

El Camino College Sustainability Plan

January 2019



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LETTER FROM THE PRESIDENT

Dear Colleague:

As members of the El Camino College community, one of our key responsibilities is to act as wise and careful stewards of the resources entrusted to us. Taxpayer dollars provide the resources to serve our students and the communities in our district. Multiple construction projects, funded by voter-approved bonds, provide our students with a state-of-the-art educational environment that enhances learning and success. Our charge is to ensure El Camino College operates effectively and efficiently by utilizing these and all of our resources appropriately.



To that end, we have commissioned the creation of this Sustainability Plan. We started by identifying the sustainable activities already underway at El Camino College. Then we developed strategic, measurable goals that will further our vision of being a sustainable, resilient campus with minimal environmental impact. As you will see, this plan identifies short- and long-term goals that will help us reduce ongoing operational costs by investing in transportation, waste and water reduction, energy efficiency, and campus operations. I invite you to review the report and consider how you can contribute to the implementation of its recommendations.

It has been said that sustainability seeks to meet the needs of the present without compromising the ability of future generations to meet their needs. I believe that is the approach we must take as the stewards of El Camino College—wisely and carefully managing our resources not just for the students we serve today, but for those we will serve in generations to come.

Best regards,

Dena P. Maloney, Ed.D.
Superintendent/President
El Camino College



EXECUTIVE SUMMARY

El Camino College (ECC) began developing a campus sustainability plan in summer 2018, with a goal of highlighting current sustainable activity on campus and developing strategic goals that can be measured to further the College's vision toward resource efficiency. The process, which began with campus site visits and gathering of current campus data, engaged ECC stakeholders every step of the way. Existing sustainability projects and benchmarks were identified, current operations programs were understood and evaluated, and campus performance data (electricity, gas, water, waste, transportation) was captured in order to identify baselines fundamental to campus sustainability goal development. Interactive, hands-on stakeholder workshops allowed for the collaboration and cross-pollination of ideas and the definition of goals and action steps agreed upon by participating campus stakeholders.

Why is this plan important to El Camino College?

- This plan was developed for the El Camino College community by campus staff, faculty, and students.
- This plan identifies short- and long-term goals for the campus that will reduce ongoing operational costs.
- Identified goals will minimize impacts of climate change and depletion of resources, and will encourage new ways of thinking to improve our natural and built environments.
- This plan represents a collaborative exchange of ideas and opportunities for the entire campus community to be engaged, supportive, and become sustainability champions.

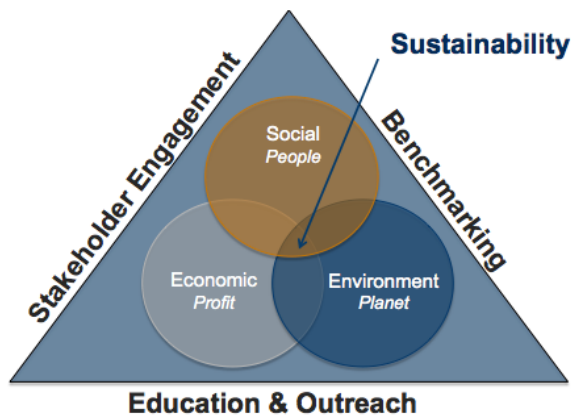
While an initial roadmap for augmenting campus sustainability has been identified and outlined within this plan, the use of advanced technologies, and growing campus needs should lead the way and allow this plan to evolve alongside the campus. This plan is considered a living document and should be updated annually with progress and achievements. It should strive to be a guiding force in achieving resource efficiency for El Camino College.





BACKGROUND AND PROCESS

Many are familiar with the triple bottom line: people, planet, and profit, with sustainability located in the sweet spot at the center of the three—but our process for the development of this plan involved another facet of this notion. In order to be successful with the triple bottom line, it is essential to have the following:



- **Stakeholder engagement** to gain campus buy in and to create a sense of ownership of sustainability initiatives and goals.
- **Baseline development and benchmarking** so the campus can continue to make progress and improve performance.
- **Education and outreach** to create awareness and to implement continued improvement over time.

Using this process, the sustainability plan has been created to be an active and living document. The goal of the plan is to be a dynamic and engaging roadmap for students, staff, and faculty, and will be referenced continuously during ECC's mission to become a more resource efficient and resilient campus, thus reducing operating costs and lessening the impact on the environment. The process used in crafting this sustainability plan encourages the insight and support of campus stakeholders, and develops specific and measurable goals that are appropriate for the ECC campus specifically. Without the input and support of all parties involved, the plan would have little hope of taking off and inspiring long-term change. In order to encourage involvement, the development of the plan relied on interactive workshops and meetings with various stakeholders to shed light upon which areas of campus the ECC community feels most invested in for making improvements. Sustainability is a group effort—it demands collaboration and active participation amongst all campus stakeholders. Involving campus community in the process enables the campus to make lasting and impactful change in campus resource efficiency.

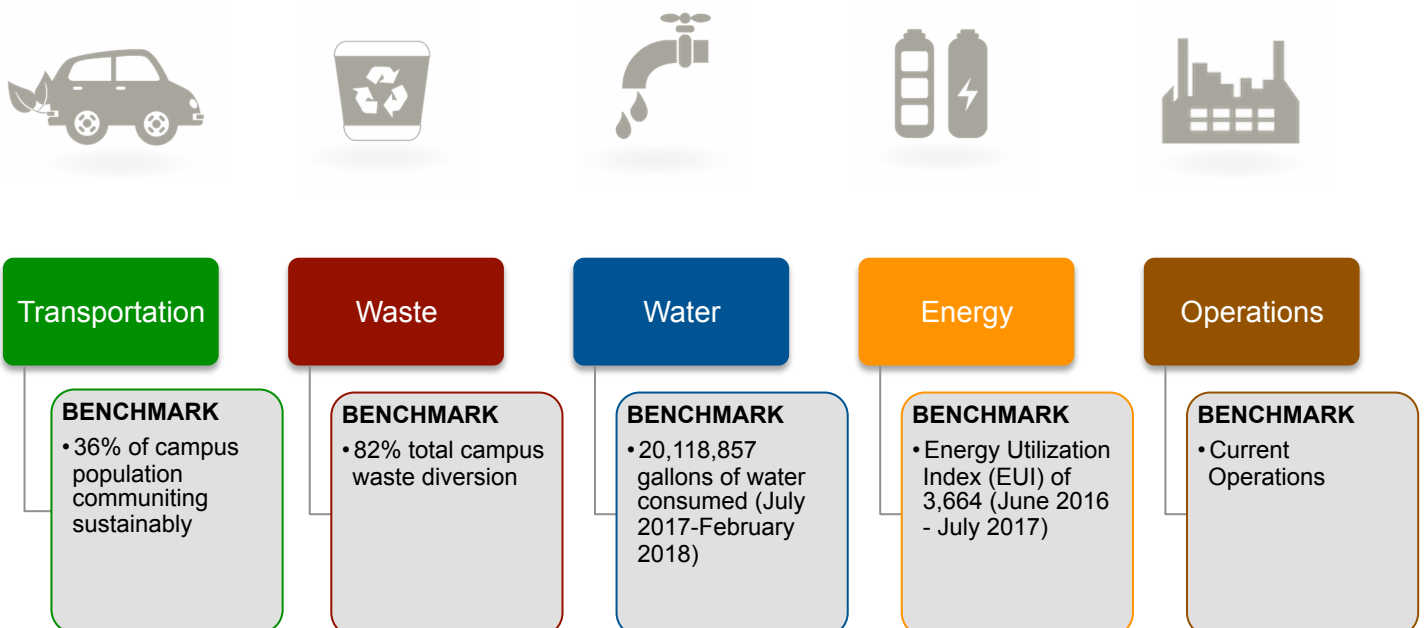


GOALS FOR SUSTAINABILITY

ECC maintains approximately 126 acres and over 837,000 ASF and/or 1.25m GSF of building space. With this quantity of space and the educating of over 33,000 students per year, we recognized the need to sort and prioritize initiatives for sustainability throughout the campus. Information from the interviews, data collection, and workshops honed ECC's vision for sustainability, set priorities and timelines, and are formally expressed in the following plan. The vision of a sustainable and resilient campus is one that fully minimizes its environmental impact, regenerating ecosystem function whenever possible, honors and strengthens a diverse and supportive community, makes economic decisions using a full and accurate accounting that includes environmental and social costs and benefits, and fully integrates the design and implementation of the plan into curriculum whenever possible.

During the first interactive workshops, campus performance data was reviewed in areas of water use, energy consumption, transportation, and waste management. Each identified baseline helped guide the determination of key benchmarks and thresholds to focus on in order to augment current achievements and ultimately achieve the resilient, resource efficient campus ECC desires and needs. During our second interactive workshop and using the first workshop as our foundation, we identified measurable and attainable goals for our campus, which were confirmed and agreed upon by all participating campus stakeholders. The baselines, benchmarks, and goals represented in areas of Water Consumption, Energy Efficiency, Transportation, Waste & Recycling Management, and Operational Practices are a direct result of the collaborative effort of the campus and provide the fundamental tools needed to move forward effectively and diligently.

Current Campus Benchmarks





INVEST IN TRANSPORTATION

GOAL

Expand current transportation incentive program and reduce overall single occupied vehicle (SOV) use by 10% by 2021.

ACTION PLAN

1

Perform a comprehensive mode count (determine date) to identify transportation mode split of campus.

1. Utilize data from mode split to expand current transportation incentive program.
2. Perform campus survey and ask what additional infrastructure and/or services could be offered to encourage more stakeholders to not use a single occupied vehicle to commute to campus everyday.

ACTION PLAN

2

Continue to work with outside agency's to assist with sustainable transportation.

1. Work with the City and other organizations to expand bike paths to, from, and around the campus.
2. Continue to work with local bus provider to ensure schedule meets the needs of students and employees of ECC as well as work on discounted fares for the stakeholders using the bus for their commutes.

ACTION PLAN

3

Develop a communications/marketing plan to publicize program and tell ECC community about the program and available incentives.

1. Encourage all stakeholders to use the Metro website and plot out a commuter route from home to work. Those who do this could be included in the incentive process and the result would include more stakeholders identifying the possibility of sustainable commuting.

ACTION PLAN

4

Expand sustainable transportation infrastructure:

1. Provide safe drop off and pick up locations for sustainable (carpoolers) commuters.
2. Provide more secured bike parking (cameras and bike racks) to ensure less bike theft and provide workshops on how to properly lock bikes for less theft.
3. Work with local bike coalition (such as LA County Bike Coalition, <https://la-bike.org/>) on providing information on safest route to and from the campus via bike.
4. Provide better bike lanes on and off campus.

GOAL

Install four (4) more electric vehicle (EV) car-charging stations on campus by 2021.

ACTION PLAN

1

Research and determine best company to fit the needs of ECC for new charging stations.

1. Verify campus electrical load can handle four (4) more charging stations.

ACTION PLAN

2

Determine which four (4) parking locations will have EV charging. Consider providing EV charging stations in all lots and provide access to students

1. Work with Administration and Board of Trustees for funding.
2. Look into grants/funding for additional units.



INVEST IN WASTE REDUCTION

GOAL | Develop an educational and marketing plan for on-campus recycling by fall 2021.

ACTION PLAN 1 | **Work with Communications department to provide campus information about the source separation process that occurs off site, resulting in the college's high diversion rate.**

ACTION PLAN 2 | **Provide messaging to reduce overall waste (such as "Bring Your Own Water Bottle, Reusable Cup for Coffee" and "Think Before You Print" campaigns)**
1. Use Earth Day as an opportunity to educate campus and collaborate with 3rd party organizations/vendors that can help to inspire change.

ACTION PLAN 3 | **Develop websites, posters and social media campaigns to help educate the campus on recycling and waste diversion.**
1. Provide tours of campus and waste hauler facility, showing stakeholders how an 82% diversion rate is possible.
2. Host a green mixer to educate campus about recycling and campus sustainability plan.

ACTION PLAN 4 | **Determine main waste streams on campus and, if needed, look into new receptacles to improve upon the current diversion rate to prevent any cross-contamination.**

GOAL | Develop a comprehensive waste management plan by 2021 to include strategies for overall waste reduction, improved recycling efforts, and opportunities for composting.

ACTION PLAN 1 | **Evaluate current campus waste streams and identify Reduction Strategies:**
1. Stop selling water bottles and encourage reusable bottles/install more refill stations around campus.
2. Begin to explore paperless strategies by streamlining three (3) processes that can go paperless by 2021 and coordinate this effort with the Campus.
3. Host a zero waste event and educate community on why its important
4. Continue to highlight the campus' high rate of waste diversion
5. Determine best strategies for capturing compost (includes paper towels, food waste and landscape clippings).



INVEST IN WATER REDUCTION

GOAL | Reduce campus water usage (measured in gallons, indoor and outdoor) by 15% by 2021.

ACTION PLAN 1 | Identify key departments or personnel responsible (consider developing a diverse taskforce) for maintaining water reduction strategies including fixture maintenance and monitoring.

ACTION PLAN 2 | Conduct a water audit of installed fixtures at each individual building and identify phase-out plan to replace all fixtures with low-flow fixtures that meet EPA Water Sense standards or better.

Plumbing Fixture	EPA Water Sense Flow or Flush Rate
Water Closet	1.6 gallons per flush (GPF)
Urinal	1.0 gallons per flush (GPF)
Public Lavatory	0.5 gallons per minute (GPM)
Kitchen Faucet	2.2 gallons per minute (GPM)
Showerhead	2.5 gallons per minute (GPM)

ACTION PLAN 3 | Have Water Taskforce identify a plan to expand recycled water use for toilet and/or urinal flushing and ensure that reclaimed water is provided for 100% of irrigation.

ACTION PLAN 4 | Evaluate any upgrades needed on irrigation controls such as rain sensors on smart irrigation controllers and fully implement ET functions on controllers when available. Identify preferred vendor of irrigation controllers.

GOAL | Develop campus demonstration project using reclaimed water by 2021.

ACTION PLAN 1 | Develop a taskforce to discuss and determine most appropriate project for campus. Ideas for project could include, but are not limited to, capturing air conditioning condensate converted to useable water for irrigation and/or grey water harvesting from PE laundry center useable for irrigation.



INVEST IN ENERGY EFFICIENCY

GOAL | Reduce overall campus energy use by 12% by 2021.

- ACTION PLAN 1** | **Perform ASHRAE Level 1 energy audits on all campus buildings to determine what modifications need to be made to make the most impact.**
1. Identify the low-to-no cost energy efficiency projects and determine building Energy Utilization Index (EUI) per Energy Star Portfolio Manager once meters are installed.
 2. Utilize energy audit information to determine what energy efficiency projects are needed within the building.
 3. Work with class scheduling to have weekend and summer classes consolidated into one location to reduce the need to run multiple buildings at half capacity.
 4. Establish set points for heating and cooling.
- ACTION PLAN 2** | **Develop an educational and outreach program to promote behavioral changes for energy reduction.**
1. Develop a platform to educate all stakeholders on protocols for reducing plug and process loads, phantom loads, etc.
 - Encourage turning off of appliances, electronics, etc. that are not in use.
 - Work closely with IT department on program development.
 2. Work with Communications department on a variety of platforms to get message across campus.

GOAL | Install 3% on-site renewable energy by 2021.

- ACTION PLAN 1** | **Perform a feasibility study to determine appropriate locations throughout campus for PV panels. This includes parking lots and roof space.**
- ACTION PLAN 2** | **Pursue creative funding mechanisms to finance solar energy, including the consideration of Power Purchase Agreements (PPA), School Project for Utility Rate Reduction SPURR (www.spurr.org), and look for donor and/or grant funding opportunities.**
1. Devise plan for implementation.
 2. Work closely with Administration and other organizations for funding (private and incentive/rebates)

GOAL | Develop a plan for the installation of building metering (one main water, gas, electric) on all buildings by 2021.

- ACTION PLAN 1** | **Determine members for the Energy Taskforce to develop and implement a phased approach for the installation of gas, electric, and water meters.**
- ACTION PLAN 2** | **After the meters have been in place for a minimum of one (1) year, benchmark building-performance through Energy Star Portfolio Manager.**
1. Work towards achieving Energy Star score of 75 or higher for every building



INVEST IN CAMPUS OPERATIONS

GOAL

Improve overall campus best practices and develop appropriate methods for communicating successes to campus community.

ACTION PLAN

1

Develop LEED-EB:O&M compliant operational policies for Integrated Pest Management (IPM) and Green Cleaning.

1. Develop a plan/policy which includes Scope, Performance Metrics, Goals, Procedures and Strategies, Responsible Party, and Time period.
2. Provide training and education and outreach to campus stakeholders on the benefits of having green operational policies.
3. Evaluate plan/policies after 6 months and make adjustments if necessary to ensure successful.

ACTION PLAN

2

Host one (1) campus-wide sustainability event each academic year. Establish a Taskforce that works with Communications department to determine date of event and program. Utilize marketing and media outlets appropriate to campus. Suggestions include: Campus Sustainability Day (Oct), Earth Day (expand this event to be bigger than current), AND/OR a comprehensive 1-day event that touches on all elements of sustainability included in this plan.

ACTION PLAN

3

Hire a sustainability/Energy Manager to establish a sustainability committee/forum to keep programs, goals and progress at the forefront of the campus. Continue to provide sustainability achievements in ECC's Annual Reports.

GOAL

Enroll campus in one (1) 3rd party review program such as BIT or STARS by 2021.

ACTION PLAN

1

Continue to monitor progress/campus baselines and evaluate against program benchmarks. Educate the campus on WHY sustainability is important and use the program report as a validation of the campus committing to resource efficiency. Work with Faculty and students to use program requirements as curriculum integration to get hands on experience.

GOAL

Establish a permanent position for an Energy/Sustainability Manager.

ACTION PLAN

1

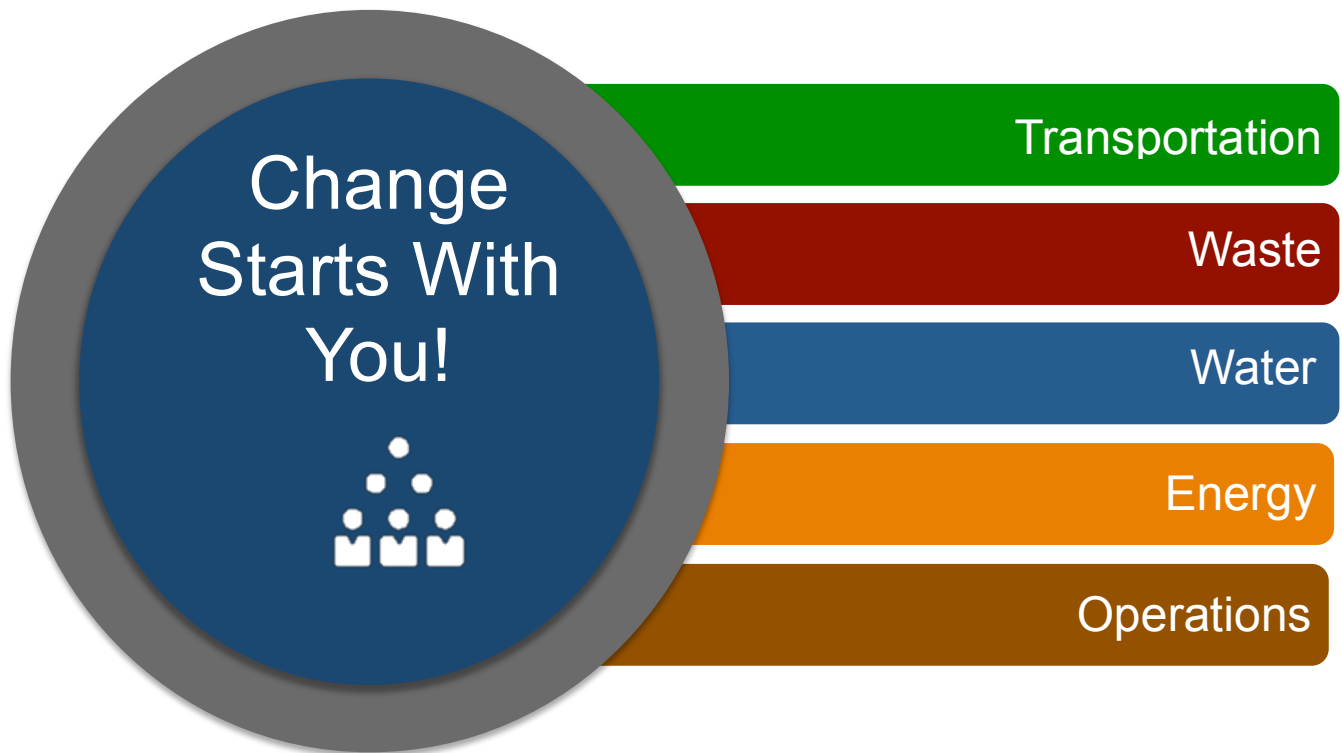
Hire an Energy/Sustainability Manager to manage goals and task within this plan and to coordinate/facilitate the completion of sustainability initiatives moving forward.

- Position would assist campus in implementing sustainability plan, apply for grants and rebates, provide the necessary education and outreach to campus on current activities related to campus sustainability.



OWNERSHIP OF PLAN

ECC is committed to the implementation of each goal with active support from the Facilities department, student groups, and executive leadership. Throughout the development of this plan, it was identified that faculty and student participation would be imperative to the successful implementation and ongoing achievements of sustainability on campus. The ECC Communications department will be essential to the outreach and campus messaging efforts in order to showcase the achievements made and needs moving forward, and key student groups should be identified as champions and leaders of key goals and initiatives





BENCHMARKS

Throughout the workshops, stakeholders identified goals, upcoming projects and desired operational changes that will assist in the reduction of ECC's overall environmental impact. One key detail identified is the need to address annual utility and waste data for the College in order to determine key baselines and improvements for moving forward. It is ideal to review operational data and identify baselines on an annual basis. This plan identifies an analysis of current baselines, as initially determined, and as a living document, should be reviewed annually and updated as tasks are complete and successes achieved.

Baselines and benchmarking are important when developing a campus sustainability plan. Gas and electrical usage, waste and recycling, number of sustainable commuters, and water use data was gathered and calculated to develop the baseline year for ECC. This baseline tells the campus current performance and as the goals are implemented and achieved, the baselines will improve. The only way to show improvement is to determine the baseline. To measure improved performance for campus sustainability, appropriate benchmarks need to be determined. Benchmarks including operational plans, campus policies, nationally and internationally recognized tools, and others will be considered as part of the process for developing a comprehensive plan and achievable goals. The following benchmarking tools should be assessed for their applicability to the ECC Sustainability Plan as short- and long-term goals are pursued and achieved.

Tools for Tracking and/or Calculating Performance

- **Energy Star Portfolio Manager (ESPM):** An interactive energy management tool that allows building owners to track and assess energy and water consumption across the campus entire portfolio of buildings. Using the free online program, building owners can benchmark and validate building performance. www.energystar.gov
- **EPA Water Sense Calculator:** Provides estimates on the amount of water, energy, and money that can be saved by installing low flow fixtures, http://www.epa.gov/watersense/partners/watersense_awards.html
- **Develop Campus Sustainability Website**
 - Determination and Identification of Campus Indicators
 - Annual Reporting on Campus Indicators/Sustainability Projects
- **BIT Building:** is a sustainability improvement program for all commercial and multifamily buildings. The program is currently under development in collaboration with real estate owners and managers. <http://www.bitbuilding.org/>
- **Building Performance Partnership (BPP):** Allows USGBC to work with LEED-certified buildings to track, collect, and analyze building performance data. The goal of BPP is based on educating building owners on the performance of their buildings. <http://www.usgbc.org/bpp>
- **Ecological/water Footprint Calculator:** A calculator to estimate carbon and water footprints for day-to-day activities. <http://www.myfootprint.org>
- **Developing a Sustainability List serve:** Develop a list serve of all stakeholder emails to keep in contact with during the development of plan and after allowing stakeholder engagement to continue.



Long Term Goals for Benchmarking and Overall Sustainability Performance

- **AASHE STARS:** Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainable Tracking, Assessment & Rating System (STARS) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance on campus. www.aashe.org

This plan is a living document. As technology, goals, and curriculum are developed, this plan should evolve with them. Each goal and milestone needs the support of the entire campus including staff, faculty, administrative support, ancillary support, and most of all, students. Get involved, take action, and make change to create a healthier and more resource-efficient campus.