

Ventura College



Prepared By: Innovative Workshop Consulting www.iworkshopconsulting.com

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College Mission

At Ventura College, we transform students' lives, develop human potential, create an informed citizenry, and serve as the educational and cultural heart of our community. Placing students at the center of their learning experience, we serve a highly diverse student body by providing innovative instruction and student support, focusing on associate degree and certificate completion, transfer, workforce preparation, and basic skills. We are committed to the sustainable continuous improvement of our college and its services.

Background and Process

Development of the Ventura College Sustainability Plan involved active participation of students, faculty, staff, local municipalities, utility representatives, contractors and ancillary support staff. To effectively capture all essential data for Plan development, the process included:

Campus Interviews

Interviews took place in Summer 2015 with staff, students and faculty to learn about current campus and District sustainability initiatives, understand current activities, accomplishments, goals, and strategies and begin to identify next steps for success.

Campus Workshops

Campus Workshops took place in October of 2015 and in April 2016. The workshops introduced the campus to sustainability benchmarks, encouraged brainstorming of sustainability goals, and required active group participation through a series of development activities. With participation from over 40 stakeholders representing a diverse group of backgrounds, departments, and experiences, the forums identified agreed-upon goals for campus sustainability in areas of **Energy Efficiency**, **Waste Management**, **Water Reduction**, **Transportation**, **Food**, and campus **Outreach**.

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 involves 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

The goal of this plan is to create a dynamic and engaging roadmap that students, faculty, and staff will reference continuously during Ventura's mission to pursue resource efficiency. The process we use in crafting this sustainability plan encourages insight and support of campus stakeholders, and develops specific and measurable goals that are appropriate for the Ventura College specifically. The workshops and meetings with campus stakeholders shed light upon which areas of campus the Ventura community feels most invested in making improvements. Sustainability is a group effort—it demands collaboration and active participation in order to inspire short- and long-term improvements. Involving campus stakeholders in the process enables the ability to make lasting and impactful change in campus resource efficiency.

Goals for Sustainability

Ventura College maintains approximately 112 acres and over 614,000 square feet of building space. With this quantity of space, 633 faculty and staff members, and the educating of over 14,500 students per year, Ventura College recognized the need to sort and prioritize initiatives for sustainability throughout the campus. Information from the interviews, data collection, and forum proceedings honed Ventura's vision for sustainability, set priorities and time lines, and are formally expressed in the following Plan. Ventura's 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.



0-1 Year Goals 1-3 Year Goals 3-6+ Year Goals

- 1. Develop a renewable energy task force of campus stakeholders to research renewable energy technologies and identify potential installation locations on campus
- 2. Perform energy audits on all campus buildings and implement all lowto no-cost upgrades
- 3. Develop a timeline for installing individual meters on campus buildings to monitor gas, electric, and water usage

- 1. Reduce overall campus energy use by 15% by 2019 (over 2014-2015 baseline)
- 2. Provide 3% of on-site renewable energy to offset campus energy use by 2020
- 3. Install individual meters for gas, electric, and water on 50% of buildings by 2020

- 1. Install meters on 100% of buildings by 2023
- 2. Benchmark all campus buildings through **Energy Star Portfolio** Manager, targeting a score of 75 or higher
- 3. Increase onsite renewable energy by 4% to offset campus energy use by 2025
- 4. Benchmark building performance and operations through a 3rd party system

2014-2015 Campus Baseline*

Annual	Annual Natural	Gross	Weeks of	Average Energy
Electricity Use	Gas Use	Square Feet	Operation	Use (EUI) per
6,066,136 kWh	45,235 therms	614,391 SF	51	Square Foot 883*

*EUI is energy use per square foot per week. An EUI of 883 is equivalent to the energy used by 13 single-family homes per week.

 Energy Efficiency
 0-1 Year

 Develop a Renewable Energy Tapotential renewable technologie

 1.
 Determine locations on car

 2.
 Evaluate Power Purchase of

0-1 Year Success Plan

Develop a Renewable Energy Task Force of campus stakeholders to research potential renewable technologies.

- 1. Determine locations on campus for installation and systems integration.
- 2. Evaluate Power Purchase Agreements (PPA) and other financing options.

Perform energy audits on all campus buildings and implement all low- to no-cost upgrades.

- 1. Evaluate plug and process loads (computers/servers), HVAC (review schedule and run times of energy using systems), lighting (interior/exterior retrofits, daylight harvestings, controls, LEDs, etc.).
- 2. Determine which buildings need individual building energy meters and develop a roadmap for installation.
- 3. Contact utility account representatives as they might have programs in place to perform energy audits free of charge.

Develop a timeline for installing individual meters on campus buildings to monitor gas, electric, and water usage.

Energy Efficiency

1-3 Year Success Plan

- Reduce campus energy use by 15% (on a per square foot basis) over 2014-2015 baseline by 2020.
 - 1. Evaluate implementation of low- to no-cost measures from energy audit to verify reduction (see 0-1 year goals).

Provide 3% of onsite renewable energy for campus energy use by 2020.

- 1. Based upon recommendations from Renewable Energy Task Force, implement a renewable energy project and develop curriculum based upon the project to promote and educate campus community.
- 2. Develop education and outreach plan for project and foster development of a living laboratory.

☐ Install meters (gas, electric, water) on 50% of buildings by 2020.

Energy Efficiency

3-6+ Year Success Plan

☐ Install meters (gas, electric, water) on 100% of buildings by 2023.

Benchmark all campus buildings through Energy Star Portfolio Manager, targeting a score of 75 or higher.

1. For buildings that do not achieve a score of 75 or better, perform an energy audit to determine areas for improved performance.

☐ Increase onsite renewable energy by 4% by 2025.

1. Implement Renewable Energy Task Force's project list as appropriate.

Benchmark Building Performance and Operations through a 3rd Party System

- 1. Evaluate marketable and reliable 3rd party certification systems for efficient tracking and benchmarking of building performance data.
 - LEED for Existing Buildings: Operations & Maintenance
 - BIT Building
 - <u>AASHE STARS Program</u>

Energy Efficiency Resources

- For information regarding energy audits, review <u>ASHRAE</u> Level I Energy Audit guidance.
- Gain access to <u>Southern California Edison's (SCE) Green Button tool</u> to develop a load profile and track current campus performance data.
- Learn ideas and strategies for improved energy efficiency through Energy Star.
- Input energy usage and track building performance through <u>Energy Star Portfolio</u> <u>Manager</u>.
- Power Purchase Agreements (PPA) or electricity power agreement, is a contract between two parties, one, which generates electricity (the seller), and one, which is looking to purchase electricity (the buyer).
- Research rebates such as <u>Prop 39</u> funds, <u>Southern California Edison (SCE) Business</u> <u>Solutions</u>, and <u>On-Bill Financing</u> to offset any upfront costs.
- Provide training for campus staff on energy efficiency through available seminars at <u>SoCalGas</u> and <u>SCE</u>.
- Document savings of each improvement project and develop case study to share with campus.



2015 Campus Baseline*

Material Type	Total Quantity	Quantity Diverted	
Trash (Landfill)	210.59 tons	77.92 tons	Overall
Cardboard	38.87 tons	38.87 tons	Diversion
Concrete	31.36 tons	31.36 tons	
Metal	3.75 tons	3.75 tons	Rate
Commingled C&D	36.35 tons	18.18 tons	53.0%
TOTAL TONS	320.92 tons	170.08 tons	

*2015 campus baseline as per Tonnage Report date July 13, 2016 from Harrison Industries

Waste Management

0-1 Year Success Plan

Develop a comprehensive waste management plan including purchasing guidelines by 2017.

1. Develop task force to spearhead implementation of waste and purchasing initiatives consisting of staff, students, faculty, and waste hauler.



Waste Management Resources

- California Recycling and AB 939 information.
- California grants and loan programs.
- Harrison & Sons recycling guide.

0-1 Year Goals	1-3 Year Goals	3-6+ Year Goals	
 Reduce campus water use (indoor and outdoor) by 15% over 2014-2015 baseline by 2018 	 Reduce campus water use (indoor and outdoor) by 20% over 2014-2015 baseline by 2020 	 Reduce campus water use (indoor and outdoor) by 25% over 2014-2015 baseline by 2023 	
	2. Develop a demonstration program on campus showing grey water capture by 2020		

2014-2015 Campus Baseline

	2014	2015	Total Reduction
Domestic and Irrigation	51,097 HCF	38,858 HCF	24% Reduction

Water Consumption	0-1 Year Success Plan
Reduce ca 2018).	ampus water use (indoor and outdoor by 15% over 2014-2015 baseline) by
1. Re	 olace 40% of sprinkler heads to drip irrigation. Utilize Prop 82 funds, if available, to fund project. Identify opportunities to implement Ocean Friendly Gardens/drought tolerant landscape in underused areas of campus.

- 2. Perform plumbing fixture water audit and determine upgrade plan for the replacement of old fixtures.
- 3. Calculate anticipated water reduction using EPA Water Sense Calculator for replacement fixtures.
- 4. Develop a plan and timeline for installing main water meters on each building.
- 5. Develop and implement a Water Economic Efficiency Policy (include maintenance plans for cleaning storm drains).
- 6. Research and pursue available incentives and rebates through the City of Ventura and State to off set cost of upgrades.

Water Consumption

1-3 Year Success Plan

Reduce campus water use (indoor and outdoor) by 20% over 2014-2015 baseline by 2020.

- 1. Recalculate campus baseline from previous year to determine improved savings.
- 2. Install water meters on 50% of campus irrigation systems.
- 3. Install fixture upgrades (meeting EPA water Sense) to 30% of campus buildings.

□ Install a demonstration project for rainwater and greywater capture by 2020.

1. Determine location on campus to demonstrate rainwater and greywater capture.

Water Consumption

3-6+ Year Success Plan

- Reduce campus water use (indoor and outdoor) by 25% over 2014-2015 baseline by 2023.
 - 1. Recalculate campus baseline from previous year to determine improved savings.
 - 2. Install water meters on 100% of campus irrigation systems.
 - 3. Install fixture upgrades (meeting EPA water Sense) to 100% of campus buildings.

Water Reduction Resources

- EPA Water Sense for <u>Native Plants</u>, <u>Irrigation Controllers</u>, resources regarding <u>Educational Facilities</u> and <u>Office Buildings</u>, and a <u>Water Budget Calculator</u> to identify potential savings.
- Research rebates through <u>Save Our Water</u>
- Utilize U.S. Green Building Council's <u>Water Reduction Calculator</u> to identify potential savings for indoor plumbing fixture retrofits.
- Research ideas and strategies for <u>ocean friendly gardens</u> through the Surfrider Foundation.

• Research ideas and strategies for <u>drought tolerant landscape</u> through the Metropolitan Water District of Southern California.

EPA Water Sense Flow and Flush Rates (as of 2008)

The following is a list of recommended commercial flow/flush rates that should be considered when specifying plumbing fixtures in new construction or replacing old fixtures.

Commercial Fixtures, Fittings, and Appliances	Baseline Rates	High Efficiency Recommendations
Commercial Toilets	1.6 GPF	1.28 GPF
Commercial Urinals	1.0 GPF	0.128 GPF or non-water
Commercial Lavatory (Restroom) Faucets	0.5 GPM 0.25 GPC for metering	0.4 GPM 0.2 GPC for metering
	faucets	faucets
Showerheads	2.5 GPM	2.0 GPM

DEFINITIONS: GPF: Gallons per Flush, GPC: Gallons per Cycle, GPM: Gallons per Minute





- 1. Reduce single occupied vehicle (SOV) commuting to campus by establishing a transportation baseline and developing a transportation management plan
- parking areas on campus by 2019
- 3. Install four (4) more electric car charging stations (in addition to existing 4) by 2019

Transportation

0-1 Year Success Plan

- Reduce single occupied vehicle (SOV) commuting to campus by establishing a transportation baseline and developing a transportation management plan.
 - Develop a Sustainable Transportation Task Force comprised of campus 1. stakeholders and supporting transportation agencies. Bike commuters should be included on Task Force to help identify essential bike infrastructure.
 - Determine bike infrastructure needs for bike parking, bike paths, egress/ingress, shower facilities, etc.
 - Designate preferred parking for vanpool/carpools. •
 - 2. Determine a transportation baseline (i.e. number of permits sold per campus population) in order to monitor progress and reduce SOV usage.

- 3. Work with City of Ventura/Gold Coast Transit
 - Identify any adjustments to bus schedules that could be added to benefit campus use.
 - Determine what bike paths/lanes need to be added for safer commute to campus via bike.



Reduce SOV commuting to campus by 15% by 2021 over the established baseline.

- 1. Perform a transportation survey and determine next steps for reduction of SOV commuting over established baseline.
- 2. Identify infrastructure needs to support further reduction in SOV commuting to campus.

Transportation Resources

- Visit <u>Gold Cost Transit</u> for opportunities to expand bus routes and frequency to VC campus
- Connect with Ventura County Air Pollution Control District for possible rebates for EV Charging stations: http://www.vcapcd.org/









Outreach

0-1 Year Success Plan

Host one (1) campus-wide event during the academic year.

1. Execute one (1) event (see Outreach Resources) to communicate campus sustainability at Ventura College.

Establish social media accounts for sustainability communication and obtain 400 likes/follows by 2018.

1. Utilize Instagram, Facebook, Twitter, etc. to tell successes, quick stories, upcoming events, and accomplishments to promote campus sustainability.

2. Utilize campus Blackboard to provide information regarding Ventura's sustainability plan goals and accomplishments.

Develop education and outreach plan for sustainability policies developed.

- 1. Provide outreach and education on policies/programs for energy efficiency, waste and purchasing management, water efficiency, and transportation.
- 2. Outreach and education can include, but should not be limited to, training, social media outreach, educational/promotional items, email distribution, campus Blackboard, and the addition of a sustainability manager on ASG.

Outreach

1-3 Year Success Plan

- Host two (2) campus-wide events during the academic year (one in spring and one in fall).
- Develop a sustainability website with real-time data, updates on progress, and identification of how to get involved.
- Provide continuous trainings and campus-wide updates on goal achievement.
 - 1. Trainings and campus-wide updates can include, but should not be limited to, training, social media outreach, education/promotional items, email distribution, the addition of a sustainability manager on ASG, and on campus events for Earth Day, Campus Health and Sustainability Fair, new student orientation, and a Campus Clean Up Day (with support of ASG).
 - 2. Develop case studies to showcase economic savings and sustainability achievements.

Outreach

3-6+ Year Success Plan

Enroll in 3rd party program(s) to achieve national recognition for commitment to sustainability.

- 1. BIT Building
 - To be eligible, building performance data is needed and 16 measures need to be met for certification.
- 2. USGBC LEED Certification
 - Certify 1 building through the LEED-NC or LEED-EB: O&M program.
- 3. AASHE STARS
 - A program to benchmark campus sustainability

Outreach Resources

One of the most difficult aspects of campus sustainability is promoting projects and accomplishments to the campus stakeholders. When goals are achieved they should be celebrated. There are many ways to promote and acknowledge sustainability accomplishments around the campus. Suggested campus events for promoting sustainability:

- Participate in <u>Recycle Mania</u>
 - Using fair and friendly competition, Recycle Mania provides tools and opportunities that inspire, empower, and mobilize colleges and universities to benchmark and improve efforts to reduce or eliminate waste.
- Host Campus Health and Sustainability Fair
 - Celebrate sustainability and overall health and wellness achievements on campus. For additional ideas on celebrating sustainability visit <u>Campus</u> <u>Sustainability Day</u>.
- Continue to host a on campus Earth Day Celebration
 - An annual event happening in April, Earth Day is to promote and demonstrate support for environmental protection.

Benchmarking and Progress Monitoring

Ventura College is committed to the implementation of each goal with the active support and participation of stakeholder groups, academic integration, and community partnerships, and will create resilient policies, initiatives, and practices that will foster future improvement.

In order to effectively implement and monitor each goal, Ventura College will maintain data collection of sustainability indicators to meet performance benchmarks, which provides understanding of work that needs to be done, current progress, and relationship with the campus economy, environment, and culture.

Benchmarks allow the campus to track continuous improvements over time and provides the stakeholders with the information and ability to make well-informed decisions about sustainability efforts campus-wide. Efforts should not be limited to those activities that have benchmarks, as some decisions may be based on experience and knowledge with regard to improving student success, morale, and community connections.

Engaging the Campus Community



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.

Recommendations

One of the key recommendations for the implementation of this plan and goals is to strategize which groups and personnel will lead, coordinate, and inspire. The following are several methods for implementing the plan and fostering continued success in sustainability throughout the campus. During workshop #2, Agreement of Goals, the stakeholders determined Ventura College's Department of Business Administrative Services will over see the plan goals and implementation, with the support of other campus departments such as AS Government who will play a key role in communicating plan details and action with the student body. The workshop also identified Ventura College's Science Center has a large blackboard that is widely used and would be a good method for divulging information about the sustainability plan goals and accomplishments.

Committee/Taskforces

Develop a dynamic committee consisting of staff, students, faculty, and community members to oversee the implementation of plan goals, projects, and events. The committee's role will be to prioritize projects, seek grant/funding opportunities, and promote the plan campus-wide.

Incentives

For cultural change throughout the campus, provide incentives for improved resource efficiency. Suggestions include making copies more expensive to reduce unneeded print outs and encourage digital options.

Funding Opportunities

Research and identify local, state, and government funding opportunities to support sustainability initiatives and programs on campus.

<u>Website</u>

A designated sustainability website provides information and updates on sustainability, including building performance data, operational plans, tools and guidance, and other resources for the entire campus to access. The website will allow Ventura College and the community to become involved, and get educated and excited about campus sustainability.

Concluding Remarks

Ventura College offers many opportunities to get involved, take action, and improve the campus community. Together as team, differences can be made and challenges overcome. As a living document, this plan will remain ever evolving and be reflective of current goals and future vision of Ventura College.

Ventura College Sustainability Plan – Workshop 1: Exercise 1 Results

Waste	Energy	Transportation Water	Purchasing	Landscape
 Get rid of plastic bottles Plastic free campus Waste/recycle bins near food trucks Water stations*** Better recycling on campus Compost campus green waste E-waste collection Composting program* Hand dryers in bathrooms separated recycling receptacles (Big Belly) Increase acceptable recyclable materials (community recycling, e-waste recycling day) Enhance indoor recycling 	 Install more LED lights using Prop. 39 funds ** Automotive tech to turn gas cars into electric Living laboratory for shared renewables (multi-department interaction) Food truck electrical plugin vs. generator analysis Energy efficient windows and doors Solar PV over parking lot *** Lights out schedule and auto shut off ** Increase shading on campus (reduce heat island effect, MC, W/E, Quad) Sustainable growth plan (LEED green building) Wind generation High efficiency air conditioning Ceiling fans instead of AC Electric vehicle fleet 	 Install EV Charging stations* Transportation incentive plan- vanpools, bikes, shuttles, carpool etc. Free parking for ride share Main mass transportation center Public bus system- routes increased and more frequent pick up times Coordinate class schedule with transportation Increase bike routes and parking Capture all grey water from sinks on campus and divert to water tanks Hydration stations*** (reverse osmosis?) Dual flush toilets Rainwater capture and reuse Educational campaign for behavioral changes (e.g. water efficiency, meat free Monday) no flow/low flow toilets/urinals Free water bottle at registration 	 Recycled content/ environmenta l criteria in purchasing practices Incentivize partnerships with sustainable vendors 	 Reduce turf area that is not in use Landscape design to capture/treat rainwater & divert for later use (permeable surfaces, ocean friendly garden) **** Native/drought tolerant landscaping (no palms, turf) *** Eliminate unused grass on Telegraph Road Community gardens program

• Clear education and outreach roll out when plan is launched.

Ventura College Sustainability Plan – Workshop 1: Exercise 2 Results

1) Education and Outreach

Roadblocks	Stakeholders	Timeline	Connections
 Funding Coordination Consistent information Advertising Resistance to change 	 Faculty Student Portal City Agencies ASVC (student government) 	 6 to 8 months 	 AASHE Energy Efficiency City of Ventura Harrison and Sons So Cal. Edison

2) Transportation Demand Management Program (Parking, bus, rideshare)

Roadblocks	Stakeholders	Timeline	Connections
 Students don't want to pay for permits Bus system out of campus control Parking demand Funding No campus bike parking Safety Bike lanes and bike routes on campus+ 	 Associated Students Campus Police Facilities Students 	 Orientation (summer) New student introduction Maps of bus locations 	 Bus Authority (Gold Coast) Campus Police for Rideshare permit City

3) Renewable Energy (PV, Wind, Solar)

Roadblocks	Stakeholders	Timeline	Connections
 Permits/permit fees Funding Planning process Consensus for location 	 Admin. Facilities Students Foundation District Board of Trustees City Contractors Utilities 	 Within a year 	 Sponsors Student clubs/senate Academic departments: Engineering, Drafting, Environmental Science, Business, Marketing, others Other schools with PV

Ventura College Sustainability Plan – Workshop 1: Exercise 2 Results

4) Ocean Friendly Garden/Drought Tolerant Landscape/Turf Removal

Roadblocks	Stakeholders	Timeline	Connections
 Coast Training Staff Accessibility requirements Aesthetics Landscape architect 	 Ground People City design review board Faculty and students Horticulture classes 	 Short and long term goals Master plan needed 	 Curriculum component City Planning Volunteers Symbiosis with native fauna (habitat) Rainwater catchment/re-use Public art/no palms used

5) Energy Efficiency (sensors, shading, etc)

Roadblocks	Stakeholders	Timeline	Connections
 Permits Regulations Money Access to buildings Maintenance Product reliability 	 Facilities Management Campus Officers President/Executives Contractors/Electricians DSA Grant Writers Consultants Students 	 6 months to 1 year 	 Edison State and Federal Rebates City building officials/Inspectors Grant Writing Prop. 39 Student Educator Outreach Advocacy

6) Waste/Landfill waste (refill stations, toilets, reusable water bottles)

Roadblocks	Stakeholders	Timeline	Connections
 Funding Behavioral change Human Resources 	 FYE program FOG Student Association Student body Faculty Environmental/Sustainability Club 	• NOW!	 Surfrider Patagonia City Environmental Services and VW