

2023 – 24 Annual Sustainability Report

Contra Costa Community College District

May 8, 2024

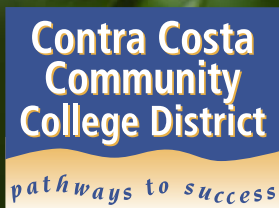


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Executive Summary

The climate crisis and increased equity gaps have multiple major and contributing common factors. In response to many environmental and equity issues, on November 9, 2022, the Contra Costa Community College District (4CD) Governing Board adopted a Board Resolution in support of Sustainability and Climate Action. This Resolution adopted nine Districtwide sustainability goals, which are in support of the 2019 California Community Colleges Board of Governors (BOG) Climate Change and Sustainability Policy, and in support of the 2021 BOG Climate Action and Sustainability Framework. The 2021 Framework refined the 2019 Policy to reach further and extended the end target year by five years, putting it out to 2035. This framework aligns with current state policies and includes comprehensive goals for establishing benchmarks and meeting targets for reductions in greenhouse gas emissions, energy efficiency, water usage reduction, waste, transportation, food systems, and sustainable purchasing.

The focus of the 2023-24, 4CD Annual Sustainability Report is on progress toward the nine sustainability goals. It includes a description of each goal, steps taken in support of each of the goals, and the development of baselines and targets to articulate annual measurable progress. This report is also forward-looking, as we continue to engage in this vision and determine the resources required in support of the 4CD sustainability goals at each of the campuses. In addition, highlighted throughout the report are ways the Facilities Master Planning (FMP) at each campus is helping to frame future implementation strategies of these goals by establishing long-range energy efficiency and greenhouse reduction projects, as well as funding requirements and timelines for these projects. Woven in the report is also the collective commitment to promoting and implementing opportunities for student learning and engagement in sustainability, including collaboration with the Associated Students sustainability champions and the Learning Aligned Employment Program (LAEP) zero waste interns.

Finally, this report also highlights various activities, projects, initiatives, and progress by campus Sustainability Committees as a way of promoting an increased awareness about the way we can collectively foster the best possible built environment for our students and continue to provide an enriched and student-focused experience.



Environmental Justice

The State of California has been rapidly developing long range energy and sustainability goals, mandates, and plans. This work highlights action is necessary to deescalate a myriad of environmental issues, including wildfires, coastal erosion from rising seas, disruption of water supply, health threats from air pollution, contaminated soil, unhealthy water, and many other issues that all contribute to large equity gaps and have damaging impacts on the economy. Climate crisis and increased equity gaps have many significant and contributing common factors. Among others, these factors include how energy is procured and used, how materials are procured, how waste is generated and disposed, how landscape is irrigated, how investments are maintained, how school and work travels are undertaken, and how food is shared. These factors all impact environmental justice and equitable outcomes for all.

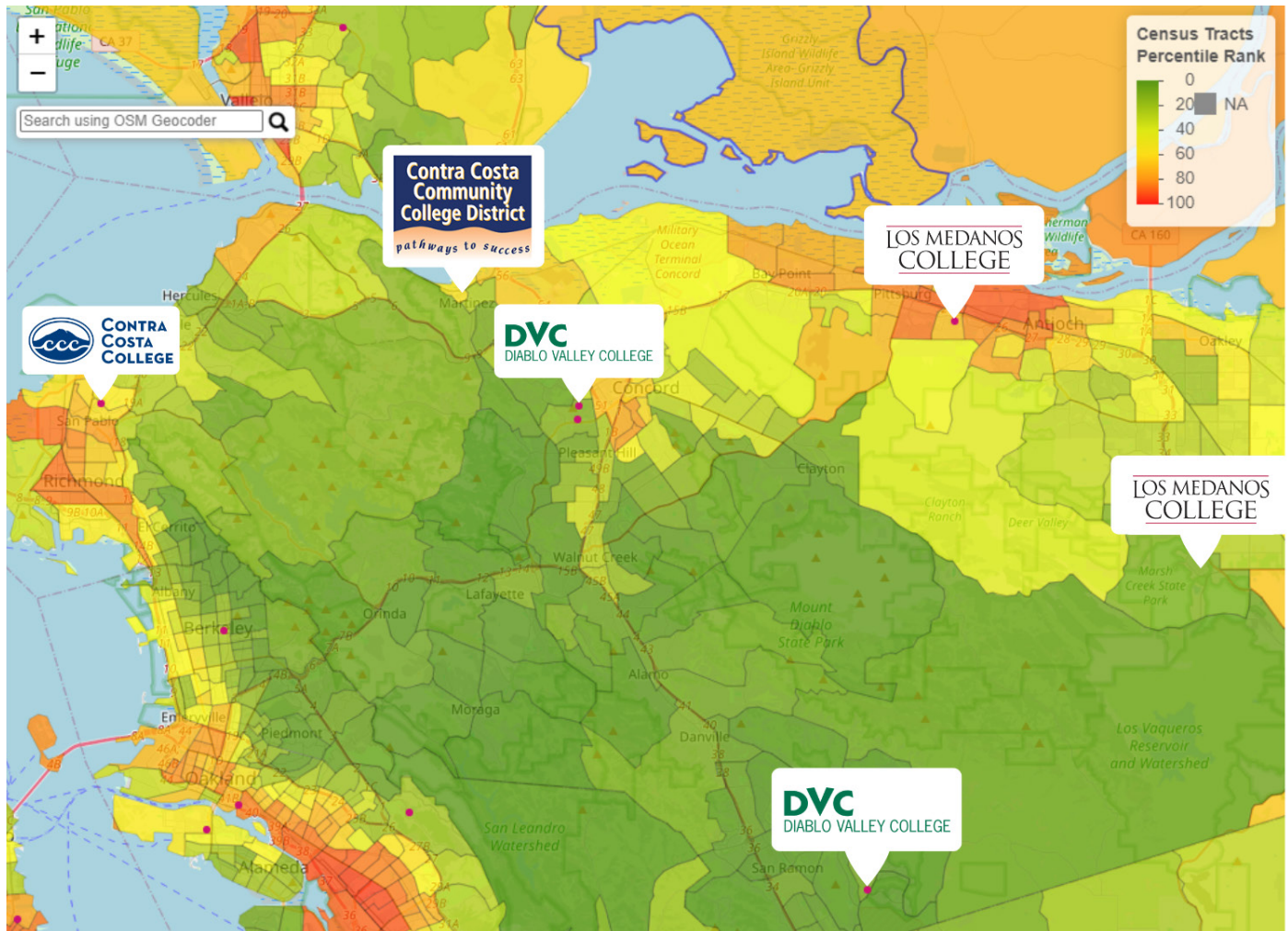
Research shows that negative environmental factors, such as dirty soil and polluted air, contribute significantly toward historically disadvantaged communities, which are often situated near facilities that produce hazardous waste in the air, water, and soil. While these environmental factors impact all people, animals, and our ecosystems, it is important to note these factors disproportionately impact young people and future generations, and disproportionately affect people of color and people in poverty, thereby exacerbating existing inequities and limiting opportunities. Closing equity gaps requires continued conversations, strategy, and action.

A national commitment to environmental justice has begun. In 2022, the federal government, for the first time in history, set a goal to ensure that at least 40% of certain federal climate and clean energy investments flow to disadvantaged communities through the [Justice 40 Initiative](#). At the state level, grant funds are being made available to certain projects, such as community climate resilience centers. Most recent examples of such projects include the [Boyle Heights, Los Angeles](#) resiliency center, and a project in progress [Lincoln Square Park, Oakland](#). Both of these are local examples of community resilience projects, which provide communities in need with equitable access to shelter from wildfire, smoke, extreme heat, power outages, and more. During non-emergency times, these centers continue to function as community centers. These efforts are a result of close collaboration between community-based organizations, local leaders, and partners and they shine a light on the just outcomes that solve pressing local climate-related issues.

The map below with 4CD locations combines environmental burdens, health risks, and socioeconomic factors across geographic areas. Areas shaded in warmer colors indicate higher environmental burdens and health risks, while cooler colors denote lower environmental burdens and health risks. DVC Pleasant Hill is surrounded by communities that are yellow to orange because of extreme heat risks. All nine of the recently adopted sustainability goals reduce 4CD's impact toward climate change, and thus on human health, environmental injustice and inequality directly in our communities. Achieving the nine 2035 sustainability goals will not only align operationally with the *District Strategic Plan*, but it will result in long-term savings while providing surrounding communities with cleaner air, water, soil and more equitable spaces to work and learn.



Map of 4CD locations most vulnerable to climate change, power grid outages, and socioeconomic and health disparities



Source: [PSE Healthy Energy Mapping Tool](#)

Pictured: This graphic combines California SB 535, Justice 40, extreme heat days and wildfire particulate matter (PM) risks to create a Percentile Rank to prioritize needed resiliency centers and other climate solutions throughout the state.

Timeline of Sustainability at 4CD

Sustainability efforts at 4CD have been shaped over the years through numerous state and local level policies, as well as collective leadership from the District Office and the Colleges including faculty, staff and students past and present. Below is a brief history of select Districtwide sustainability milestones at 4CD:

2008

The first districtwide **energy efficiency projects** completed included districtwide solar panels installation, lighting retrofits, mechanical equipment and controls upgrades.

2010

4CD Governing Board approves [Board Policy \(BP\) 6004: Environmental Stewardship and Sustainability](#), supporting resources and environmental conservation at 4CD.

2013

Prop 39 funding: 4CD receives \$4.5M in State funding, allowing for implementation of several key Districtwide energy efficiency projects, including LED lighting, mechanical and some building controls upgrades completed in 2019.

2019

California Community College Chancellor's Office BOG adopts the **Climate Change and Sustainability Policy**. This sets sustainability goals for 2030 and places intermediate targets for 2025. This decision also requests community college districts (CCDs) to adopt their own local climate change and sustainability resolutions.

4CD Governing Board approves the [Contra Costa Community College District Strategic Plan 2020 – 2025](#). This plan outlines five District Strategic Goals. Strategic Direction #2 and #5 provide the framework for the Districtwide sustainability efforts:

- **Strategic Direction #2: Decreasing Equity Gaps for All Students:** As part of this strategic goal, 4CD's sustainability projects work to promote equitable access to safe and healthy environments, promoting learning for all students.
- **Strategic Direction #5: Responsibly, Effectively, and Sustainably Steward District Resources:** 4CD's nine Districtwide Sustainability Goals directly support this strategic direction by promoting and advancing sustainability in all areas of 4CD, including operations, construction, facilities, land use, instruction, energy, water conservation, and environmental integrity.

2020

86 Level 2 Electric Vehicle (EV) charging stations are installed Districtwide, providing access to EV charging to faculty, staff, students, and community members.

2021

California Community College Chancellor's Office BOG adopts the **Climate Action and Sustainability Framework**, which refines the 2019 BOG policy to reach further and extends the end target year by five years, putting it out to 2035. The framework also asks CCDs to establish benchmarks, and track progress towards these goals.

2022

4CD Governing Board adopts **Board Resolution 20B: In Support of Sustainability and Climate Action**, adopting nine Districtwide sustainability goals and aligning 4CD with California Community College Chancellor's Office BOG 2019 and 2021 Climate Action and Sustainability Framework goals. It sets near-term goals in 2025, 2030, and 2035.

2023

The first **sustainability internships** created in the Facilities Planning Department, in collaboration with the colleges. Funding from PG&E supported the **Campus Energy and Sustainability** intern and **Building Decarbonization** intern, both located at DVC. Funding from the **Learning Aligned Employment Program (LAEP)** supported the creation of **Zero Waste Analysis** internships at all three colleges, to update waste bin infrastructure and improve waste sorting on campuses.



4CD Districtwide Sustainability Goals



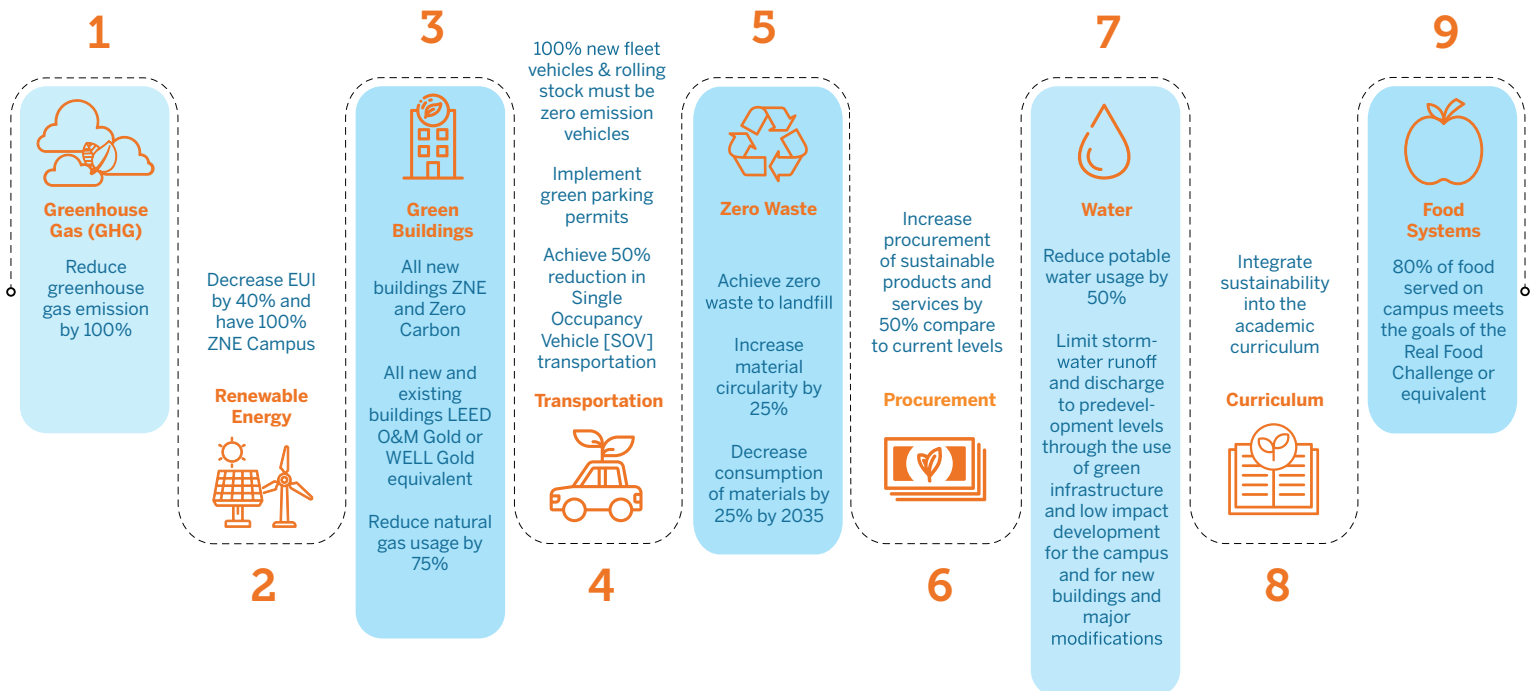
4CD Districtwide Sustainability Goals

The California Community College Chancellor's Office BOG adopted the Climate Change and Sustainability Policy in 2019, followed by the updated nine Climate Action and Sustainability Framework goals in 2021 including: Greenhouse Gas Emissions, Green Buildings, Energy, Water, Waste, Purchasing and Procurement, Transportation, and Food Systems.

The Climate Action and Sustainability Framework asks California's community colleges to establish benchmarks for each of the nine goals as a starting point. It also asks that progress is tracked towards the goals for 2025, 2030, and ultimately 2035.

In 2022, the 4CD Governing Board established the 2035 climate change and sustainability goals by passing a Governing Board Resolution in support of Sustainability and Climate Action. This action allowed 4CD to align with the California Community College Chancellor's Office BOG 2019 and 2021 policy and goals. This year, the 4CD sustainability team focused on engagement activities to educate and share these goals with campus sustainability committees and sustainability champions from each college part of their respective associated students. The sustainability committees and sustainability champions created annual goals and events to collectively move forward the crucial dialogue and action towards these goals, focusing on Goals 4-5 and 8-9, those goals identified as campus-led with 4CD support. The planning effort and new facilities master plans (FMP) also focus on sustainability and electrification to support Goals 1-3 and 6-7, the District-led with campus input goals. The college sustainability committees and associated student sustainability champions will continue to make strides in engaging faculty, staff and students in change management; namely, shifting behaviors to conserve energy and resources through annual goals and events.

2035 Districtwide Sustainability Goals



Based on BOG 2021 Climate Action & Sustainability Framework
 Goals 1-3, 6-7: District-led with campus input
 Goals 4-5, 8-9: Campus-focused

Goal 1

Greenhouse Gas (GHG) Emissions



Policy Goals –

District-led with campus input

2025:

Establish baseline by creating an inventory of greenhouse gas emissions. Create a Climate Action Plan.

2030:

Reduce greenhouse gas emissions by 75% below 2013 baseline.

2035:

Reduce greenhouse gas emissions by 100% below 2013 baseline.

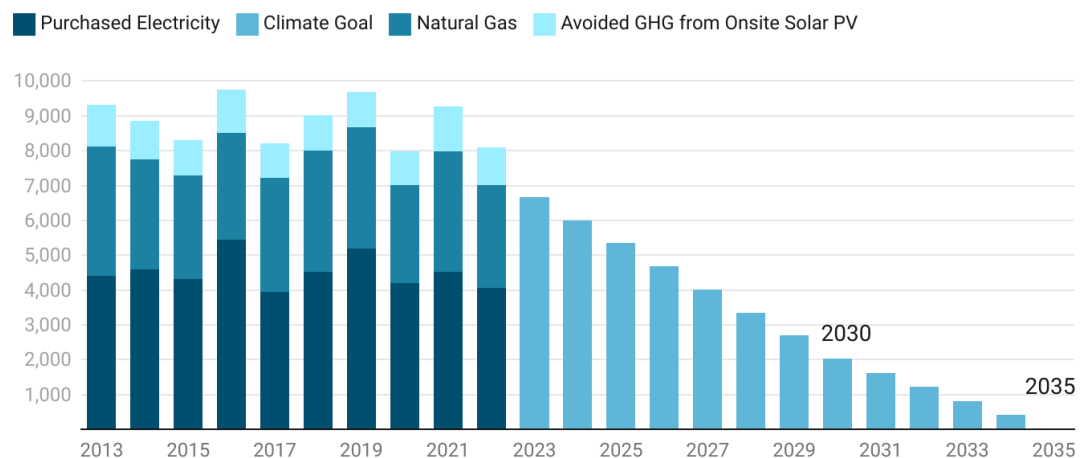
Progress Toward Goals

Part of 4CD's first and overarching sustainability goal is reducing its total GHG emissions, which directly contribute to climate change. To move towards this goal, 4CD is implementing several decarbonization strategies, including utilizing renewable energy sources, adding more solar panels to campuses, electrifying fleet vehicles, increasing campus energy efficiency, and electrifying older, end of life, natural gas-fired equipment. During this year, many of these strategies will be reviewed, studied, and incorporated into the Facilities Master Plans (FMP) at each campus to help determine specific approaches and funding strategies for equipment and infrastructure upgrades.

There are various energy-efficiency measures, alone or combined, that effectively reduce energy usage and associated emissions from generating electricity. Measures such as installing energy-efficient lighting and electrifying gas-fired equipment and heating systems not only support 4CD in its goal to decrease its greenhouse gas emissions, but also provide for operational cost savings through higher efficiency technologies. Electrifying fleet vehicles reduces transportation-related emissions, while providing fuel and maintenance-related cost savings in the long term. Finally, transitioning to renewable energy sources and adding more solar panels at the campuses allow for the generation of clean energy and presents the greatest opportunity to drive down 4CD's greenhouse gas emissions and utility costs. The chart below is based on actual emissions from 4CD's purchased electricity and gas provider. It shows the largest emissions are from purchased electricity, with the next largest emissions coming from natural gas usage. The positive impact of current campus solar panels is also seen in the avoided emissions in the chart. If the solar panel capacity was to be doubled, the ability to offset emissions would be doubled.

4CD Greenhouse Gas Emissions Compared to Goal

(metric tons CO2e)

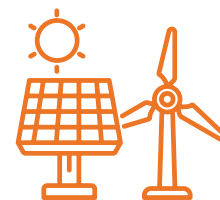


Campus fleet not yet incorporated into chart. 2023 Fleet vehicles contribute 155 metric tons to our GHG emissions.

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Goal 2

Renewable Energy



Policy Goals –

District-led with campus input

2025:

Establish a campus-level baseline energy use intensity (EUI) score. Conduct effective useful life (EUL) analysis of all gas appliances and systems. Plan for electrification of systems with EUL's of less than 10 years.

2030:

Decrease campus EUI's by 25% from 2013 baseline. Produce or procure 75% of 4CD's electrical consumption through renewable energy.

2035:

Decrease EUI by 40% from 2013 baseline. Achieve zero net energy (ZNE) at all campuses.

Progress Toward Goals

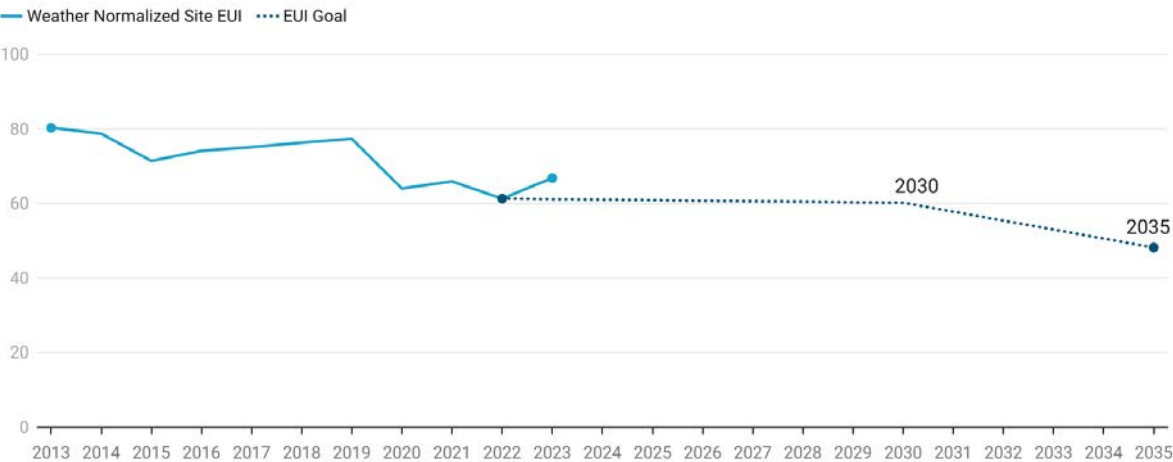
Goal 2 is increasing renewable energy usage across 4CD. It focuses on decreasing the EUI of the campuses, and moving towards ZNE campuses, where energy consumed matches the amount of renewable energy generated. Progress towards this goal supports Goals 1 and 3. While there are photovoltaic (PV) panels at the three colleges, they only offset a small portion of electricity usage. Renewable energy generators on California's electricity grid continue to increase, shifting 4CD closer to its goal by increasing the amount of purchased renewable energy. A new solar and battery storage project is in design for the new Brentwood Center as a strategy to help offset the Brentwood Center's electricity usage and to provide resiliency.

Our college FMPs include an electrification study that accomplishes the 2025 baseline portion of this goal, looking at EULs and the electrification of 4CD buildings. This study also considers future PVs, to shift 4CD toward more renewable energy at the campuses and reduce our annual utility expenses. The FMP also include districtwide energy conservation measures, such as lighting retrofits and controls retrofits, which will reduce our building EUIs. Our colleges are also participating in the Higher Education Efficiency Performance (HEEP) Program, funded through utility incentives. HEEP combines traditional energy efficiency programs with a holistic, whole-facility approach, dispensing energy efficiency services, technical assistance, and incentives to support our energy goals. Consideration must be given to funding opportunities like energy efficiency programs, state scheduled maintenance funding, project grants, including the Inflation Reduction Act (IRA). These programs provide for tax credits for public agencies up to 40% of the cost to install PVs and are some examples of the ways 4CD is exploring how to leverage available grants and funding opportunities to make the capital investments more palatable.



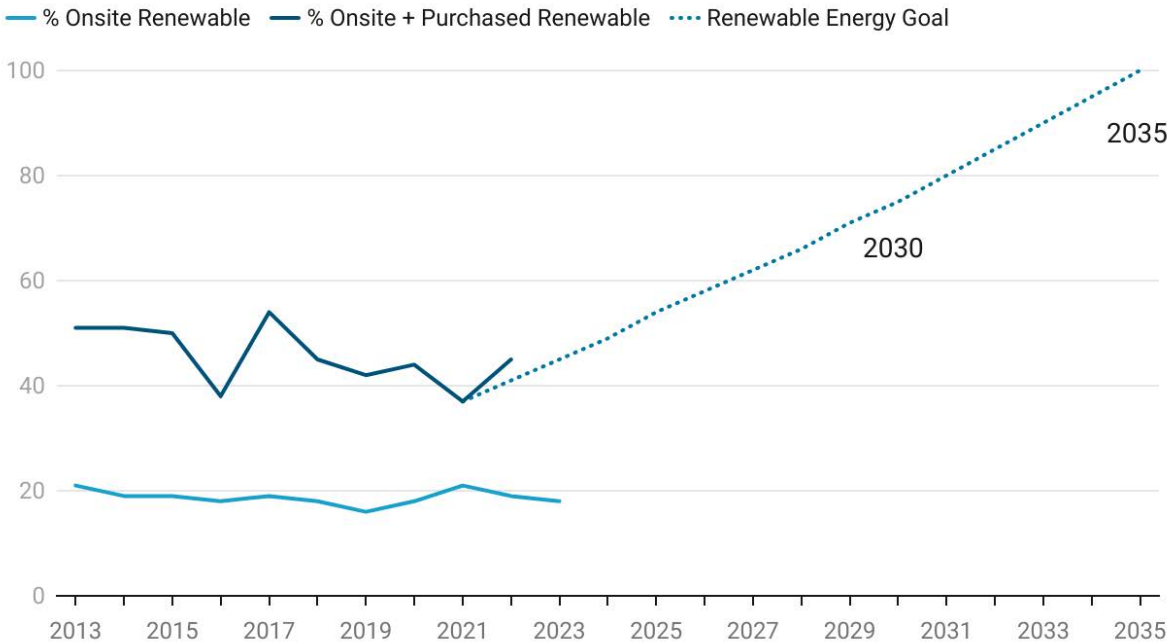
The graphs below show that 4CD’s Energy Use Intensity (EUI) has been steadily dropping over time, with the most notable drop during the pandemic, when we were able to shut many of our building energy using systems down. We can see a slight rise in EUI post pandemic, when in-person learning resumed and required more energy from more building systems operating. The second graph shows how much electricity is provided by the existing on-campus solar panels and by renewable sources in purchased electricity. Like GHG emissions, purchasing electricity from cleaner, greener providers and adding additional on-site PV can increase overall renewable energy usage. Our onsite PV provides for 20% of overall electricity usage, and provides free electricity, thus reducing annual expenses. The percentage of renewable energy we are using varies over the years because the renewable energy on our state electricity grid also varies. This variation is due to the type of power plants or renewable energy devices generating electricity on the grid. As an example, in drought years, there is less electricity generated from hydroelectric facilities, because there is less water to generate that electricity.

4CD Energy Usage Index (EUI) Compared to Goal



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Onsite and Purchased Renewable Energy



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Goal 3

Green Buildings



Policy Goals –

District-led with campus input

2025:

Establish an EUI score for all campus buildings. Develop a ZNE and campus electrification strategy. As appropriate, conduct Leadership in Energy and Environmental Design (LEED) or WELL assessments of existing 4CD buildings.

2030:

All new buildings are LEED or WELL Gold certified. Reduce natural gas usage by 30%.

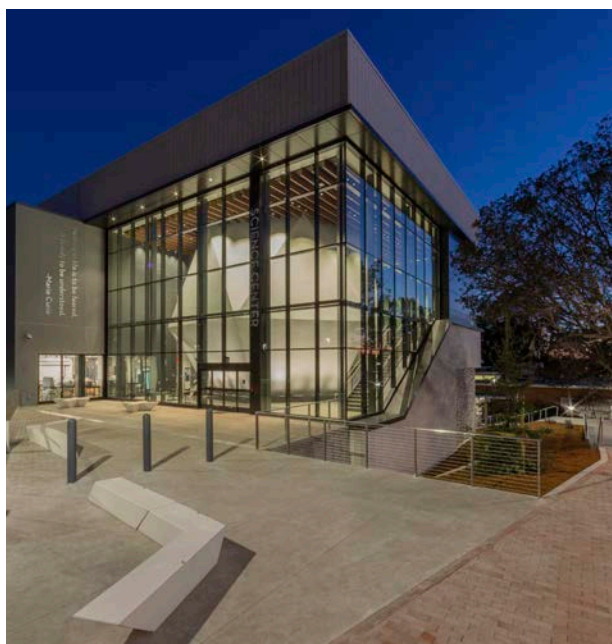
2035:

All new buildings are ZNE and Zero Carbon rated. All existing buildings are certified LEED O&M Gold or WELL Gold equivalent. Reduce natural gas usage by 75%.

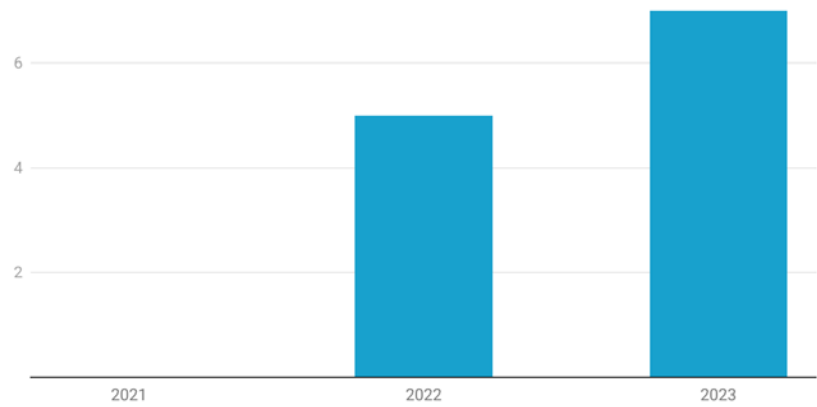
Progress Toward Goals

This goal requires 4CD's new and existing campus buildings to become LEED or WELL Gold certified. This goal also requires reducing our Districtwide natural gas usage to decrease onsite campus emissions. The LEED certification process evaluates a building's performance in sustainable site development, water and energy efficiency, materials selection, indoor environmental quality, and innovation in design, creating healthy spaces for students and staff. 4CD has several buildings that have achieved or are on the path for LEED Gold certification, including the major capital projects under the Measure E bond program, including the Art and PE/K Complex at DVC, the new Science Building at CCC, the Student Union and Kinesiology Athletics Center at LMC, and the new Brentwood Center, all surpassing former LEED Silver targets. The CCC Science and CCC PEK Complex each received their LEED certification in 2023, coming in with Gold and Silver. The most recent buildings at CCC and DVC have an all-electric design, which eliminates emissions from fossil fuels and puts them on target to achieve LEED ZNE certification. Students, faculty, staff, and campus visitors can learn about the sustainable features of these newer LEED certified buildings by reading the LEED educational signage boards installed within each building.

The electrification study being conducted as part of this year's FMPs will include developing a ZNE and campus electrification strategy, establishing a baseline EUI score for each campus building as well as developing EUI targets required to meet the goals. State scheduled maintenance funds are also lowering building EUIs by upgrading the lighting systems, HVAC systems and controls. This long-term planning and baseline and target establishing puts 4CD on track to help meet the established 2025 and 2030 intermediate targets for this goal.

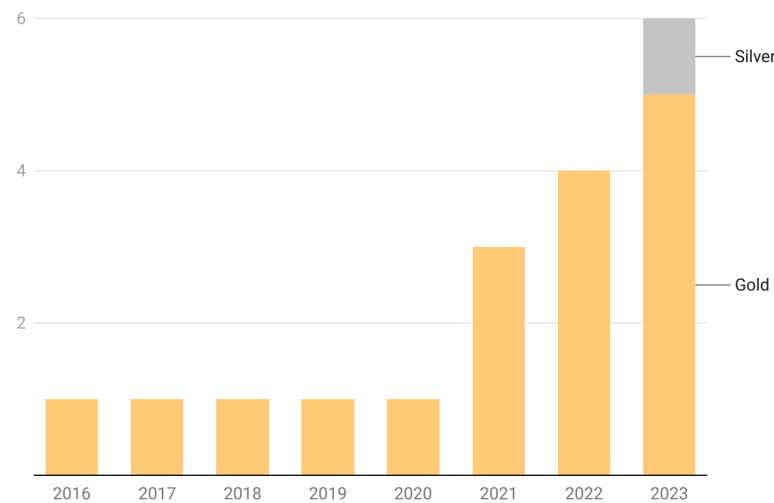


Cumulative Number of 4CD All Electric New Buildings



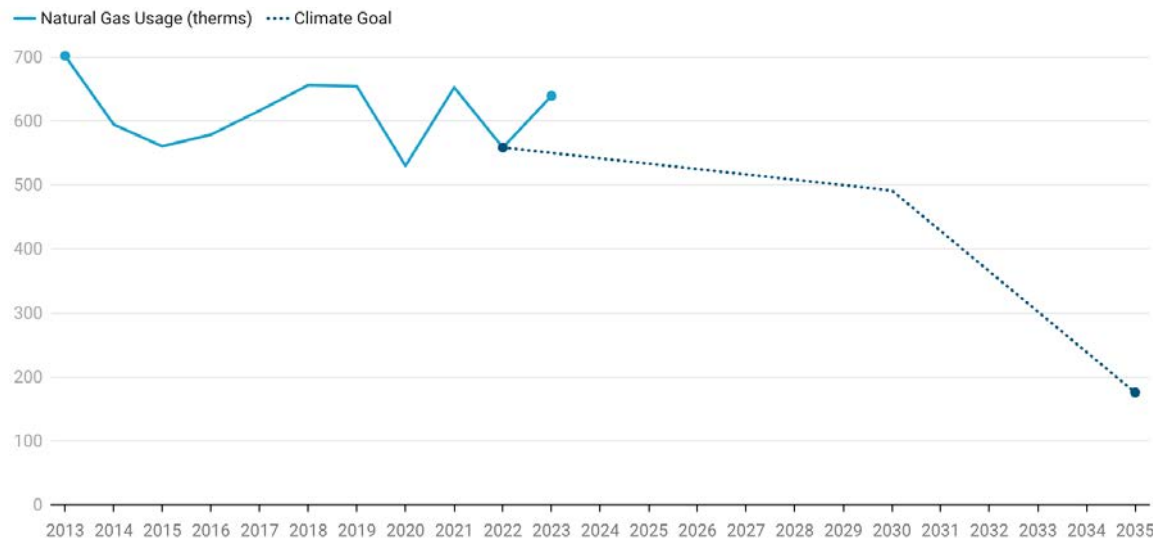
Six of these buildings are projected to be Zero Net Energy by using existing Onsite Solar PV
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Cumulative Number of 4CD LEED Certifications by Year



2030 Goal - 100% new buildings LEED or WELL Gold
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4CD Natural Gas Usage Compared to Goal



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Goal 4

Transportation



Policy Goals – Campus focused

2025:

Conduct accounting and conditions assessment of fleet vehicles; assess remainder rolling stock for electrification. Develop EV charging infrastructure to encourage EV use among 4CD community. Promote accessible shared transportation methods. Make pedestrian and bicycle assessment improvements by 2025.

2030:

Achieve 50% electrified rolling stock, and 50% of new fleet vehicles as electric. Implement green parking permits districtwide.

2035:

Achieve 100% electric new fleet vehicles, 100% electric rolling stock, and 50% reduction in single occupancy vehicle (SOV) transportation.

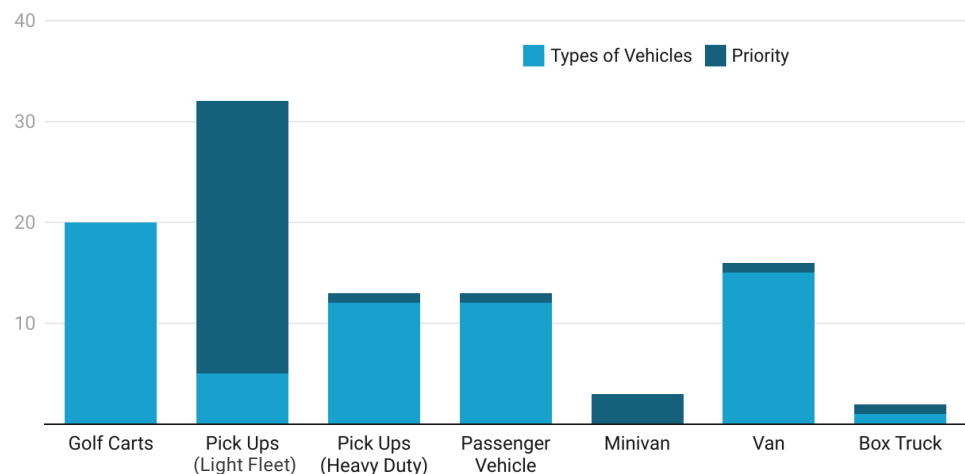
Progress Toward Goals

This goal focuses on several initiatives, including electrifying 4CD's fleet vehicles, expanding EV charging stations, improving pedestrian and bicycle access to campuses, and expanding access to shared transportation options. To date, 4CD has completed the installation of 86 EV chargers districtwide ahead of its 2025 goal, by planning early and leveraging available programs and grants.

4CD collaborated with Prospect Silicon Valley (PSV) on a fleet electrification assessment to develop a strategy for electrifying 4CD's fleet vehicles. PSV assessed the existing vehicle fleet across 4CD and recommended the best models and funding strategies to move toward fleet electrification. This assessment, along with a total cost of ownership perspective, will guide 4CD's next steps in collaborating with the colleges' Maintenance and Operations (M&O) teams and other departments to support step-by-step vehicle replacements with electric equivalents. EV replacements are expected to occur as older vehicles are replaced or retired from campus fleets.

College sustainability committees promote sustainable transportation practices, like carpooling, cycling, or using public transportation to reduce emissions and reliance on fossil fuels among faculty, staff, students, and community members. This work also supports 4CD's Goal 1 by reducing GHG emissions from campus operations and commuting. The graph below shows the results of the 98-vehicle fleet inventory from this past year. Vehicles categorized as a priority represent the oldest and most traveled of the fleet, making them the best choice to electrify upon their replacement. On average, most active fleet vehicles travel 4,704 miles annually. This ranges from 615 miles to 24,385 miles a year, with a median of 3,664 miles among all active fleet vehicles. In addition to the fleet vehicles, 4CD has 67 landscaping devices, ranging from lawnmowers to blowers and trimmers. As these gasoline and diesel-powered landscaping devices age, they will be part of a plan for replacement with electric-powered devices.

4CD Fleet Vehicle Inventory 2022



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Goal 5

Zero Waste



Policy Goals – Campus focused

2025:

Conduct a waste categorization assessment. Develop total material consumption benchmark. Benchmark and comply with T14 Division 2 Chapter 5 requirements, and T14 CCR Division 7 requirements. Conduct AB341 compliance assessment. Centralize reporting for waste and resource recovery.

2030:

Achieve zero waste to landfill. Conduct circularity analysis. Reduce material consumption by 10%.

2035:

Maintain zero waste to landfill. Increase material circularity by 25% and decrease consumption of materials by 25%.

Progress Toward Goals

The colleges continued to make strides towards zero waste this year, including expansion of the waste signage and three-stream bin set-ups on all campuses. At the District level, benchmarking efforts resulted in the collection of historical waste data for each site across 4CD, to track overall waste generation and diversion rates moving forward. Central to this effort are the dedicated contributions by campus M&O teams, as well as students, faculty, and staff members supporting one another in this culture shift of practicing recycling and composting as much as possible. These efforts will continue in the coming year, with a focus on expanding waste sorting training and continued expansion of three-stream waste systems and signage.

The 2023-24 year also featured 4CD's first Zero Waste Analysis interns supporting waste bin inventories and waste audits at all campuses this year. The interns helped document existing waste bin systems and provided recommendations to update infrastructure to support three-stream bin systems across our campuses. A Green Guide intern at DVC was onboarded to help teach students and answer questions about waste sorting in the DVC cafeteria.

In October, a month-long educational "Race to Zero Waste" competition was piloted at the District Office. The goal was to reduce landfill waste and increase sorting accuracy. Based on measurements and visual inspections, landfill waste decreased by 37.6% and sorting accuracy increased by 60-100% across the landfill, compost and recycling streams, resulting in a successful campaign.



Goal 6

Procurement



Policy Goals –

District-led with campus input

2025: Benchmark sustainability of existing products and services. Adopt a sustainable procurement policy and administrative procedure. Purchase environmentally preferable electronics products.

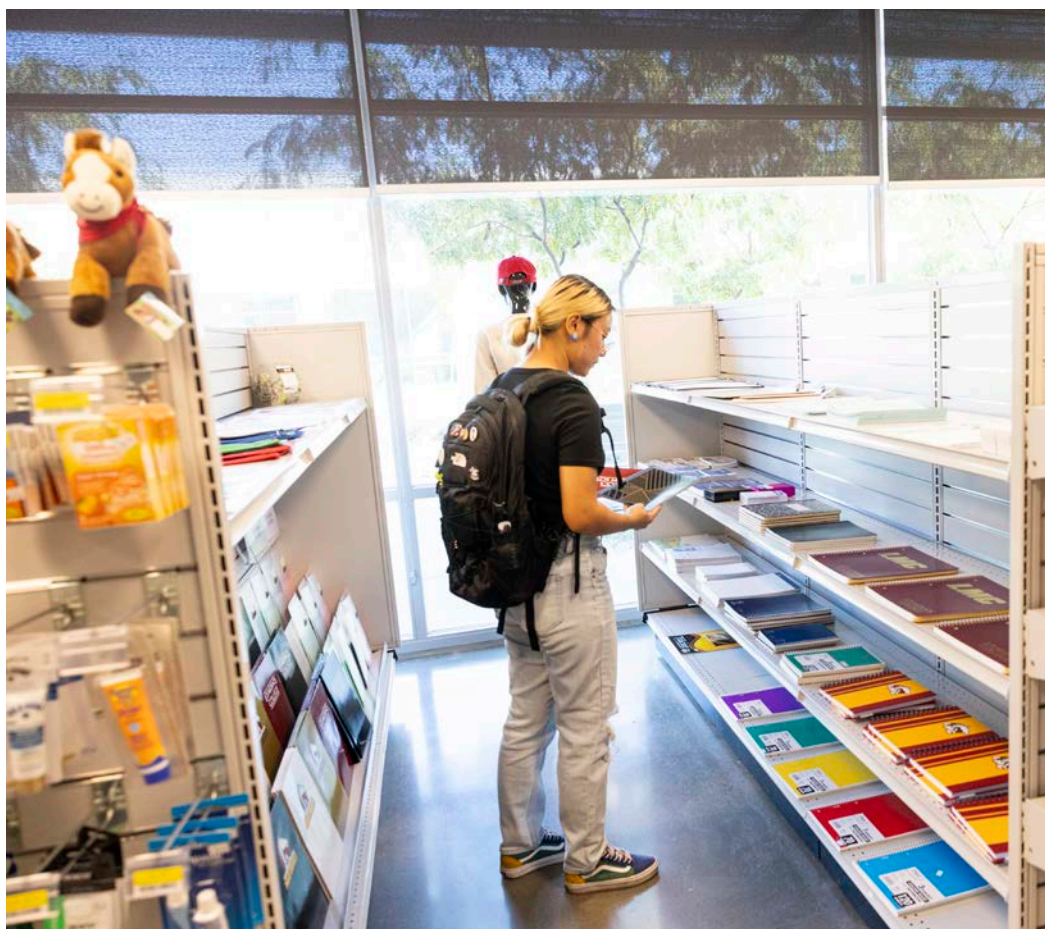
2030: Increase procurement of sustainable products and services by 25%.

2035: Increase procurement of sustainable products and services by 50%.

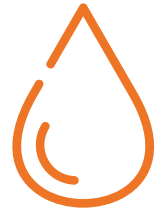
Progress Toward Goals

Sustainable procurement and purchasing policies prioritize the use of environmentally friendly and socially responsible products and services in procurement. 4CD is implementing several strategies to achieve this goal, including setting clear sustainability goals and criteria, monitoring progress, working with suppliers who meet sustainability criteria, promoting sustainable products and services, and engaging stakeholders to support sustainability initiatives and promote a culture of sustainability within 4CD.

During 2023-24, the District Purchasing department and 4CD sustainability team collaborated on sustainable procurement measures, including researching the leasing programs available for fleet EVs, as well as the requirement for maintenance and construction teams to recycle old carpet materials. 4CD's Office Depot (ODP) business accounts/contract also shows various green purchasing options, where costs sometimes vary widely compared to the standard ODP website. Teams are working together to reconcile these differences so that green purchasing is more easily achievable, visible, and cost effective. Additionally, 4CD's Purchasing department is moving away from its paper version/filing of contracts and bid documents and shifting to an all-online system, reducing paper use.



Goal 7 Water



Policy Goals –

District-led with campus input

2025: Develop local benchmarks for potable water usage and identify non-potable water resources. Create a landscape zoning map and irrigation metering strategy. Adopt CCC Model Stormwater Management Program practices.

2030: Reduce potable water usage by 25%. Install meters on all landscape irrigation systems of 2500 square foot or more (unless using local or municipal reclaimed water). Achieve 90% of landscape plantings as geographically native species. Irrigated turf cannot exceed 50% of landscaped areas on campus. Follow Municipal Separate Storm Sewer Systems (MS4) requirements.

2035: Reduce potable water usage by 50%. Limit stormwater runoff and discharge to predevelopment levels for temperature, rate, volume, and duration of flow through use of green infrastructure and low impact development for the campus, and for new buildings and major modifications.

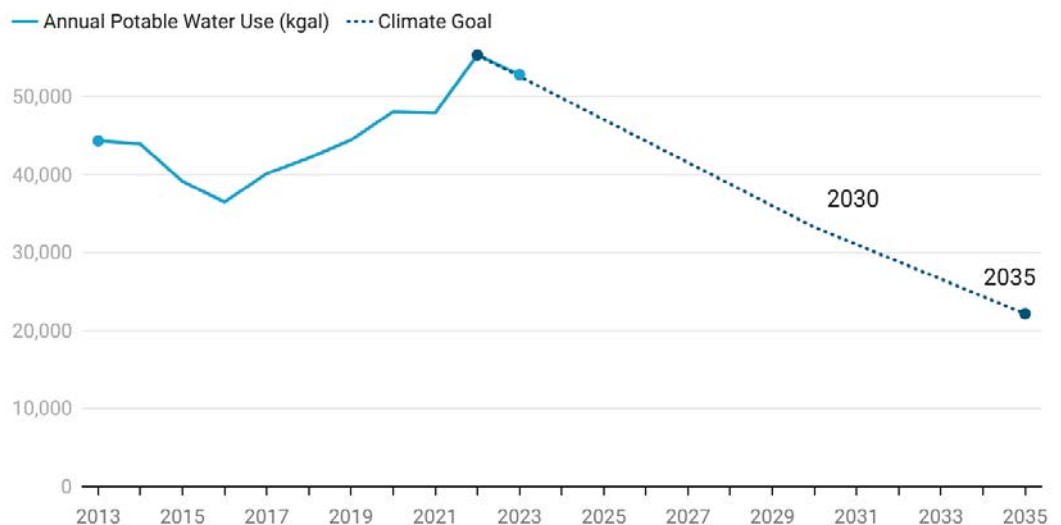
Progress Toward Goals

4CD's water goal is focused on implementing, expanding, and maintaining water conservation measures at all campus locations. In a drought-prone state like California, water is a precious resource, and it is important to use water wisely, increase water use efficiency, recycle it where feasible, and protect water sources. Several strategies are being implemented to support progress in this goal. These strategies include implementing water conservation measures such as low-flow fixtures; using native landscaping combined with landscaping suitable for reclaimed water; irrigating and flushing toilets with reclaimed water when available; installing water-efficient appliances; educating students and staff about water conservation; monitoring water usage and partnering with local water agencies for resources and expertise. These strategies are all relevant to help reduce water usage to ensure that 4CD achieves its sustainability water goals.



The graph below shows historical water usage for potable (drinking) water. While most of our colleges use reclaimed, or recycled, water for irrigation, there are still some challenges in implementation. Unfortunately, LMC experienced challenges irrigating with reclaimed water a few years ago, and had to switch to irrigating with potable water, causing an increase in the potable water usage shown in the graph. Most recently, DVC has been experiencing a water leak, identified through the smart utility meter. Specifically locating the leak has been challenging without building level submetering (in most buildings) and with no visible water leaks on the campus, however, additional studies are taking place. While such challenges have contributed to the increase over the past several years, overall usage dropped this year, which means 4CD used less and/or leaked less water this past year. District and college teams are working toward a solution for both situations, which will aid in reaching goals and reducing water utility costs.

4CD Potable Water Usage Compared to Goal



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Goal 8

Curriculum



Policy Goals – Campus focused

Integrate Sustainability
into the Academic
Curriculum

Progress Toward Goals

This goal is focused on updating curriculum and expanding opportunities for all students to learn about sustainability concepts as it pertains to their studies and across all academic majors. Learning opportunities can also include campus events, speaker series, internships, volunteer opportunities, and similar learning opportunities outside of the classroom. To achieve its sustainability curriculum goal, 4CD's sustainability team will continue to collaborate with the colleges to promote experiential learning opportunities, engage with the community, enhance learning through technology, and encourage staff and faculty to participate in available professional development opportunities as well as provide resources that may assist with integrating sustainability into existing academic disciplines. Using the campuses as living laboratories for learning is one key strategy in this effort. The Campus as a Living Lab model provides students hands-on applied learning opportunities by solving real-world problems on campus and has been successfully utilized by other community colleges.

This year, 4CD's sustainability team expanded the number of sustainability internships available to students, offering the first-ever Zero Waste Analysis internships at all three colleges in partnership with the Learning Aligned Employment Programs (LAEP). These internships focus on waste bin inventories and waste audits on their respective campuses to understand what infrastructure and education-related improvements are needed on each campus to increase

recycling and composting and reduce the overall amount of waste generated at each campus. While these internships move us closer to the zero waste goal, they also provide valuable hands-on learning and working experiences for our students as they prepare for careers and projects on sustainability issues.

DVC hosted a Green Guide intern, whose role focused on providing onsite training and education for food waste sorting at the DVC cafeteria during lunch hours. The Green Guide intern also recommended adding tabletop sorting signage, which was installed to better support learning resources for understanding where to deposit lunch waste. This internship concurrently provided a real-world learning and working opportunity and helped provide student education on waste sorting on campus.

This year, our focus was also on engaging with sustainability representatives from each college's Associated Student Senate. These representatives are student sustainability champions and ambassadors on campuses, collaborating on the nine 4CD goals. They create annual events and opportunities for students to help achieve the goals set forth and learn about sustainability in their daily lives. Each representative attends Districtwide Sustainability Committee meetings and brings a unique student perspective to these initiatives. They also implement events at their respective campuses, from clothing swaps to clean-up events, to waste audits, and recruit their fellow classmates to assist them.



Goal 9

Food Systems



Policy Goals – Campus focused

2025:

Campus food service organizations track their sustainable food purchases. Refer to Real Food Challenge guidelines – or equivalent – with consideration for campus-requested improvements.

2030:

Increase sustainable food purchases to 20% of total food budget.

2035:

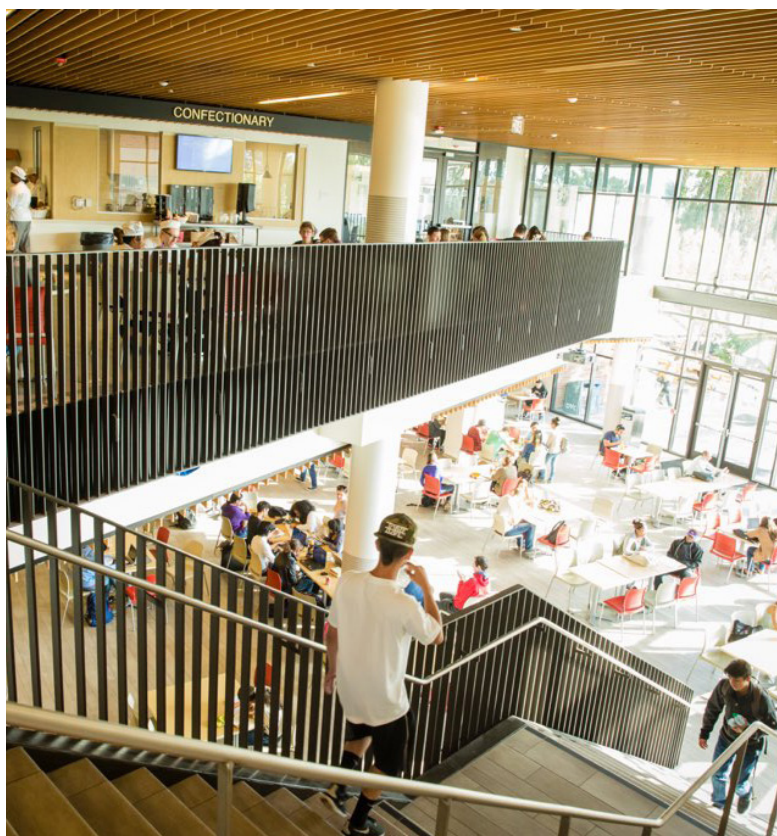
Achieve 80% of food served on campus meets the goals of the Real Food Challenge or equivalent.

Progress Toward Goals

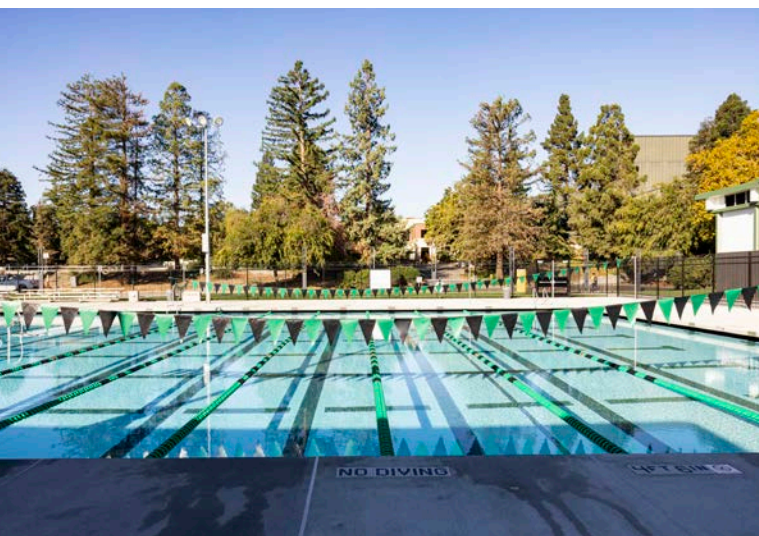
Goal 9: Food Systems is focused on where and how 4CD purchases food and food ingredients prepared and served on its campuses. Sustainable food procurement involves sourcing food distributed and produced responsibly with environmental, social, and economic factors considered. As 4CD strives toward sustainability, the focus also shifts toward reducing food waste and insecurity, by recovering edible food and providing it to under resourced individuals. The new phase of SB 1383 supports sustainable food procurement by requiring all our campuses preparing and serving food (CCC, DVC, LMC, and the San Ramon Campus) to implement an edible food recovery and donation program by contracting with at least one external food recovery organization who will donate and track that college's edible food recovery/donations.

DVC is reviewing a text message alert system, inspired by successful models at other institutions. This system would notify students about leftover food from campus events. This initiative shows 4CD's commitment to minimizing waste and addressing the critical issue of student food insecurity.

By integrating these practices with ongoing efforts in local sourcing and educational programs, the aim is to foster a more sustainable food system. 4CD's work is based on collaboration across departments and with the student body, emphasizing the importance of monitoring and reporting on key sustainability metrics. Collectively, these efforts contribute to the goal of building a resilient food system that benefits the environment, supports public health, and promotes social justice.



Utility Costs



Districtwide Utility Costs Update

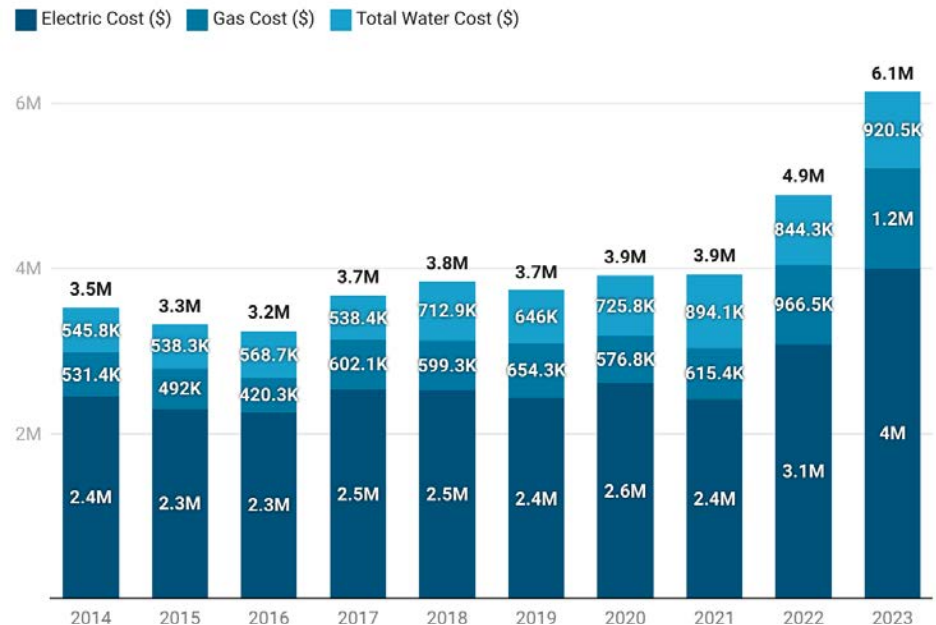
Districtwide utility costs are impacted by two primary factors: usage and unit cost. As usage increases, costs typically increase. As unit costs increase, overall costs may increase even when usage is on a decline.



4CD Utility Costs

The following graph shows the total utility cost increasing by 74% between 2014 and 2023. More specifically, electric costs increased by 63%, gas costs increased by 29% and water costs increased by 69%. Though the graph does not articulate the percentages for each cost, electricity represents 65% of 2022 costs, while gas and water come in at 20% and 15%.

4CD Utility Cost by Fiscal Year



Created with Datawrapper

4CD Utility Usage

Looking at the 4CD's Utility Usage by Fiscal Year graph, total usage is shown. What is not as easily captured in this graph is the impact of adding new buildings and more building areas to the campuses. Between 2014 and 2023, 4CD grew by 214,297 square feet, representing an overall increase of 13%. The electric usage and gas usage in the graph below were nearly the same in 2014, compared to 2023, thereby noting the increase in cost shown in the graph above is due to the unit costs increasing. Without the reduced utility usage per square foot (through implementation of LEED buildings, electrification and overall energy and sustainability efforts), overall utility costs would have been much higher.

4CD Utility Usage by Fiscal Year

	Purchased (kWh)	Annual Therms Consumed	Annual Potable Water Use (kgal)	Annual Recycled Water Use (kgal)
2014	16,852,816	642,129	43,597	47,351
2015	16,925,340	566,701	40,782	47,804
2016	16,747,418	570,767	37,585	44,628
2017	17,117,056	610,802	36,940	35,899
2018	17,285,088	659,015	42,512	87,448
2019	17,007,985	648,316	38,546	40,159
2020	16,247,539	578,712	46,511	29,117
2021	14,181,352	538,046	52,704	26,948
2022	16,120,319	650,102	49,837	26,588
2023	16,681,472	633,161	53,203	13,220

Created with Datawrapper

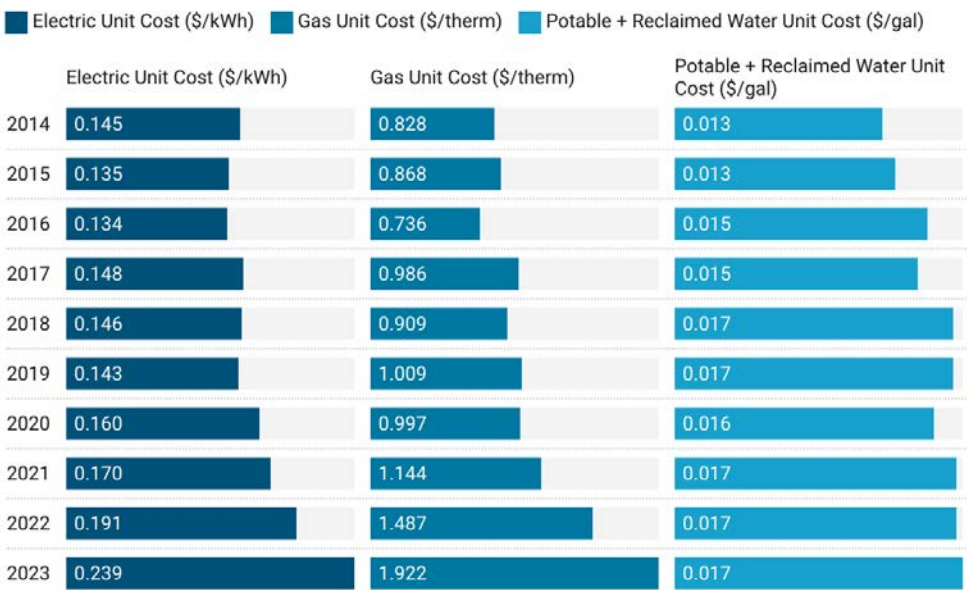
4CD Utility Unit Costs

The chart to the right shows how the unit costs for each utility have increased. Electricity has increased by 65% between 2014 and 2023, while gas and water have increased by 132% and 38%. This increase would imply that gas unit costs are the most volatile, followed by electricity and water.

The 2023-24 budget was projected to be 15% higher than last year, accounting for all the known unit price increases. However, this year PG&E increased their electric rates after our budget was set, well outside the expected range. Because of that, utility costs have been tracked for this fiscal year more closely. At the six-month mark, the expenses were at the corresponding budget, at 52%, and at the end of the third quarter, they were at 64% of the budget. Based on that trend data, it is expected that actual utility costs align closely with the budget this year, even given the unexpected electric rate increases from PG&E in January 2024.

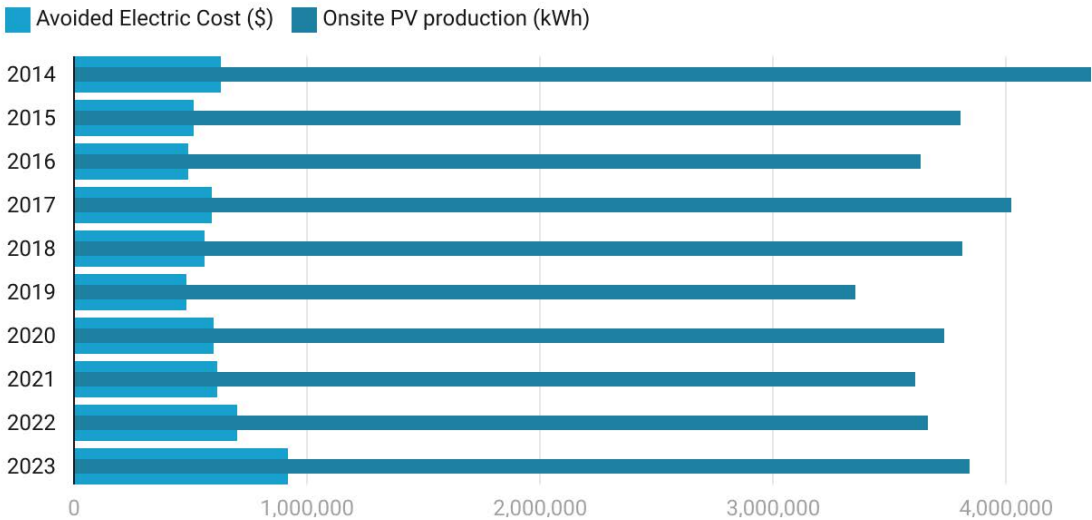
As more campuses electrify, it will be important to stabilize electricity unit costs, as they will be an even larger portion of the budget. This can be done by adding more solar PV panels to the campuses, and by engaging in long-term agreements with clean, green electricity providers. The electric heat pump technology is three to five times more efficient than gas fired equipment, so this helps minimize the increase in electricity usage and cost as well. This year we generated 19% of our electricity on campus from our existing PV, which means we received 19% of our electricity for free. If we had to pay for that electricity, this year alone, it would have been \$920,000 in additional utility costs. If we were able to completely offset our electricity costs by generating all our electricity on campus, we could eliminate nearly \$4M a year in utility costs. Our FMP electrification study will project future electric usage, after we electrify our campuses, and help us to refine and manage our utility costs by proposing future solar PV on our campuses.

4CD Utility Unit Costs by Fiscal Year



Created with Datawrapper

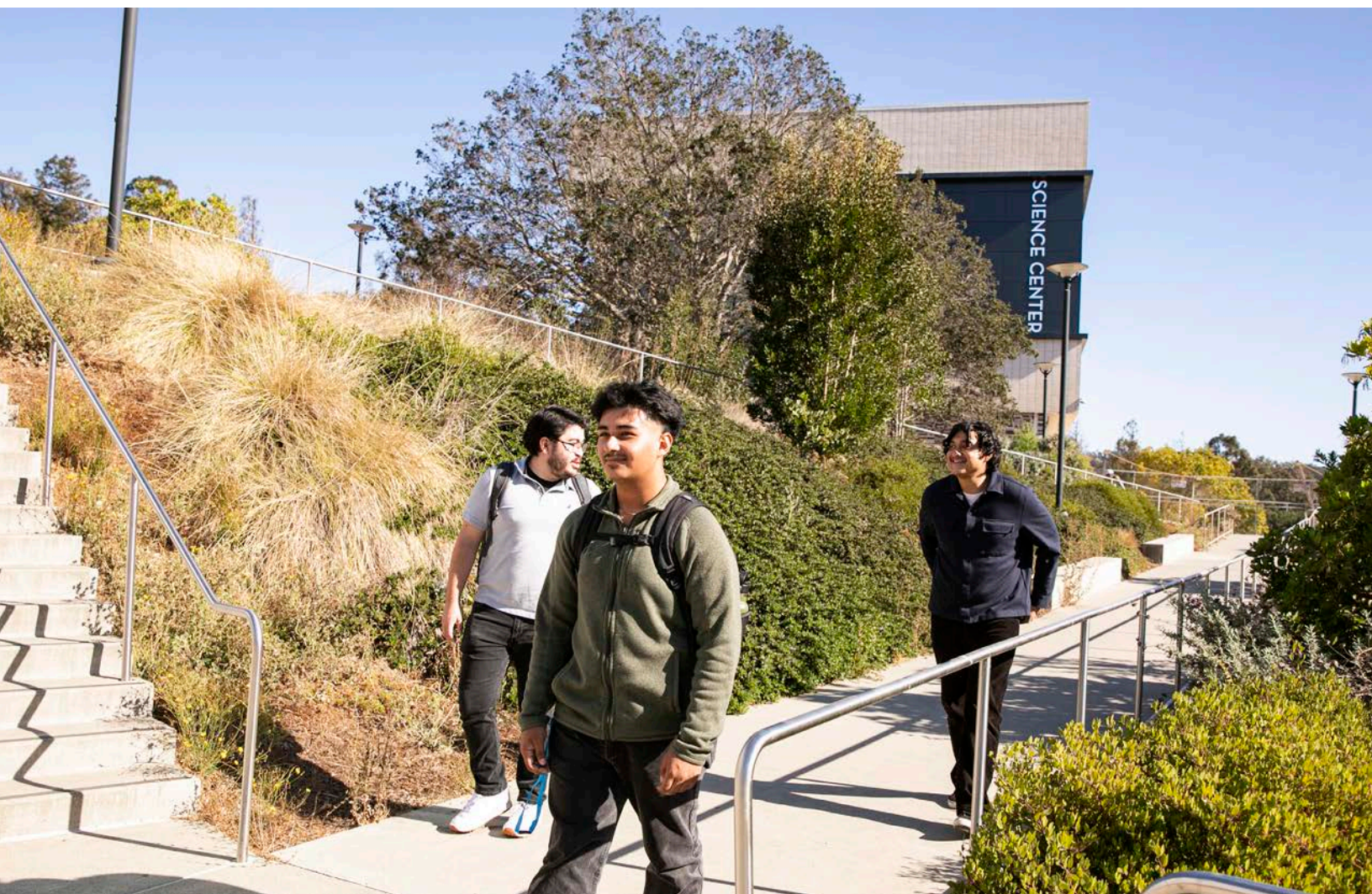
Existing Campus Solar PV Generation & Avoided Cost



Created with Datawrapper

A wide-angle photograph of a modern campus courtyard. In the background, a light-colored building with large glass windows and a sign that says "LIBRARY" is visible. The courtyard is paved with light-colored tiles and features several small trees and shrubs. A large, semi-transparent blue rectangle is overlaid on the lower half of the image, containing the text "Campus Sustainability Committees".

Campus Sustainability Committees



Contra Costa College



CCC has an active sustainability committee composed of students, faculty and staff. The CCC Sustainability Committee works with the 4CD Sustainability Team to foster sustainability initiatives across CCC campus, and this year welcomed their new Director of M&O Robert Bagany as the new Sustainability Committee Chair. Below are details of this year's accomplishments in different areas of sustainability at CCC.

A. Zero Waste: Infrastructure Expansion and Zero Waste Analysis Intern

This year, three-stream bins, which feature landfill, recycling, and compost bins side by side expanded across campus. Signage showing what items go in each bin have also been added across campus. CCC Zero Waste Analysis Intern Juan Velazquez has supported data collection on waste generation across the campus, which will help guide further education on waste sorting and updating campus infrastructure to encourage more recycling and composting on campus. Juan also supported advancement of the zero-waste goal through conducting site walk assessments of campus bin infrastructure, identifying opportunities to improve the efficiency of bin setups, and enable more recycling and composting infrastructure on campus.

In one of the first waste audits done at CCC, Juan and several custodial team members analyzed the waste content of three-stream bins in the hallways and entrance of the AA Building. The goal of the waste audit is to understand the quantity of waste that these bins collect, and gauge people's sorting accuracy in that location. In a waste sample from the hallway three-stream bin near Room 142 in the AA Building, the original waste sampled was made up of 73% landfill waste, 15% recycling waste, and 11% compostable waste. After looking through the waste and correctly re-sorting it, it turned out that the waste sample was made up of 27% landfill, 17% recycling waste, and 56% compostable waste. This showed that there is a lot more compostable and recyclable waste than people had originally sorted, and there is an opportunity to educate building users to correctly sort more waste into the compost and recycling bins. More waste being sorted accurately into compost and recycling means that overall less waste is being sent to landfills.

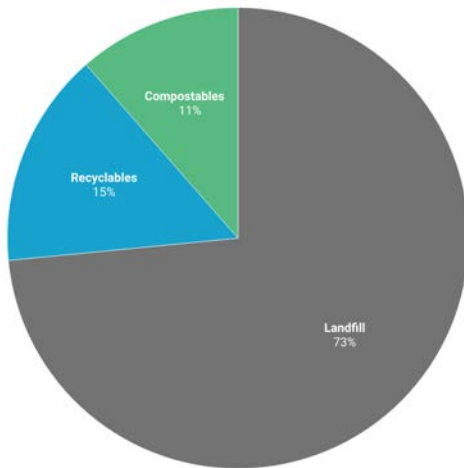


Pictured: CCC Zero Waste Analysis Intern Juan Velazquez weighs a bag of waste during a waste audit at the AA Building during Spring 2024. Results from this audit, shown in the graphs, revealed that there is a lot more compostable and recyclable waste than people may realize.



Contra Costa College: Original Waste Collected from AA Building

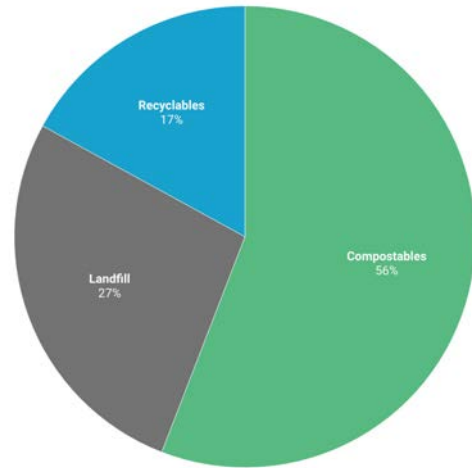
Original waste content from hallway bin near AA Building Rm 142. Diversion rate: 26%



Diversion rate is the total percentage of compost and recyclable waste combined and diverted from landfill.
Created with Datawrapper

Contra Costa College: Sorted Waste Collected from AA Building

Waste content from hallway bin near AA Building Rm 142, after corrective sorting. New diversion rate: 73%



Diversion rate is the total percentage of compost and recyclable waste combined and diverted from landfill.
Created with Datawrapper

B. Transportation

CCC is working to expand access to electric vehicle charging on campus and to encourage CCC faculty, staff, and students to use electric vehicles. The Custodial, Athletics, and Police Services on campus currently use electric golf carts rather than gas-powered vehicles to travel around campus.

CCC will host its annual Bike to School Day on May 16, 2024, to encourage alternative modes of transportation to campus. Collectively, these efforts to shift to biking, carpooling, electric vehicles or other alternative modes to go to school help improve air quality and reduce GHG emissions for the community and 4CD. These efforts support Goal 4 (Transportation) and Goal 1 (Greenhouse Gas).

C. Water

CCC is advancing water conservation strategies by installing automatic faucets for bathroom and lab sinks, automatic flushable urinals, and toilets with high efficiency flushing. Future projects include upgrading CCC's landscape sprinkler system to a modern remote system with moisture sensors to further conserve water for campus landscape irrigation. These efforts will save CCC water and money through improving water use efficiency. These efforts are aligned with Goal 7 (Water).

D. Food

CCC's Sustainability Committee continues to explore and discuss tracking sustainable food purchases, which is aligned with District Goal 9 (Food Systems). Cost effectiveness is a priority for CCC and the culinary academy in exploring sustainable food purchases on campus.

E. Campus Events

Campus sustainability events this year included the annual CCC Arbor Day Celebration hosted by the Culinary Department, on April 26, 2024. CCC's annual Earth Day celebration was held this year on April 22, 2024, and the annual Bike-to-School Day is scheduled for May 16, 2024.



An example of the six electric golf carts at CCC!

Diablo Valley College



DVC this year continued to advance sustainability projects on campus in multiple areas, including transportation, zero waste, water conservation, curriculum, and food. These efforts have helped DVC move closer towards reducing waste generated on campus, promoting a circular economy, expand access to public transportation, and educate the DVC community about waste sorting.

A. Zero Waste: Waste Audits, Clothing Swaps, More Three-Stream Bins, Cafeteria Updates

The 2023-24 school year at DVC made further progress in support of zero waste initiatives on campus. Three-stream bins – which feature landfill, recycling, and compost bins side-by-side – expanded into lobby areas in the PE/K complex. Furthermore, continued discussions have been taking place with the cafeteria and culinary staff to explore the option of utilizing compostable takeout containers at the DVC cafeteria.

Two waste audits were also completed this year, focused on gathering data on the types and amount of waste generated at the DVC cafeteria. The first audit took place on November 14, 2023, and the second one took place on January 29, 2024.

The November waste audit revealed that waste sampled from the DVC cafeteria was made up of 69% landfill, 30% recyclables, and only 1% compost. After re-sorting the waste properly, waste audit volunteers discovered that 17% was landfill, 19% recyclable and the remaining 64% was compostable.

The January waste audit revealed that waste sampled from the cafeteria was made up of 40.3% landfill waste, 35.8% recyclable waste, and 23.9% compost waste. After properly sorting the waste, 39.1% was landfill, 10.3% was recyclable, and the remaining 50.6% was compostable.

Both waste audits show there is a lot more compostable waste than folks realize, and more practice is needed to accurately sort more compostable waste into the green compost/organics bin in the DVC cafeteria. The pie charts below show the original unsorted waste data, and the re-sorted waste data described above.

Pictured below: Katherine Chen, the 4CD Utility and Sustainability Specialist, and Derren Aurelius, the DVC Green Guide Intern, weigh and record waste collected from the DVC cafeteria.

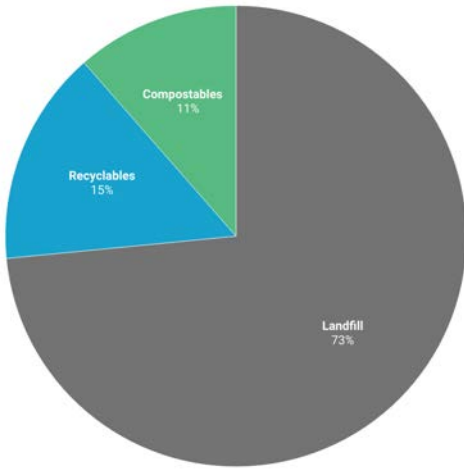


Pictured below: The November 14, 2023 waste audit team, featuring members of Associated Students of DVC (ASDVC).



Diablo Valley College Cafeteria: November 14 Original Waste Sample

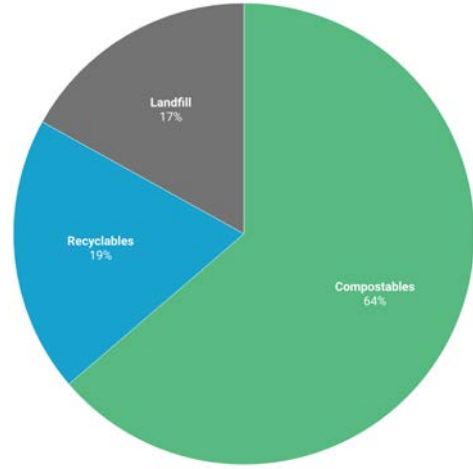
Original waste content from hallway bin near AA Building Rm 142. Diversion rate: 26%



Diversion rate is the total percentage of compost and recyclable waste combined and diverted from landfill.
Created with Datawrapper

Diablo Valley College Cafeteria: November 14 Sorted Waste Sample

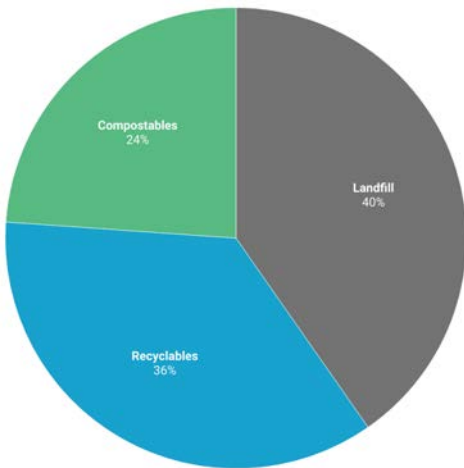
Waste collected from DVC cafeteria waste bins, after corrective sorting. Diversion rate: 83%



Diversion rate is the total percentage of compost and recyclable waste combined and diverted from landfill.
Created with Datawrapper

Diablo Valley College Cafeteria: January 24 Original Waste Sample

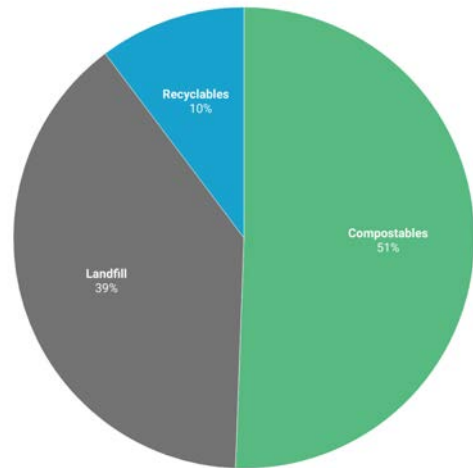
Original waste collected from DVC cafeteria waste bins. Diversion rate: 60%



Diversion rate is the total percentage of compost and recyclable waste combined and diverted from landfill.
Created with Datawrapper

Diablo Valley College Cafeteria: January 24 Sorted Waste Sample

Waste collected from DVC cafeteria waste bins, after corrective sorting. Diversion rate: 61%



Diversion rate is the total percentage of compost and recyclable waste combined and diverted from landfill.
Created with Datawrapper

Lastly, the DVC Sustainability Committee hosted a clothing exchange event on October 3, 2023. At this event, participants donated gently used clothing they no longer needed, and anyone could stop by and pick up clothes for free. During the event, the DVC Career and Transfer Center kicked off the event with donations from the Career Closet. During the event, 20 students donated 119 pounds of clothing. Several hundred students walked through the event and browsed the free clothing items, and over half of the clothes donated were taken home by students that same day. After the event, the remaining clothes were donated to Hospice East Bay. Following the success and positive feedback for the event, the DVC Sustainability Committee plans to host another clothing exchange during Earth Month in April 2024.

These clothing swaps encouraged reuse and re-homing of clothes no longer needed (instead of contributing to textile waste), helped folks find free, new clothes, and promoted a circular – and zero waste economy on campus.



Pictured: DVC students peruse tables stocked with free donated clothes and accessories at the first DVC Clothing Exchange on October 3, 2023.

B. Transportation: Clipper Card Distribution

DVC's Sustainability Committee continued to partner this year with the DVC Basic Skills Initiative to offer prepaid Clipper Card transit passes for students who receive financial aid. The Clipper Cards came preloaded with \$125 each and can be used for traveling on BART or County Connection buses. This expands student access to transportation and encourages the use of public transportation.

C. Curriculum: Creek Cleanup, Sustainability Newsletter, Green Guide Intern and Zero Waste Analysis Intern

There were multiple opportunities to get involved and learn about sustainability at DVC during the 2023-24 school year. On October 21, 2023, the DVC Earth Club organized a cleanup of a section of Grayson Creek next to the campus. The cleanup event helped remove litter from the creek habitat, which is home to many animal and bird species. Volunteers picked up over 100 pounds of waste.

The DVC Sustainability Committee continues to share updates through their "Sustainability Newsletter," released once each semester. The Fall 2023 issue and others can be found on the [DVC Sustainability Newsletter page](#).

Finally, the DVC Sustainability Committee hosted its first Green Guide Internship and Zero Waste Analysis Internship in partnership with the 4CD Sustainability Team. Derren Aurelius, the first DVC Green Guide Intern, helped DVC students sort their waste in the cafeteria during the Spring 2023 semester. He also supported waste audits to measure the waste sorting accuracy in the cafeteria, and recommended tabletop sorting signs, which were created and placed on tables at the DVC cafeteria. Abby Halverstadt, the first Zero Waste Analysis Intern, was hired to support bin assessments across campus and provide recommendations to improve recycling and composting infrastructure on campus. Abby's internship also supported waste audits to understand campus wide sorting habits and identify specific details of what forms of additional sorting education will improve sorting accuracy in different parts of campus.

Los Medanos College

LOS MEDANOS COLLEGE

This year, the LMC Sustainability Committee welcomed their new Director of M&O Jarrod Holcombe as the new Sustainability Committee Chair. With Jarrod and the opening of the new cafeteria in the Student Union, the 2023-24 academic year brought continued progress across multiple areas of sustainability at LMC.

A. Zero Waste: New Composting Service, Water Bottle Filling Stations, and Zero Waste Analysis Interns

Students, staff, and faculty may have noticed new composting bins alongside the recycling and trash cans in the Student Union, which aligned with the opening of the new cafeteria. Food waste, dirty napkins, and soiled paper products can be placed in the green compost bin. Furthermore, there are now signs and bins in restrooms that will enable people to compost used paper towels in restrooms.

There is also a new water bottle filling station in the Math building, expanding the locations where students can refill their water bottles on campus and stay hydrated.

Both updates support 4CD's Sustainability Goal 5: Zero Waste, by reducing the need for single-use water bottles and increasing the number of bins where people can dispose of compostable waste. By encouraging more composting and recycling on campus, LMC is reducing waste going to the landfill. Students, staff, and faculty can also contribute to this goal by practicing how to sort recyclable waste into the recycling bins on campus, and their compostable waste into the new composting bins in the Student Union.

Finally, LMC also welcomed its first Zero Waste Analysis Interns, Isabella Meza and Drew Booth. Through their internships, Isabella and Drew conducted site assessments of existing bin infrastructure on campus and identified opportunities to improve the efficiency of bin setups while expanding infrastructure to offer recycling and compost across campus. Furthermore, they conducted waste audits to record waste generation data, and identify areas of improvement to provide tailored sorting education for different parts of campus. Data and recommendations from Isabella and Drew's work support LMC's Zero Waste goals by standardizing recycling and compost services across campus, increasing the potential for diversion and reducing the amount of waste from LMC that is going to landfill.

B. Fleet Electrification

LMC's M&O teams continue to explore strategies for electrifying their vehicle fleet that is due for replacement. These efforts support Goal 1 (Greenhouse Gas) and Goal 4 (Transportation). This year included replacements of vehicles with smaller carts, and a continued focus on infrastructure to support fleet electrification.

C. Campus Education

This year, the LMC Biology Department continued to include tours to the material recovery facility at Mount Diablo Resource Recovery, as part of its curriculum for students. These tours show people where their waste goes after throwing it away on campus or at home and demonstrate the importance of reducing waste generation through zero waste practices. The LMC Sustainability Committee also has been working on presenting information at key events on campus, such as Mustang Day and Earth Day.



Glossary of Terms

BAAQMD

The Bay Area Air Quality Management District (BAAQMD) is a public agency that regulates the stationary sources of air pollution in the nine counties of California's San Francisco Bay Area: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma.

Backcasting

Backcasting is central to the Framework for Strategic Sustainable Development, which is a framework that has helped hundreds of different organizations around the world integrate sustainable development into their strategic planning and create long lasting transformative change. Backcasting begins with the end goal in mind, moves backwards from the vision to the present state, and then moves step-by-step toward the vision, using sustainability principles.

Carbon dioxide (CO₂)

Carbon dioxide enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and other biological materials, and because of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle. Carbon dioxide emissions are the primary driver of global climate change. It is widely recognized that to avoid the worst impacts of climate change, the world needs to urgently reduce emissions.

Carbon Neutral

Carbon Neutral is an emerging definition that relates to measuring, reducing and offsetting carbon energy used by either a building or an organization. A carbon neutral building is one where the design, construction, and operations do not contribute to emissions of greenhouse gases that cause climate change.

CCTA

The Contra Costa Transportation Authority (CCTA) works to plan, fund, and implement innovative transit programs that strengthen our diverse communities and improve the lives of residents.

Compost

Compost is organic matter that has been decomposed in a process called composting. This process recycles various organic materials otherwise regarded as waste products and produces a soil conditioner. Compost is rich in nutrients. Sometimes it's referred to as "organics" on waste bin signs.

Decarbonization

Decarbonization has been simplified by many in our industry, by using the term electrification. That applies for part of the definition. But, the second part of decarbonization will require absorbing carbon from the atmosphere by capturing emissions and enhancing carbon storage in places such as agricultural lands, forests and possibly deep in the ground in depleted oil and gas reservoirs.

Electrification

Electrification in the context of this report, refers to changing things that use fossil fuel as their power source to use electricity as their power source. For example, a gas fired boiler could be electrified by changing it from gas to an electric heat pump boiler. Or a gasoline powered vehicle could be changed to an electric vehicle. It assumes the electric grid will be shifted to 100% renewable by 2045, using clean, green power, that emits zero GHG emissions.

Energy Usage Index (EUI)

EUI is a common performance factor that can be compared against benchmarks in the same climate and in the same type of usage (college/university, office buildings, and so on). EUI is expressed as energy per square foot per year. It is calculated by dividing the total energy consumed by the building in one year (measured in kBtu) by the total gross floor area of the building/campus.

Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

EV Charge Program

PG&E launched the EV Charge Network program to install 7,500 EV chargers at multi-unit dwellings and workplaces throughout its service territory, including sites in disadvantaged communities. This program provides an opportunity to contribute to California's clean energy goals while also investing in your property.

GHG

Any of various gaseous compounds (such as carbon dioxide or methane) that absorb infrared radiation, trap heat in the atmosphere, and contribute to the greenhouse effect. In this report we are using it as a synonym for CO₂ and methane emissions.

LEED

Leadership in Energy and Environmental Design (LEED) is the most widely used green building rating system in the world. Available for all building types, LEED provides a framework for healthy, highly efficient, and cost-saving green buildings.

Methane (CH₄)

Methane is emitted during the production, transport and burning of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.

Photovoltaic (PV)

Solar cells, also called PV cells, convert sunlight directly into electricity. PVs get their name from the process of converting light (photons) to electricity (voltage), which is called the photovoltaic effect. Solar PV has specific advantages as an energy source: once installed, its operation generates no pollution and no greenhouse gas emissions, it shows simple scalability in respect of power needs and silicon has large availability in the Earth's crust.

Renewable Energy

Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human time scale, including carbon neutral sources like sunlight, wind, rain, tides, waves, and geothermal heat. Renewable energy does not emit GHG emissions while generating/producing energy. The term often also encompasses biomass as well, whose carbon neutral status is under debate.

Weather Normalized

This is a process that measures the impact of weather on energy consumption. Because weather patterns vary widely day-to-day and year-to-year, weather for a given season may be colder or warmer. Energy used in keeping warm is directly dependent on how cold it is. Comparing the weather or energy consumption from one year to the next would provide only the change between those years. However, when energy consumption is "Weather Normalized" you are comparing your energy consumption over a normal weather period. Weather normalization adjusts energy usage so it can be compared to energy usage in other years over a longer period.

WELL

WELL is a performance-based system for measuring, certifying, and monitoring features of the built environment that impact human health and well-being, through air, water, nourishment, light, fitness, comfort and mind.

ZNE

The State of California defines ZNE for state buildings as follows: ZNE Source – Energy Efficient building that produces as much clean renewable energy as it consumes over the course of a year, when accounted for at the energy generation source. Other terms used for this include: zero-energy building (ZE), net-zero energy building (NZEB), net zero building is a building with zero net energy consumption, meaning the total amount of energy used by the building on an annual basis is equal to the amount of renewable energy created on the site.

Additional Resources

[CA Community Colleges Climate Action and Sustainability Goals](#)

[CA Community Colleges Board of Governors Climate Action and Sustainability Framework](#)

[Contra Costa College Sustainability Committee](#)

[Diablo Valley College Sustainability Committee and DVC Sustainability Page](#)

[Los Medanos College Sustainability Committee](#)

[4CD Facilities Planning, Sustainability Page \(coming soon!\)](#)



www.4cd.edu

<https://www.4cd.edu/business/facilities/index.html>



**Contra Costa
Community
College District**

pathways to success

