

#### Rancho Santiago Community College District Sustainable RSCCD Committee

May 17, 2023

#### Zoom Meeting: <u>https://us06web.zoom.us/j/84232589434</u> 3:00 – 4:00 p.m.

#### Agenda

- 1. Introductions
- 2. Meeting Notes of March 15, 2022 Matsumoto
- 3. Approval of 2023-2024 Meeting Schedule Matsumoto
- 4. Review of Draft Biennial Report Covering FY21-23 Matsumoto
- 5. Future Update to Sustainability Plan 2025 Matsumoto Sub Work Group Meeting – Matsumoto
- 6. Earth Day Events
- 7. College Úpdates

Santiago Canyon College – Satele Santa Ana College – Hoffman

8. Other

#### Next Meeting: September 20, 2023 3:00 p.m. Zoom or TBD

#### Mission Statement

The Rancho Santiago Community College District aspires to provide equitable, exemplary educational programs and services in safe, inclusive, and supportive learning environments that empower our diverse students and communities to achieve their personal, professional, and academic goals.

Santa Ana College inspires, transforms, and empowers a diverse community of learners.

Santiago Canyon College is an innovative learning community dedicated to intellectual and personal growth. Our purpose is to foster student success and to help students achieve these core outcomes: to learn, to act, to communicate and to think critically. We are committed to maintaining standards of excellence and providing the following to our diverse community: courses, certificates and degrees that are accessible, applicable, and engaging.



### Rancho Santiago Community College District Sustainable RSCCD Committee

Meeting Notes

March 15, 2023

Members:	Carri Matsumoto Bart Hoffman Arleen Satele Linda Melendez Jose Vargas Jim Kennedy Tae Kim Kelvin Leeds Vanessa Engstrom Daniel Oase Hugo Curiel Ambar Nakagami Tanisha Burrus Simone Wolfe Anthony Cantoran	Present Present Present Present Present Present Present Present Present Present Present Present Present Present Present Present
	Anthony Cantoran Arriana Flores Gabriel Lopez	Present Present Present
Guests:	Jim Isbell Diana Casares Joe Melendez Lisa Imai	Present Present Present Present

Assistant Vice Chancellor, Carri Matsumoto convened the meeting at 3:02 p.m.

#### 1. Introductions

Committee members and guests introduced themselves.

#### 2. Meeting Notes of November 16, 2022

Ms. Matsumoto noted the meeting notes from the November 16, 2022 meeting were attached to the agenda for today's meeting and asked the committee if they had any questions, comments or edits. There were no changes.

#### 3. Biennial Report Due June 2023

Ms. Matsumoto noted the next biennial Sustainability Report will be due June 2023 and asked the committee to provide updates for the report by April 30, 2023. The report covers two fiscal years. Mr. Hoffman noted Santa Ana college had their second work group meeting to update the report. Ms. Matsumoto noted the final report will be presented at the first SRC committee meeting in the Fall for the committee to take action to approve it.

#### 4. Future Update to Sustainability Plan 2025

Ms. Matsumoto noted there is a sub workgroup that will hold their first meeting in May after the Earth Day events. The purpose of the workgroup is to review the plan and discuss what can be updated to the plan. Ms. Matsumoto asked the committee if anyone was interested in volunteering to be a part of the sub workgroup. Mr. Vargas, Ms. Satele, and Ms. Engstrom from Santiago Canyon College had previously volunteered to help. No one from Santa Ana College volunteered.

#### 5. College Updates

Ms. Satele noted SCC's Earth Day event will be on April 20, 2023 from 10am to 2pm and some of the vendors include Home Depot, Honeywell and OUSD Mr. Hoffman SAC's Earth Day event will be on April 20, 2023. Mr. Kennedy noted SAC's event will be from 11am to 1pm. Ms. Matsumoto noted the SRC committee would like to have a table at both colleges so students can participate in the recycling challenge. Ms. Wolfe noted she is updating the hydration stations on the campus maps for both colleges. Mr. Leeds noted SAC's event is being planned by the students.

#### 6. Other

Ms. Matsumoto thanked the committee for their participation.

#### 7. Next Meeting Date

The next meeting will be held on Wednesday, May 17, 2023, at 3 p.m. via Zoom or TBD.

Meeting Adjournment: 3:30 p.m.



### Sustainable RSCCD Committee

### 2023 – 2024 Proposed Meeting Dates

All meetings will be held from 3:00 – 4:00 p.m. Location TBD

September 20, 2023

November 15, 2023

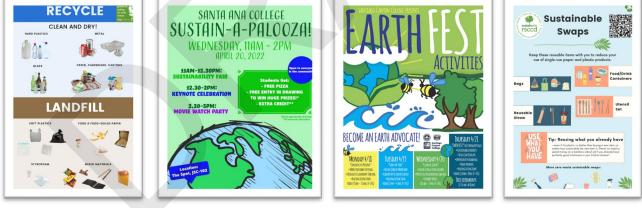
March 20, 2024

May 15, 2024



# SUSTAINABILITY REPORT





Period Covering March 1, 2021 – June 20, 2023 Approved by the Sustainable RSCCD Committee May 17, 2023



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# INTRODUCTION

On March 3, 2015, the Rancho Santiago Community College District (RSCCD) Board of Trustees approved a District Sustainability Plan ("Plan"). The Plan outlined eight (8) goals in areas of sustainability: Campus & Community Engagement, Curriculum Development, Energy, Facilities Design & Operation, Solid Waste Management, Sustainable Procurement, Transportation and Water Management.

This report was compiled on behalf of the Sustainable RSCCD Committee (SRC) by the Facility Planning, District Construction and Support Services Department and covers approximately a two-year fiscal period. The previous report covered July 1, 2018 - March 1, 2021; therefore, this report covers the period of March 1, 2021 – March 1, 2023. The information was compiled through a collaborative effort between the colleges, District and members of the SRC. The report highlights the achievements, projects, programs, and plans completed as well as the work currently in progress in various phases of planning and implementation.

The SRC's primary goal over the last several years has been focusing on reducing plastic and paper consumption. It was an objective of the committee to see that a new waste hauling service provider be contracted with who can assist the District in allowing for more sorting options in collection of waste, and by providing more detailed recycling data for the various sites.

Many sustainable activities are on-going and several projects have been completed to meet the goals of the plan. The reporting method organizes the activities, programs, and projects to align the report outcomes with the identified eight (8) goals of the Plan. This organization of the reporting format allows for easier collection of information by members of the SRC and is easily comprehensible to interested individuals. The SRC will continue to focus on implementing programs and projects outlined in Section 4 of the Plan: Sustainable Programs and Projects for Implementation.

An update to the 2015 plan is in development, with an expected publish date in 2025. The SRC is working to align the plan to better track performance in alignment with the California Community Colleges Chancellor's Office Climate Action and Sustainability Goals, updated in 2021. The Goals have benchmarking and reduction milestones for 2025, 2030, and 2035, which the District intends to adopt and measure performance using the AASHE STARS online tool.

The SRC continues to strive towards implementing the goals of the Sustainability Plan and is proud to present the attached report covering the period of March 1, 2021 – March 1, 2023.

#### ACHIEVEMENTS

- Compiled Utility Data Use for the last 10 years and established the baseline year as 2012-2013.
- The District has met the original annual goal stated in the Sustainability Plan 2015 to reduce energy consumption by 5% from baseline year (2012-13) on average through 2019-20. Years 2020-21 and 2021-22 saw a slight increase in energy usage following the pandemic; however, the District achieved an overall reduction of approximately 35,000 therms (gas) and 3.4 million kWh (electric) between the baseline year and current.
- Districtwide there has been an average reduction of 19% in electricity and 20% in gas over the last 5 years when compared to the baseline year.
- The District has met the original annual goal stated in the Sustainability Plan 2015 to reduce water consumption by 5% from baseline year (2012-13) on average through 2019-20. Years 2020-21 and 2021-22 saw a slight increase in water usage following the pandemic; however, the District achieved an overall reduction of approximately 20 million gallons of water between the baseline year and current.



- Districtwide there has been a water use reduction by 25% over the last 5 years in comparison to the baseline year.
- Incorporated several sustainable features in the new construction projects at both colleges.
- Accomplished the procurement of several new sustainable products and equipment.
- Continues to contract with a new waste hauler to track and provide data on waste and recyclable materials.
- Completed Phase 2 of the Irrigation Controller Upgrades at Santa Ana College and installed seven (7) new controllers. With these upgrades, Santa Ana College has a completely new smart irrigation controllers system campuswide to help reduce water consumption.

#### Goals established by the Committee for the past Biennial are as follows:

- Reuse for Better Use initiative for plastic reduction
- Paper reduction



### SUSTAINABLE RSCCD COMMITTEE MEMBERS: 2021-2023

#### Santa Ana College

Bart Hoffman, Vice President, Administrative Services (2018-Current) James Kennedy, Vice President of Continuing Education (2023-Current)

Kelvin Leeds, Faculty (2023-Current)

Tanisha Burrus, Classified Staff (2021-Current) Aggie Sehm, Classified Staff (2018-2021)

Samanta Errera, Student (2020-2021) Avinash Ramaswamy, Student (2021-2022) Daniela Derramadero, Student (2021-2022) Christopher Fesler, Student (2022-2022) Jesse Villa, Student (2022-2022) Amin Hairat, Student (2022-2022) Anthony Cantoran, Student (2023-Current)

#### Santiago Canyon College

Arleen Satele, Ed. D., Vice President of Administrative Services (2016-Current) Jose Vargas, Vice President of Continuing Education Orange Education Center (2022-Current)

Vanessa Engstrom, Faculty (2021-Current) Daniel Oase, Faculty (2023-Current) Charlie Malone, Faculty (2021-2022) Angela Guevara, Faculty (2017-2021) Mary Mettler, Faculty (2017-2021)

Ambar Nakagami, Classified Staff (2018-Current)

Jocelyn Montiel, Student (2020-2021) Sebastian Pintea, Student (2021-2022) Elisabeth Neely, Student (2021-2022) Gabriel Lopez, Student (2023-Current) Arriana Flores, Student (2023-Current)

#### District Office

Carri Matsumoto, Assistant Vice Chancellor, Facility Planning, District Construction & Support Services (2016-Current) Linda Melendez, Director, Purchasing Services (2021-Current) Tae Kim, Director of Facility Planning (2022-Current) Hugo Curiel, Facilities Project Manager (2022-Current)

Simone Wolfe, Classified Staff (2019-Current)



# GOALS OF THE SUSTAINABILITY PLAN

The Sustainable RSCCD Committee (SRC) has identified the following sustainability goals and priorities. The goals and priorities for the Sustainability Plan reflect campus needs, interests, and available resources.

#### Goal 1- Campus & Community Engagement

Encourage participation in and awareness of sustainability issues through effective education and engagement. Integrate sustainability into all facets of student life, including student government, clubs, and organizations.

#### Goal 2- Curriculum Development

#### Vision Statement

The Rancho Santiago Community College District holds sustainability to be a foundational principle in its current and future development. As a responsible steward of natural resources and the environment, the District will endeavor to minimize its impact on the environment by implementing best practices for conserving resources, reducing waste, implementing energy reduction and alternative energy generation strategies, constructing efficient buildings, and by developing partnerships that will further these activities.

Facilitate the inclusion of environmental sustainability and social responsibility into existing curriculum and develop new curricula and career-oriented certificate and training courses with an emphasis on sustainability.

#### Goal 3- Energy

Utilize 2012-2013 benchmark study to establish annual energy use and demand reduction goals (target 5% reduction). Plan appropriate energy efficiency, demand reduction, or clean self-generation measures by mid-2015 to meet reduction goals.

#### Goal 4- Facilities Design & Operation

Design and construct all major capital projects and renovations to meet LEED Silver "equivalent" standard and operate facilities to meet solid waste, energy, and water use reduction goals. Employ sustainable landscaping practices.

#### Goal 5- Solid Waste Management

Continue to implement the landfill diversion program, expand it to include all sectors of recycling and waste reduction to landfills, and strive to meet the statewide landfill recycling goal of 75% by 2020.

#### Goal 6-Sustainable Procurement

Implement efforts to source campus food, materials, supplies, information technology, equipment, and resources from organizations committed to social responsibility and environmental sustainability.

#### Goal 7- Transportation

Reduce the reliance of students, faculty, and staff on single occupancy vehicle commutes by 5% within the next five years, and encourage the use of low and zero emissions vehicles.

#### Goal 8- Water Management

Perform water use benchmarking studies at both campuses and the District Office to better understand usage as compared to similar facilities and community college peers. Based on the results, establish annual water use reduction goals and plan appropriate measures to achieve goals.

The goals described above will apply to both Santa Ana College and Santiago Canyon College, the education centers, and the District Office. The goals are listed in numerical order and are not necessarily listed by priority.



### GOAL 1: CAMPUS & COMMUNITY ENGAGEMENT

#### **Goal Description**

Encourage participation in and awareness of sustainability issues through effective education and engagement. Integrate sustainability into all facets of student life, including student government, clubs, and organizations.

#### ACHIEVEMENTS

#### A. Created a Sub-Committee in the Associated Student Government Devoted to Sustainability

#### Santa Ana College



*Mission Statement:* The Associated Student Government of Santa Ana College is committed to empowering students: by celebrating diversity; by supporting programs and activities that develop mutual understanding; by developing leadership qualities of honesty, advocacy, and integrity; by assisting the student in discovering success and happiness; and by endeavoring to build a future in which students are vitally involved in all academic and decision-making processes of the college.

The Associated Student Government (ASG) has created a Sustainability Commissioner position and this position serves on the Sustainable RSCCD Committee and promotes sustainability efforts within ASG as well as provides

a student voice for sustainability advocacy for the students. The position leads the student effort for the annual Earth Day event. The Sustainability Commissioner brings together a group of interested students to help promote sustainability named the Sustainability Committee. Their mission, similar to the Commissioner's responsibilities, is to promote sustainability efforts within ASG as well as provide a space for sustainability advocacy. In helping to bring awareness to the student body, the committee is currently working on a project that promotes recycling, composting, and renewing.

#### Santiago Canyon College



*Mission Statement:* To promote and engage in student representation and involvement by safeguarding collegial governance and representative democracy, to influence institutional policy affecting student affairs, to facilitate campus-wide activities for the improvement of student life, and to provide a platform for the fundamental development of a cohesive and accountable group of student leaders at Santiago Canyon College.

The Associated Student Government of Santiago Canyon College established a "Green Operations Committee" and the committee continues to be active.

The position of Sustainability Commissioner is an appointed position. The

Sustainability Commissioner is obligated to hold a minimum of one (1) event related to environmental sustainability and/or service in the fall and spring semesters. The Sustainability Commissioner is responsible for chairing the Sustainability Committee. The Sustainability Commissioner is mandated to, but not limited to, attend the following required meetings: ASG Sustainability Committee meetings, ASG Activities Committee meetings, and ASG Executive Branch meetings. The Sustainability Commissioner shall present a report from their respective



meetings to their governing bodies. The responsibilities of the Commissioner of Sustainability shall include, but not be limited to the following:

- Serves as a member of the Activities Committee
- Coordinates and assists with the planning of all sustainability-related events, including but not limited to Earth Day and at least one environmental service activity per semester
- Advises all ASGSCC entities and individuals on sustainable, eco-friendly practices
- Provides a calendar of planned events and activities within their purview to the Director of Outreach Operations
- Serves as the liaison for all ASGSCC-sponsored events and activities hosted in collaboration with college clubs and organizations that are within their purview

The senator description no longer specifically references the Sustainable RSCCD committee (or any other committee) to prevent ASGSCC from needing to amend the bylaws any time the committee names or information change.

The responsibilities of all Senate officers shall include, but not be limited to the following:

- Attending meetings of the Senate
- Presenting frequent reports to the Senate of all relevant actions and duties carried out within the officer's respective role and within any attended meetings
- Assists with any events and activities coordinated by the Senate

Each Senator shall be responsible for the following:

- Attends participatory governance meetings as assigned by the Vice President to provide an active student voice
- Assists with any ASGSCC events coordinated by the Senate and Vice President
- Organizes and hosts at least one event, activity, or survey per academic school year related to their assigned participatory governance committees
- Serves as a member of at least one ASGSCC standing committee

#### B. Sustainability Events

Both Colleges resumed annual Earth Day festivities in 2022 following the pandemic. The Sustainable RSCCD Committee attended Santa Ana College and Santiago Canyon College's respective Earth Day events. SRC ran a booth where students and community members could test their knowledge of recycling various materials. The SRC gave away reusable microfiber cloths and gift cards to the campus bookstore as prizes. The following sustainability infographics were also on display in front of the booth:







#### Santiago Canyon College

- Events hosted by ASG / SLL
  - o 2021-2022
    - Huntington Beach Cleanup 9/24/21
    - Earth Week 4/18-4/21/2022
  - o 2022-2023
    - Trick or Trash 10/31-11/2/2022
    - Earth Week 4/17-4/20/2023
  - Events hosted by clubs
  - o 2022-2023

•

■ Human Services Student Assn. (HSSA) Cleanup 12/7/2022













#### Santa Ana College

On April 20, 2022 Santa Ana College Associate Student Government relaunched its annual Sustain-A-Palooza event. The event highlights sustainability efforts in the community and educates students and the community on best practices and opportunities to positively impact sustainability. The event was an incredible success. The event included a Resource Fair, with 15 different tables that came out from the college, district, and the community to host activities, games, and educate students on different aspects of sustainability and the environment. Along with the Sustainable RSCCD Committee, the College President Dr. Nery and Chancellor Martinez both came to give opening remarks during the Keynote Presentation, followed by City of Santa Ana Councilmember and SAC Alum David Penaloza. The event featured amazing keynote presentations from Professor Shelley Moore, one the foremost experts in plastics pollution research, followed by Captain Charlie Moore, the



world-renowned oceanographer who discovered the Great Pacific Garbage Patch. Students who attended received free pizza and were entered into a prize drawing.

The annual Sustain-A-Palooza will continue this year with its 9<sup>th</sup> annual event. ASG has formed a committee to plan the 2023 event. The Environmental Club is involved with this effort and working with the Environmental Commissioner, Faculty, Classified Staff and Administration to plan the event. The event is planned for April 20, 2023.











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# GOAL 2: CURRICULUM DEVELOPMENT

#### **Goal Description**

Facilitate the inclusion of environmental sustainability and social responsibility into existing curriculum and develop new curricula and career-oriented certificate and training courses with an emphasis on sustainability.

#### ACHIEVEMENTS

#### A. Utilize Different Pathways to Integrate Sustainability in the Curriculum

#### Santiago Canyon College

The Curriculum Office has a fully online catalog available and has not mass printed any catalogs since 2020. In addition, all Curriculum & Instruction meeting agendas are available online for review. Last year, the Water Utility Science department changed their department title to Water and Wastewater Technology to better define its courses and programs and align with the state's course number identifications.

#### Santa Ana College

Efforts to include environmental sustainability and social responsibility into existing curriculum have been ongoing within Earth Sciences, Geology, Environmental Science and some Biology courses. Specifically, within Earth Science 110 and Geology 140/Environmental Science 140 case studies have been added to address issues such as water conservation and water recycling (highlighting the work at the Orange County Groundwater Replenishment System), desertification and land conservation, impact of smog checks and green technology on air pollution in southern California and responsible recycling of electronics to support need for depleting mineral resources. Biology and Earth Science/Geology faculty are working to create a cross-listed course Introduction to Environmental Science. This course is needed for the creation of the Associate for Transfer Degree in Environmental Science, which will be presented for Curriculum and Instruction approval in Fall 2023.

New curricula within Automotive Technology is geared towards sustainable technology. In AUTO-260 – Introduction to Hybrid/Electric Vehicles, students will focus mostly on the technical aspects of hybrid/electric vehicles, however, a course objective has been included where students will be required to explain the need for zero emission vehicles for environmental purposes.

Within the last year, the Alternative Powertrain Technology certificate, created in 2022, has been modified to include the AUTO260 course. This certificate was designed to address a job market need created by various vehicle manufacturers and municipalities which require specific training for non-gasoline powered vehicle (alternative powertrains).

Within the Fire Technology department updates to curriculum were made to include current wildland firefighting methods in Minimal Impact Suppression Tactics (MIST). MIST tactics extinguish and mop-up wildfires with the least impact to the landscape and environment.

During SAC's accreditation visit in March 2022, the visiting team was impressed with the campus-wide commitment to sustainability and creating a culture of sustainable practices as evidenced, in part by, inclusion of environmental sustainability into new and existing curriculum.



#### B. Enhance Student Distance Learning

Both colleges have resumed in-person classes while continuing to offer remote learning classes.



### GOAL 3: ENERGY

#### **Goal Description**

Perform energy use benchmarking studies at both campuses and the District Office to better understand District energy use as compared to similar facilities and community college peers. Based on the results, establish annual energy use and demand reduction goals and plan appropriate energy efficiency, demand reduction, or clean self-generation measures to achieve goals.

#### ACHIEVEMENTS

#### A. Energy Consumption Goal (Electricity and Gas)

"The District performed an energy benchmark study in 2012-13 using the Chancellor's Office Energy Calculator" (Sustainability Plan). This became the baseline year for establishing the annual energy use reduction goals, and targeting an overall annual reduction of 5%.

- The District has met the original annual goal stated in the Sustainability Plan 2015 to reduce energy consumption by 5% from baseline year (2012-13) on average through 2019-20. Years 2020-21 and 2021-22 saw a slight increase in energy usage following the pandemic; however, the District achieved an overall reduction of approximately 35,000 therms (gas) and 3.4 million kWh (electric) between the baseline year and current.
- Districtwide there has been an average reduction by 19% in electricity and 20% in gas over the last 5 years when compared to the baseline year.

#### Electricity

• Districtwide there is a steady decrease in electricity usage, with 2020-21 being the largest decrease of about 32% compared to the baseline year. This is likely in part due to the pandemic and less use across facilities.

#### Gas

• Districtwide there has been a significant decrease in gas usage ranging between a decrease of 10% to 23% each year when compared to the baseline year.

#### B. Conduct Comprehensive Facility Energy Audits

- Prepared report of energy and gas consumption for all sites, using fiscal year 2012-2013 as a baseline year of measurement can be seen in Exhibit C (Electricity, Gas, and Water Consumption History FY 2010-2022).
- The District conducts an annual review of electricity and gas use from a detailed billing summary generated by Southern California Edison (SCE) and Southern California Gas Company (SoCalGas).
- District compares the summary to the actual billing statements.
- District reviews the trends with the campus to discuss use and changes.

#### C. Summary of Current Accounts

1. Electricity Table of Summary Accounts



Site	Number of Accounts,	Service Period
	and Number of Meters	
District Operations Center	1 account; 1 meter	Mid-month
Santa Ana College	2 accounts; 2 meters	Mid-month
Santiago Canyon College	5 accounts; 5 meters	Mid-month
Orange Education Center	2 accounts; 2 meters	Mid-month
Orange County Sheriff's Regional Training Academy	1 account; 1 meter	Mid-month
Digital Media Center	1 account; 1 meter	Beginning of the month
Centennial Education Center	1 account; 1 meter	Mid-month

- The electricity consumption summary 2010 to 2020 (Exhibit C) includes 13 active accounts, as well as 1 de-activated account that is no longer in use since September of 2017 (SAC site).
- 2. Gas Table of Summary Accounts

Site	Number of Accounts, And number of meters	Service Period
District Operations Center	1 account; 1 meter	Beginning of the month
Santa Ana College	2 accounts; 2 meters	Beginning of the month
Santiago Canyon College	2 accounts; 2 meters	End of the month
Orange County Sheriff's Regional Training Academy	1 account; 1 meter	Beginning of the month
Digital Media Center	1 account; 1 meter	End of the month
Centennial Education Center	1 account; 1 meter	Beginning of the month

• The gas consumption summary 2010 to 2022 (Exhibit C) includes 8 active accounts, as well as 2 deactivated accounts that are no longer in use: OEC site since March of 2018 and one account from SAC since July 2022.

#### D. Energy Summary Account Details by SCE & SoCalGas

#### 1. Electricity

SCE provided the detailed electricity usage history summary and it includes the following information:

- o Customer's Name (for all sites, it is Rancho Santiago College)
- o Customer Account Number
- o Service Account Number
- o Customer Service Account Number
- o SIC Code
- o Current Rate
- o Meter Number
- o Service Street Address
- o City Name
- o Zip Code
- o Billing Month and Year
- o Meter Read Date (this is the end date of service)
- o Statement Rate
- o Billed Amount



- o Kwh Usage
- City Tax and State Tax
- o Maximum Kw
- o Billing Date
- o 34 columns of a complete breakdown of Summer Peak vs Winter Peak

The detailed summary includes all 13 active accounts and site, address, customer service account number or service account number. For tracking and trending purposes, some of the information is extracted from the detailed summary.

2. Gas

The gas use history report is available on the SoCalGas on the website, which provides up to 25 months of billing history and it includes the following information:

- o Date Mailed (billing statement)
- o Billing Period; beginning date and end date (service period)
- Billed Days (number of days of service)
- o Total of Therms
- o Current Charges
- o Total Amount Due

#### E. Methodology for Maintaining and Monitoring Electricity and Gas Consumption

The District tracks consumption/use history from 2010 to current (2022) for each site and accounts for both electricity and gas. The District continues to collect the data consumption history to generate trending reports and summarize the overall total use of each account.

The District has obtained copies of the electricity and gas billing statements for comparisons and verification of the reports. SoCalGas offers copies of the billing statement online and it is only limited to 25 months. Previous billing history prior to 2015 was from the actual billing statements obtained from the Accounts Payable Department.

SCE billing statements were not available online. Therefore, copies of the billing statements were obtained from the Accounts Payable Department and these were only available from 2015 to current.

# F. Electricity and Gas Consumption Trends (See Exhibit C - Electricity, Gas, and Water Consumption History FY 2010-2022)

The District has collected utility sites as noted in attached Exhibit C and can now be evaluated for trends on a monthly, quarterly, annually and seasonal basis.

1. Electricity

Typically, for all the sites, the electricity consumption begins to increase in June and gradually increases through October. Summer months demand more kilowatts due to an increase use in cooling for buildings.



2. Gas

Gas use typically begins to increase around September through March. These winter months will demand more therms for the use of the heating system.

#### G. Recommendations to Improve Consumption Management

To improve and enhance the management of utility consumption at sites, the District and the Colleges need to continue to review utility bills on a regular basis (i.e. monthly, quarterly, annually) to monitor consumption and any anomalies in billing.

- Once a billing statement has been received by the Accounts Payable Department at the District office, it is very important that the department reach out to the campus and inquire if there was a reason for an increase of the service.
- A note to the actual billing statement shall be annotated for future reference.
- The District summarizes the usage history on an annual basis and reviews this with the colleges.

#### H. Energy Efficiency Improvements

#### Santa Ana College

Replaced the roof systems at Building F, J, and I using the District's standard roofing system. The installation included a final application of a highly reflective coating designed to enhance the performance of the new roofing system and meet new Title 24 energy efficiency standards.

HVAC equipment at Buildings G, H, L, T, W, & X are at the end of their useful life and are being replaced with more energy-efficient roof-top HVAC equipment using Scheduled Maintenance funding. Although the majority of the equipment will be replaced with new equipment, some equipment will be retrofitted with efficient components and new programming upgrades will be made to improve system efficiency. The project will further extend the life usage of the air handler units, improve ventilation and indoor comfort, and will reduce energy costs. This project is currently in design and is expected to be completed in 2024.

#### Santiago Canyon College

HVAC equipment at Buildings A and B need a retrofit and replacement of multiple HVAC components to improve operations and reduce energy usage. The project includes retrofitting and/or replacing compressors, converting R-22 refrigerant to RS-44B refrigerant, replacing supply fan motors, replacing filter racks, calibration/cleaning of all air handler components, and programming upgrades to the building automation system to improve system efficiency. The project will further extend the life usage of the air handler units, improve ventilation and indoor comfort, and will reduce energy costs.

Replaced the roof systems at Building D, E, L, SC, H, and G using the District's standard roofing system. The installation included a final application of a highly reflective coating designed to enhance the performance of the new roofing system and meet new Title 24 energy efficiency standards.

HVAC equipment at Buildings A, B, C, D, & U are at the end of their useful life and are being replaced with more energy-efficient roof-top HVAC equipment using Scheduled Maintenance funding. Staff will have better control of HVAC operations through implementation of building automation controls. The project will improve indoor air quality by improving ventilation and help reduce operational energy costs. This project is currently in design and is expected to be completed in 2024.



#### **District Office**

The District upgraded the server room air conditioning equipment. The equipment was at the end of its useful life and required a full replacement. The District installed new higher efficiency equipment with improved building automation controls to ensure the reliability of cooling operations and efficiently stage compressors up or down based on the heating load.

The heating hot water valves will be replaced with new valves due to failing equipment. The project will replace all heating hot water valves and isolation valves reducing the building heating demand and reducing energy costs.



### GOAL 4: FACILITIES DESIGN & OPERATION

#### **Goal Description**

Design and construct all major capital projects and renovations to meet LEED Silver "equivalent" standard and operate facilities to meet solid waste, energy, and water use reduction goals. Employ sustainable landscaping practices.

#### ACHIEVEMENTS

#### A. Facilities Design

#### Districtwide

All new building and major landscape projects will continue to be specified with a smart controller system tied to the districtwide Command Center to better manage irrigation water usage.

Improved operations by adjusting the building automation systems, including setpoint adjustments increasing systems setpoints higher for summer cooling and lower for winter heating reduce energy consumption associated with cooling and heating operations. The District and colleges continue to fine tune setpoint and HVAC scheduling to reduce energy waste.

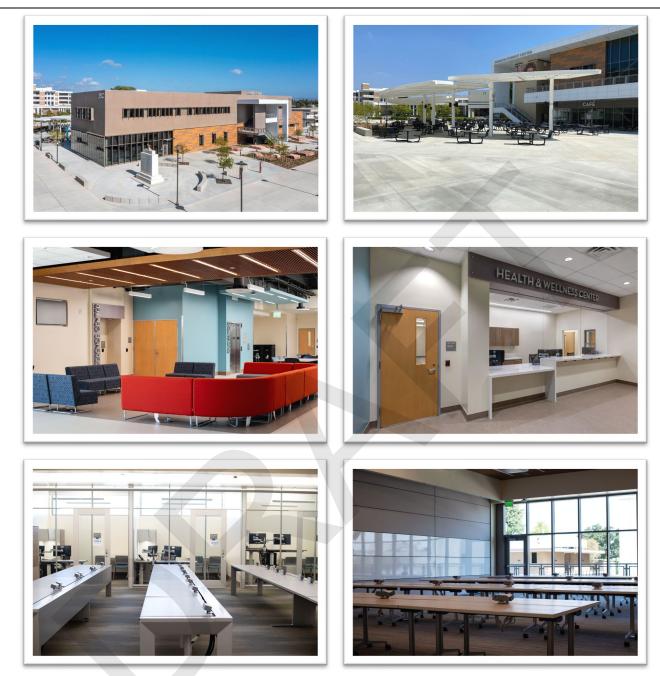
#### Santa Ana College

The Johnson Student Center building was designed to meet Leadership in Energy and Environmental Design (LEED) Silver equivalence by the United States Green Building Council. The project completed construction, and its grand opening event was held on July 27, 2021. Some of the efficient elements include water-efficient landscaping and plumbing fixtures, highly efficient HVAC units, daylight harvesting, controlled electrical outlets, and separate building metering. The approximately \$60 million project was funded almost entirely by Measure Q.









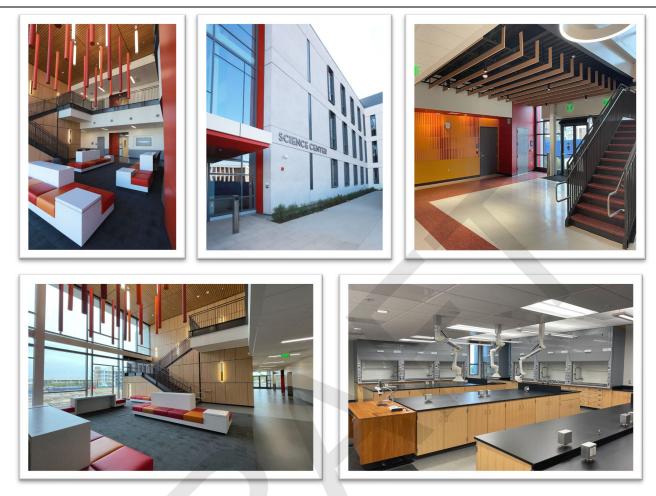




The Science Center building was designed to meet Leadership in Energy and Environmental Design (LEED) Silver equivalence by the United States Green Building Council. The project completed construction. The grand opening event was held on January 26, 2022 and the building was open for classes at the start of the Spring 2022 Semester. Some of the efficient elements include water-efficient landscaping and plumbing fixtures, highly efficient HVAC units, daylight harvesting, controlled electrical outlets, separate building metering. The building is 28% more energy efficient than required by code.







The Health Sciences building is designed to meet Leadership in Energy and Environmental Design (LEED) Silver equivalence by United States Green Building Council. The project began construction in March 2021 and is anticipated to be complete at the end of August 2023. Some of the efficient elements include water-efficient landscaping and plumbing fixtures, highly efficient HVAC units, daylight harvesting, controlled electrical outlets, and separate building metering.













# GOAL 5: SOLID WASTE MANAGEMENT

#### **Goal Description**

Continue to implement the landfill diversion program, expand it to include all sectors of recycling and waste reduction to landfills, and strive to meet the statewide landfill-recycling goal of 75% by 2020.

#### ACHIEVEMENTS

#### Districtwide

- WARE Disposal continues to be the waste hauler for the District, providing monthly and annual diversion reports so that the District can monitor the amount of waste generated for trash, recycling, and organics.
- The District publishes an annual update to the Hydration Stations map for both campuses, encouraging the campus community to bring reusable water bottles to refill on campus and reduce single-use plastic waste (see Exhibits A and B).

#### Santa Ana College

• Campus-wide Drinking Fountains: This project includes removing and replacing existing non-compliant drinking fountains at the college with compliant drinking fountains and bottle fillers. The project is currently in the bidding phase. This will reduce the need for single-use plastic water bottles, which is a resource-intensive production process and diverts waste from the landfill.



# GOAL 6: SUSTAINABLE PROCUREMENT

#### **Goal Description**

Implement efforts to source campus food, materials, supplies, information technology, equipment, and resources from organizations committed to social responsibility and environmental sustainability.

#### A. Green Purchasing

#### Districtwide

- Purchased less toxic cleaning solutions.
- LED lighting has reduced hazardous waste and the need to replace lamps.
- Continue to ensure paper products specified contain more recycled product.
- Continue to replace equipment with more energy efficient equipment such as copy machines, refrigerators, computers, etc.
- Paper used throughout the District contains at least 30% recycled content.
- Paper towels are Green Seal GS-1 Certified, 100% recycled content, 65% post-consumer recycled content
- The District Purchasing Services Department encourages all departments to consider sustainable goods when feasible. Purchasing Services share brochures and fliers from District vendors advertising sustainable products for consideration. The District is ordering more sustainable products from Home Depot, with details to come following the 22-23 Fiscal Year. Purchasing Services works closely with the Publications department when purchasing printing supplies and paper. All used printer cartridges are sent to a recycling program which gives back to the District in points for purchasing printers and cartridges.

Below are examples of some of the recycled products purchased Districtwide:











### GOAL 7: TRANSPORTATION

#### **Goal Description**

Reduce the reliance of students, faculty, and staff on single occupancy vehicle commutes by 5 percent within the next five years and encourage the use of low and zero emissions vehicles.

#### ACHIEVEMENTS

A. Improve Campus Fleet & Travel

#### **Electric and Hybrid Vehicles**

#### **District Operations Center**

• One Toyota Prius (2013)

#### Santa Ana College

- One Honda Hybrid (2007)
- One Toyota Prius (2013)
- Two Toyota Prius (2016)
- One Ford Hybrid Interceptor (2020)
- Two Hyundai EVs (2021)
- Two Ford Escape Hybrids (2022)

#### Santiago Canyon College

- One Toyota Prius (2014)
- One Toyota Prius (2017)







#### B. Encourage Low and Zero Emissions Vehicles for Commuters

#### Districtwide

• The District publishes an annual update to the Bicycle Rack locations map for both campuses, encouraging the campus community to ride their bikes to campus and reduce single-occupancy, emissions-producing vehicles on the roads (see Exhibits A and B).

#### Santa Ana College

- Ongoing assessment for future electric vehicle charging facilities.
- All new construction shall comply with California Green Building Code's Clean Air/Vanpool/EV requirements.
- As part of the Parking Lot 11 Restoration project, Installed two dual and one single electric charging stations able to provide charging for five cars at one time.
- At the completion of the new Health Sciences building, there will be three electric charging stations servicing five cars at one time, one of which is accessible (Parking Lot 6).
- SAC Campus Entrance Improvements: The Campus Entrance Improvement is scheduled to start in fall 2024 to renovate hardscape and softscape as well as increase the number of parking stalls, drop-off areas, and ride-sharing areas. The objectives include reduce traffic congestion, improve pedestrian and vehicle circulation, remove accessibility barriers, increase ride-share drop-offs, and improve the campus front entry.



# GOAL 8: WATER MANAGEMENT

#### **Goal Description**

Perform water use benchmarking studies at both campuses and the District Office to better understand usage as compared to similar facilities and community college peers. Based on the results, establish annual water use reduction goals and plan appropriate measures to achieve goals.

#### ACHIEVEMENTS

#### A. Establish Water Conservation Goals

- 2012-13 was used as a baseline year for comparison and the District established a 5% annual water reduction use.
- The District has met the original annual goal stated in the Sustainability Plan 2015 to reduce water consumption by 5% from baseline year (2012-13) on average through 2019-20. Years 2020-21 and 2021-22 saw a slight increase in water usage following the pandemic; however, the District achieved an overall reduction of approximately 20 million gallons of water between the baseline year and current.
- Districtwide there has been an average reduction by 25% in water use over the last 5 years when compared to the baseline year.

#### B. Conduct a Comprehensive Facility Water Audits

- Completed benchmark studies for all District sites.
- Established the fiscal year 2012-13 as the baseline year for water use consumption analysis, consistent with the electricity and gas baseline year (See Exhibit C).
- The District conducts an annual review of water utility bills and reviews the trends with the campus to discuss use and changes.

#### C. Summary of Accounts

Table of Summary Accounts.					
Site	Water Utility Agency	Number of Accounts, and number of meters	2 Month Service Period *exception; monthly		
District Operations Center	City of Santa Ana	1 account; 1 meter	Mid-month		
Santa Ana College	City of Santa Ana	10 accounts; 10 meters	Mid-month (4)		
			End of Month (6)		
Santiago Canyon College	City of Orange	3 accounts; 5 meters	End of Month		
Orange County Education Center	City of Orange	2 accounts; 3 meters	End of Month		
Orange County Sheriff's Regional Training Academy	Irvine Ranch Water District	5 accounts; 5 meters	Mid-month *		
Digital Media Center	City of Santa Ana	2 accounts; 2 meters	End of Month		
Centennial Education Center	City of Santa Ana	2 accounts; 2 meters	Beginning of the Month		

#### Table of Summary Accounts:



- The water consumption summary 2010 to 2022 (Exhibit C) includes 25 active accounts.
- The District's sites are within three water utility agencies: City of Santa Ana, City of Orange, and Irvine Water Ranch Water District.
- The billing cycles are either at the beginning of the month, mid-month, or at the end of the month, and services are being billed either monthly or bi-monthly.

#### D. Water Summary Details

- 1. City of Santa Ana
  - Services to District Operations Center, Santa Ana College, Centennial Education Center, and Digital Media Center
  - o Bills are available online up to 6 months.
  - Bills from 2015 to 2020 were downloaded. Bills from 2021 to current were received from accounting.
- 2. Irvine Ranch Water District
  - o Services to Orange County Regional Sheriff's Regional Training Academy
  - Bills from 2015 to current were downloaded. Bills from 2021 to current were received from accounting.
- 3. City of Orange
  - o Services to Santiago Canyon College and Orange Education Center
  - o Bills are available online for 24 months.
  - Bills from 2015 to 2020 were downloaded. Bills from 2021 to current were received from accounting.

Note, all three water utility agencies do not offer the capability to export the water usage history, and therefore all collected data is tracked manually by the District.

#### E. Maintaining a Master File

Water utility data is entered from the billing statements which includes the following:

- Date of Services; beginning date and end date
- Number of days of services
- Meter Read Date; beginning date and end date
- Total CCF (this is the difference between the two meter read dates)
- Total Gallons (the total CCF multiply by 748)
- Daily Average by Gallons
- Charges; various from water agencies, but all the rates and charges were entered.
- Billing Date (the date the billing statement was issued)



#### F. Water Trends

For each site it appears that spikes in water usage occur seasonally and when there are irrigation leaks and or other types of plumbing line breaks and repairs occur.

#### G. Recommendations to Improve Reporting of the Usage History

Open communication with the campus and District is very important. In order to understand the usage and consumption patterns, all respective parties from the campuses to the District, must communicate with one another to proactively monitor utilities.

- 1. Campus or other building operators should notify the District when a leak occurs and note the duration.
- 2. The District office can inform the Colleges of spikes in the water billing statement, which may lead to investigation of unknown irrigation leaks.
- 3. District logs and tracks events for future reference and provides water use history data.

#### H. Implement Water Conservation Strategies

Several water conservation measures have been implemented throughout the District and are included in the Facility Design Standard Guidelines.

#### Santa Ana College

• Completed Phase 2 of the Irrigation Controller Upgrades at Santa Ana College and installed seven (7) new controllers. With these upgrades, Santa Ana College has a completely new smart irrigation controllers system campuswide to help reduce water consumption.

#### I. Reduce Storm Water, Sewer Discharges, and Water Pollution

#### Santa Ana College

- New Science Center and Health Sciences buildings will utilize a shared retention basin to manage storm water runoff.
- New Johnson Center is tied into the existing campus retention basin to manage storm water runoff.

#### Santiago Canyon College

- Completed new erosion control measures to prevent runoff on the hillside and around the Campus Safety portable offices. The work included grading soil, removing vegetation, irrigation, landscaping, chain link fencing, storm drain adjustments, metal railing and hardscape. The improvements will prevent rainwater runoff from washing mud onto the sidewalk, parking lot, and near the backside of the portables along the adjacent hillside. New irrigation and plants were installed enhancing and stabilizing the area.
  - NOTE TO HUGO: Insert the Campus Wayfinding project and talk about the storm drain improvements and water quality improvements.

#### J. Adopt Sustainable Landscaping Practices

#### Districtwide



- The District adheres to landscape material design standards updated in 2020 which includes California native plants, drought resistant, and water-wise landscaping practices.
- All new buildings incorporate the Facility Designs Standards which require low water use plants and, irrigation systems with controllers to reduce and monitor water use.
- All new construction will comply with California Green Building Code.



# NONDISCRIMINATION POLICY

The Rancho Santiago Community College District is committed to equal opportunity in educational programs, employment, and all access to institutional programs and activities.

The District, and each individual who represents the District, shall provide access to its services, classes, and programs without regard to national origin, religion, age, gender, gender identity, gender expression, race or ethnicity, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because he or she is perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.

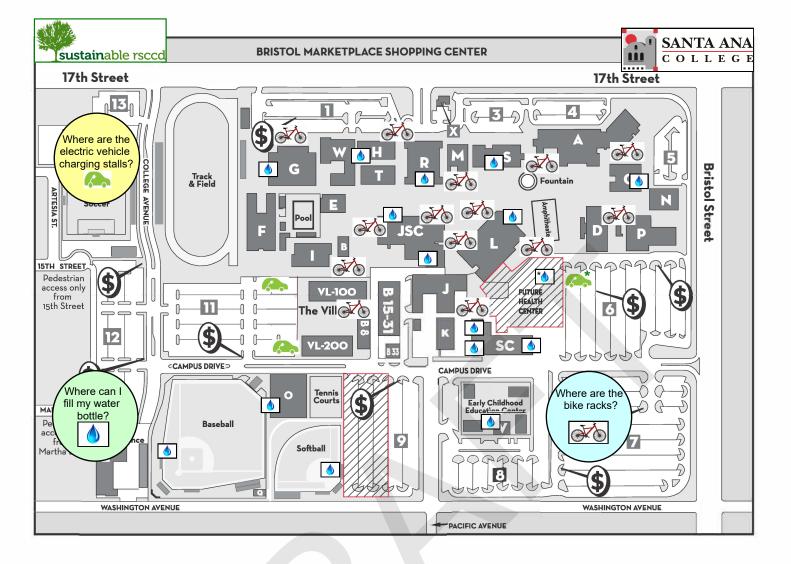
The Chancellor shall establish administrative procedures that ensure all members of the college community can present complaints regarding alleged violations of this policy and have their complaints heard in accordance with the Title 5 regulations and those of other agencies that administer state and federal laws regarding nondiscrimination.

No District funds shall ever be used for membership, or for any participation involving financial payment or contribution on behalf of the District or any individual employed by or associated with it, to any private organization whose membership practices are discriminatory on the basis of national origin, religion, age, gender, gender identity, gender expression, race, color, medical condition, genetic information, ancestry, sexual orientation, marital status, physical or mental disability, pregnancy, or military and veteran status, or because he or she is perceived to have one or more of the foregoing characteristics, or because of his or her association with a person or group with one or more of these actual or perceived characteristics. Inquiries regarding compliance and/or grievance procedures may be directed to District's Title IX Officer and/or Section 504/ADA Coordinator. RSCCD Title IX Officer and Section 504/ADA Coordinator: Jean Estevez, 2323 N. Broadway, Santa Ana, CA 92706, 714-480-7404.



## EXHIBIT A

Santa Ana College Bicycle Racks and Hydration Stations Location Map

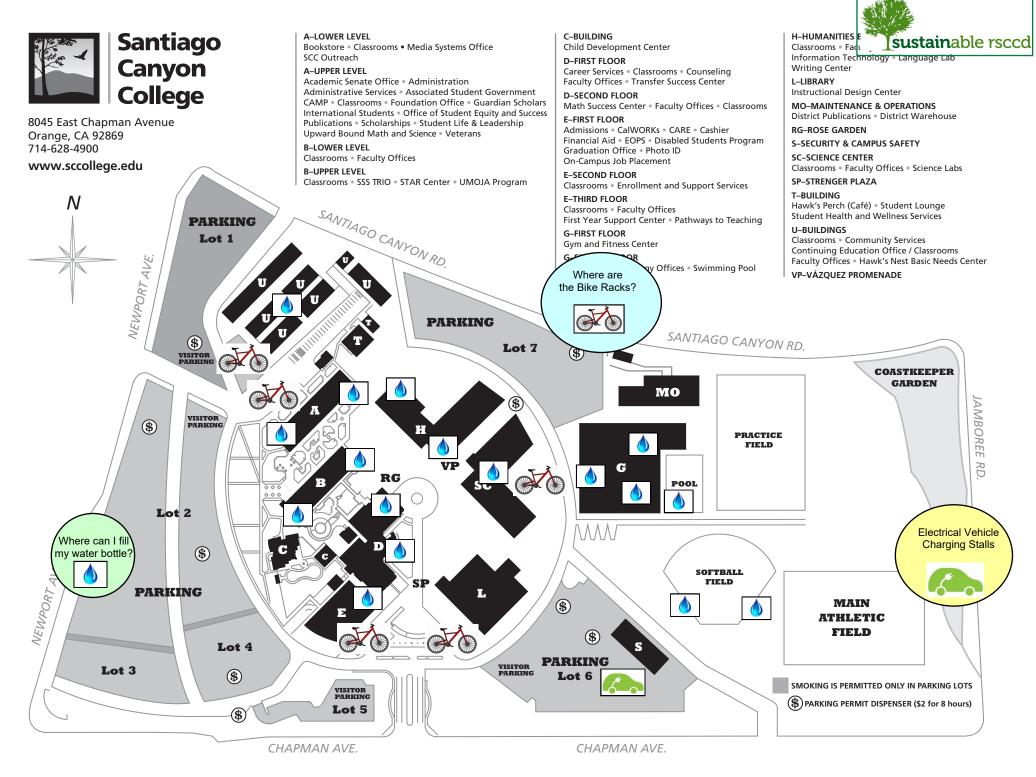


Revised 4/10/2023



## EXHIBIT B

# Santiago Canyon College Bicycle Racks and Hydration Stations Location Map





## EXHIBIT C

# *Electricity, Gas, and Water Consumption History FY 2010-2022*

## SUMMARY OF UTILITY USE PER SITE BY FISCAL YEAR

			2012-13									
Sites	2010-11	2011-12	(Baseline)	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
District Operations Center	2,080,188	2,172,192	1,997,160	1,875,984	1,813,900	1,438,404	1,674,024	2,093,652	1,543,124	1,460,844	1,198,296	1,688,984
Santa Ana College	33,998,096	30,550,564	35,758,140	36,499,408	31,588,788	27,594,468	27,079,096	35,137,300	25,981,780	24,680,260	21,365,124	24,404,248
Centennial Education Center	1,485,528	1,408,484	1,329,944	1,442,892	1,376,320	1,415,964	1,281,324	1,207,272	1,258,136	969,408	146,608	454,036
Digital Media Center	496,672	691,152	417,384	401,676	565,488	332,112	257,312	395,692	466,004	412,896	715,088	363,528
Orange County Sheriff's Regional Training												
Academy	2,168,452	2,383,128	1,828,860	2,047,276	2,126,564	1,415,216	1,244,672	845,988	1,295,536	2,427,260	8,378,348	4,862,748
Santiago Canyon College	26,375,707	26,145,133	37,986,432	41,012,840	32,291,908	20,534,096	22,499,092	29,388,172	26,468,728	26,122,404	28,103,108	28,334,988
Orange Education Center	1,500,488	1,543,124	1,414,468	742,016	878,900	373,252	1,040,468	963,424	130,900	5,984	0	0
Districtwide	68,105,131	64,893,777	80,732,388	84,022,092	70,641,868	53,103,512	55,075,988	70,031,500	57,144,208	56,079,056	59,906,572	60,108,532

### Water Use by Gallons per Site by Fiscal Year

## Natural Gas Use by Therms Per Site by Fiscal Year

			2012-13									
Sites	2010-11	2011-12	(Baseline)	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
District Operations Center	10,474	10,880	7,303	8,360	5,331	7,347	11,016	14,738	15,238	11,668	9,300	7,684
Santa Ana College	151,727	162,059	141,777	125,931	104,654	111,837	122,283	138,617	141,208	134,050	146,209	181,483
Centennial Education Center	2,725	3,200	2,939	2,134	1,790	2,029	2,055	1,702	2,165	2,172	2,209	2,658
Digital Media Center	8,013	2,912	3,602	3,489	3,308	3,420	6,389	3,127	311	1,795	510	1
Orange County Sheriff's Regional Training												
Academy	13,324	12,793	7,037	6,195	3,004	4,377	4,210	6,831	6,292	6,480	4,864	4,825
Santiago Canyon College	61,231	73,264	157,181	142,773	105,172	114,745	112,475	101,996	117,376	98,163	65,132	98,999
Orange Education Center	14,086	12,802	10,426	6,886	210	1,138	187	34	0	0	0	0
Districtwide	261,580	277,910	330,265	295,768	223,469	244,893	258,615	267,045	282,590	254,328	228,224	295,650

## Electricity Use by Kilowatt Hours Per Site by Fiscal Year

	1											
			2012-13									
Sites	2010-11	2011-12	(Baseline)	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
District Operations Center	1,302,385	1,208,298	1,222,424	1,379,409	1,125,280	847,325	865,735	883,893	856,975	825,599	737,901	778,176
Santa Ana College	8,991,583	8,487,114	8,669,762	8,722,061	8,140,174	8,166,950	8,244,453	8,460,769	7,333,808	7,007,845	6,652,093	7,920,443
Centennial Education Center	699,234	700,901	680,089	659,451	644,109	624,532	605,279	622,904	619,319	513,996	325,125	490,867
Digital Media Center	731,256	466,222	492,034	508,408	528,452	529,502	529,429	428,529	400,392	392,792	364,284	406,769
Orange County Sheriff's Regional Training												
Academy	751,765	773,334	823,648	889,446	936,498	876,507	785,915	725,676	703,366	695,604	673,285	672,563
Santiago Canyon College	3,345,127	3,589,063	4,991,821	4,895,855	5,520,082	5,072,556	5,153,590	4,747,751	4,185,125	3,837,760	3,241,879	3,882,682
Orange Education Center	1,062,580	1,034,058	780,722	514,535	444,519	427,247	351,542	235,468	245,102	112,303	51,693	60,136
Districtwide	16,883,930	16,258,990	17,660,500	17,569,165	17,339,114	16,544,619	16,535,943	16,104,990	14,344,087	13,385,899	12,046,260	14,211,636

Note: 2012-13 Baseline Year established per Sustainability Plan \*Updated based on available information as of 8/10/2021 (subject to change)

## PERCENTAGE CHANGE: FISCAL YEAR TO BASELINE YEAR

#### Water Use Percent Change by Fiscal Year Compared to Baseline Year

						Five Year
Sites	2017-18	2018-19	2019-20	2020-21	2021-22	Average %
District Operations Center	4.83%	-22.73%	-26.85%	-40.00%	-15.43%	-20.04%
Santa Ana College	-1.74%	-27.34%	-30.98%	-40.25%	-31.75%	-26.41%
Centennial Education Center	-9.22%	-5.40%	-27.11%	-88.98%	-65.86%	-39.31%
Digital Media Center	-5.20%	11.65%	-1.08%	71.33%	-12.90%	12.76%
Orange County Sheriff's Regional Training						
Academy	-53.74%	-29.16%	32.72%	358.12%	165.89%	94.76%
Santiago Canyon College	-22.64%	-30.32%	-31.23%	-26.02%	-25.41%	-27.12%
Orange Education Center	-31.89%	-90.75%	-99.58%	-100.00%	-100.00%	-84.44%
Districtwide	-13.25%	-29.22%	-30.54%	-25.80%	-25.55%	-24.87%

### Natural Gas Use Percent Change by Fiscal Year Compared to Baseline Year

						Five Year
Sites	2017-18	2018-19	2019-20	2020-21	2021-22	Average %
District Operations Center	101.81%	108.65%	59.77%	27.34%	5.22%	60.56%
Santa Ana College	-2.23%	-0.40%	-5.45%	3.13%	28.01%	4.61%
Centennial Education Center	-42.09%	-26.34%	-26.10%	-24.84%	-9.56%	-25.78%
Digital Media Center	-13.19%	-91.37%	-50.17%	-85.84%	-99.97%	-68.11%
Orange County Sheriff's Regional Training						
Academy	-2.93%	-10.59%	-7.92%	-30.88%	-31.43%	-16.75%
Santiago Canyon College	-35.11%	-25.32%	-37.55%	-58.56%	-37.02%	-38.71%
Orange Education Center	-99.67%	-100.00%	-100.00%	-100.00%	-100.00%	-99.93%
Districtwide	-19.14%	-14.44%	-22.99%	-30.90%	-10.48%	-19.59%

### Electricity Use Percent Change by Fiscal Year Compared to Baseline Year

						Five Year
Sites	2017-18	2018-19	2019-20	2020-21	2021-22	Average %
District Operations Center	-27.69%	-29.90%	-32.46%	-39.64%	-36.34%	-33.21%
Santa Ana College	-2.41%	-15.41%	-19.17%	-23.27%	-8.64%	-13.78%
Centennial Education Center	-8.41%	-8.94%	-24.42%	-52.19%	-27.82%	-24.36%
Digital Media Center	-12.91%	-18.63%	-20.17%	-25.96%	-17.33%	-19.00%
Orange County Sheriff's Regional Training						
Academy	-11.89%	-14.60%	-15.55%	-18.26%	-18.34%	-15.73%
Santiago Canyon College	-4.89%	-16.16%	-23.12%	-35.06%	-22.22%	-20.29%
Orange Education Center	-69.84%	-68.61%	-85.62%	-93.38%	-92.30%	-81.95%
Districtwide	-8.81%	-18.78%	-24.20%	-31.79%	-19.53%	-20.62%

\*Updated based on available information as of 8/10/21 (subject to change)

## PERCENTAGE CHANGE: YEAR TO YEAR

### Water Use Percent Change by Fiscal Year Compared to Previous Year

							Five Year
Sites	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Average %
District Operations Center	16.38%	25.07%	-26.30%	-5.33%	-17.97%	40.95%	3.28%
Santa Ana College	-1.87%	29.76%	-26.06%	-5.01%	-13.43%	14.22%	-0.10%
Centennial Education Center	-9.51%	-5.78%	4.21%	-22.95%	-84.88%	209.69%	20.06%
Digital Media Center	-22.52%	53.78%	17.77%	-11.40%	73.19%	-49.16%	16.84%
Orange County Sheriff's Regional Training							
Academy	-12.05%	-32.03%	53.14%	87.36%	245.18%	-41.96%	62.34%
Santiago Canyon College	9.57%	30.62%	-9.93%	-1.31%	7.58%	0.83%	5.56%
Orange Education Center	178.76%	-7.40%	-86.41%	-95.43%	-100.00%	0.00%	-57.85%
Districtwide	3.71%	27.15%	-18.40%	-1.86%	6.83%	0.34%	2.81%

### Natural Gas Use Percent Change by Fiscal Year Compared to Previous Year

							Five Year
Sites	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Average %
District Operations Center	49.94%	33.79%	3.39%	-23.43%	-20.29%	-17.38%	-4.78%
Santa Ana College	9.34%	13.36%	1.87%	-5.07%	9.07%	24.13%	8.67%
Centennial Education Center	1.28%	-17.18%	27.20%	0.32%	1.70%	20.33%	6.48%
Digital Media Center	86.81%	-51.06%	-90.05%	477.17%	-71.59%	-99.80%	32.93%
Orange County Sheriff's Regional Training							
Academy	-3.82%	62.26%	-7.89%	2.99%	-24.94%	-0.80%	6.32%
Santiago Canyon College	-1.98%	-9.32%	15.08%	-16.37%	-33.65%	52.00%	1.55%
Orange Education Center	-83.57%	-81.82%	-100.00%	0.00%	0.00%	0.00%	-36.36%
Districtwide	5.60%	3.26%	5.82%	-10.00%	-10.26%	29.54%	3.67%

### Electricity Use Percent Change by Fiscal Year Compared to Previous Year

							Five Year
Sites	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Average %
District Operations Center	2.17%	2.10%	-3.05%	-3.66%	-10.62%	5.46%	-1.95%
Santa Ana College	0.95%	2.62%	-13.32%	-4.44%	-5.08%	19.07%	-0.23%
Centennial Education Center	-3.08%	2.91%	-0.58%	-17.01%	-36.75%	50.98%	-0.09%
Digital Media Center	-0.01%	-19.06%	-6.57%	-1.90%	-7.26%	11.66%	-4.62%
Orange County Sheriff's Regional Training							
Academy	-10.34%	-7.66%	-3.07%	-1.10%	-3.21%	-0.11%	-3.03%
Santiago Canyon College	1.60%	-7.87%	-11.85%	-8.30%	-15.53%	19.77%	-4.76%
Orange Education Center	-17.72%	-33.02%	4.09%	-54.18%	-53.97%	16.33%	-24.15%
Districtwide	-0.05%	-2.61%	-10.93%	-6.68%	-10.01%	17.98%	-2.45%

\*Updated based on available information as of 8/10/21 (subject to change)

