



# SUSTAINABILITY PLAN

2020 - 2024



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## INTRODUCTION

This Sustainability Plan is a document intended to provide a framework for integrating sustainability into institutional policy & practice at American River College. ARC has a long history of adopting and implementing sustainable practices; however, the college community is not always aware of these practices. The purpose of this plan is to strengthen and communicate ARC's commitment to sustainability and align efforts with ARC Strategic Goal #4 Vibrancy and Resiliency which states:

The college promotes a culture of innovation, entrepreneurship, **sustainability**, and transparent communication. Proactive, effective, and efficient operational systems and governance and data-informed approaches to planning, decision-making, and resource allocation provide a high level of service to our students, community, and to one another.

The charge of the ARC Sustainability Improvement Plan Team was to assess the current state of ARC sustainability efforts, determine future priorities, and recommend an actionable plan for promoting responsible sustainability practices. The team's approach is intended to create a culture of sustainability in which the entire ARC community is aware of, engaged in, and committed to advancing sustainability through education, operations, and community service activities that help protect our environmental resources and create a better quality of life for everyone, now and for generations to come.

## PROJECT TEAM

Cheryl Sears, Director of Administrative Services (Lead)

Narine Madramootoo, Supervisor - Instructional Science Lab (Co-Lead)

Dawn Benjamin, FM - Head Groundskeeper

Matthew Blevis, Supervisor - Campus Operations

Alex Enderle, Student Representative

Tommie Hall, Supervisor – Custodial/Receiving

Glenn Jaecks, Faculty - Earth Science

Kuldeep Kaur, Vice President of Administrative Services

Angela Milano, Dean - Fine & Applied Arts

Jennifer Neale, Faculty Representative - Natural Resources

Annaliese Pennell, Project Assistant

Don Reid, Supervisor - Printing Services

Brett Sawyer, Supervisor - Student Life

Cielo Sichi, Faculty - Horticulture

Santa E Singh, External Representative - Aramark

Debbie Turner, DO – General Services Supervisor

## SUMMARY OF RECOMMENDATIONS

Focus Area	Recommendations
<b>Engagement &amp; Leadership</b>	Identify campus leaders such as students, administration, faculty, staff, and community members who will engage in a meaningful way in managing, implementing, maintaining, and developing sustainable efforts for the present and future.
<b>Communication</b>	To increase visibility and education to our internal and external stakeholders to promote a culture of sustainability into our campus culture and encourage active participation by student, faculty, staff, and the community at large.
<b>Built Environment</b>	Build and design spaces and facilities that serve the community, students, and staff by considering present and future impacts and demands. These spaces and facilities are sustainable, creates engagement, incorporates biomimicry, and educates the public while promoting equity, justice, and inclusion.
<b>Food</b>	Create a regional closed loop food system that includes criteria for all purchasing, food preparation and service, presentation, cleaning and waste disposal, equipment and supplies, facility design, and renovation and utilities.
<b>Curriculum and Instruction</b>	To create, disseminate, and perform assessment of knowledge on climate changes and sustainable practices through classroom instruction, research, in-service learning, and visual and performing arts.
<b>Energy &amp; Climate</b>	Reduce non-renewable energy consumption through efficiency, conservation and strategic procurement of energy resources.
<b>Landscape &amp; Biotic Environment</b>	To increase the biodiversity of campus flora and use native species that are drought tolerant and reduce the dependency on fossil fuels, extracted minerals, pesticides, and potable water.
<b>Waste Management</b>	To eliminate waste streams on the campus with the eventual goal of a net zero waste campus through implementing “cradle to cradle” processes and practices. ARC strives to reduce the amount of waste leaving the University by implementing on-campus waste management programs and practices.
<b>Water</b>	Minimize the use of potable water for non-essential operations or where collected water from rain, re-processing, and reuse water can be used without affecting the safety and health of the campus community.
<b>Transportation</b>	To reduce greenhouse gases and the consumption of natural resources related to transportation by using appropriate technology, management, and behavioral approaches.
<b>Social Justice and Equity</b>	Incorporated throughout each category.

## WHAT IS SUSTAINABILITY?

Sustainability is often defined as using, developing, and protecting resources at a rate and manner that provides for the ability to meet the needs of the present generation without compromising the ability of future generations to meet their own needs.

The recognition that there are negative consequences from previous and current human activities (as well as financial costs) has spurred higher education to begin to implement practices which reduce or mitigate such consequences. As a responsible member of the world community, American River College is pursuing a commitment to environmental stewardship through the development of a sustainability plan.

## CURRENT SUSTAINABLE PRACTICES

Below is a list of current sustainable practices to help guide our development and institutionalization of sustainability at ARC.

[insert list]

## REGULATORY ENVIRONMENT

[insert brief overview of how it influences ARC's sustainability efforts]

## ARC SUSTAINABILITY VISION

At American River College, we envision a future where sustainability is the guiding influence for all of our work intrinsic and extrinsic of the college. We are committed to fostering a culture that engages in sustainable practices through program development, campus-wide efforts, and promoting sustainability accomplishments and work of staff, faculty, and students. We aim to research, create, and implement solutions for a more sustainable, equitable and just environment. As an institution of higher learning, we strive to ensure that staff, students, and faculty understand the interconnectedness of the environment, social systems, and economics and the role each of us play in creating a sustainable, equitable and just future. We envision that our students will become ambassadors of sustainability while at ARC and when they graduate or transfer from ARC to their intended college or career in the industry. We will engage with vendors that embody sustainability to provide services or goods to ARC. We will encourage and support student, staff, or faculty-led sustainability programs and initiatives and continue to support those taking action today for a better tomorrow. By working with all stakeholders we strive to help ARC create and make a sustainable future for us and support our global community's effort for a sustainable future.

## MISSION

The mission of the ARC Sustainability Improvement Plan Team is to create a culture of sustainability in which the entire ARC community is aware of, engaged in, and committed to advancing sustainability through education, operations, and community service activities to help create a better quality of life for everyone, now and for generations to come. This mission can be realized by continuing our existing sustainable practices and embracing environmental and social justice and equity ideas throughout our college sustainability plan.

## FOCUS AREA 1: ENGAGEMENT & LEADERSHIP

**Sustainability Objective:** Identify campus leaders such as students, administration, faculty, staff, and community members who will engage in a meaningful way in managing, implementing, maintaining, and developing sustainable efforts for the present and future.

### Background: Assessment and Accomplishments

Currently, ARC does not have an official channel to coordinate sustainability efforts. Sustainability efforts are isolated or led by individual faculty, staff or student, and therefore, have very little impact on the overall campus. There is a lack of active messaging and recognition of sustainability efforts across the campus and community.

Successful sustainability programs are centralized with support from leadership, staff, faculty, and student government. Despite the lack of centralization, ARC has hosted many events surrounding sustainability or Earth Day through the efforts of employees and students who have a passion for sustainability. Faculty and staff are also actively engaged in promoting sustainable practices and are actively streamlining workflow processes.

Recommendation	Suggested Activities and Comments	Timeline
<b>Institutionalize a sustainability program</b>	<ul style="list-style-type: none"><li>▪ Create a centralized sustainability program with substantial student involvement and/or leadership that can engage in outreach, education, and hosting sustainability events. It is suggested that this program be operated from the student center with an advisor.</li><li>▪ Grow the program to encompass staff, faculty, and a representative. Need more than one from administration.</li><li>▪ Create educational messaging and advertisements around the campus and community to learn about sustainability and becoming a community leader for sustainability.</li><li>▪ Create bridge discussion and host events around sustainable practice.</li><li>▪ Actively advertise sustainable practices across ARC and within the community.</li></ul>	Begin in 2020-21; fully institutionalize by 2024
<b>Increase funding for sustainability activities</b>	<ul style="list-style-type: none"><li>▪ Apply for grants and other funding sources to grow sustainability, to empower and fund student efforts to create and lead sustainable programs, and fund community participation.</li></ul>	

<b>Office of Sustainability</b>	<ul style="list-style-type: none"> <li>▪ The office will serve the campus by planning, integrating, and interfacing sustainability practices and program into campus operations, curriculum, staff, and student body.</li> <li>▪ Coordinates sustainability practices and events with the ARC community and outside vendors.</li> <li>▪ Serve as a repository of knowledge for institutional practices.</li> <li>▪ Evaluates sustainability plans and programs, makes changes, and provides recommendations to leadership.</li> </ul>	
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## FOCUS AREA 2: COMMUNICATION

**Sustainability Objective:** To increase visibility and education to our internal and external stakeholders to promote a culture of sustainability into our campus culture and encourage active participation by student, faculty, staff, and the community at large.

### Background: Assessment and Accomplishments

Currently, ARC does not have an official social media presence or channel to interface with the public or the ARC community on sustainability. To improve visibility and education around climate change and sustainable practices, ARC needs to actively engage the public via media outlets, social media, public outreach, and events.

Recommendation	Suggested Activities and Comments	Timeline
<b>Public Relations</b>	<ul style="list-style-type: none"> <li>▪ Develop a public relation campaign highlighting public transportation accessibility, water and energy conservation, zero waste initiative, and climate.</li> <li>▪ Develop and use mobile applications, media outlets, and a social media to connect the ARC community to engage the community in sustainable practices.</li> <li>▪ Have dedicated media personnel established in the Office of Sustainability.</li> <li>▪ Create an annual brochure to distribute at convocation in the beginning of the year and at board meetings to demonstrate ARCs sustainability achievement.</li> </ul>	
<b>Events and Outreach</b>	<ul style="list-style-type: none"> <li>▪ Host Earth Day by inviting vendors and speakers to highlight and educate the ARC community on being responsible citizens of Earth.</li> <li>▪ Host sustainable events that educate the</li> </ul>	

	<p>public on topics such as climate change, zero waste initiative, recycle and reuse, etc.</p> <ul style="list-style-type: none"> <li>▪ Emphasize ARCs sustainable initiatives via our outreach programs with high schools.</li> </ul>	
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**FOCUS AREA 3: BUILT ENVIRONMENT**

**Sustainability Objective:** Build and design spaces and facilities that serve the community, students, and staff by considering present and future impacts and demands. These spaces and facilities are sustainable, creates engagement, incorporates biomimicry, and educates the public while promoting equity, justice, and inclusion.

**Background: Assessment and Accomplishments**

American River College (ARC) is the oldest campus in the Los Rios Community College District with the most aged buildings that were not designed to meet GSA and US Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) standards. Many buildings on ARC campus such as the Bill J. Priest Administration building was built in 1957. The age of the buildings on the campus poses some difficult maintenance and remodeling problems that limits the buildings from becoming LEED certified. The ARC campus provides a great opportunity to incorporate modern sustainable design features that will enable the campus to meet our current and future demands.

New buildings, such as the Diane J. Bryant STEM Innovation Center, are designed to be more sustainable than baseline requirements. Currently, ARC has invested in upgrading the hydronic lines to be more efficient in delivering cooling and heating to current and new buildings. The project will reduce energy waste and save ARC \$\_\_.

Recommendation	Suggested Activities and Comments	Timeline
<b>Evaluate and enhance sustainable practices in current and future built environment</b>	<ul style="list-style-type: none"> <li>▪ Evaluate and determine the most feasible and economical approach to modernize building to be more sustainable.</li> <li>▪ Install and retrofit lighting systems to LED lights in current and future buildings when feasible to reduce energy consumption.</li> <li>▪ Use natural lighting in new construction for illumination and ventilation system that incorporates biomimicry to reduce energy load and cooling system demands. Implement campus wide energy and water monitoring system to determine overall campus usage and on-demand intervention.</li> </ul>	
<b>Design new buildings to meet GSA and LEED sustainable design criteria</b>	See next page for details	

<p><b>Advocate for sustainable policies and practices</b></p>	<p>Advocate for policies and practices to build new facilities to meet US Green Building Council (USGBC) LEED Silver certification, at a minimum, while striving for LEED Gold and platinum certification. Renovated facilities should be built to meet LEED Silver certification if the renovation significantly changes the structure or cooling systems of the building.</p>	
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**GSA and LEED Sustainable Design Criteria**

**Optimize Site Potential**

A new building will impact the ecosystem, landscape, transportation, and energy use. Thoughtful design consideration and environmental impact should be a key feature of the design and build process.

**Minimize Non-renewable Energy Consumption**

New buildings should be built to LEED Gold or Platinum standards to reduce the impact of non-renewable energy sources by increasing efficiency, and maximizing renewable energy use, and energy independence.

**Environmentally Sound Products**

Materials used in new buildings should be considered based on their environmental impact. Materials used should address global warming, resource depletion, upstream pollution, life-cycle and reuse, and environmental toxicity. These considerations should reduce impact on the environment, human health, improve worker safety, reduce disposal cost, and liabilities.

**Water Protection and Conservation**

Buildings fundamentally changes the ecological and hydrological function of the land which can lead to loss of watersheds and affect water run-off. Sustainable buildings practices should minimize the effect of impervious cover and seek to engineer water efficiency in the design by reusing or recycling water for onsite use.

**Enhance Indoor Environmental Quality (IEQ)**

There are significant benefits to engineering an indoor environment that contributes to occupant health, comfort, and productivity. The design should incorporate natural lighting when possible, appropriate ventilation, moisture control, and acoustics. Materials that emits high-volatile organic compounds (VOCs) should be avoided.

**Optimize Operational and Maintenance Practices**

Buildings operators and maintenance personnel should be consulted in the design and development phase of a building. This participatory practice will lead to better designs that contribute to improved working environments, productivity, reduction of energy waste and cost, and prevention of system failures. Personnel involved in building maintenance should receive training on how to operate and maintain complex modern building systems. This approach will ensure that the building operates as designed.

## FOCUS AREA 4: FOOD

**Sustainability Objective:** Create a regional closed loop food system that includes criteria for all purchasing, food preparation and service, presentation, cleaning and waste disposal, equipment and supplies, facility design, and renovation and utilities.

### Background: Assessment and Accomplishments

ARC provides food services via a contracted vendor and via the Oak Cafe. Biodegradable straws are used in the Oak cafe Bakery and dining room. The Oak Café is a culinary program offered by Fine and Applied Arts, which focuses student training in the food industry. Food services to the general campus is provided by contracted vendor/s via the student center, bookstore, and other vending sources located around campus. The student center is the main generator of food waste and waste associated with food such as, straws, napkins, plastics, containers, etc. Currently, Starbucks donates coffee grinds for garden use which reduce the amount of going to the landfill.

Recommendation	Suggested Activities and Comments	Timeline
<b>Transition to environmentally friendly food service products and materials</b>	<ul style="list-style-type: none"> <li>Switch over all to go products (e.g., forks and cups) to more environmentally friendly options.</li> <li>Replace all non-reusable and non-compostable material used in the food dining services to reusable, compostable, and landfill friendly materials. This includes all vendors that provide food services or beverages on ARC campus.</li> </ul>	
<b>Influence our community and food service vendors</b>	<ul style="list-style-type: none"> <li>Communicate and share our framework for creating a sustainable food system with other schools, universities, and communities.</li> <li>Influence manufacturers and distributors of natural and organic food products to provide more bulk, recyclable packaging materials</li> </ul>	
<b>Increase composting</b>	<ul style="list-style-type: none"> <li>Develop a food composting program</li> <li>Work in conjunction with campus and waste disposal to find sites and vessels for composting all disposable products and post-consumer waste</li> </ul>	
<b>Advocate for Sustainable Polices</b>	<ul style="list-style-type: none"> <li>Develop a framework to sustain student involvement in food sustainability</li> <li>Work with Soil born farms equinox event which educates children on the value and practice of growing food in a sustainable environment.</li> <li>Support and build out sustainable framework with our vendors</li> </ul>	

	<ul style="list-style-type: none"> <li>Require that at least 50% of food should be sourced locally to support local farms and businesses.</li> </ul>	
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**FOCUS AREA 5: CURRICULUM AND INSTRUCTION**

**Sustainability Objective:** To create, disseminate, and perform assessment of knowledge on climate changes and sustainable practices through classroom instruction, research, in-service learning, and visual and performing arts.

**Background: Assessment and Accomplishments**

The ARC curriculum does not emphasize sustainability or climate changes throughout its program. Climate change and sustainability are viewed as ideas in realm of science and may seem foreign to a professor in the liberal arts or math field. However, there are professional development programs that enable any instructor in any class to incorporate sustainability into their course. This can be done by selecting certain type of readings or assignments that are relevant to the course but highlights climate change and sustainability.

Recommendation	Suggested Activities and Comments	Timeline
Curriculum	<ul style="list-style-type: none"> <li>Assess incorporating sustainability ideas across the curriculum.</li> <li>Provide professional development and training to support changes in curriculum.</li> <li>Develop a climate change educator program</li> <li>Coordinate with the office of sustainability to create internship programs with faculty.</li> <li>Create internship programs that enable students to learn and lead sustainability initiative.</li> <li>Set aside funding to develop courses related to climate change that is accessible to the public as a community education program or a credit program for students.</li> <li>Establish an online database with peer reviewed articles and assignments that can be accessed by students and faculty.</li> </ul>	
Classified Senate	<ul style="list-style-type: none"> <li></li> </ul>	

**FOCUS AREA 6: ENERGY AND CLIMATE**

**Sustainability Objective:** Reduce non-renewable energy consumption through efficiency, conservation and strategic procurement of energy resources.

**Background: Assessment and Accomplishments**

To address the effects of climate changes and be a proactive citizen of Earth, ARC is doing its part in reducing its reliance on fossil fuels and embracing sustainable technologies. Many areas on campus still rely on fossil fuels and there are gaps in our understanding of building utilization. However, ARC has invested in many technologies to reduce energy consumption such as motion activated lighting in buildings and occupancy

thermostats that controls the demand for air conditioning and heat. All of the energy used by ARC comes from renewable sources reducing the demand for fossil fuels.

Recommendation	Suggested Activities and Comments	Timeline
<b>Assess and enhance climate control practices</b>	<ul style="list-style-type: none"> <li>▪ Establish areas that need year-round climate control and shut down all non-use areas during non-instructional times.</li> <li>▪ Install LED lights in existing and new building projects.</li> <li>▪ Reduce overall campus energy consumption by performing building utilization studies.</li> </ul>	
<b>Support ARC community and the student population</b>	<ul style="list-style-type: none"> <li>▪ Install fast DC charging stations in all parking lots.</li> <li>▪ Provide easy to access information to the campus community on energy use and environmental impact.</li> </ul>	
<b>Electrify campus fleet</b>	<ul style="list-style-type: none"> <li>▪ Replace campus fleet vehicles used in maintenance and travel within the district to electrified vehicles.</li> <li>▪ Explore feasibility of replacing long distance fleet vehicles with hybrid or electric.</li> </ul>	

## FOCUS AREA 7: LANDSCAPE AND BIOTIC ENVIRONMENT

**Sustainability Objective:** To increase the biodiversity of campus flora and use native species that are drought tolerant and reduce the dependency on fossil fuels, extracted minerals, pesticides, and potable water.

### Background: Assessment and Accomplishments

[insert assessment and accomplishments]

Recommendation	Suggested Activities and Comments	Timeline
<b>Increase use of native plants</b>	<ul style="list-style-type: none"> <li>▪ Replace all landscaping with drought friendly native plants except when needed for educational purposes.</li> <li>▪ Eliminate the use of pesticides to control weed.</li> <li>▪ Maintain tree campus USA status.</li> <li>▪ Identify invasive plants and seek removal</li> </ul>	
<b>Leverage Technology</b>	<ul style="list-style-type: none"> <li>▪ Implement technology to monitor irrigation systems.</li> <li>▪ Install system to capture and reuse non-potable water.</li> </ul>	

	<ul style="list-style-type: none"> <li>▪ Reduce overwatering by collecting remote moisture data</li> <li>▪ Create a map of campus to identify run-off points to prioritize repair and replacement of barriers.</li> <li>▪ Install storm drain fossil pollutant filters to capture pollutants.</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Replace gas-powered equipment used in lawn maintenance with electrified units where feasible.</li> <li>▪ Manage storm water through wetlands and biofiltration, using native plant species, and storage and reuse where applicable. (combine with manage storm drain)</li> <li>▪ Assess the feasibility of green roofs for use on campus.</li> </ul>	

## FOCUS AREA 8: WASTE MANAGEMENT

**Sustainability Objective:** To eliminate waste streams on the campus with the eventual goal of a net zero waste campus through implementing “cradle to cradle” processes and practices. ARC strives to reduce the amount of waste leaving the University by implementing on-campus waste management programs and practices.

### Background: Assessment and Accomplishments

In 2001, we increased efforts to divert waste from the landfill and created a waste reduction advisory committee district wide (R-8371). Assembly Bill 75 mandated all state agencies to provide an annual report showing diverted solid waste from the landfill by 25% by Jan 1, 2002, and divert at least 50% on or after Jan, 1, 2004 through source reduction, recycling, and composting activities. This effort includes recycling, reduction and reuse of materials which continues today. The Oak Café uses a tiered waste system. This includes recycling and food waste. The use of these is reviewed in culinary and work experience courses.

ARC waste streams are segregated based on their site of generation

- Green Waste – leaves, branches, grass and clippings
- Wood Waste – clean wood that can be repurposed into other projects
- Recycled Waste – single-stream waste which includes glass, paper, plastic, and aluminum. Desk side recycling
- Food Waste – the Oak Café / Hospitality Management & our Cafeteria are separating their pre-consumer food waste to meet AB1826
- Metal Bin – used to collect metal from welding and other generator sources such as renovations and building projects
- Universal Waste – this includes bulbs, batteries, sharps, used E-waste, clay, photography waste, theatre C&D,
- Landfill Waste – Certain wastes are not currently being segregated and may end up in general trash meant for landfill. These include Styrofoam, certain plastics, and other waste brought onto the campus.

- Hazardous Waste
- Construction Waste – Contractors required to provide recycling report on items recycled like asphalt, concrete, metal, wood and vegetation
- Surplus – Equipment, furniture, and obsolete electronics

Recommendation	Suggested Activities and Comments	Timeline
<p><b>Build upon current efforts to recycle, reduce, and reuse</b></p>	<ul style="list-style-type: none"> <li>▪ Continue our 2002 efforts of diverting 50% of solid waste from the landfill through recycling, reduction and reuse of materials.</li> <li>▪ Collect and segregate Styrofoam from general landfill garbage</li> <li>▪ Conduct feasibility study of campus run composting program</li> <li>▪ Add more waste receptacles that encourage proper sorting of waste.</li> <li>▪ Add more in-depth signage for new garbage system to help educate community about differences in waste receptacles.</li> </ul>	
<p><b>Building on our commitment</b></p>	<ul style="list-style-type: none"> <li>▪ Implement clean fuel strategies for generators and campus vehicles</li> <li>▪ By 2025, reduce campus waste weight by 90%</li> <li>▪ Reduce procurement waste by identifying vendors that package items in minimal packaging or packaging is made of recyclable materials.</li> </ul>	
<p><b>Build policies and Collaborate with California Community Colleges</b></p>	<ul style="list-style-type: none"> <li>▪ Continue to evaluate waste reduction methods</li> <li>▪ Collaborate with California Community College (CCC) system to implement policies that leverage the CCC financial power in purchasing and selecting vendors.</li> <li>▪ Continue to evaluate vendors environmental practices and encourage new vendors to adopt.</li> <li>▪ Provide Zero waste training to maintenance and operations staff.</li> </ul>	

## FOCUS AREA 9: WATER

**Sustainability Objective:** Minimize the use of potable water for non-essential operations or where collected water from rain, re-processing, and reuse water can be used without affecting the safety and health of the campus community.

### Background: Assessment and Accomplishments

Water is a valuable resource in California given that droughts can last longer due to climate change. The population of California is approximately 40 million and growing which stress an already venerable water system that has to provide for the population and supports California's farming industry. To alleviate the demand on potable water, ARC installed water stations throughout the campus. These stations have already saved ### plastic bottles. However, the campus is unable to accurately track how the stations are being used with exception to the smart fill station, which tracks water usage. The Oak cafe has a filtration systems for the water served in the café reducing the need to buy bottled water. ARC has also invested in efficient flush toilets and under-sink water heaters that deliver instantly hot water reducing water waste.

Recommendation	Suggested Activities and Comments	Timeline
<b>Reduce potable water consumption</b>	<ul style="list-style-type: none"><li>Assess our current potable water usage.</li><li>Reduce current potable water usage by 10%.</li><li>Reduce growth adjusted potable water consumption.</li><li>Use recycled water in toilets.</li></ul>	
<b>Modification of delivery systems</b>	<ul style="list-style-type: none"><li>Retrofit toilets and urinals in bathrooms to conserve water.</li><li>Upgrade water drinking stations to filtered water bottle refill stations.</li><li>Implement technology to monitor and manage water usage across the campus.</li><li>Install real-time meters in all buildings and new construction.</li></ul>	
<b>Increase access to clean water</b>	<ul style="list-style-type: none"><li>Install more water refilling stations across campus.</li><li>Water filling stations provides greater access to fresh clean water to the community.</li></ul>	

## FOCUS AREA 10: TRANSPORTATION

**Sustainability Objective:** To reduce greenhouse gases and the consumption of natural resources related to transportation by using appropriate technology, management, and behavioral approaches.

### Background: Assessment and Accomplishments

The most effective way to reduce environmental impact is to adopt public transportation. Public transportation enables disproportionately impacted communities to access resources, reduce

traffic congestion on highways and streets, preserve open spaces, and enable our communities to be more mobile. Many products that are purchased by the Oak Café are purchased through local farms reducing the transportation needed to get the products to campus.

Recommendation	Suggested Activities and Comments	Timeline
Support public transportation infrastructure	<ul style="list-style-type: none"> <li>▪ Advocate for increase bus route, bike trails, and light rail.</li> <li>▪ Collaborate with local and state government to improve public transportation efficiency and times for the college.</li> <li>▪ Provide free bus pass to students that meet requirements for transportation assistance.</li> <li>▪ Advocate for contiguous sidewalks.</li> </ul>	
Improve campus infrastructure to meet future and current demands	<ul style="list-style-type: none"> <li>▪ Install charging stations in all parking lots.</li> <li>▪ Provide bike rental service.</li> <li>▪ Designate carpool-parking slots.</li> </ul>	

## **CLOSING THOUGHTS AND NEXT STEPS**

While each focus area has a singular emphasis, this plan should be viewed in its entirety in order to work towards the overarching ARC sustainability vision. With that in mind, the project teams offers these final closing thoughts for those involved in future implementation.

[insert closing thoughts]

## APPENDIX A: CALIFORNIA STATE CLIMATE REGULATIONS

Below is a brief overview of recent California climate regulations.

### **Governor's Executive Order # S-03-05**

The Governor's Executive Order # S-03-05 establishes greenhouse gas emission reduction targets, creates the Climate Action Team and directs the Secretary of Cal/EPA to coordinate efforts with meeting the targets with the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually on progress toward meeting the GHG targets, GHG impacts to California, Mitigation and Adaptation Plans.

### **Global Warming Solutions Act of 2006 (AB-32)**

The Global Warming Solutions Act, or Assembly Bill 32 (AB-32) adopted in 2006, establishes two key requirements in regard to climate change reduction measures. The first requires that California GHG emissions be capped at 1990 levels by 2020, and the second establishes an enforcement mechanism for the GHG emissions reduction program with monitoring and reporting implemented by the California Air Resources Board (CARB). In 2008, the Assembly Bill 32 Scoping Plan was released by CARB which describes measures to implement the requirements set by AB-32. In addition to partnering with local governments to encourage the establishment of regional emission reduction goals and community regulations, the Scoping Plan uses various mechanisms to reduce emissions state-wide, including incentives, direct regulation, and compliance mechanisms. AB-32 includes major GHGs and groups of GHGs as follows:

- Carbon dioxide (CO<sub>2</sub>)
- Methane (CH<sub>4</sub>)
- Nitrous Oxide (N<sub>2</sub>O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF<sub>6</sub>)
- Nitrogen Trifluoride (NF<sub>3</sub>)

### **Assembly Bill 1493 (The Pavley Bill)**

The "Pavley" bill requires the registry, in consultation with the State Air Resources Board, to adopt procedures and protocols for the reporting and certification of reductions in greenhouse gas emissions from mobile sources for use by the state board in granting the emission reduction credits. This bill requires the state board to develop and adopt, by January 1, 2005, regulations that achieve the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks.

### **Low Carbon Fuel Standard (LCFS)**

The Low Carbon Fuel Standard (LCFS) was established in January 2007 by Executive Order S-01-07 and requires California fuel providers to decrease lifecycle fuel carbon intensity of transportation fuels by 10 percent from 2007 levels by 2020.

### **California Renewables Portfolio Standard**

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill 1078 and

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mandated that electrical corporations increase its total procurement of eligible renewable resources by at least 1 percent a year to reach a goal of 20 percent electricity generation from renewable resources. These goals were accelerated in 2006 under Senate Bill 107, which mandated that at least 20 percent of the total electricity sold be generated from renewable resources by the end of 2010. The RPS was further extended in 2008 by Executive Order S-14-08, which requires that 33 percent of total electricity sales be generated from renewable resources by 2020.

### **Senate Bill 97**

Senate Bill 97, passed in 2007, required the Governor's Office of Planning and Research (OPR) to develop and recommend amendments to CEQA Guidelines for addressing GHG emissions related to land use planning. The amendments to CEQA were approved and became effective in March 2010, thereafter requiring all CEQA documentation to include and comply with the new amendments established for addressing greenhouse gas emissions.

### **Senate Bill 375**

Senate Bill 375 was passed in 2008 to reduce GHG emissions caused indirectly by urban sprawl throughout California. The bill offers incentives for local governments to execute planned growth and development patterns around public transportation in addition to revitalizing existing communities. Metropolitan Planning Organizations (MPOs) will work with CARB to reduce vehicle miles traveled by creating sustainable urban plans with a comprehensive focus on housing, transportation, and land use. Urban projects consistent with the MPO's Sustainable Community Strategy (SCS) can bypass the CEQA's GHG emission environmental review. This provides developers with an incentive to comply with local planning strategies which support the State's greater effort for overall emission reduction in the land use and transportation sector.

### **Regional Air Pollution Control Districts (APCD) and Air Quality Management Districts (AQMD)**

In 1947, the California Air Pollution Control Act was passed and authorized the creation of Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs) in every county. APCDs and AQMDs are tasked with meeting federal and state air pollution requirements set by the Clean Air Act and can develop regulations to achieve the necessary public health standards, though these regulations need approval from CARB and the US EPA. APCDs and AQMDs have jurisdiction over businesses and stationary sources of emissions and can offer varying levels of outreach, grants, and CEQA review and technical assistance to interested public and private parties. The APCDs and AQMDs do not have the authority to regulate mobile air pollution sources, which is the responsibility of CARB, and must defer to state or federal regulations provided by the California Air Resources Board and the U.S. Environmental Protection Agency.

### **AB 341**

### **AB 197-relate to AB32**

### **AB 1826 Mandatory Organics Recycling**

Assembly Bill 1826 requires business that generate 4 cubic-yards or more of organic waste per week to arrange for organic recycling services. AB 1826 applies to business including schools, hospitals, stores, restaurants, etc.

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This bill aims to lower greenhouse gas emission and meet California's emissions goals.

### **SB 1383**

This bill would require the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40%, hydrofluorocarbon gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030, as specified.

### **HR 4184 Food Recovery Act**

A comprehensive piece of legislation aimed at reducing food waste and promoting food recovery, in 2015. The Food Recovery Act includes various provisions to encourage farms, groceries, restaurants, and institutions to donate excess food to food recovery nonprofits, along with regulations and funding measures that will raise awareness, encourage composting and anaerobic digestion programs, and reduce wasted food in schools and the federal government.

### **AB 1219**

**APPENDIX B: GLOSSARY OF SUSTAINABILITY TERMS**