustainable Landscaping, Section A.4.2 (2)). The results of this assessment will be used by FAF to identify opportunities to increase recycled water use at County owned facilities.

(2) Charcot Recycled Water Project

In 2018, FAF coordinated with the San Jose Water Company on a recycled water project to link the Charcot Campus irrigation system into the existing recycled water pipeline so that recycled water can be used for landscape irrigation. The San Jose Water Company completed an audit and designs for the Charcot Campus recycled water retrofit and submitted a recycled water application to the California Division of Drinking Water (DDW).

Using recycled water for irrigation will save approximately 3.5 million gallons of potable water annually, which preserves our precious drinking water supply and will save an estimated \$2,200 annually.

The *Landscape Assessment* identified issues with the Charcot irrigation system that will make water reuse challenging without retrofitting the existing system. The deliverable will estimate the cost to complete this retrofit.

A.3. County Trails

A.3.1. ENVIRONMENTAL STEWARDSHIP GOAL #9

Work with local governments and regional authorities to ensure that all existing County trails are interconnected with local and regional trails.

The original Countywide Trails Master Plan (CWTMP), as approved in 1995, identified 147 miles (18 percent) of trail connections completed, 64 miles (8 percent) partially completed, and 584 miles (73 percent) for future development. PRK's most recent update to the trail build-out totals occurred in January 2015.²¹

²¹ See Parks and Recreation Department, Countywide Trails Prioritization and Gaps Analysis: Informational Report (3/17/2015), which reports progress on the Santa Clara County Trails and Pathways Master Plan (1978), as revised in 1995.

At that time, 40 percent of the trails (316 miles) were complete, 1 percent (8 miles) were partially complete, and 59 percent (471 miles) remained identified for future development (see Figure 4).

No additional updates to the exact trail mileage have occurred since 2015 because accurate data coordination with cities poses a challenge. However, the PRK has continued day-to-day advocacy for completion of the Countywide Trails network by commenting on external projects that have the potential to adversely impact or benefit trails, and by contributing to other agency efforts such as the Santa Clara Valley Water District’s Trails and Waterways Conference in June 2019. The Department’s priority focus in FY 2020 includes the CWTMP implementation.

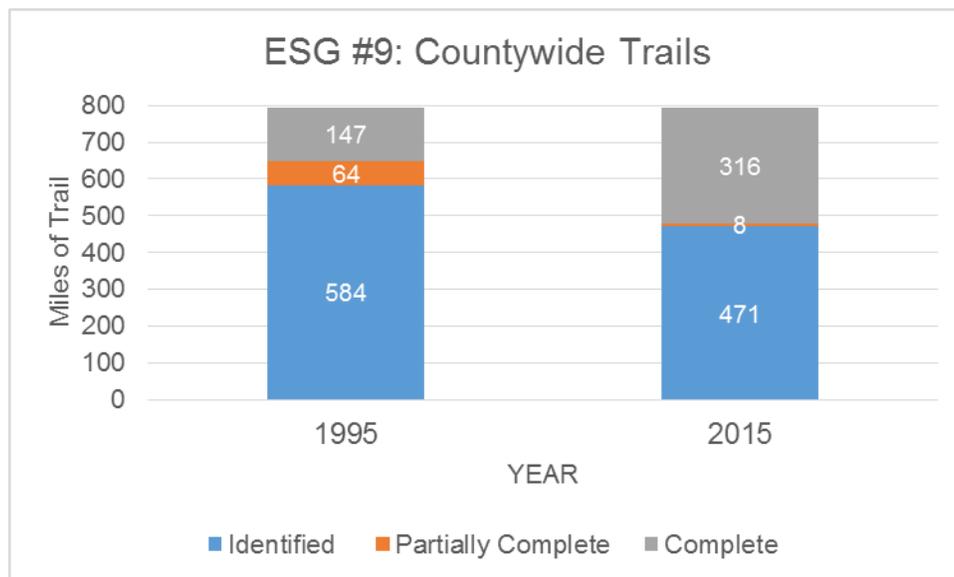


Figure 4: Countywide Trail Completion.

A.4. Trees and Sustainable Landscapes

A.4.1. ENVIRONMENTAL STEWARDSHIP GOAL #10

Plant 1,000 trees in unincorporated urban county pockets and work with local governments and agencies to build a comprehensive urban forest.

The County planted 554 trees (55 percent) between 2011 and 2015 under a contract with the volunteer-based non-profit organization Our City Forest (OCF), as shown below in Figure 5. OCF now has a new contract with the OOS Integrated Pest Management (IPM) program in support of ESG #10. Under the new agreement, from Spring 2017 to Spring 2019, an additional 152 trees were planted and OCF

aims to find sites for and plant an additional 48 trees by the end of June 2019.²² To meet ESG Goal #10, an additional 246 trees remain to be planted.

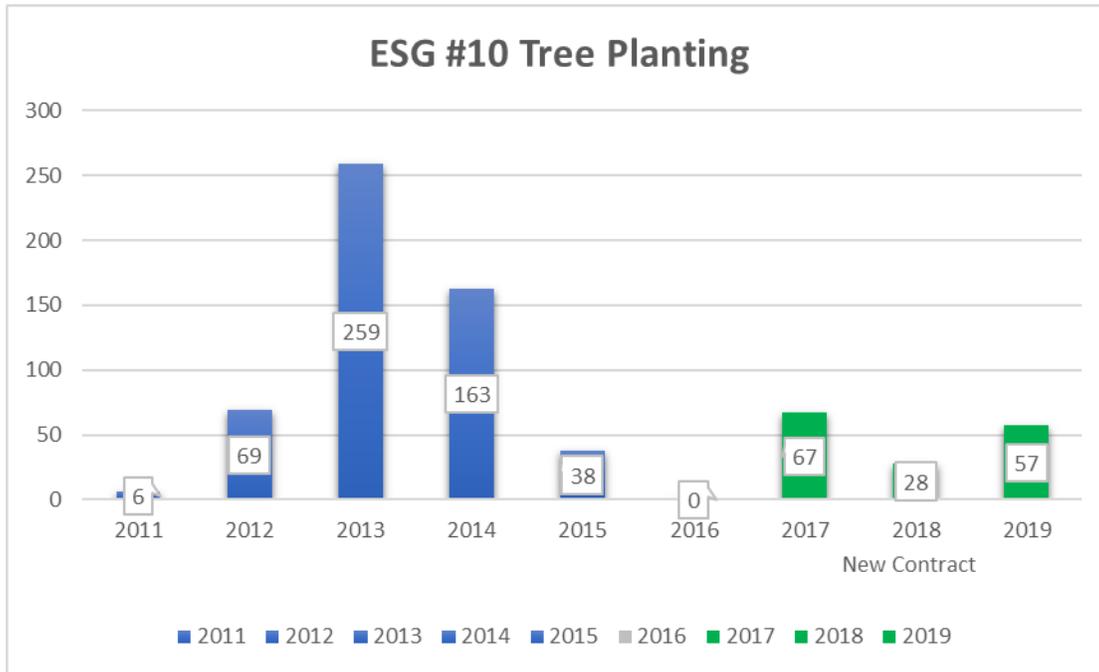


Figure 5: Tree Planting within the unincorporated County area.

A.4.2. COUNTY TREE PROGRAMS

(1) Tree Management Guide and Departmental Plans

On April 12, 2018, OOS IPM met with representatives from RDA, FAF and the PRK departments to discuss ESG #10²³ and departmental challenges regarding tree planting and management. This SMP workgroup’s purpose is to explore and identify departmental challenges, propose solutions, and share best practices aimed at creating sustainable tree management practices and, ultimately, a County-wide forest plan. The second “County Tree Management” workgroup meeting was held May 30, 2018. Participants agreed, as a first step, to allocate staff resources to develop a County *Ecology-Based Tree Management Guide (Tree Guide)* as a foundation for developing subsequent department-specific plans. The *Tree Guide* is intended to structure and organize County tree management overall, which is foundational to the completion of ESG #10 because the County’s tree management practices needed to be established before the County can invite other agencies to contemplate the creation of an urban forest.

²² Totals updated by vendor on April 26, 2019.

²³ Plant 1,000 trees in unincorporated urban county pockets and work with local governments and agencies to build a comprehensive urban forest.

The OOS IPM Program drafted the *Tree Guide* and provided it to FAF, RDA, PRK, and HHS for review in October 2018. The workgroup met on December 4, 2018 to discuss revisions, and PRK responded thereafter with further comments. Departments' feedback was used to create the final *Tree Guide* version that was issued to the workgroup members on May 13, 2019. The *Tree Guide* accompanies this *Semi-Annual Report* as a separate attachment to the legislative file.

(2) Sustainable Landscaping

County sustainable landscape management efforts are in support of ESG #6, to reduce water usage. Additionally, these efforts support several County policies and ordinances for pollution prevention and sustainability.

The OOS launched the IPM sustainable landscape management website on October 2017. The site provides information to educate and promote sustainable landscaping to County employees, residents and businesses. The IPM website was updated in November 2018 to enhance public accessibility to IPM and sustainable pest control practices. Both websites can be accessed through the OOS portal at: www.sccgov.org/sustainability.

The County is dedicated to properly managing its trees and landscapes sustainably. To do so requires that tree management and sustainable landscaping activities each have a separate management program because these areas have different needs for logistics, labor, and materials. Consequently, FAF contracted in December 2017 for a *Landscape Inventory and Operational Needs Assessment (Landscape Assessment)*. The assessment work, which began in April 2018, was executed in two phases.

During Phase 1 of the work scope, the contractor collected data on current plant palettes, irrigation systems, and landscape categories (e.g., turf, mulch, hardscape). The Phase 1 final deliverables, the existing/recommended plant palette, landscape and irrigation maps, and concept plans was completed and FAF and OOS reviewed it for accuracy and completeness. The deliverables include recommendations for irrigation efficiency upgrades, low water-use replacement plants, and employee training.

The Phase 2 deliverables were completed and delivered on May 30, 2019. The deliverables included staffing and operational budget recommendations, and cost estimates for transitioning the assessment sites from conventional to sustainable landscaping. The vendor close-out meeting was held with OOS and FAF on May 30, 2019. The resulting sustainable *Landscape Assessment* is expected to be presented at the June 20, 2019 HLUET meeting.

(3) County Tree Inventory

The County contracted with Davey Resource Group (Davey) for tree inventory services to document trees and their condition based on International Society of Arboriculture standards. Tree inventory data will be maintained in Davey's TreeKeeper system. An example is shown in Figure 6.

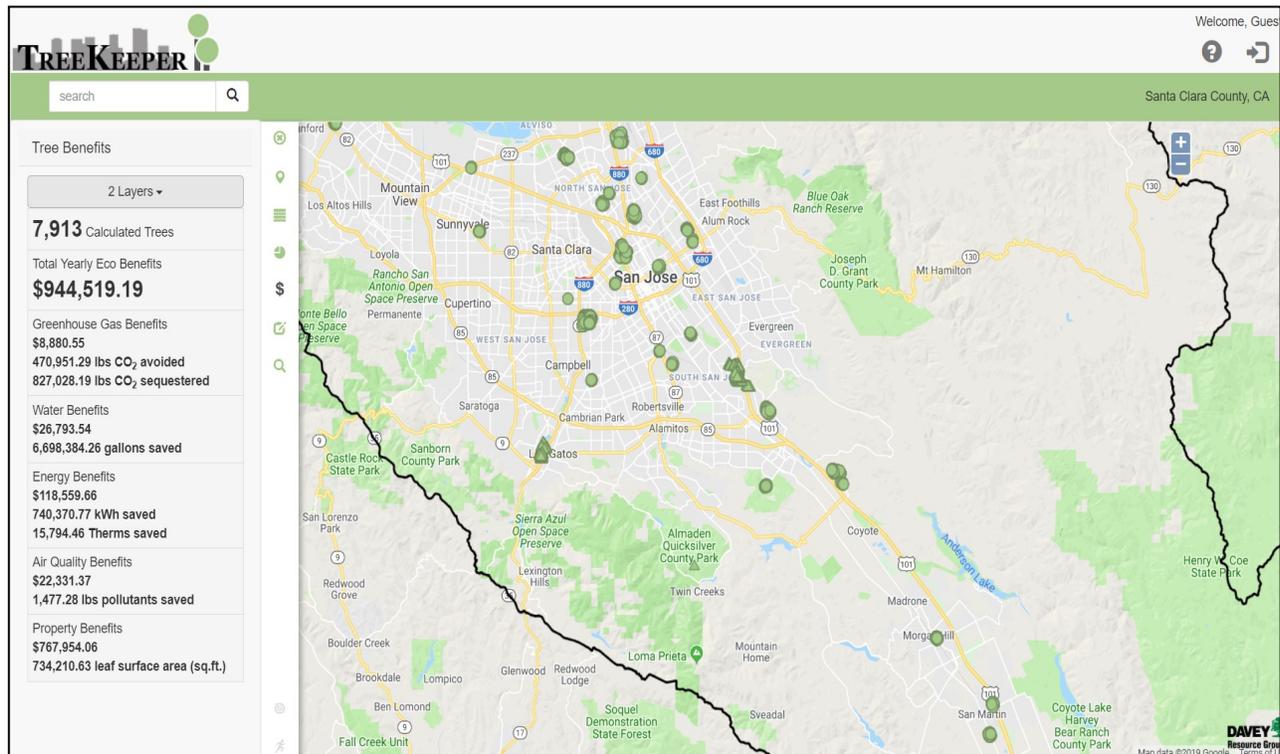


Figure 6: Inventoried County trees and calculated environmental benefits.

FAF purchased inventory services for all trees on 38 FAF-managed sites. The James Boys Ranch, which was the last of these FAF-managed sites to be inventoried, was completed on May 8, 2019. FAF plans to contract for a new inventory phase to inventory trees at the recently purchased Tasman and Silver Creek campuses. OOS and FAF now have access to completed tree inventory data through the vendor's online portal and are collaborating on data quality assurance needs.

On January 29, 2019, PRK contracted for \$70,000 in inventory services for 12,131 trees in "use-areas" at 29 County parks; use-areas are those which receive the most interaction with people, such as restrooms, picnic areas, parking lots, and buildings. Tree inventorying at Hellyer Park began on April 8, 2019 and was completed on April 26, 2019. Inventorying at Vasona Park began April 29, 2019 and was completed on May 9, 2019. The Los Gatos Creek Park inventory was

completed May 13, 2019 and the Martial Cottle Park inventory was scheduled to begin on May 15, 2019. PRK has identified Coyote Lake/Harvey Bear Ranch, Almaden Quicksilver, and Mt. Madonna, in that order, as the next parks to be inventoried. The time estimated to complete a park inventory is approximately three to four weeks.

(4) Arbor Week

On February 6, 2018, the Board declared March 7th to March 14th annually to be “Arbor Week” in Santa Clara County.²⁴ This coincides with Arbor Week in California and is intended to raise awareness of how trees are valuable economic assets that are important to energy conservation, improved air quality, water resources protection, habitat provision, and contributing to health overall.

In 2018, Arbor Week was celebrated with an informational tree care symposium offer by OOS IPM titled “Urban Forest Management for People in a Hurry.” It was tailored towards people in city management and local government who are not directly involved in tree management, but whose work affects urban forests.

During Arbor Week 2019, to raise public awareness about the substantial benefits that trees provide, all 60 trees in McEntee Plaza at 70 West Hedding (the County Administrative Offices) were labeled with “price tags” quantifying both the economic value and ecologic benefits provided by each tree. A summary of the total benefits from all plaza trees was displayed in the breezeway (*see* Figure 7).

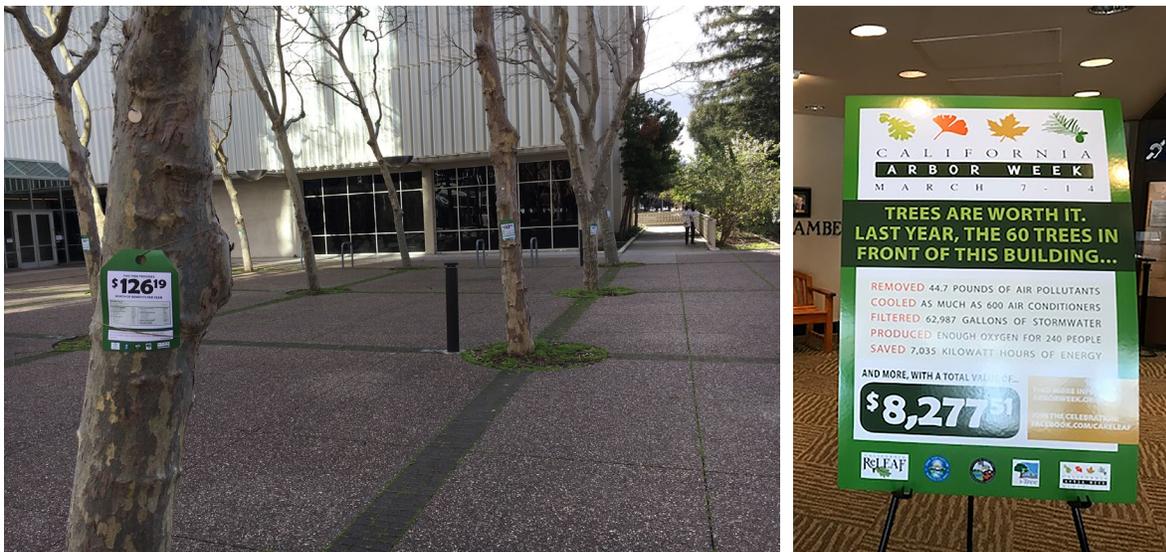


Figure 7: Tagged plaza trees and benefits summary poster

²⁴ Santa Clara County Board of Supervisors, February 06, 2018 (Item No. 58(j)), Office of Sustainability, “Proclamation declaring March 7-14 of each year as "Arbor Week" in Santa Clara County,” (Commendation/Proclamation 89889, Adopted 02/06/2018) *available at:* http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=&MeetingID=9789&MediaPosition=&ID=89889&Class=.

B. Built Environment

B.1. Lighting Installation

B.1.1 ENVIRONMENTAL STEWARDSHIP GOAL #1

Ensure that 100% of light fixtures owned and operated by the County, in buildings, on streets, and in parks are at the highest energy efficiency standard.

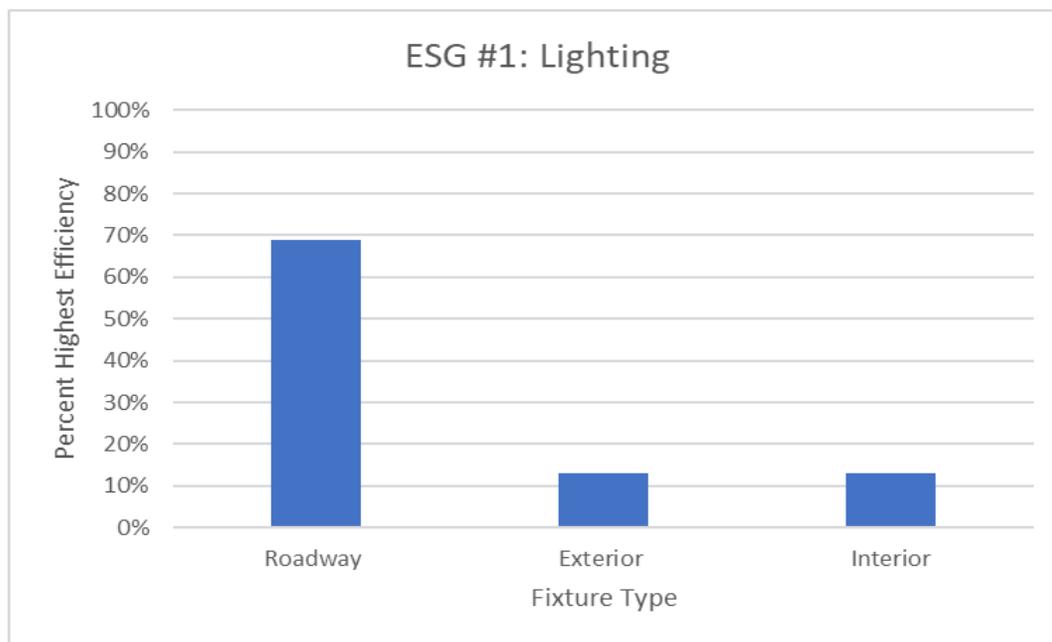


Figure 8: Percent Highest Efficiency Lighting, excludes VMC lighting

FAF estimates the number of existing light fixtures based on building square footage and calculates lighting upgrades based on actual completed retrofits. As of April 2017, when OOS received the last lighting update from FAF and RDA, of the estimated 2,500 County roadway lights some 69 percent (1,730 lights) were updated to either LED or inductive florescent high-vapor sodium lights. Therefore, based on the cumulative data received from FAF and RDA in early 2017, about 14 percent of all roadway exterior and interior light fixtures had been upgraded (*see* Figure 8).

Under an Energy Services Company (ESCO) Project (*see* Energy Efficiency and Conservation Programs, Section C2.2.2(2)) all County real estate received a lighting audit. With ESCOs, FAF plans within the next year and one-half to retrofit 2.7 million square feet (27 percent of facility space) with the most efficient lighting technology. At the ESCO Project completion, 41 percent of FAF lighting is expected to operate with the most efficient technology. Additional funding will be required to reach the 100 percent lighting efficiency goal.

B.2. Sustainable Buildings

B.2.1. ENVIRONMENTAL STEWARDSHIP GOAL #4

Ensure that 100% of County buildings are LEED certified and require LEED standards for construction in county land use jurisdictions.

Since adoption of the Board’s Green Building Policy 7.14, of the total 203 FAF-managed facilities, three have received certification under the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) rating system. FAF continues to incorporate the Green Building Policy 7.14 in all current planning of new construction and major renovation projects, including: Main Jail South; the South County Animal Shelter; the Vietnamese American Service Center; and the Tasman and Silver Creek campuses. Figure 9 shows the LEED Certified buildings managed by FAF in relation to the total FAF-managed buildings.



Figure 9: FAF-Managed LEED Certified Buildings.

B.2.2. SUSTAINABLE BUILDINGS PROGRAMS

(1) Sustainability in Capital Projects

The FAF Energy and Sustainability group continues to participate in pre-design architectural programming to identify client space needs, design, and schematic design phases for four major new construction projects and two major recent campus purchases. These efforts are expected to achieve an integrated design that exceeds State and County sustainability goals for the new construction of the: Main Jail South; South County Animal Shelter; the Vietnamese American Service

Center; Ambulatory Specialty Center; and, the two new Tasman and Silver Creek campuses. Because each facility has a different purpose and use, the sustainability strategies will differ for each building. However, all facilities are targeted to meet the County of Santa Clara's Green Building Policy 7.14, which requires that all County-owned facilities achieve at least LEED Silver certification. The FAF Energy and Sustainability group is responsible for reviewing draft LEED scorecards and life cycle cost analyses to recommend strategies that ensure that a facility is designed, operated, and maintained in a sustainable manner.

B.3. Land Use Planning

B.3.1. ENVIRONMENTAL STEWARDSHIP GOAL #7

Adopt a County General Plan with measurable standards for sustainable development.

The Board's adoption of the ESGs in 2009 established a goal of revising or adopting measurable standards for sustainable development within the County General Plan within a 15-year timeframe. The current General Plan, which is intended to cover the period 1995 – 2010, was last updated in 1994. OOS met with the Planning on December 6, 2018, to discuss collaborative efforts on a proposed General Plan update. The two departments are committed to working closely together to envision and achieve the General Plan update in a manner that places the County at the forefront of sustainability and climate defense, which includes climate resiliency, adaptation, and mitigation.

At the HLUET Committee on May 16, 2019, Planning proposed to update the General Plan in collaboration with OOS to incorporate sustainability goals. Subject to the HLUET Committee's direction, Planning will provide this proposal to the Board in June 2019. Thereafter, subject to the Board's direction, by fall of 2019, Planning will propose to the Board a workplan that provides a more detailed scope and timeline for the General Plan update. Overall targets for incorporating sustainability principles into a General Plan update are expected to be developed by the end of calendar year 2022.

B.3.2. LAND USE PLANNING PROGRAMS

The OOS will continue to meet and work with Planning during both the SMP development process and the General Plan update.

C. Climate Change and Defense

C.1. Greenhouse Gas Reduction Goals and Monitoring

C.1.1. COUNTY GOALS FOR GREENHOUSE GAS (GHG) REDUCTIONS

The Board has adopted various Resolutions and policies for the County of Santa Clara's commitment to achieve significant, measurable, and sustainable greenhouse GHG emissions reductions. Although GHG emissions from County operations have recently increased (*see* Municipal Operations Greenhouse Gas Inventory, Figure 11, *Municipal Operations Emissions by Sector*), over a ten-year period from 2005 to 2015 the County reduced GHG emissions by 10 percent, while simultaneously the County population increased by over 11 percent and the County workforce increased by 8 percent.

The County's goals for GHG emissions reduction were specifically reiterated in response to the United States' withdrawal from the United Nations Paris Climate Agreement (Agreement). On June 20, 2017,²⁵ the Board adopted Resolution No. BOS-2017-85 to affirm the County's commitment to the Agreement, which pledged to combat climate change by limiting the temperature increase to 1.5 degree Celsius.²⁶

Thereafter in 2018, at the request of Supervisor Cortese, District 3, OOS worked with County Counsel to draft a new consolidated GHG Resolution that establishes baselines for County operations, targets, and a commitment to carbon neutrality. On December 18, 2018, the Board of Supervisors passed Resolution 2018-145, *Reaffirming and Augmenting GHG Emissions Reduction Targets and Establishing 100% Carbon Neutral Commitment*, that aims to achieve carbon neutrality for all County operations by 2045.²⁷

²⁵ Item No. 16.

²⁶ Other County commitments include: Resolution No. 31892 (11/2/2004) to participate in the Cities for Climate Protection Campaign; and Resolution No. 22994 (9/25/2007) to commit to the U.S. Cool Counties Climate Stabilization Declaration to stop increasing Santa Clara County geographical GHG emissions by 2010 and reduce emissions by 10 percent every five years thereafter through to 2050, at which time GHG emissions shall be 80 percent below 2007 levels. Additional Board actions that are relevant to GHG emission reductions but do not set reduction targets include: Resolution No. BOS-2013-53 (4/23/2013) to fund the construction, operation and maintenance of a commercial compressed natural gas fueling station so as to provide alternative energy fueling facilities for public use to reduce community-wide greenhouse gas emissions; Resolution No. BOS-2015-46 (3/24/2015) to enter into a power purchase agreement (PPA) and take all necessary action to implement the alternative energy projects called for in the PPA to produce renewable energy for consumption at County facilities and operations; and, the Board Policy Manual with numerous adopted practices that promote GHG emissions reductions.

²⁷ *See* County of Santa Clara, Resolution BOS-2018-145, "Reaffirming and Augmenting GHG Emissions Reduction Targets and Establishing 100% Carbon Neutral Commitment," 12/18/2018, *available at* [http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=SplitView&MeetingID=9968&MediaPosition=&ID=94679&CssClass=\(as of 2/28/2019\)](http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=SplitView&MeetingID=9968&MediaPosition=&ID=94679&CssClass=(as%20of%202/28/2019)).

The Resolution also:

- Reaffirmed the County’s pledge to achieve 100 percent renewable electricity for County operations by December 31, 2019;
- Established a 100 percent carbon neutrality commitment for County operations by 2045;
- Established GHG emission baselines as being 2005 emission levels;
- Established GHG emission reduction targets for 2020, 2030 and 2050;
- Directed Administration to complete annual GHG inventories and set interim annual reduction targets; and,
- Directed Administration to complete by 2020 a carbon storage inventory to set a baseline and interim targets for achieving carbon neutrality by 2045.

During the SMP development process, OOS is working with County departments to identify other possible objectives, targets, and new programs to implement to accelerate GHG emission reductions.

C.1.2. GHG EMISSIONS MONITORING PROGRAMS

(1) Silicon Valley Clean Energy (SVCE)

Formed in 2016 by the County of Santa Clara and twelve other local communities, Silicon Valley Clean Energy (SVCE), a County-based community choice energy aggregator, is redefining the local electricity market. SVCE provides residents and businesses with carbon-free electricity at lower rates and offers innovative clean energy programs. OOS continues to participate in the SVCE Member Agency Working Group, a staff-level city/County forum for coordination on energy efficiency and electrification efforts. As of May 2019, the SVCE overall customer²⁸ opt-out rate (from approximately 282,000 accounts) is 3.5 percent. The opt-up rate for the 100 percent renewable energy “GreenPrime” program is approximately 1 percent of total customer accounts.

During 2018, SVCE worked with the consulting firm DNV GL Energy Services on community greenhouse gas inventories for all member communities. The results show that from October 2017 through September 2018, the County and cities within the SVCE territory achieved their commitments to save customers money, buy cleaner power, and reduce community-wide carbon emissions.

The *County of Santa Clara County and Silicon Valley Clean Energy* GHG inventory results for the unincorporated County areas, which was received from SVCE on September 28, 2018, shows impressive reductions within the

²⁸ All SVCE customer accounts are currently within the County of Santa Clara.

unincorporated area for kilowatt hours, costs, and GHG emissions avoided. See Figure 10. Regional achievements for 2018 are shown in Figure 11.

Unincorporated County Results - A cleaner environment and lower costs



353 million kilowatt hours (kWh) of electricity from carbon-free sources



\$1,558,000 in on-bill savings for SVCE customers



24,916 households and businesses served



100% renewable electricity powering all municipal facilities with GreenPrime upgrade



103.9 million pounds greenhouse gas emissions avoided by providing clean energy

Figure 10: County of Santa Clara Unincorporated Area SVCE Results

2018 Regional Achievements

- **16.6%** community-wide greenhouse gas emissions reduction from 2015 baseline
- **\$16.5M** total in overall on-bill customer savings
- **270,000+** customers served, a **97%** participation rate
- **All** start-up capital repaid
- **6%** discount in 2018 generation rates
- **1.1 billion** lbs. of CO2 avoided in 2018
- **110 megawatt** new wind energy project in development
- **\$75,000** community engagement pilot grant

Figure 11: SVCE 2018 Regional Achievements

SVCE will continue to update and track GHG emissions from its service territory. To help support SVCE’s GHG inventory analysis, the County of Santa Clara Office of the Assessor (AO) provided SVCE with countywide parcel data. This countywide data set includes building square footage, zoning, and building-type information for parcels. SVCE is linking the AO data with their GHG inventory to provide further insight into GHG emissions generation. More information and updates on SVCE can be found at: www.svcleanenergy.org.

The County’s Community Climate Action Plan (CCAP) (see Part I - Sustainability Master Plan Progress) aims to leverage SVCE’s GHG inventory and add emission-sources not captured by the SVCE inventory to, thereby, develop a comprehensive countywide GHG emissions inventory portfolio.

(2) Municipal Operations Greenhouse Gas Inventory

The GHG emissions inventory completed in March 2018 found that in 2015 the County’s municipal operations emitted 112,952 metric tons of carbon dioxide equivalent (MTCO₂e) from the buildings, facilities, public lighting and utilities, employee commute, vehicle fleet, reimbursed employee miles, solid waste and closed landfills sectors. The 2015 GHG emissions level represented a three percent increase from the 2010 municipal operations emissions of 109,819 MTCO₂e. The emissions increase was primarily due to County staffing increases, which resulted in more employee single occupancy vehicle commutes. Given that the employee commute is the County’s largest GHG emissions source, developing a robust Transportation Demand Management program that promotes alternative modes of transportation (e.g., biking, light rail) is a high priority.

Figure 12 shows the MTCO₂e from County operations emission sources.

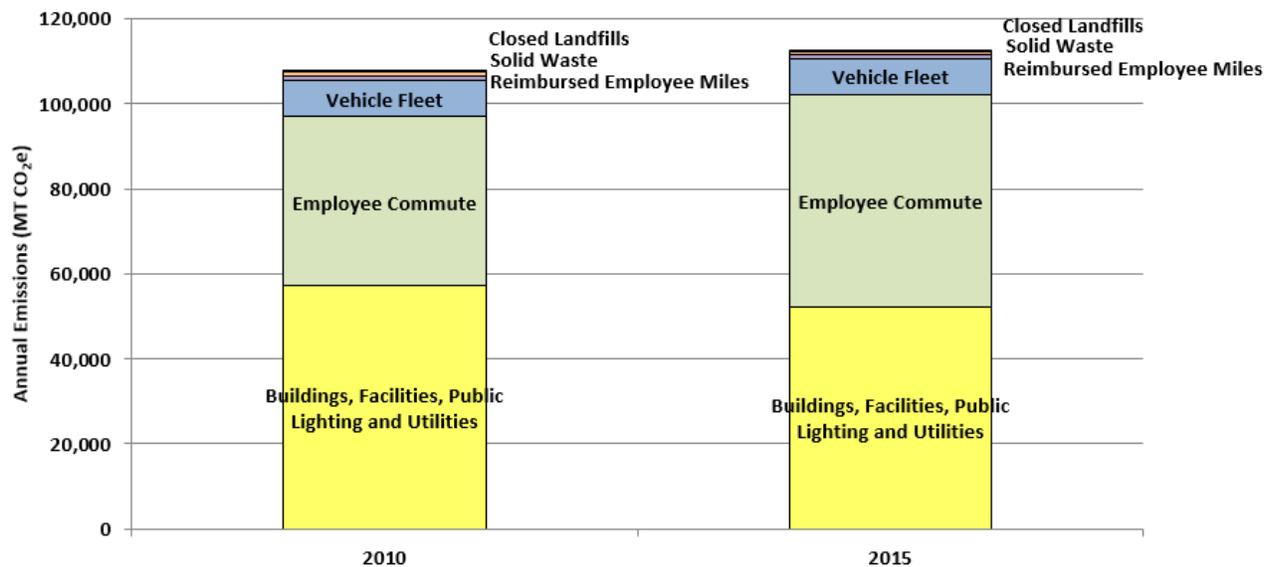


Figure 12: Municipal Operations Emissions by Sector (DNV GL Energy Services).

C.2. Energy Efficiency and Conservation

C.2.1. ENVIRONMENTAL STEWARDSHIP GOAL #2

Reduce per capita energy use by 50%

The County's estimated 2018 per capita energy use decreased by 2.6 percent compared to 2017, and by 13.6 percent compared to the 2008 baseline.

The County's progress toward ESG #2 is shown in Figure 13.

YEAR	Electricity Consumption		Gas Consumption Therms	County Population	Per Capita Therms/ Person/Year	Change in Per Capita Energy Use	Change in per capita energy use from 2017 to 2018
	Total Million KWhs (GWh)	GWh Converted to Therms					
2008	16,733	570,934,027	472,881,756	1,747,912	597	(baseline)	
2009	16,564	565,173,022	457,166,073	1,767,204	579	-3.1%	
2010	16,270	555,146,047	449,586,452	1,781,427	564	-5.6%	
2011	16,579	565,674,894	471,888,770	1,803,362	575	-3.7%	
2012	16,507	563,224,330	454,058,930	1,828,496	556	-6.8%	
2013	16,628	567,359,550	465,261,591	1,856,416	556	-6.9%	
2014	16,672	568,859,241	402,534,747	1,879,196	517	-13.4%	
2015	16,807	573,441,103	410,897,569	1,903,209	517	-13.4%	
2016	16,777	572,420,026	421,069,380	1,922,619	517	-13.5%	
2017	17,190	586,671,597	444,979,800	1,945,465	530	-11.2%	
2018	16,668 ²⁹	568,876,987 ³⁰	440,030,822 ³¹	1,956,579 ³²	516	-13.6%	-2.6%
<i>AVERAGE:</i>					547.6		

Figure 13: Santa Clara County Per Capita Energy Use.

ESG #2 data sets are obtained, calculated, and reported as follows:

- 1) California Energy Commission (CEC) electricity and gas usage information;
- 2) Electricity and gas usage are both converted and reported in therms;

²⁹ California Energy Commission (CEC), Electricity Consumption by County, Santa Clara (2018) available at <http://www.ecdms.energy.ca.gov/elecbycounty.aspx> (as of 05/22/2019) (values rounded up for display purposes).

³⁰ Conversion factor used was 1 GWhr = 34,129.56 therms (U.S.).

³¹ CEC, Gas Consumption by County, Santa Clara (2018) available at: <http://www.ecdms.energy.ca.gov/gasbycounty.aspx> (as of 05/22/2019).

³² State of California, Department of Finance, E-2. California County Population Estimates and Components of Change by Year, July 1, 2010-2018. Sacramento, California (Dec. 2018), available at: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-2/index.html> (as of 05/22/2019); State of California, Department of Finance, P-1: State Population Projections (2010-2060), Total Population by County, available at: <http://www.dof.ca.gov/Forecasting/Demographics/Projections/> (as of 05/22/2019).

- 3) The State of California's Department of Finance population estimates for each year by county are used instead of U.S. Census population data; and,
- 4) The baseline year for reporting is fixed at 2008, just prior to ESG #2 adoption in June 2009.

C.2.2. ENERGY EFFICIENCY AND CONSERVATION PROGRAMS

(1) Bay Area Regional Energy Network

Funded by the California Public Utility Program (CPUC) and administered by Association of Bay Area Governments (ABAG), the Bay Area Regional Energy Network (BayREN) is a collaboration of the nine counties that make up the San Francisco Bay Area. BayREN provides three main areas of expertise and services that benefit the County and the community:

1. Promote healthy and energy efficient buildings for single family and multifamily residents;
2. Build government capacity for local governments to increase their impacts with training, mentoring, and a range of resources throughout the Bay Area;
3. Reduce carbon emissions by catalyzing regional activities and connecting them to existing initiatives.

BayREN activities also create a pathway for counties and cities to achieve their Climate Action Plan goals through the BayREN activities that support energy education and efficiency. As a BayREN member, the County of Santa Clara serves as a resource to the cities within the County boundary and to the property owners living therein. Additionally, County staff benefits from BayREN-supported training and development.

OOS worked with ABAG to amend a new 2019 agreement to align BayREN activities and outreach with OOS priorities. With the new agreement, BayREN funds can be leveraged to support SMP activities, including CCAP outreach and other relevant County programs. The new BayREN contract was fully executed on April 1, 2019.³³ Thereafter, County contracts with two vendors, CLEAResult and Signature Events by Christina Romero, to assist with the delivery of BayREN services, were both fully executed.

³³ The 2019 BayREN contract was delayed pending a thorough review by County Counsel to ascertain the impacts of the PG&E bankruptcy on the BayREN agreement. County Counsel ultimately determined that the contract could proceed to the Board of Supervisors, who approved the contract on March 19, 2019 (Item No. 40).

- BayREN Residential Workshops 2018

In 2018, OOS conducted eight single-family residential workshops throughout the County, with a total of 468 participants. One of these workshops, offered in the Mandarin language, had 82 attendees. OOS partnered with local cities to host the workshops. The cities provided a venue and were given an opportunity to present city-specific initiatives related to energy and sustainability. The County was responsible for attracting workshop attendees, booking speakers, and overall logistics. The County made six additional presentations, attracting a total of 233 attendees, of which five were for single-family homeowner community groups and one was for real estate professionals. The County also hosted two additional workshops aimed at multifamily property owners.

- Codes and Standards Activities 2018

In addition to residential programs and outreach, BayREN administers a “Codes and Standards” program for local governments, to help member cities evaluate and improve compliance with energy codes and develop options for accelerating energy efficiency. The program offers no-cost training to building departments and hosts quarterly regional forums throughout the Bay Area. In early 2018, the County helped to develop a new introductory-level *Residential Zero Net Energy for New Construction* training for building professionals. In December 2018, the County partnered with the City of San Jose to host two trainings to educate 60 building professionals about Residential Heat Pump Water Heaters.

- BayREN Impacts 2013 through 2018

From BayREN’s inception in September 2013 to December 2018, the County has facilitated the completion of 1,776 single-family upgrades and provided over \$3.1 million in incentives to Santa Clara County homeowners, as shown in Figure 14 below. During the same period, BayREN installed energy efficiency improvements in 8,273 multifamily units and delivered over \$6.2 million in rebates to Santa Clara County building owners. According to monthly data collected and reported by BayREN, the County of Santa Clara leads all other BayREN counties in multifamily upgrades.

A handout that shows the County’s BayREN achievements from 2013 through December 2018 accompanies this *Semi-Annual Report* as a separate attachment to the legislative file.

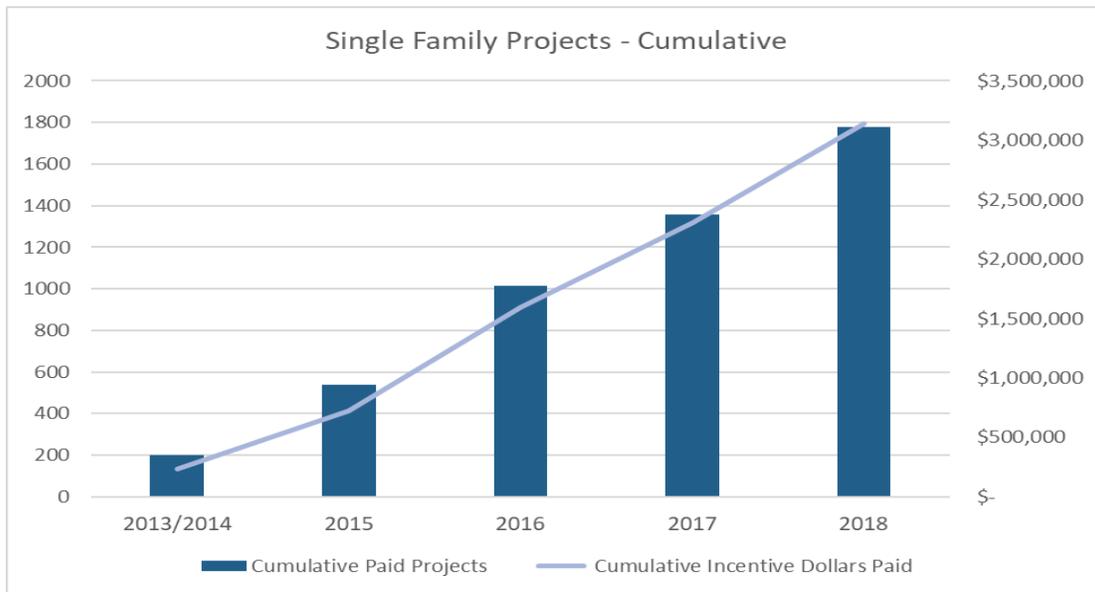
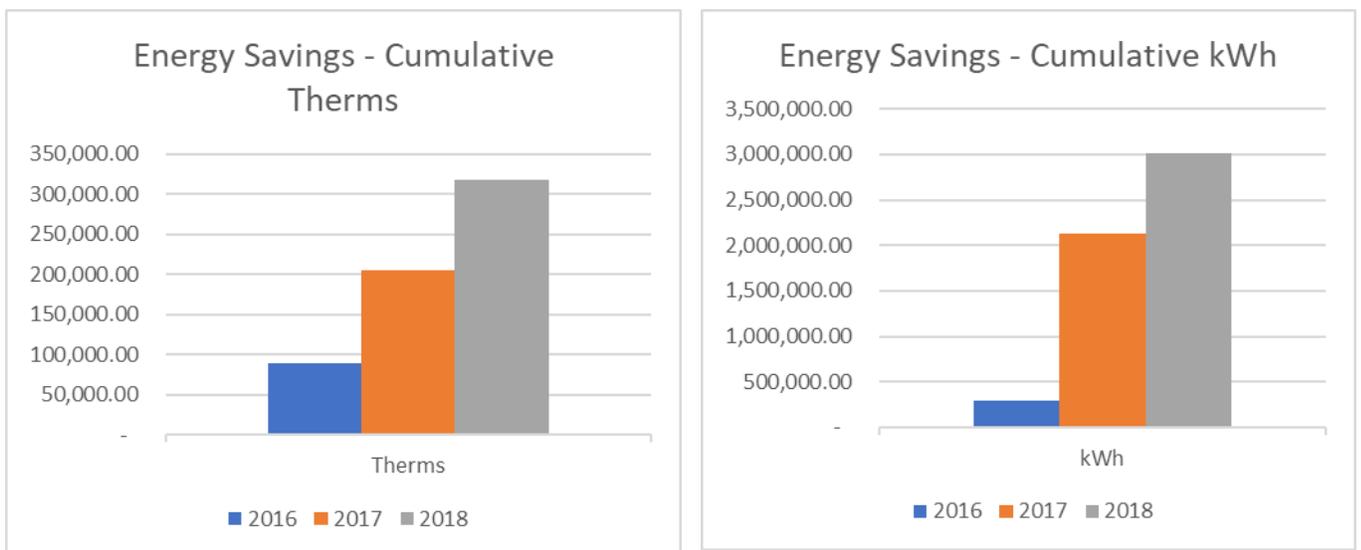


Figure 14: BayREN Funds Paid for Single Family Project Improvements.

These single- and multi-family improvements have collectively reduced energy usage by over 6.1 million kilowatt-hours (kWh) and over 580,000 therms, thereby reducing greenhouse gas emissions by an estimated 7,417 MT of CO₂e — equivalent to the CO₂e emitted from the energy use of some 900 average American homes’ annually.³⁴

Figures 15a and 15b show the BayREN’s cumulative energy savings for Santa Clara County for both single family and multifamily programs.



Figures 15a & 15b – Cumulative BayREN Program Energy Savings

³⁴ See U.S. EPA, Greenhouse Gas Equivalencies Calculator, *available at*: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator> (as of 12/04/2018).

- BayREN Activities 2019

The 2019 BayREN Single Family program has been entirely redesigned and re-launched as “Home+.”³⁵ Home+ is intended to appeal to moderate-income homeowners by allowing single measure upgrades to reduce upfront costs and decrease barriers to participation. Because of this significant program change, the performance data collected for 2019 will not include prior years’ data, as was previously customary. As of April 30, 2019, a total of 101 Santa Clara County single family residences have completed Home+ applications, which represents 333 energy efficiency upgrades such as air sealing, insulation, and heating and cooling system improvements or upgraded appliances. Additionally, as of May 1, 2019, eleven multifamily properties (accounting for 1,543 units) are undergoing construction for energy efficiency upgrades.

Because the County’s new 2019 BayREN contract allows for OOS to strategically align BayREN activities and outreach with important County initiatives, such as efforts to reduce GHG emissions, OOS plans to leverage BayREN outreach with messaging about County programs and activities. OOS created handouts that highlight County sustainability and climate defense activities to distribute at BayREN and other events. These handouts accompany this *Semi-Annual Report* as separate attachments to the legislative file.

(2) Energy Services Companies (ESCOs) Projects (FAF)

Three ESCOs have completed Investment Grade Audits (IGAs) at County facilities. The IGAs identify approximately \$30 million worth of energy and water efficiency upgrades. FAF has selected efficiency measures totaling approximately \$8 million. FAF is working with County Counsel to complete the implementation service agreements. By the Third Quarter of 2019, FAF anticipates bringing at least one service agreement to the Board for approval.

(3) Utility Data Management System (FAF)

A Utilities Data Management System (UDMS) is a software solution that facilitates the efficient tracking, management, benchmarking and analysis of utility cost and usage. FAF is negotiating with Siemens for a UDMS implementation contract which is expected to be executed by the end of FY 2018/2019.

³⁵ Home+ read “Home Plus” at www.BayRENresidential.org.

C.3. Clean Energy

C.3.1. ENVIRONMENTAL STEWARDSHIP GOAL #3

Receive 100% of our electrical power from clean renewable sources.

The Board is committed to increasing the County’s percentage of renewable electricity used at County facilities to 100 percent by December 2019 and, thereby, fully achieve ESG #3. To realize this goal, FAF and OOS collaborated to develop a renewable electricity purchasing plan that was proposed at the April 3, 2018³⁶ Board meeting. The plan includes a mix of direct renewable electricity purchases from utility companies and the purchase of Renewable Energy Certificates (REC). The Board approved the plan at an annual electricity cost increase of approximately \$800,000.

As of this report, the County’s current 75 percent reliance on clean renewable electricity sources is a dramatic 436 percent increase from its baseline of 14 percent in 2009. Figure 16 shows the renewable electricity percentage usage from 2009 through mid-2019.

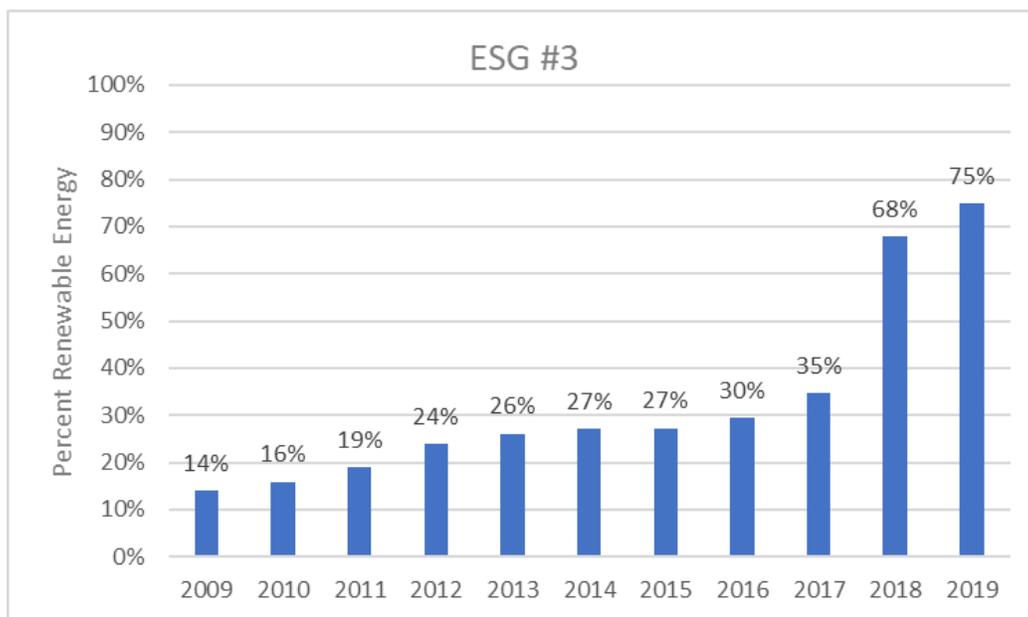


Figure 16: Countywide Renewable Electricity

³⁶ Item No. 17.

C.3.2. CLEAN ENERGY PROGRAMS

(1) Renewables for Revenue Project (Bill Credits)

The County of Santa Clara's Renewables for Revenue (R4R) Project consists of six ground-mounted and carport solar photovoltaic systems built at County-owned properties: Hellyer County Park; Holden Ranch; Malech Road; San Martin Airport; Reid Hillview Airport; and Guadalupe Parkway. Together, the six systems have an electricity generating capacity of 11.24 megawatts and generate approximately 20 million kilowatt-hours (kWh) of renewable electricity per year (equivalent to the energy used by 1,164 average homes).

Project construction has been completed and the project was accepted at the February 12, 2019 (Item No. 71) Board of Supervisors meeting. Through March 2019, the County's R4R solar portfolio has produced 18,670,933 kWh of renewable electricity and earned \$2,874,366 in PG&E invoiced bill credits.

(2) California Public Utilities Commission (CPUC) Litigation

On August 17, 2018, the California Public Utilities Commission (CPUC) issued a final decision (Decision 18-08-013) in the rate design phase of PG&E's 2017 General Rate Case (GRC). A primary focus of the case was on PG&E's proposal to change time-of-use (TOU) periods and rates, and the related customer bill impacts. The County of Santa Clara actively participated in the case to ensure reasonable rates for its solar projects in the RES-BCT Program, which were developed as part of the County's commitment to renewable energy and GHG emission reductions. In the GRC decision, the CPUC agreed with the County that the impact of PG&E's rate proposal to RES-BCT customers, compared to Net Energy Metered (NEM) customers, would be much greater and was, therefore, unfair. To address this inequity, the CPUC decision directed PG&E to set rates for RES-BCT customers so that the net bill impact for RES-BCT and NEM customers is equal, thereby maintaining the financial viability of County RES-BCT projects.

To comply with the CPUC's Decision, on September 7, 2018, PG&E issued advice letter 5379-E, where it proposed rates specific to legacy RES-BCT customers. The County provided comments on the advice letter and on October 4, 2018, PG&E issued an update incorporating the County's feedback and clarifying the rate calculation methodology. In March 2019, the CPUC Energy Division indicated that in the next several months it will be issuing a "non-standard disposition letter" that aligns with the County's interpretation, and will serve as the final interpretation of advice letter 5379-E.

The CPUC's issuance of a "non-standard disposition" final interpretation letter, which supports the County's feedback on the rate calculation methodology, will ensure that the net bill impact for the County's five grandfathered Solar PV sites

within the PG&E RES-BCT program will be equal to that of NEM solar customers through to calendar year 2023. This essentially ensures that the County's RES-BCT solar sites will remain financially viable at least through 2023. After 2023, the financial impact to the County's RES-BCT solar sites will depend upon the upcoming 2020 GRC Phase II. Depending on what PG&E proposes, the County may need to participate in the GRC Phase II process if PG&E proposals impact the financial viability of the County's RES-BCT solar sites.

(3) Diesel Free By '33 (DF'33)

At the request of Supervisor Cindy Chavez, District 2, the OOS evaluated the BAAQMD request for the County of Santa Clara to become a signatory to the *Diesel Free By '33 Statement of Purpose (DF'33 Statement)*, which aims to eliminate diesel emissions from the Bay Area within the next 15 years. At their September 11, 2018³⁷ meeting, the Board of Supervisors adopted a resolution endorsing the *DF'33 Statement* and pledging to eliminate diesel fuel from County operations. To implement this DF '33 goal, OOS recommended, and the Board approved, that the County conduct a feasibility study.

To properly design a feasibility study OOS needs to understand the extent of diesel fuel use within County operations and potential barriers to diesel fuel elimination. Therefore, through internal and external collaboration OOS worked to gain a better understanding of the current state of County-operations diesel fuel use and to plan for future implementation efforts. In October 2018, OOS contacted BAAQMD to obtain information about equipment inventories, new technologies, regulations, and the status of other *DF'33 Statement* signatories. On October 23, 2018, OOS convened a meeting with County departments to provide an overview of the DF'33 initiative, understand departments' use of diesel equipment and inventory management, and discuss the DF'33 feasibility study. Participating departments included FAF, PRK, RDA, Procurement, Santa Clara Valley Medical Center Facilities, and a representative from the CEO Office of Budget and Analysis.

OOS created DF'33 worksheets to assist with data collection to understand the departments' diesel equipment inventories, diesel fuel annual volume and cost, existing legal requirements, equipment replacement cycles, and disposals. Departments were asked to complete the worksheets and return their responses to OOS. The data findings (*see* Figure 17 below) include: estimates on diesel consumption and costs for County operations; types of diesel equipment used throughout the County departments; and department concerns related to DF'33. On November 20, 2018 OOS provided an off-agenda report to the Board and County Executive with recommendations for conducting the feasibility study.

³⁷ Item No. 44.

The DF’33 feasibility study is intended to understand available technology and operational appropriateness, and to develop cost estimates and implementation plans for potential zero emission technologies that can replace current diesel-fueled vehicles and equipment. OOS also worked with FAF to include a review for DF’33 in the *Greening County Fleet and Operations*” (*Greening the Fleet*) RFP scope of work, which will analyze how to increase the amount of alternative fuel vehicles in the County fleet. Because the Fleet RFP will analyze the fleet for FAF, HHS, PRK and RDA, the DF’33 feasibility study requested from OOS by the Board on September 11, 2018,³⁸ will leverage the *Greening the Fleet* work and use it for completing the more comprehensive feasibility study.

The FAF *Greening the Fleet* RFP was released on March 26, 2019 and closed on May 23. Because this study will not include diesel from stationary equipment such as back-up generators, OOS plans to procure consultant services to conduct a feasibility study that incorporates the FAF fleet analysis and expands it to include additional diesel sources. OOS intends to release this DF’33 RFP by early fall.

OOS, with the departments’ support, will also explore the possibility of the County test piloting a new technology in the early commercialization or demonstration phase so that the County can show leadership for new emerging technologies.

Department	Diesel-powered equipment	Estimate of annual fuel usage (gallons = gal)	Estimate of annual fuel usage (cost)	Notes
FAF	Yes	Fleet = 162,607 gal WEX credit card = 1,441.892 gal Total = 164,048.89 gal	Fleet = \$472,202 WEX credit card = \$4,812 Total = \$477,014	Estimated average cost of \$2.90 per gal
Fire	Yes	62,521 gal	\$200,067 to \$237,580	Estimated average cost of \$3.20–\$3.80 per gal
PRK	Yes	6,343 gal	\$ 19,346	Estimated average cost of \$3.05 per gal
Procurement	No	N/A	N/A	Not applicable
RDA	Yes	80,000 gal	\$256,000	Estimated average cost of \$3.20 per gal
SCVHHS	Yes	8,210 gal	\$21,100	Estimated average cost of \$2.57 per gal
Total		321,123 gal	\$973,527 to 1,011,040³⁹	

Figure 17: Summary of Department DF’33 Worksheets

³⁸ County of Santa Clara Board of Supervisors, “Diesel Free by 33 Resolution,” Item No. 44, September 11, 2018, available at: [http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=SplitView&MeetingID=9961&MediaPosition=&ID=93096&CssClass=\(as of February 26, 2019\).](http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?Frame=SplitView&MeetingID=9961&MediaPosition=&ID=93096&CssClass=(as of February 26, 2019).)

³⁹ Santa Clara County Fire Department provided a range of annual fuel usage costs.

C.4. Transportation

C.4.1. ENVIRONMENTAL STEWARDSHIP GOAL #8

Ensure that 100% of public fleet vehicles are electric, hybrid electric or run on alternative fuels.

Despite the increase in County employees, the County of Santa Clara's total fleet vehicle inventory has remained stable over the last nine years. The 2009 year-end fleet inventory was 1,698 vehicles; the 2018 year-end inventory was 1,701 vehicles. The percentage of alternative fuel vehicles (AFVs) for FAF and PRK is expected to be 29.9 percent. AFVs in the fleets of other departments are currently not reported. Figure 18 shows the percentage of AFVs for FAF and PRK since 2009.

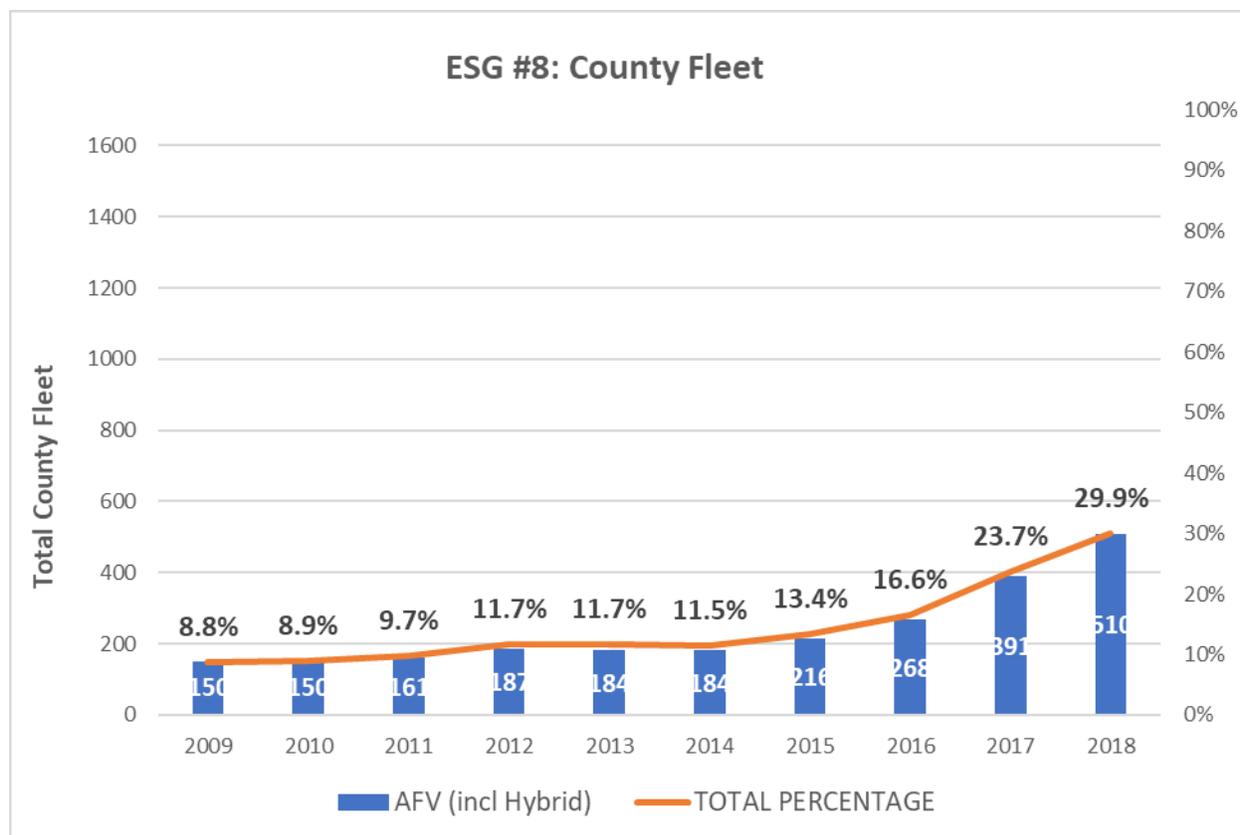


Figure 18: Alternative Fuel Fleet, Excludes RDA Vehicles.

C.4.2. COUNTY FLEET ELECTRIC VEHICLE PROGRAMS

(1) Electric Vehicle (EV) Adoption

At the direction of the HLUET Committee, OOS, FAF, and RDA met on March 1, 2018, to discuss opportunities and constraints to Alternative Fuel Vehicle (AFV) adoption. As the result of this meeting, FAF released an RFP to analyze how the

existing fleet can be replaced over time to increase AFV numbers. The work scope includes assessing each fleet vehicle, providing a timeline to transition the vehicle to an AFV, and projecting the costs associated with increased AFV adoption. FAF expects that the fleet study will begin by the Second Quarter of 2019/2020.

- EV Charging Stations

The first 12 electric vehicle charger stations were installed at the County Government Center in 2010. The County has since installed 64 additional charging spaces at four sites:

- 2265 Junction Ave
- Downtown Valley Health Clinic
- Valley Medical Center
- Sheriff's Office

The County expects 78 more EV charging spaces to be operational in the Second Quarter of FY 2019/2020 among four sites: Berger; the Hedding Parking Garage; Charcot; and the Julian Campus.

At their March 6, 2018 meeting,⁴⁰ the Board approved FAF to apply to PG&E's EV Charge Network Program for a grant to add an additional 200 EV charging spaces at County facilities to encourage the public and County staff to adopt EVs to reduce the GHG emissions generated by fossil fuels. If the County receives the PG&E's funding for 200 additional charging spaces, by 2020 the County's electric vehicle charger program will expand to 348 EV charging spaces at 19 County sites.

(2) Driving to Net Zero: Decarbonizing Transportation in Silicon Valley

The Driving to Net Zero (DTNZ) project was a multi-jurisdiction/agency project to support electric vehicle infrastructure and accelerate market uptake of AFVs including electric, natural gas, biofuel, and hydrogen fuel cell. The project was grant-funded by the California Strategic Growth Council (SGC) and concluded March 11, 2018. OOS worked with the cities of Cupertino, Morgan Hill, Mountain View, Palo Alto, San Jose, and Sunnyvale, to complete the deliverables which included:

- *Best Practices Compendium* of local government policies;
- EV Charging Infrastructure Siting Analysis website and memorandum;
- Memorandum on Compressed Natural Gas fueling;

⁴⁰ Item No. 43.

- Local government charging station toolkit including template public infrastructure standards for EV charging equipment installation;
- Memorandum recommending building and zoning code changes;
- Framework marketing campaign tailored to local community conditions based on a consumer survey;
- Clean fleet implementation guide lifecycle cost analysis for municipal fleets; and,
- County-hosted web page to house and share project deliverables, which was made publicly available in June 2018.

OOS completed the final project report and submitted it to the SGC on June, 2018. All DTNZ deliverables are available on the OOS website at:

<https://www.sccgov.org/sites/dnz>.

The DTNZ resources are being used by local partners interested in increasing EV charging infrastructure within their municipal facilities and communities. OOS is participating in a regional working group led by SVCE that is expanding upon DTNZ to advance EV charging infrastructure plans and strategies. Additionally, the CPUC recently conferred with the OOS Director and the DTNZ contractor about questions related to transportation electrification evaluation.

C.4.3. EMPLOYEE COMMUTER PROGRAMS

The GHG emissions inventory completed in March 2018 found that in 2015 employee commuting was the County’s single largest greenhouse gas emissions source (*see* Municipal Operations Greenhouse Gas Inventory, C.1.2(1)).

Therefore, Transportation Demand Management (TDM) and Employee Commuter Programs are a high priority to reduce GHGs from County operations.

(1) Transportation Demand Management Study

On October 30, 2018,⁴¹ the Board approved a Professional Services Agreement (PSA) with a transportation consultant, Nelson/Nygaard, to conduct an Employee TDM Study from November 2018 through May 2019. The TDM Study evaluated potential alternative transportation options for County, Superior Court, and Housing Authority employees, and for In-Home Supportive Services (IHSS) Independent Providers that service the region. The TDM study aims to provide specific recommendations for how to reduce single-occupancy commuting and decrease GHG emissions, with a detailed cost-benefit analysis for each measure.

⁴¹ Item No. 74.

More specifically, the Study will provide a detailed cost-benefit analysis for the following measures:

- Transit Subsidies;
- Carpool Program;
- Ride Hailing Program;
- Parking Cash Out Program;
- Commuter Shuttle Program;
- Parking Management Programs;
- Shared Active Transportation Program.

FAF expects to present the TDM Study findings to the Board of Supervisors in August 2019.

(2) VTA SmartPass Program

On December 4, 2018,⁴² the Employee Services Agency (ESA) and FAF recommended for the Board to approve a one-year agreement with Santa Clara VTA to continue providing the VTA SmartPass Program from January 1, 2019 through December 31, 2019 to County and Superior Court employees, and IHSS Independent Providers. This item was added to the Board's Consent Calendar and approved by the Board. The SmartPass Program's purpose is to promote alternative and public transportation commute options that reduce traffic congestion, parking demand, and air pollution while lowering employee commuting costs and related stress. From January 2018 to December 2018, the number of monthly SmartPass unique users amongst County employees increased from 1,212 to 1,361, a 12 percent increase in participation.

(3) Ridesharing Pilot Program

The ridesharing pilot with Scoop Technologies concluded in June 2018 and is being evaluated as a strategy within the TDM Study for County employees.

C.5. Climate Change Preparedness

C.5.1. CLIMATE ADAPTATION AND PREPAREDNESS GOAL

The County has many programs for advancing climate mitigation, adaptation, resilience, and preparedness. OOS is meeting with County departments during the SMP development process to identify possible goals for these areas to present as future recommendations to the Board of Supervisors.

⁴² Item No. 32.

C.5.2. CLIMATE ADAPTATION AND PREPAREDNESS PROGRAM

(1) Climate Adaptation and Preparedness (Silicon Valley 2.0)

The Silicon Valley 2.0 (SV20) Project was developed by the County of Santa Clara, in collaboration with partner organizations, to create risk-based decision-making tools for those who need to respond to climate adaptation planning. The SV20 Project was funded through a “sustainable communities” grant from the California SGC and with matching funds and resources provided by the County of Santa Clara. The project developed an online climate change impacts tool, the “Climate Change Decision Support Tool” (Online Tool), to identify the region’s key climate vulnerabilities, the risk of exposure of our natural, built, and human assets to those impacts, the likelihood of occurrence, and a cost/benefit analysis of taking specific actions to maintain the region’s potential, competitiveness, desirability, operational capacity, and human health.

On March 14, 2018, Joint Venture Silicon Valley, one of the original project partners, hosted a meeting for the SV20 Technical Advisory Committee (TAC) to reengage with those partners and invite them to collaborate further. On May 23, 2018, OOS hosted a meeting focused on privacy and data access issues surrounding the public release of the SV20 online tool, and the prioritization of climate adaptation strategies from the SV20 Guidebook.

As follow-up to the May 2018 meeting, OOS hired Point Blue Conservation Science (Point Blue), the original developer of the Online Tool, to complete modifications needed to make the Online Tool publicly accessible. OOS worked with Point Blue to ensure that broken links within the Online Tool were fixed and that missing text sections were completed. OOS also initiated a procurement process to obtain hosting and support services for the Online Tool.

In July 2018, the County was recognized for its efforts on climate adaptation by the National Association of Counties (NACo), which awarded SV20 with an annual achievement award in the category of “County Resiliency: Infrastructure, Energy, and Sustainability.”⁴³

In December 2018, the SV20 Online Tool was publicly launched; it is now available on the OOS website⁴⁴ or at www.siliconvalleytwopointzero.org. In FY 2019/2020, OOS plans to update the data sets underlying the SV20 Online Tool and enhance the SV20 platform. The OOS Director is also in communication with the Tech Museum of Innovation about possibly including SV20 in the museum’s sustainability exhibit.

⁴³ See <https://www.sccgov.org/sites/opa/newsroom/Pages/nacoaward.aspx>.

⁴⁴ See <https://www.sccgov.org/sites/osp/Pages/sv2.aspx>.

(2) County Climate Coalition

On June 6, 2017,⁴⁵ the Board of Supervisors adopted recommendations to direct County Counsel to draft a resolution affirming the County’s commitment to the Paris Climate Agreement, environmental sustainability, and combating climate change. The adopted recommendations further directed Administration to lead efforts calling upon other counties throughout the nation to sign on to or adopt similar resolutions. The alliance of these counties was subsequently named the “County Climate Coalition” (Coalition). As a result, on June 20, 2017,⁴⁶ the Board passed the Resolution BOS-2017-85 calling for the County of Santa Clara to work to meet the Paris Agreement goals despite withdrawal by the United States.

On August 14, 2018,⁴⁷ the Board approved OOS’s recommendation (at the request of Supervisor Cortese) to award a grant to Climate Reality Project (CRP), an organization founded by Vice President Al Gore, to conduct outreach and undertake related efforts to encourage counties and other local government entities nationwide to formally join the Coalition in support of the Paris Agreement. This includes committing to undertake strategies to reduce GHG emissions. The CRP partnership was announced by Mr. Gore in August at the 39th Climate Reality Leadership Corps training in Los Angeles, and during the California Global Climate Action Summit at a “kick-off” event hosted by Supervisor Cortese on September 12, 2018 at which Mr. Gore was a keynote speaker.

Under the one-year grant term, the CRP hired two staff to work on the goal of adding to the Coalition five counties within California and 25 counties nationally. The CRP recruits their volunteer grassroots advocates, organized nationwide in Climate Reality Leadership (CRL) Chapters, to work locally on behalf of the County and engage local elected officials to join or support the Coalition.

As of May 20, 2019, the Coalition has added seven new Members and ten new Supporters, thereby expanding to 22 county Members⁴⁸ and 27 Supporters.⁴⁹

⁴⁵ Item No. 111.

⁴⁶ Item No. 16.

⁴⁷ Item No. 25.

⁴⁸ Santa Clara County, CA; Alameda County, CA; Boulder County, CO; Charles County, MD; Contra Costa County, CA; Denver County, CO; Essex County, NJ; Gilpin County, CO; Humboldt County, CA; Lake County, IL; Los Angeles County, CA; Marin County, CA; Maui County, HI; Pima County, AZ; San Mateo County, CA; San Miguel County, CO; Santa Barbara County, CA; Summit County, UT; Ulster County, NY; Union County, NJ; Washtenaw County, MI; Taos County, NM.

⁴⁹ The Climate Reality Project; Sierra Club Loma Prieta Chapter; 350 Silicon Valley; Santa Barbara County, CA, Board of Supervisors Chair Joan Hartmann; Knox County, TN, Commissioner Evelyn Gill; Marin County, CA, Board of Supervisors President Judy Arnold; Albany County, NY, Legislator William Reinhardt; Lane County, OR, Commissioner Pete Sorenson; Adams County, CO, Board of Commissioners Chair Eva Henry; Ramsey County, MN, Commissioner Victoria A. Reinhardt; Nevada County, CA, Supervisor Heidi Hall; City of Boulder, CO, Councilor Aaron Brockett; San Francisco State University, Assistant Professor Eric Mar; Local Power Inc., President Paul Fenn; City of Dallas, TX, Council Member Philip Kingston; Sonoma County, CA, Regional Climate Protection Authority Coordinator Carolyn Glanton; Carbon Free Silicon Valley; Carbon Free Mountain View; Fair

Currently, 28 CRL Chapters are working across the country to build the County Climate Coalition’s membership. Cumulatively, CRL Chapters⁵⁰ have held 20 meetings with local county officials to discuss Coalition membership and ask that their counties formally join.

The one-year partnership, which was scheduled to end in August 2019, is being renewed for an additional year. OOS meets bi-weekly by phone with the CLP managers to ensure the work remains on track. OOS and CLP are currently strategizing how to institutionalize the County Climate Coalition so that it becomes a lasting initiative and county-to-county resource. In March 2019, OOS launched a new website www.CountyClimateCoalition.org to serve as a resource for current and potential County Climate Coalition Members and Supporters. A Coalition “welcome kit” has been developed and will be sent to Members in early June.

D. Public Health, Safety, and Equity

There are currently no ESGs categorized under Public Health, Safety and Equity. Through the SMP development, OOS is working closely with departments to identify possible goals and Programs in this category and identify the metrics to monitor, measure, and report.

D.1. Toxics Reduction

D.1.1. TOXICS REDUCTION GOALS

[I]t shall be the policy of the County of Santa Clara to eliminate or reduce pesticide applications on County property to the maximum extent feasible.⁵¹

(1) Integrated Pest Management (IPM) and Toxics Reduction

The OOS IPM Program supports various County policies and Ordinances that advance sustainability.⁵² Program activities aim to significantly decrease pollution by reducing pesticides in the environment through IPM. From 2002 to 2018

Shake Environmental Legal Services, Marketing Director John Eisenfeld; Stay Work Media, Freelance Journalist Whitney Hope; Isothermal Community College, Grants Coordinator Sarah Morse; Altadena, CA, Councilmember Dorothy Wong; Northwest Iowa Group of Sierra Club, Chair Carrie Radloff; City of San Luis Obispo; East Hampton Town Trust, Trustee Susan Keber; Bentwood Wedding Venue, Felipe Martinez; Marston and Associates, Engineering Consultant Carol Marston; Midpeninsula Regional Open Space District, Climate Resiliency Fellow Hayley Edmonston.

⁵⁰ These CRL Chapters are in New Mexico, New Jersey, Florida, California, Colorado, Pennsylvania, and Washington.

⁵¹ County of Santa Clara Ordinance, Division B28 – Integrated Pest Management and Pesticide Use (IPM Ordinance), Sec. B28-1, *available at*: https://library.municode.com/ca/santa_clara_county/codes/code_of_ordinances?nodeId=TITBRE_DIVB28INPEMAPEUS_CHIIPEMA_SB28-4COINPEMAIPPR.

⁵² *See*: IPM Ordinance; Sustainable Landscape Ordinance (Model Water Efficient Landscape Ordinance); Sustainable Landscaping Policy; Tree Preservation Ordinance; and Zero Waste Policy.

pesticide use in County urban landscapes and buildings was significantly reduced and can now be described as statistically “insignificant.” During this same period, County parklands being managed using non-chemical methods have increased to 99.9 percent. Since 2005 there has been a 75 percent reduction in County roadside acreage under chemical control. Overall, the use of 26 conventional pesticides has been completely phased out, while the total number of pesticide applications and overall volume of “reduced-risk” pesticides was significantly reduced.

(2) IPM Database: Field Data Collection and Management

The County IPM Ordinance requires the use of an electronic database tracking system⁵³ to eliminate paper-based data collection and provide a cost-effective, efficient means to report and record pest management activities. An RFP for a database product was issued in February 2018. IPM worked with RDA, FAF, PRK and the County GIS unit to evaluate vendor proposals. In August, two vendors provided product demonstrations and vendor selection occurred in September.

Prior to negotiating the final contract, OOS IPM held a series of “sign-off” meetings with stakeholder departments. RDA agreed to move forward with the software project. FAF decided that their department activities do not currently warrant the use of the IPM spatial mapping and data collection software.

OOS and PRK met multiple times to discuss the IPM data collection system and how it might integrate with the PRK Content Management System (CMS), Nexgen. OOS and PRK agreed that the IPM data collection system needs to integrate seamlessly with Nexgen. PRK agreed to create fields in Nexgen for staff to enter information so that the IPM software can pull and/or push information for reporting. PRK has also agreed to provide staff to assist OOS IPM with the software beta testing. Procurement is currently negotiating the vendor contract; a signed agreement is expected by July 2019. Software configuration will begin soon thereafter.

(3) Right-of-Way Vegetation Fire Clearance

Weeds (grasses and broadleaves) growing on the shoulders of unincorporated County rural and mountain roads create a significant fire risk in Santa Clara County. The primary non-chemical method for weed control on unincorporated County roads is mechanical mowing in conjunction with use of herbicides. The mowing part of this process has its own fire risk and has been ineffective because of mowing restrictions (fire risk from mechanical actions) during summer months. Pursuant to the Santa Clara County IPM Ordinance, the County RDA is currently unable to use any systemic, non-selective herbicides for the control of grasses

⁵³ Section B28-8.

adjacent to unincorporated County roads. Aminopyralid (Brand Name: Milestone) is a systemic herbicide that is currently available, however it is ineffective against grasses. Glyphosate use, which is effective on both grasses and broadleaf weeds, was withdrawn in 2018 due to its known carcinogenic status. Since this withdrawal, the RDA has expressed the need for an alternative non-selective herbicide that can provide control of both grasses and broadleaf weeds as part of their integrated vegetation management toolbox.

To support the IPM Ordinance goals and RDA's need to mitigate fire hazards, OOS IPM identified several, reduced-risk glyphosate-alternative herbicides: imazamox (brand name Imox formulation); flumioxazin (brand name Promenade formulation); and dithiopyr (brand name Dithiopyr L formulation). OOS IPM also submitted a grant proposal to the California Department of Food and Agriculture's Noxious Weed Grant Program on April 5, 2019 to field trial three new herbicides; unfortunately, the County was not awarded the grant.

Nonetheless, in support of County IPM and overall innovation, RDA has agreed to field test two of the three recommended new herbicides on 30 high fire-risk unincorporated roads and determine product efficacy. RDA is currently procuring imazamox and flumioxazin, and the IPM Coordinator will issue exemptions for their use upon RDA's request.

E. Economy and Innovation

E.1. Green Workforce Development

E.1. Environmental Stewardship Goal #11

Increase the available blue and white collar "clean and green workforce" course/trainings available regionally and in Santa Clara County and help place 20,000 trainees and graduates in the regional labor force by the end of 2013.

Monitoring regional green job training and creation is challenging. First, there is no consistent definition on what sectors constitute the "green" workforce. Second, there is no regular standardized reporting on the many emerging sectors that could be included in this category such as solar, electric vehicles, and green buildings.

In Spring 2017, OOS wrestled with this issue and contacted both the Asset and Economic Development and the NOVA Workforce Board. NOVA provided data from a SolarTech Workforce Innovations Collaboration Job Report Summary from the Fourth Quarter of 2011, which noted that 590 solar jobs and 326 energy efficiency jobs had been created regionally by that point – just under 0.5 percent of the goal. Data was neither broken down by geography nor available beyond 2011.

Consequently, as part of the SMP process, OOS is reviewing methodologies and targets used by other cities and regions to track and monitor clean and green job

creation. After completing this assessment, OOS will recommend a revised ESG #11 target date, and a methodology for goal reporting.

Meanwhile, OOS supports green and clean workforce training and job creation through its regional partnerships. For example, this year BayREN contracted with Rising Sun Center for Opportunity to deliver outreach for the BayREN Single Family program. Rising Sun hires local youth and provides them with valuable energy efficiency and community development training and work experience. These youths engage underserved households throughout the Bay Area counties to promote the BayREN “Green House Call Service,” which assesses home energy and water efficiency and installs resource efficient devices.

Summary

The *2019 Semi-Annual Sustainability and Climate Action Report*’s format, which is organized by key categories, combines and matches each ESG with those programs that are intended to advance goal performance. The *Semi-Annual Report* displays ESG progress in a graphical format for those goals in which data is collected and monitored. The *Semi-Annual Report* also provides updates on County sustainability and climate defense programs, initiatives, and activities.

Achieving the Board’s vision for sustainability requires that goals, programs, initiatives, and metrics are monitored and that adjustments are made, when needed, to improve goal performance. During the SMP process, OOS is working with County departments to identify the priority actions that will close these gaps and advance the County’s sustainability and climate defense.

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Action (Program or Activity)	Responsible Department(s)
Climate Change and Defense	
Greenhouse Gas Reduction Goals and Monitoring	
Municipal operations GHG inventory	FAF
Community Climate Action Plan (RFP issued)	OOS
County Climate Coalition	OOS
Diesel Free by '33	OOS, FAF
Climate Change Preparedness	
Preparedness/Resilience Public Outreach	OEM
Bay Area Climate Adaptation Network (BayCAN), Member	OOS
Silicon Valley 2.0	OOS
Climate Change, Health Equity Unit	PHD
Energy Efficiency and Conservation	
Energy conservation projects (lighting, HVAC, retrofits) on County buildings	FAF
Utility Data Management System (UDMS)	FAF
Bay Area Regional Energy Network, County-lead and outreach	OOS
Parks General Operations: Energy Conservation	PRKs
Purchase of Energy Star compliant IT devices	TSS
Datacenter Consolidation	TSS
Cloud Computing	TSS
Clean Energy	
Renewables for Revenue - Renewable energy projects on County properties	FAF
100% renewable energy for County facilities - Silicon Valley Clean Energy (SVCE) GreenPrime and San Jose Clean Energy TotalGreen services and Renewable Energy Purchases.	FAF
SVCE Member Agency Working Group, Member	OOS

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Transportation and Fleets	
Construction, Maintenance of EV Charging Stations	FAF
Parks General Operations: Fleet and Equipment	PRKs
Field Services Vehicle use and purchase of additional clean air Field Service Vehicles (as part of IT consolidation)	TSS
Natural Resources + Environment	
Water	
Clean Water Program (CWP)	CEPA
CWP - Business Inspection Program - inspects stormwater runoff from industrial & commercial properties	CEPA
CWP - Illicit Discharge Detection and Elimination Program (issues permits for National Pollutant Discharge Elimination System (NPDES) program)	CEPA
CWP - Operations and Maintenance Verification Program (Stormwater Runoff Treatment Systems)	CEPA
CWP - Water Quality/Bacteria Monitoring in South County (Llagas Creek and Corralitos Creek)	CEPA
Land Use Program - Onsite Wastewater Treatment Systems	CEPA
Stormwater: programs, management, monitoring	Planning, RDA
Steams and riparian corridor education programs	PRKs
River Clean-up Day	PRKs
Outdoor Environmental Education Programs and Special Events (e.g. Fishing for Kids, National Trails Day, Alviso Safari Interpretation Program)	PRKs
Trees and Sustainable Landscapes	
California Naturalist Program	CEPA
Wildlife Program	CEPA
Project Learning Tree	CEPA
Small Farm Program	CEPA
Specialty Inspection Protection Programs (Sudden Oak Death, Light Brown Apple Moth, Glassy-winged Sharpshooter)	CEPA
Invasive Species Program - Plants, Weeds	CEPA, OOS, PRKs, FAF, RDA
Weed Abatement Program	CEPA, OOS

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Trees and Sustainable Landscapes	
Urban Forestry	CEPA, OOS, PRKs, FAF, RDA
Sustainable Landscaping Outreach	OOS
Arbor Week	OOS
Tree Planting	OOS
Tree Inventory	OOS, PRKs, FAF
Grazing Program	PRKs
Santa Clara Valley Habitat Conservation Plan Implementation Actions	PRKs
Forest Health Program	PRKs, OOS
Tree/Vegetation/Debris Maintenance	RDA
Solid Waste	
Composting Education Program	CEPA
Waste diversion program management for County operations	FAF
Promote Paperless (e.g. DocuSign)	Procurement, TSS, countywide
Utilization of recycled paper in the TSS print services department	TSS
Recycling of cuttings and other wastepaper with in TSS print services department	TSS
Centralized multifunction printer Instead of local printers	TSS
IT E-waste Computer Equipment Disposal	TSS
County Trails	
Countywide Trails Master Plan	PRKs
Built Environment	
Land Use Planning	
Agricultural Mitigation Policy	LAFCO, CEPA
Urban Service Area (USA) Policies	LAFCO

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Land Use Planning	
Sphere of Influence (SOI) Policies	LAFCO
General Plan - updates and implementation	Planning
Housing Element - updates and implementation	Planning
Health Element	Planning, PHD
Valley Agricultural Plan - creation and implementation	Planning, CEPA
Land Acquisition	PRKs
Sustainable Buildings	
LEED in new construction projects	FAF
Green Building Ordinance	Planning
Housing	
Affordable Housing Preservation	OSH
Affordable Housing Construction - Activity for Permanent Supportive Housing (PSH), Emergency Shelter (ES), Transitional Housing (TH), and Rapid Rehousing (RRH) programs [services once operating listed under Social Services]	OSH
Building and Fire Codes	Planning
Sustainable Transportation	
Transportation Demand Management	FAF
Active and Safe Communities, Chronic Disease & Injury Prevention - Includes Active/Alternative Transportation, Safe Routes to School, Parks Promotion/Parks RX	PHD
Pavement Maintenance and Preservation	RDA
Intelligent Transportation Systems (ITS) and Safety	RDA
Vehicle Miles Travelled (VMT) Policy(s)	RDA
Design and Construction of Pedestrian/Bicycle/Transit Facilities	RDA
Pedestrian Detection	RDA

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Public Health, Safety, & Equity	
Public Health	
Animal Care and Control	ACC, CEPA
Certified Farmers' Market	CEPA
Nutrition, Family and Consumer Sciences Program	CEPA
Master Gardener Program	CEPA
Healthy Nail Salon Program	CEPA
Public Swimming Pools and Spas Recreational Health Program	CEPA
Tobacco Retailer Program	CEPA
Vector Control District - Outreach Program	CEPA
Vector Control District - Household and Urban Pests Program	CEPA
Vector Control District - Rodents Program	CEPA
Mosquito Control Program	CEPA
Stinging Insects Program	CEPA
Pest Exclusion/Quarantine	CEPA
Awareness Posters & Classes on Healthy Food Choices	CSS
Universal Access to Early Childhood Education, Care, and Health Services Pilot	OCC
Clinic-Community Linkages, Chronic Disease & Injury Prevention	PHD
Women, Infants, and Children (WIC)	PHD
Healthy Food and Beverage Environments, Chronic Disease & Injury Prevention	PHD
Food Systems/Food Security (CDIP)	PHD
Infectious Disease and Response Branch	PHD
Maternal and Child Health	PHD

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Public Health	
Tobacco Free Communities, Chronic Disease & Injury Prevention	PHD
Santa Clara Valley Medical Center	SCVHHS
Valley Health Center Clinics	SCVHHS
Senior Nutrition	SSA
Employment & Benefits Services (MediCal, Continuing Benefits)	SSA
Utilize Organic and/or low VOC products in the process for printing documents in TSS Printshop	TSS
Vector Control District	VCD, CEPA
Ticks Program	VCD, CEPA
Hantavirus Program	VCD, CEPA
Safety and Emergency Response	
Emergency Preparedness Training & Resource Materials	CSS
Monthly Facility Inspections for Hazard Mitigation & Preparedness	CSS
Safety Committee: -Active Shooter Prevention Training -Emergency Supplies throughout Departments	FIN
Safety Committee: Finance Agency Safety Fair	FIN
Emergency Operations Center	OEM
Community Emergency Response Team Training	OEM
Hazard Mitigation Planning/Projects	OEM
Disaster Services Guide for Immigrants	OIR
Rapid Response Network (RRN)	OIR
Prescribed Fire Program	PRKs
SSA Emergency Services/SCC Mass Care & Shelter	SSA

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Equity	
Census 2020: facilitation, education and outreach to ensure a complete, accurate and fair Census	Census
University of California Cooperative Extension: 4-H Youth Development	CEPA
Community Engagement, small table discussions	OCC
Trauma-Informed and Healing-Centered Framework	OCC
Racial Equity through Prevention Workgroup, Juvenile Justice Systems Collaborative	OCC
Education about Immigrant Contributions	OIR
Know Your Rights presentations	OIR
API Justice Coalition	OIR
Citizenship Collaborative	OIR
Southeast Asian Network	OIR
OIR Hotline for immigrants	OIR
Fair Housing programming	OSH
Emergency Shelters – Emergency shelter and services.	OSH
Transitional Housing – Time-limited housing and services for people experiencing homelessness.	OSH
Rapid Rehousing – Supportive housing strategy that quickly moves people experiencing homelessness into permanent housing and provides time-limited rental subsidy and supportive services to obtain and maintain stable housing.	OSH
Permanent Supportive Housing – Rental subsidies, medical and behavioral health, and other supportive services to help long-term homeless and disabled individuals and families maintain permanent housing.	OSH
East San Jose Prevention Efforts Advance Community Equity Partnership - PEACE Partnership	PHD
Active & Peaceful Gilroy San Ysidro Park & Neighborhood Action Plan	PHD
Racial & Health Equity Unit	PHD
Interpretive Programs	PRKs
In-House Supportive Services	SSA

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Equity	
Family & Children's Services	SSA
Public Administrative Guardian/Conservator	SSA
Adult Protective Services	SSA
Toxics Reduction and Management	
Underground Storage Tank Program (UST)	CEPA
Local Oversight Program- investigation and cleanup of releases from petroleum USTs	CEPA
Aboveground Petroleum Storage Program	CEPA
Household Hazardous Waste Program	CEPA
Safe Meds and Sharps Disposal Program	CEPA
Medical Waste Management Program	CEPA
Hazardous Materials Business Plan Program	CEPA
Hazardous Materials Storage Ordinance Program	CEPA
Hazardous Waste Program	CEPA
Methamphetamine Laboratory Clean-Up Program	CEPA
Tiered Permitting Program	CEPA
Toxic Gas Program	CEPA
Septic Tank, Chemical Toilet & Grease Waste Pumper Management Program	CEPA
California Accidental Release Prevention Program	CEPA
Site Cleanup Program	CEPA
DEH - Consumer Protection Division - Lead Poisoning Prevention	CEPA
Childhood Lead Prevention	PHD
Pesticide Regulation	CEPA
Integrated Pest Management Ordinance and Program	OOS
Parks Integrated Pest Management Implementation	PRKs, OOS

APPENDIX A

County Sustainability and Climate Defense Programs and Activities (In Process)

Economy + Innovation	
Consumer Protection	
Devices Program, Weight and Measures	CEPA
Quantity Control Program	CEPA
Weighmaster Program	CEPA
Sustainable Business	
Bay Area Green Business Program	CEPA
Sustainable Procurement	
Assist in LEED and other sustainability programs' procurement	Procurement
Incorporate Green and/or Environmentally Preferable Purchasing (EPP) language on solicitations	Procurement
Incorporate trade-in, buy back or take back provisions on solicitations	Procurement
Sustainable Workforce (Fair wages and benefits; trained and equipped workforce)	
BayREN Participating Contractor Support	OOS