



# Sustainability Plan

Spring 2018

**DRAFT**



# CURRICULUM INTEGRATION

## Skyline College

### GOAL SUMMARY

Embed sustainability into existing courses while creating new sustainability focused curricula in order to provide students with a sustainability education that prepares them for the future.

Objectives	Year 1	Year 3	Year 5
<i>Integrate sustainability into existing course student learning outcomes (SLOs) and institutional student learning outcomes (ISLOs)</i>	<p>Create service learning opportunities with a sustainability focus</p> <p>Identify courses with the potential to have sustainability as part of the curriculum</p>	<p>Develop an environmental service learning program</p> <p>Support student internships in sustainability on and off campus</p>	<p>Host 1 professional sustainability training each semester</p> <p>Develop and execute a sustainability-focused Flex Day</p>
<i>Develop new curricula and training programs focused on sustainability and the environment</i>	<p>Hire an ESTM faculty program coordinator</p> <p>Create new certificate and degree programs in Environmental Science</p>	<p>Connect 3 classes with facilities for Campus as a Living Laboratory projects</p> <p>Collaborate with ESTM, Environmental Science, and Career Services to identify professional training opportunities</p>	
<i>Create sustainability theme pathway or Learning Community in General Education core requirements</i>			

Job growth in the environmental field, notably renewable energy and energy efficiency, is outpacing growth in most other sectors. As society shifts to more sustainable systems, strengthening students' understanding of how sustainability interconnects with not only various economic sectors and industries but also social issues will set them up for success in their respective careers. Education that provides holistic perspectives will foster an inclusive and adaptable campus culture at Skyline College. Integrating sustainability into the curriculum of courses across the different academic departments will prepare students to be innovative problem solvers and champions of sustainability after their time at Skyline College, regardless of their intended major or profession.



### MEASURING AND REPORTING

STARS Academics points 1, 2, 3, 5, 6, 7, and 8



# CAMPUS AND COMMUNITY ENGAGEMENT

## Skyline College

### GOAL SUMMARY

Encourage the entire campus community to embrace and champion sustainable behaviors through participation in campus-wide sustainability initiatives. Grow awareness of sustainability issues and their connections to broader social issues in order to establish College as a cultural center for sustainability and social justice.

Objectives	Year 1	Year 3	Year 5
<i>Create opportunities for learning about sustainability</i>	Administer survey to campus to assess student & employee understanding of sustainability	Plan a yearly sustainability competition for campus	Integrate sustainability into new student and faculty orientations
<i>Partner with other campus entities and outside organizations</i>	Sustainability Ambassador Network (SAN) & Environmental Club develop 1 workshop/presentation per semester that explores socioeconomic issues as they pertain to sustainability	Increase number of workshops/presentations facilitated by SAN & Environmental Club to 4 per year  Initiate partnership with local organizations & schools to bring field professionals and students to campus to share information, ideas, and resources regarding sustainability	Create a sustainability focused Flex Day  Institutionalize SAN as an operational work group  Develop and regularly publish a sustainability newsletter
<i>Promote the connection between sustainability and social justice</i>	Host a workshop or speaker that addresses the relationship between sustainability and social justice	Connect with EOPS and SEED to plan a sustainability & social equity center	Establish a sustainability & social equity center  Track metrics for community impacts from volunteering
<i>Encourage community service that ties sustainability to social and economic justice</i>	Identify and provide resources for volunteer opportunities	Develop metrics for assessing community impacts from student & employee volunteering	
<i>Systematize sustainability efforts through a full-time position</i>	Create job description for Sustainability Coordinator position and get approved by administrators	Hire Sustainability Coordinator in a permanent position	Provide continued support for Sustainability Coordinator to collaborate with stakeholders



An essential part of achieving campus sustainability goals is engaging both campus and the greater community. Outreach efforts will focus on connecting with a diverse mix of campus stakeholders and groups underrepresented in the broader sustainability realm in order to strengthen a culture of inclusive sustainability. Providing resources and opportunities to get involved and gain hands-on experience stimulates students' interest in supporting sustainability measures. Furthermore, establishing Skyline College as a center for sustainability may attract prospective students looking to develop their knowledge and skills in preparation for a career that will undoubtedly interconnect with sustainability. The educational outcomes of campus and community engagement will help Skyline College carry out its mission while institutionalizing sustainability.



**MEASURING AND REPORTING**



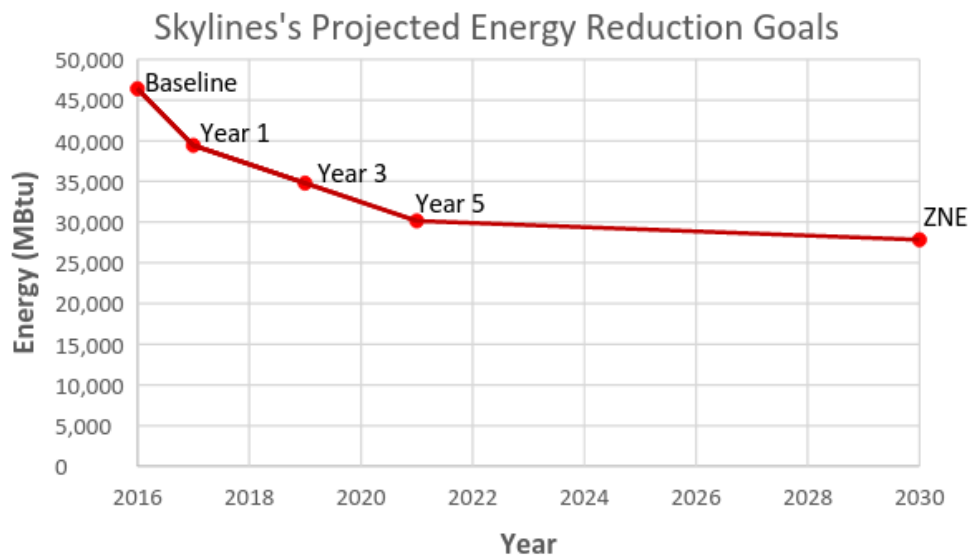
# ZERO NET ENERGY Skyline College

## GOAL SUMMARY

Accomplish Zero Net Energy by 2030 by reducing energy demand and consumption. Engage in continuous monitoring of loads and make adjustments while prioritizing safety, security, functionality, and comfort.

Objectives	Year 1	Year 3	Year 5
<i>Benchmark building energy loads</i>	Reduce Energy Utilization Intensity by 15% per square foot across campus compared to baseline	Reduce Energy Utilization Intensity by 25% per square foot across campus compared to baseline	Reduce Energy Utilization Intensity by 35% per square foot across campus compared to baseline
<i>Create a phased plan and establish a budget for identified improvement opportunities</i>			

Because of the energy sector’s significant greenhouse gas emissions, becoming more energy efficient is necessary for Skyline College to reduce its carbon footprint. Reducing the campus’s energy use also aligns with efforts and trends set by the State of California, in addition to other higher education institutions and community colleges. Besides offering long-term savings opportunities and environmental benefits, clean technology has been connected to health benefits that could bolster the wellbeing of students, faculty, and staff as well as communities off campus. Making improvements in energy efficiency would mean advancing the transition to a green economy and supporting an industry that may provide opportunities for the diverse members of the Skyline College community in the future.



## MEASURING AND REPORTING

STARS Ops points 8 and 9 | LEED Energy and Atmosphere Category | Energy Star



# WATER SYSTEMS

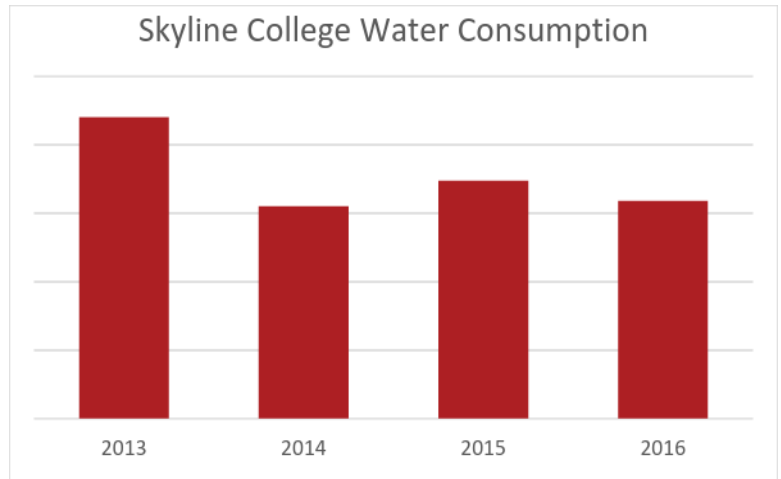
## Skyline College

### GOAL SUMMARY

Reduce freshwater consumption per square foot of building space by 50% by 2025 compared to 2013 baseline.

Objectives	Year 1	Year 3	Year 5
<i>Maintain constant 25% reduction characteristics compared to 2013 baseline</i>	Reduce water consumption by 30% compared to the 2013 baseline	Reduce water consumption by 40% compared to the 2013 baseline	Reduce water consumption by 50% compared to the 2013 baseline
<i>Normalize per square foot</i>	Install weather stations to work with the fog catcher and monitor data	Explore greywater opportunities	Implement and monitor water reuse programs
<i>Explore water reuse opportunities</i>			

Skyline College recognizes the need to adopt better water conservation practices because of the economic and ecological risks associated with water scarcity. Over the past decade, Skyline College took necessary steps to reduce water use through initiatives including natural turf replacement on athletic fields, adjustment of irrigation schedules, use of weather-based irrigation controllers, native landscaping, and informational signage. Continuing current efforts and pursuing other cost-effective measures for water conservation ensures the campus does its part to help California reduce the severity of the drought and the serious consequences it has for communities across the state.



*Skyline's water consumption has decreased since 2013. Slight increases in 2015 and 2016 from 2014 are likely due to higher summer temperatures and unexpected leaks.*

### MEASURING AND REPORTING

STARS Ops points 22 and 23 | LEED Water Category | Energy Star





# ZERO WASTE

## Skyline College

### GOAL SUMMARY

Accomplish Net Zero Waste by 2025. Engage students, employees, and the community in goal setting, challenges, and accomplishments. Report progress and lessons learned on waste diversion at established intervals.

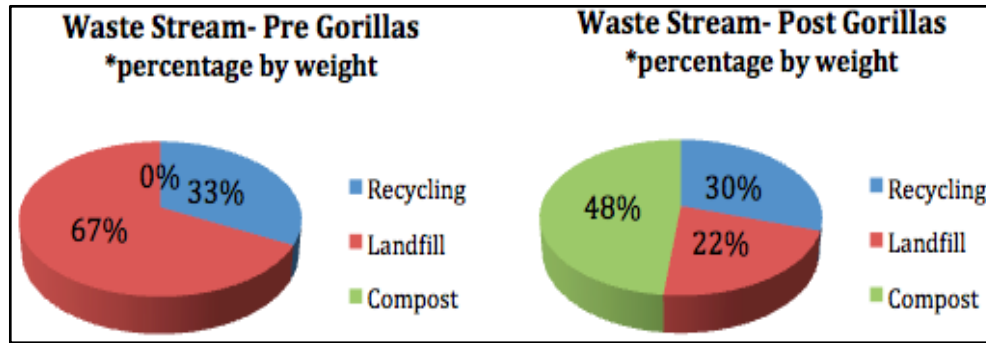
Objectives	Year 1	Year 3	Year 5
100% Diversion by 2025	Increase diversion to 75%	Reduce overall waste by 15% compared to baseline	Reduce overall waste by 25% compared to baseline
Create & support waste reduction strategies on campus	Establish waste diversion baselines and reduce overall waste by 10%	Increase diversion to 85%	Increase diversion to 95%
	Maintain and expand ReUse Hub; plan a ReUse event with a pop-up thrift shop	Host trainings about the 4 R's: Reduce, Reuse, Recycle, Rot	Include waste sorting training in orientation for new students and employees



Waste has a significant negative environmental impact. Waste management requires a lot of land and degrades the air and water quality of the area surrounding management sites. In addition, there are carbon dioxide emissions from waste transportation and methane emissions from waste decomposition. With the proper equipment and a comprehensive outreach campaign, Skyline College can achieve its zero waste goal that also supports the campus Climate Action Plan. Educating students and employees on the importance of proper waste management will need to accompany other waste diversion efforts such as installing compost bins on campus.

This will enhance students' overall educational experience while reducing Skyline College's contribution to environmental justice issues that occur due to waste management sites' proximity to communities of color and lower socioeconomic status.

In 2013, a group of Skyline College students dubbed the “Green Gorillas” piloted a waste diversion program in the campus cafeteria. By educating fellow students on composting and recycling and ensuring proper sorting, the Green Gorillas achieved a 45% reduction in waste going to the landfill just in the 2-week pilot stage. The project won the Green Gorillas the California Community Colleges Board of Governors Energy Efficiency and Sustainability Award in the Faculty/Student Initiatives category in 2014.



## MEASURING AND REPORTING

STARS Ops points 19, 20, and 21 | LEED Waste Category | Energy Star





### GOAL SUMMARY

Enhance learning environments through the use of locally produced, safe, efficient, and environmentally responsible materials and systems. Support interactive and project based learning through Campus as a Living Laboratory approaches. Improve, modify and construct facilities with the future needs of students, staff, faculty and the community in mind while engaging current stakeholders in the planning process.

Objectives	Year 1	Year 3	Year 5
<i>Apply District's design standards to modifications of existing buildings and to all new buildings</i>	Optimize the design and function of existing systems for comfort, safety, and health	Partner with USGBC to examine feasibility of LEED Operations & Maintenance (O+M) Certification for existing buildings (EB)	Assess and apply LEED O&M where feasible and appropriate
<i>Identify and apply appropriate rating systems and tools to accomplish optimization</i>			

Green buildings promote education in sustainability and serve important economic and social needs. According to a 2012 study, compliance with rigorous indoor environmental standards achieved 16% higher productivity than non-green offices<sup>1</sup>. Besides boosting productivity, upgrades to the built environment would further beautify the campus and attract prospective students. Enhancing the built environment could improve quality of life for members of the community, help the campus meet its greenhouse gas emissions reduction objective, and reinforce Skyline College's reputation as a leader in sustainability.

Figure 1: LEED Credit Categories<sup>2</sup>



<sup>1</sup> Delmas, Magali A. and Pekovic, Sanja (2012). Environmental standards and labor productivity: Understanding the mechanisms that sustain sustainability. Accessed Sept. 26, 2012 via <http://onlinelibrary.wiley.com/doi/10.1002/job.1827/pdf>

<sup>2</sup> Source: <http://westerndisposalservices.com/defining-leed-categories/>



## **MEASURING AND REPORTING**

STARS Ops points 3, 4, and 5 | LEED O&M: Existing Buildings | Energy Star



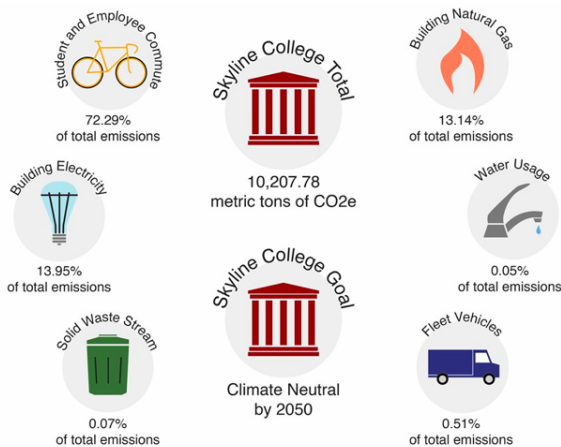
# CLIMATE ACTION Skyline College

## GOAL SUMMARY

Achieve carbon neutrality by 2050. Establish a GHG emissions baseline and set reduction targets for both stationary and mobile emissions categories.

Objectives	Year 1	Year 3	Year 5
<i>GHG emissions inventory</i>	Finalize GHG emissions inventory baseline and the Climate Action Plan (CAP)	Update GHG emissions inventory and update CAP Appendixes	Update GHG emissions inventory and update entire CAP
<i>Emission Sources</i>	Reduce Scope 1, 2, and 3 emissions by 10%	Reduce Scope 1, 2, and 3 emissions by 30%	Reduce Scope 1, 2, and 3 emissions by 50%

The Climate Action Plan (CAP) serves as a strategic guide for Skyline College to reduce its greenhouse gas emissions and become a carbon neutral campus. Implementation of the CAP will entail community outreach programs that aim to educate both students and employees about Skyline College’s sustainability initiatives, personal opportunities to help the campus meet its ambitious targets, and the greater importance of sustainability and its connection to social justice. Taking action against climate change is critical given the serious risks it poses, especially to economically and socially vulnerable populations with which many members of the Skyline College community may identify. In executing the CAP, Skyline College will contribute to global efforts to slow down climate change while protecting the health, safety, and prosperity of the local community. These valuable social co-benefits of climate action—in addition to educational gains from community engagement efforts—indicate that the CAP is essential for Skyline College to deliver on its mission, vision, and values.



Scope	Skyline College CAP Source Name
Scope 1	Building Natural Gas
Scope 1	Fleet Vehicle
Scope 2	Building Electricity
Scope 3	Students and Employee Commute
Scope 3	Solid Waste Stream
Scope 3	Water Usage

Figure and table taken from Skyline College’s Climate Action Plan

## MEASURING AND REPORTING



# TRANSPORTATION DEMAND MANAGEMENT

Skyline College

## GOAL SUMMARY

Track usage of different modes of transportation, then review and/or update existing transportation studies accordingly. Create systems and infrastructure to reduce reliance on single-occupancy gasoline vehicle commutes and to encourage use of carpooling, bicycling and public transportation. Continue to build Skyline College access to efficient, reliable, and affordable public bus and rail transportation.

Objectives	Year 1	Year 3	Year 5
<i>Maintain Skyline Shuttle and expand usage</i>	Develop metrics for monitoring shuttle use and accessibility for students	Monitor shuttle use and accessibility	Continue to monitor shuttle use and accessibility
<i>Green the fleet</i>	Discuss potential to green the fleet at SAN meetings	Establish funding for electric vehicle fleets	Establish electric vehicle fleets
<i>Incentivize carpooling</i>	Create systems for faculty, staff, and students to find carpool groups	Work with Cañada College and CSM to assess potential for implementing Student Shuttles on other campuses	Decrease use of single occupancy vehicles by 10% from Year 1
	Work with administrators to prepare incentives for carpooling, bicycling, or using public transportation	Implement incentives for carpooling, bicycling, and public transportation use	Develop next steps for incentivizing carpooling, bicycling, and public transportation use
	Develop metrics for tracking carpooling, bicycling, and public transportation use	Track metrics for carpooling, bicycling, and public transportation use	

Student and employee commute accounts for nearly 75% of Skyline College’s total greenhouse emissions. Therefore, supporting transportation options alternative to single-occupancy vehicles is an important component for reducing the campus carbon footprint to become a carbon neutral campus. The transportation sector is constantly changing, so taking advantage of opportunities to employ innovative solutions as they arise is critical for Skyline College. Meeting the objectives described above will not only help cut GHG emissions, but it will also yield social and economic benefits. These may include improved health outcomes from better air quality, personal financial savings due to sharing transportation costs, and stronger sense of community from increased social interaction during shared commutes.



6. How do you usually travel to Skyline College? (select all travel modes that are part of your usual trip)

Number of Student Responses		% of Resp'ts	Number of Employee Responses		% of Resp'ts
I drive alone.	607	72.5%	I drive alone.	148	88.1%
I ride SamTrans.	166	19.8%	I ride SamTrans.	18	10.7%
Someone drives me and drops me off.	152	18.2%	Someone drives me and drops me off.	16	9.5%
I am a driver in a carpool/vanpool.	77	9.2%	I ride BART.	12	7.1%
I am a passenger in a carpool/vanpool.	67	8.0%	I am a driver in a carpool/vanpool.	11	6.5%
I ride BART.	34	4.1%	I am a passenger in a carpool/vanpool.	6	3.6%
Other	15	1.8%	I ride a bicycle.	4	2.4%
I ride a bicycle.	9	1.1%	Other	3	1.8%
I walk to campus and do not use any other transportation method.	6	0.7%	I ride CalTrain.	1	0.6%
I ride CalTrain.	3	0.4%	I walk to campus and do not use any other transportation method.	1	0.6%
(not answered)	4	0.5%			

From the 2014 Skyline College Transportation Study



**MEASURING AND REPORTING**



# SUSTAINABLE PROCUREMENT

## Skyline College

### GOAL SUMMARY

Work collaboratively with General Services, Auxiliary Services, and other stakeholders to implement a green purchasing plan that encourages the purchasing of Environmentally Preferable Products (EPPs), which can help reduce the campus’s environmental and public health impact.

Objectives	Year 1	Year 3	Year 5
<i>Establish a green purchasing policy</i>	Research best practices in green purchasing and draft a plan for the campus	Continue implementation of green purchasing plan	Assess green purchasing plan effectiveness and update accordingly
<i>Prioritize purchasing organic food for cafeteria</i>	Determine potential to provide more organic options in the cafeteria; set goals for Year 3 and Year 5	Meet Year 3 goal for sustainable purchasing in cafeteria	Meet Year 5 goal for sustainable purchasing in cafeteria
<i>Donate or properly dispose of inefficient and outdated equipment; replace with smart and efficient technology</i>	Work with General Services to identify outdated equipment	Identify cost-effective efficient technology that can replace old equipment and identify local schools & businesses that can receive donated equipment	Purchase previously identified technology and donate old equipment to previously identified recipients
<i>Educate faculty and staff about green office practices</i>	Set goals for recruiting offices to participate in Green Office Program	Increase staff participation in Green Office Program by 15% from Year 1 baseline	Increase staff participation in Green Office Program by 30% from Year 1 baseline

Instituting a green purchasing policy would cement Skyline College’s commitment to sustainability as it entails investment in suppliers with a positive sustainability performance. Because there would be minimal interference in students’ and employees’ day-to-day lives, substituting green products for less eco-friendly ones is a relatively easy strategy for greening operations at Skyline College. As illustrated in Figure 1, there are notable economic, environmental, and social benefits associated with sustainable procurement. These include, but are not limited to, cost reduction, conservation of resources, and education through stakeholder and supplier engagement.



Figure 2: The Three Spheres of Sustainable Procurement<sup>3</sup>

## MEASURING AND REPORTING

STARS Ops points 11-14

<sup>3</sup> Source: <https://www2.le.ac.uk/offices/finance/information-for-staff/financial-operations/procurement/images/sustainable-procurement/three-spheres-of-sustainable-procurement/view>