

Cañada College Sustainability Plan



Produced by the Cañada College Sustainability Committee

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TABLE OF CONTENTS

SECTION 1.	EXECUTIVE SU	MMARY	1
SECTION 2.	BACKGROUND	·	2
2.1	HISTORY OF SU	JSTAINABILITY EFFORTS TO DATE	2
2.2	CREATION OF	THE SUSTAINABILITY	3
2.3		AINABILITY COMMITTEE	
2.4		ONTEXT OF SUSTAINIBILITY PLANNING	
SECTION 3.	VISION STATE	MENT, GOALS, AND PRIORITIES	7
SECTION 4.	PROGRAMS AI	ND PROJECTS FOR IMPLEMENTATION	9
4.1	STUDENT AND	CURRICULUM DEVELOPMENT	9
4.2	CAMPUS AND	COMMUNITY OUTREACH & AWARENESS	12
4.3	GREEN PURCH	ASING	14
4.4	MANAGEMEN	T AND ORGANIZATIONAL STRUCTURE	15
4.5	ENERGY CONS	ERVATION AND EFFICIENCY	16
4.6	FACILITIES OPE	ERATION	18
4.7	SUSTAINABLE	BUILDING PRACTICES	20
4.8	ON-SITE GENE	RATION AND RENEWABLE ENERGY	23
4.9	TRANSPORTAT	TION: COMMUTING AND CAMPUS FLEET	24
4.10	WATER, WAST	EWATER, AND SUSTAINABLE LANDSCAPING	25
4.11	SOLID WASTE	REDUCTION AND MANAGEMENT	27
SECTION 5.	MEASURE AND	O REPORT PERFORMANCE	30
5.1	MEASURING P	ERFORMANCE	30
5.2	REPORTING PE	RFORMANCE	33
SECTION 6.	APPENDICES		34
	APPENDIX A:	ENERGY AUDIT- MEASURES IMPLEMENTED	
	APPENDIX B:	GRANT AND INCENTIVE PROGRAMS MEASURES	
		IMPLEMENTED	
	APPENDIX C:	HVAC MEASURES IMPLEMENTED	
	APPENDIX D:	DESIGN STANDARD - STRUCTURAL DESIGN GUIDELINES	
	APPENDIX E:	DESIGN STANDARD SUSTAINABILITY	
	APPENDIX F:	CAÑADA COLLEGE SOLAR PV FEASIBILITY STUDY	
	APPENDIX G:	SMCCCD GREEN CLEANING PRACTICES AND PROCEDUR	ES
	APPENDIX H:	IMPLEMENTATION PROGRAMS AND PLANS CHECKLIST	

SECTION 1.

EXECUTIVE SUMMARY

As with many public sector agencies, Cañada College recognizes the environmental, economic, and social benefits of resource efficiency and sustainability. The passage of the California Global Warming Solutions Act (AB-32) and the establishment of a Sustainability Policy by the California Community Colleges (CCC) Board of Governors has made it imperative for California Community Colleges to develop an organized, comprehensive approach that incorporates the elements of sustainability, satisfies state regulations, takes advantage of available resources and complimentary programs, and adopts the best practices of others who are further along this path.

To meet these challenges, Cañada College has developed this campus-specific Sustainability Plan. Sustainability is defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." The

Sustainability Vision Statement

Cañada College will be a model for environmental sustainability, inspiring and empowering our community to implement sustainable practices and promote social equity.

purpose of this Sustainability Plan is to prepare Cañada College for the anticipated environmental and regulatory challenges of the 21st century, to guide the campus towards becoming a more sustainable institution, and to prepare students for the green economy.

The following Sustainability Plan articulates the vision, goals, and objectives established by the campus for sustainability, as well as the strategies to meet these goals. This Plan has been developed by the Cañada College Sustainability Committee, which includes college students, faculty, and staff. The Committee has developed this Sustainability Plan in coordination with the many different campus stakeholders to ensure that the plan meets the needs of the College.

SECTION 2.

BACKGROUND

2.1 HISTORY OF SUSTAINABILITY EFFORTS TO DATE

In 2002, the San Mateo County Community College District (SMCCCD) conducted a comprehensive energy audit and has since implemented over \$20 million of energy conservation measures. In addition, SMCCCD has designed all new buildings to a U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Silver rating, and is a leader in the CCC/IOU Energy Efficiency Partnership incentive program. Further, SMCCCD has evaluated the feasibility of roof-mounted solar photovoltaic systems, roof-mounted pool solar thermal systems, and fuel cells and micro-turbines for selected locations.

Cañada College has been implementing sustainable practices for decades and in particular has made significant strides in energy efficiency. Recent projects include energy efficient lighting, Energy Management Systems for heating ventilation and air conditioning (HVAC) and lighting, and lighting control systems in classrooms. Also, the new Facilities Maintenance Center, constructed in 2009, meets LEED Gold standards.

While the primary focus of campus efforts has been in energy conservation, there are many other areas of sustainability where programs are being implemented. The District has implemented a water conservation strategy by converting natural grass athletic fields to artificial turf. At Cañada College this resulted in an estimated savings of two million gallons of water and approximately \$100,000 in cost savings per year. Cañada College also has an effective waste management and recycling program and is on track to exceed the statewide landfill diversion goal of 75% by 2020. For a complete listing and description of existing Cañada College sustainability efforts see the Implementation Programs and Plans Checklist, which is in Appendix H.

Cañada College continues to identify new sustainable technologies for the built environment, promote sustainable practices within the community, and develop curriculum that includes environmental sustainability. Several academic departments at Cañada College have integrated environmental sustainability-related topics and practices into existing curriculum. For example, Cañada College's Fashion Design Department has long-incorporated fabric recycling into their curriculum, such as by having the Flat Pattern Class students use fabric from ready-to-wear garments to re-fashion new original designs. The English Honors class has recently started contextualizing curriculum with environmental sustainability topics. Throughout the semester students work on topics such as carbon footprint, ride-sharing programs, edible landscaping, solar panels, and environmental awareness and present their research outcome in a forum at the end of the semester. The Business Department offers two short courses within their entrepreneurship program to help students create business and marketing plans focused on green business practices.

Cañada College's Interior Design Department offers a Sustainable Design Certificate Program. Students in the Materials and Finishes class repurpose materials such as tile, stone, carpet, wall paper, and fabric. Students in the Color and Design class recycle various materials to create color wheels and value scales. All the sample materials (fabric, wall paper, carpet, tile, stone, laminate, solid surfacing, wood finishes, trims, design magazines, etc.) in the Interior Design Department resource library are sourced from recycled donations and donated to crafters, school and youth groups, and FabMo (www.fabmo.org) when no longer needed by the

department. Additionally, the Interior Design student club sells repurposed materials and products at the annual Arts & Olive Festivals to support student scholarships and club activities.

Cañada College is located on 131 acres in the western part of Redwood City in the foothills of the Santa Cruz Mountains. More than 350 olive trees grow on the campus and the school's symbol is an olive tree. These olive trees are drought-tolerant, require no supplemental irrigation, and provide habitat to a variety of fauna. Notably, the olive fruit fly poses a serious threat to the olive crop statewide. Recently, a faculty from the Biology Department and his Biology 110 class participated in a statewide effort to find a way to control the olive fruit fly. They introduced the African wasp, as a natural predator, to help control the olive fruit fly. Cañada College is the only location in the state where the wasp has returned for two consecutive years. This could be very beneficial for California's olive growers who produce more than 95% of the olives grown in the U.S.

In addition, a new bat house was built to attract bats to campus. Bats are extremely beneficial to the ecosystem, as they consume vast quantities of insects, including pests of agricultural crops, ornamental plants, and native trees and shrubs.

2.2 CREATION OF THE SUSTAINABILITY PLAN

To create this Sustainability Plan, Cañada College followed the process and utilized the tools provided in the California Community Colleges Sustainability Template. The process is illustrated in the flow chart on the right. The implementation of the sustainability planning process and the resulting Sustainability Plan are described in the following chapters.

2.3 CAMPUS SUSTAINABILITY COMMITTEE

In order to manage the process and to develop this Sustainability Plan, the campus established the

Establish a Campus Sustainability Committee

Define Goals, Objectives, Criteria, and Timelines

Select and Prioritize Implementation Programs

Create and Execute Action Plans

Monitor and Regularly Report Progress to Campus

Sustainability Committee consisting of faculty, staff, and students to provide representation from the different campus stakeholders. The Committee will be responsible for developing and implementing the sustainability programs and projects described in this plan to achieve the sustainability goals.

The Sustainability Committee co-chairs are Raj Lathigara, Faculty, Workforce Development and Susan Mahoney, Faculty, Earth/ Environmental Sciences. They can be reached at lathigarar@smccd.edu and mahoneys@smccd.edu, respectively.

2.4 THE POLICY CONTEXT OF SUSTAINIBILITY PLANNING

Sustainability can provide environmental, economic, and social benefits to campuses. However, there are other motivations for Cañada College to pursue these practices. The State of California has been on the forefront of efforts in establishing aggressive policies and standards for environmental protection and reducing greenhouse gas (GHG) emissions that contribute to global warming. In 1970, the State adopted the California Environmental Quality Act (CEQA) with the goal to inform governments and the public about potential environmental impacts of projects. From 2005 onward, legislation has been passed to directly regulate GHG emissions by utilizing incentive mechanisms, cap-and-trade programs, and mandatory reporting while encouraging voluntary activities such as purchasing emissions offsets and offering renewable energy certificates (RECs). Compliance with state policies and regulations regarding these issues is an important factor for consideration by the Cañada College.

The following outlines the numerous policy and regulatory drivers that contributed to the creation of this Plan.

2.4.1 CALIFORNIA COMMUNITY COLLEGES (CCC) BOARD OF GOVERNORS ENERGY AND SUSTAINABILITY POLICY

To encourage the CCCs to a more sustainable future, the CCC Board of Governors approved the Energy and Sustainability Policy in January 2008, which puts forth goals for each campus to reduce their energy consumption from its 2001-02 baseline by 15% by 2011-12. It also sets goals for minimum efficiency standards of new construction and renovation projects and provides an incentive of 2% of construction cost for new construction projects and 3% of construction cost for modernization projects. The policy also sets goals for energy independence through the purchase and generation of renewable power, and energy conservation through the pursuit of energy efficiency projects, sustainable building practices, and physical plant management.

The CCC Board of Governors Energy and Sustainability Policy can be found here:

http://www.cccco.edu/Portals/4/Executive/Board/2008_agendas/january/3-1_Attachment_CCC%20Energy%20and%20Sustainability%20Policy%2011-9-07%20FINAL.pdf

2.4.2 CALIFORNIA STATE CLIMATE REGULATIONS

2.4.2.1 State of California Executive Order S-3-05

Executive Order S-3-05 was signed by the Governor of California in 2005, thereby identifying the California Environmental Protection Agency (Cal/EPA) as the primary state agency responsible for establishing climate change emission reduction targets throughout the state. The Climate Action Team, a multi-agency group comprised of various state agencies, was formed to implement the Executive Order S-3-05. Shortly thereafter in 2006, the team introduced GHG emission reduction strategies and practices to reduce global warming. These measures are aimed at meeting the Executive Order's long term goal of reducing GHG emission to 80% below 1990 levels by 2050.

2.4.2.2 Global Warming Solutions Act of 2006 (AB-32)

The Global Warming Solutions Act, or Assembly Bill 32 (AB-32), was adopted in 2006 by the California legislature, establishing 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.

2.4.2.3 Assembly Bill 1493 (The Pavley Bill)

Assembly Bill 1493, widely known as "The Pavley Bill", was passed in 2002 and authorizes CARB to establish regulations to reduce the GHG emissions from passenger cars and light trucks by 18% by 2020 and 27% by 2030 from 2002 levels. This aggressive bill was temporarily blocked by the US EPA in March 2008 and later received a waiver of approval for implementation throughout California in June 2009.

2.4.2.4 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% from 2007 levels by 2020.

2.4.2.5 California Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill 1078 and mandated that electrical corporations increase their total procurement of eligible renewable resources by at least 1% a year to reach a goal of 20% electricity generation from renewable resources. These goals were accelerated in 2006 under Senate Bill 107, which mandated that at least 20% 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 required that 33% of total electricity sales be generated from renewable resources by 2020. In April of 2011, this RPS standard of 33% renewable by 2020 was enacted into law through final passage of Senate Bill X 1-2 (Simitian) and extended to apply to both public and investor owned utilities.

2.4.2.6 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 GHG emissions.

2.4.2.7 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) work with CARB to reduce vehicle miles traveled (VMTs) 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 emissions reduction in the land use and transportation sector.

2.4.2.8 Assembly Bill 341

Starting July 1, 2012, businesses and public entities, including schools and school districts that generate four cubic yards or more of waste per week and multifamily units of five or more will be required to recycle, if they are not already doing so. AB 341 also establishes a statewide goal of 75% diversion of solid waste to landfills. The purpose of this new law is to reduce greenhouse gas emissions by diverting commercial solid waste to recycling efforts and expand opportunities for additional recycling services and recycling manufacturing facilities in California.

2.4.2.9 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 CARB and the US EPA.

SECTION 3.

VISION STATEMENT, GOALS, AND PRIORITIES

The Sustainability Committee has developed the following Vision Statement to guide Cañada College in its Sustainability Planning efforts.

Cañada College will be a model for environmental sustainability, inspiring and empowering our community to implement sustainable practices and promote social equity.

To realize this Vision Statement, the Sustainability Committee has defined the following sustainability goals and priorities. The goals and priorities for the Sustainability Plan reflect campus needs, interests, and available resources. The goals listed are not necessarily ranked by priority. Priorities for all goals and implementation programs are contained in the Implementation Programs and Plans Checklist contained in Appendix H.

Sustainability Plan Goals and Criteria

Goal Number	Area of Sustainability	Established Goal		
1	Campus and Community Awareness & Involvement	Encourage awareness of and participation in sustainability efforts and positively influence the campus community to champion sustainability at Cañada College, in the community, and in their personal lives.		
2	Curriculum Development	Creatively integrate environmental awareness, social responsibility and sustainability into existing courses. Develop new curricula and training programs with a focus on environmental sustainability.		
3	The Built Environment	Collaborate with SMCCCD Facilities to develop the next generation of Master Planning Sustainability Goals for the Built Environment that exceed existing goals. Strengthen existing stakeholder process to ensure that new and renovated structures accomplish campus goals.		
4	Energy Conservation and Efficiency	Establish energy use baseline by the end of 2013. Establish annual energy use reduction goals that are at least 15% below the energy use by similar entities. Develop and implement strategies in order to achieve these goals by May 2016. Evaluate goals every three years.		

Goal Number	Area of Sustainability	Established Goal	
5	Water Conservation and Efficiency	Establish water use baseline for the campus by the end of 2013. Establish ambitious annual water use reduction goals by May 2014, and implement appropriate water efficiency measures to meet the goals. Evaluate goals every three years.	
6	Solid Waste Management	Expand waste reduction and recycling programs to include organic waste diversion, exceed statewide landfill diversion goal of 75% by 2020 and strive to achieve zero waste. Increase campus participation in waste reduction, reuse, and recycling.	
7	Transportation	Establish a Vehicle Miles Travelled (VMT) baseline for the campus by May 2014. Reduce the reliance of students, faculty and staff on single occupancy vehicle commutes by 10% within the next 5 years.	
8	Increase college efforts to source all goods and set from organizations that are committed to responsibility and environmental sustaina Establish procurement guidelines by Fall 2013, revibi-annually.		
9	Renewable Energy and Onsite Generation	Continue to study feasibility of procuring and/or generating renewable energy. Share findings with the campus community periodically.	
10	Climate Action Plan	Continue to reduce greenhouse gas emissions through the implementation of the Cañada College Sustainability Plan. Begin the development of the Climate Action Plan.	
11	Sustainability Plan Management	Institutionalize the Sustainability Committee by Fall Semester 2013. Evaluate the progress of Sustainability Plan implementation and disseminate findings to the campus community. Update the Sustainability Plan at least every three years.	

The goals and criteria established for the Sustainability Plan will be monitored during Plan implementation as described in Section 5, "Measure and Report Performance".

SECTION 4.

PROGRAMS AND PROJECTS FOR IMPLEMENTATION

Based on the goals and priorities described above, the Sustainability Committee has selected the following programs and projects to improve campus sustainability. These programs and projects are also reflected in the Implementation Programs and Plans Checklist, located in Appendix H, which outlines the details of each action item, its priorities, and responsibility for implementation, as well as schedules and estimated costs for each program or project. The Checklist will be used by the Sustainability Committee to manage the implementation process.

These key actions were selected from a menu of suggested programs and projects from Section 7 of the California Community College Sustainability Template.

4.1 STUDENT AND CURRICULUM DEVELOPMENT

As noted in the Cañada College vision statement, Cañada strives to deliver high quality, dynamic, innovative programs that prepare students for the university, the modern workplace, and the global community. Thus, as environmental sustainability becomes increasingly important in all facets of society, the College has a responsibility to play a role in moving current and future generations toward a sustainable future.

By implementing the Sustainability Plan, the College will demonstrate social responsibility, sustainable development strategies and carbon management. Further, by encouraging the inclusion of sustainability content in courses and developing new courses and programs focused on sustainability, the College can better serve students and play a greater role in moving current and future generations toward a sustainable future.

Cañada College will strive to create opportunities for student involvement and will encourage active sharing of current and evolving content to support implementation of the plan. Through the Sustainability Plan initiatives, faculty, staff, administrators, and students will have opportunities to collaborate, participate and serve as effective agents for positive change.

4.1.1 UTILIZE SUSTAINABILITY COMMITTEE TO COORDINATE SUSTAINABILITY-RELATED CURRICULUM

In addition to managing the Sustainability Plan and reporting to the campus community, the committee will act as a champion for integrating sustainability into the curriculum. Further, it will act as a focus for faculty interested in developing and implementing sustainability-related curriculum, and it will help consolidate and coordinate offerings among different departments and divisions.

4.1.2 UTILIZE DIFFERENT PATHWAYS TO INTEGRATE SUSTAINABILITY IN THE CURRICULUM

Sustainability can be effectively integrated into the curriculum by incorporating concepts into existing classes, offering classes that explicitly focus on sustainability, and developing certificate and degree programs in fields related to sustainability.

4.1.2.1 ADD SUSTAINABILITY CONCEPTS TO EXISTING COURSES

Cañada College offers courses (or sections of courses) that include sustainability-related content. Many science courses include sustainability concepts. The Fashion Design Department has long-incorporated fabric recycling into their curriculum, such as by having the Flat Pattern Class students use fabric from ready-to-wear garments to re-fashion new original designs. The Interior Design program sources material samples from recycled donations. Additionally, the students repurpose materials such as tile, stone, carpet, wall paper, and fabric in their projects. Further, when materials are no longer needed by the department, they are donated to crafters, school and youth groups, and FabMo (www.fabmo.org). The English Honors class has recently started contextualizing curriculum with environmental sustainability topics. Throughout the semester students work on topics such as carbon footprint, ride-sharing programs, edible landscaping, solar panels, environmental awareness etc. and present their research outcome in a forum at the end of the semester. The Business Department offers two short courses within their entrepreneurship program to help student create business and marketing plans focused on green business practices.

The College will continue to encourage faculty to incorporate sustainability into existing coursework as appropriate, especially in General Education (GE) and Career Technology Education (CTE) classes.

4.1.2.2 FOCUSED COURSEWORK

Cañada College currently offers a range of courses focused on environmental sustainability. Below is a short list of these courses and programs:

- INTD 400: Principles of Sustainable Design
- INTD 401: Sustainability and Home Energy Assessment
- Environmental Science 115: Introduction to Environmental Science
- Business 395: Getting Started in Business the Green Sustainable Way
- Business 396: Developing a Business Plan Incorporating Sustainable Practices
- IDST 100: Interdisciplinary Forum on Sustainability: People, Planet, and Profits
- Two Courses in the Fashion Design program
- Four Courses in Environmental Technology (Recycling and Resource Management

The College will continue developing coursework focused on sustainability.

4.1.2.3 CERTIFICATE OR DEGREE PROGRAMS

Presently, Cañada College is developing an Associate of Science transfer degree in Environmental Science, utilizing the Transfer Model Curriculum (TMC) framework. The TMC has yet to be finalized by the California Community College Chancellor's office, however Cañada College faculty are involved in the development process. The coursework proposed in the draft TMC includes classes from Environmental Science, Biology, Chemistry, Geology, Geography, Economics, and Statistics. The TMC will likely be finalized by fall 2013.

Cañada College currently offers a Certificate of Achievement in Sustainable Design through the Interior Design Program and has developed a certificate program in Recycling and Resource Management that will be submitted

for State approval by the end of 2013. Further, the College will continue to explore opportunities for other appropriate sustainability-related degree and certificates.

4.1.5 TRAINING OPPORTUNITIES FOR STUDENTS

Cañada College will employ the following strategies to enhance student learning outside of the classroom and provide opportunities for practical, hands-on project experience.

4.1.5.1 ASSIST IN GREEN INTERNSHIP AND JOB PLACEMENT

Despite the national and global economic recession and regional and national high unemployment rates, the market for green jobs has continued to grow in California. Through the above mentioned courses and certificate and degree programs, Cañada College prepares students to take advantage of the green job growth rate in the state. Internships can be an important tool for students wishing to pursue jobs or careers related to sustainability. Internships may provide valuable knowledge and skills, as well as a chance to apply classroom learning. Further, they are excellent opportunities for career exploration, and networking.

Cañada College's Interior Design Certificate and Degree program requires students to complete an internship in regional design firms and showrooms. The department assists with student placement. Additionally, Cañada College's Science, Technology, Engineering, and Math (STEM) Center assists interested students in identifying and applying for science and engineering internships, primarily at four-year institutions and federal government research facilities. In 2013, faculty will work closely with the STEM Center and the Cañada College Career Center to expand this program. Among other things, the College will work to develop relationships with more local agencies, businesses, and non-profits who may be interested in hiring interns or graduates, and the College will look for more internship opportunities directly related to sustainability.

4.1.5.2 FACILITATE HANDS-ON CAMPUS PROJECTS

Hands-on campus projects can be a very powerful learning tool. The Cañada College Interior Design department has been involved in past and present remodeling efforts, and the College would like to increase opportunities for on campus hands-on projects. The College will encourage faculty and clubs to include hands-on sustainability-related projects in their courses and events. Additionally, the College will explore opportunities for including students in existing and planned campus projects identified in the Sustainability Plan.

4.1.5.3 ENCOURAGE SOCIAL SERVICE

Volunteering offers students many of the same benefits as internships. (See above section 4.1.5.1 on Internships.) Additionally, volunteer service directly addresses local environmental issues and community needs, and it can promote community-building among the College, local non-profits, students, and the local community, possibly leading to future collaborations. The College will explore the possibility of hosting a sustainability-themed volunteer fair (in collaboration with the STEM Center and the Career Center) by Spring 2014.

4.1.5.4 INVITE NOTABLE SPEAKERS

Inviting notable speakers to present to the campus community can offer exceptional learning and community-building opportunities. In Spring 2013, the STEM Center premiered a STEM Lecture Series on eight Wednesday evenings throughout the semester. The series has been very well-attended and well-received by the students and faculty. The College will explore the possibility of collaborating with the STEM Center to develop a sustainability-themed lecture series by the end of 2014.

4.1.5.5 SUPPORT STUDENT COMMITTEES AND CLUBS

Currently, the College does not have a student club solely focused on sustainability. The College will encourage existing clubs to develop or participate in sustainability-themed projects and will support the development of a sustainability club if initiated by the students.

4.2 CAMPUS AND COMMUNITY OUTREACH & AWARENESS

The success of sustainability programs on campus is highly dependent on the actions of individual students, faculty, and staff. While having energy efficient equipment, installing low-flow water devices, and providing separate bins for source separation of waste can make Cañada College more sustainable, behavioral changes can have a large impact on the effectiveness of these projects. Additionally, it is important to maintain transparency and keep the campus and local community informed of the College's progress with sustainability planning and action. Overall, the Cañada College Sustainability Committee has identified the following two goals:

- Raise awareness of individual behaviors and actions that affect sustainability on campus, in the community, and in personal lives
- Inform the campus community of actions and projects the campus is taking to become more sustainable

The College will implement the following programs to achieve these goals.

4.2.1 CREATE A WEBSITE DEDICATED TO CAMPUS SUSTAINABILITY

Cañada College will explore the possibility of creating a page on the college website dedicated to spreading information about sustainability practices and the implementation of the Sustainability Plan. The website will serve as a publicity tool for sustainability events and as a coordination tool for conveying information to the community about sustainability programs. The website should be kept up-to-date with the latest campus developments and provide links to any public reports about college campus sustainability efforts. Ideally the website would be managed by a Sustainability Coordinator. Since Cañada College does not currently have such a position, the College will explore other avenues, such as management by a member of the Sustainability Committee.

Additionally, Cañada College would like the District to explore the possibility of creating a District Sustainability website with links to each college website.

4.2.2 HOLD WORKSHOPS AND PRESENTATIONS

Cañada College will explore offering workshops or presentations to enable members of the campus and community to stay informed about sustainability activities, ask questions, and participate in decisions. Workshops and presentations should be well publicized and open to all, and they should be led by individuals who can knowledgably field questions from the audience and efficiently facilitate the workshop process.

4.2.3 SUSTAINABILITY EVENTS

Cañada College will encourage participation in campus sustainability efforts and awareness of sustainability issues by encouraging academic departments, student clubs, and campus committees to coordinate and/or participate in sustainability events on campus and in the local community. Further, the College will encourage campus groups to include sustainability-themed activities in their events. Possible event days might include: Earth Day, Bike-to-Work Day, Bike/Walk to School Day, America Recycles Day, and a Zero Waste Week. Notably, in spring 2013, the STEM Center hosted Pi Day, which included several sustainability-themed booths, including urban forestry information, solar cooking and electric car demonstrations.

4.2.4 CAMPUS SPECIFIC OUTREACH & AWARENESS

By employing the following strategies, among others, Cañada College will encourage cooperation and spread awareness about sustainability on campus.

4.2.4.1 POST BEHAVIORAL REMINDERS AND EDUCATIONAL INFORMATION

Cañada College will encourage habits that promote sustainability by posting behavioral reminders where appropriate. Posting reminders with statistics of wasted energy, water, and gasoline and the associated greenhouse gas emissions and monetary costs can help encourage behavioral changes. Extrapolating efforts to an entire community can help people understand how small individual choices and efforts can have a large impact.

In particular, to reduce waste and improve recycling, the College will design improved signage and instructions above receptacles with clear visuals and recycling facts. Similar signage will be used in the campus cafeteria for a reusable cup discount program. These signs will simultaneously advertise the program and educate the campus about the environmental and economic benefits of participating.

In addition to behavioral reminders, the College will develop signage to educate the community about oncampus sustainable technologies and programs (e.g. electric car charging stations, artificial turf, low-flush toilets, etc). The signage will include background information and statistics regarding energy, water, or financial savings. Further, the College will explore cataloging signage into a self-guided campus tour.

4.2.4.2 NEW STUDENT, STAFF, AND FACULTY ORIENTATION

The College will explore opportunities to use the current orientation programs to introduce new students, staff, and faculty to the College's sustainability goals and programs. Among other things, the new students, staff, and

faculty will be informed about sustainability events, clubs, and curriculum on campus so they can contribute to sustainability efforts on campus and in their communities.

4.3 GREEN PURCHASING

Cañada College believes that SMCCCD should establish purchasing policies to meet the goals of environmental, economic, and social equity sustainability and use its market power to influence suppliers to be more sustainable.

4.3.1 SUSTAINABLE FOOD PURCHASING

The District food service vendor has expressed some interest in incorporating environmental sustainability into their food service when feasible; however, there are opportunities for improvement. The College will develop procurement guidelines by the end of 2013 and will collaborate with the food service provider to implement these guidelines on campus.

4.3.2 SUSTAINABLE PROCUREMENT PRACTICES

Currently, campus departments at Cañada College purchase paper with recycled content and local ordinances require the use of compostable flatware and containers in food service areas. As noted in section 4.6.8, "Implement a Green Cleaning Program," Cañada College uses sustainable cleaning products (Green Seal or EcoLogo certified which meet LEED-NC standards), EPA compliant disposable janitorial paper products and trash can liners, and cleaning equipment with low environmental impact. Information Technology Services at SMCCCD has and will continue to prioritize replacing energy intensive electronic equipment with more efficient devices. The campus bookstore offers environmentally friendly cosmetics, biodegradable supplies, and office supplies made of recycled content.

With assistance from the US Environmental Protection Agency's (EPA) Comprehensive Procurement Guidelines, Cañada College will create Green Purchasing Guidelines in 2013 aimed at campus-wide, sustainable procurement. The College will explore the possibility of bulk purchasing office supplies to cut costs, reduce delivery trips to campus, and reduce packaging. Additionally, centralized purchasing will help ensure purchasing guidelines are followed.

4.3.3 SOCIALLY RESPONSIBLE PURCHASING

As part of the above-mentioned Sustainable Procurement Practices (Section 4.3.2), Cañada College recognizes the importance of socially responsible purchasing by doing business with vendors that adhere to fair trade and fair labor practices, pay living wages, and are otherwise socially responsible. Currently, fair trade, sustainable coffee is available for purchase at the campus café and the campus bookstore belongs to buying groups that pledge to socially and ethically responsible practices. It is a SMCCCD mandate that all items sold through the bookstore must not be produced using unjust labor practices.

The College will explore opportunities to include socially responsible purchasing guidelines in the abovementioned Green Purchasing Policy.

4.4 MANAGEMENT AND ORGANIZATIONAL STRUCTURE

In order to implement an effective sustainability policy, it will be important for Cañada College to have a plan, the institutional structure required to manage the process, and the financial and programmatic expertise to accomplish plan goals. The College will implement the following programs to meet this requirement.

4.4.1 DEVELOP AND IMPLEMENT A SUSTAINABILITY PLAN

The Cañada College Sustainability Plan will be developed and presented to the College governing body for adoption in spring 2013. Cañada College's Sustainability Plan, as part of the SMCCCD Sustainability Plan, will be presented to the San Mateo County Board of Trustees for adoption in summer 2013.

Notably, the 2013-2014 Board of Trustees Sustainability Goals include the following. SMCCCD will:

- Continue its historic commitment to sustainability through LEED certification of new construction and renovation projects, promotion of energy efficiency initiatives and green management practices
- Demonstrate commitment and increase awareness of accomplishments and opportunities through support of active and vital campus and District-wide sustainability committees
- Continue to explore opportunities to further incorporate sustainable practices and materials into procurement and operational processes

4.4.2 APPOINT A SUSTAINABILITY COORDINATOR (AND ESTABLISH AN OFFICE OF SUSTAINABILITY)

Implementation of a Sustainability Plan will require time, effort, continuity, and leadership. It is important to establish the management and support infrastructure to meet these needs. As such, Cañada College would like to explore the possibility of appointing a sustainability coordinator by 2014 to work with staff, faculty, students, and community organizations to identify, implement, and monitor the sustainability efforts at Cañada College and the District. SMCCCD is in the process of hiring a full-time Energy Management Coordinator who will be responsible for energy management and sustainability programs and coordinate all sustainability, utility, energy efficiency and renewable initiatives across the District.

4.4.3 APPOINT A CAMPUS SUSTAINABILTY COMMITTEE

The Cañada College Sustainability Committee was formally established in October 2012 to develop the Sustainability Plan and to manage and track its implementation. The Committee consists of students, faculty, and staff and will meet at least monthly in the foreseeable future to implement the Plan and to report progress to the college community.

4.4.4 FUNDING AND RESOURCES TO SUPPORT SUSTAINABILITY ACTIVITIES

Cañada College will explore external funding sources to support the College's related sustainability activities and initiatives. Further, the College will review the existing process through which projects are prioritized.

Currently, SMCCCD utilizes three funds to finance energy efficiency and facility-related sustainability projects. The primary fund consists of leveraged rebate dollars received through previous energy efficiency projects at SMCCCD. This "Energy Efficiency Fund" amounts to approximately \$1 million as of 2012 and is used solely for future facilities sustainability measures. Facilities projects are financed through the remaining two funds, the Emergency Building Repair Fund (EBRF) and the Small Projects Fund, and are prioritized according to Board of Trustees goals. As such, projects with sustainability components are given precedence.

4.4.5 ENGAGE SUSTAINABILITY PROFESSIONALS AS APPROPRIATE

The San Mateo County Community College District is hiring a full-time Energy Management Coordinator who will coordinate sustainability initiatives across the District. In addition, SMCCCD hires architectural firms, consultants, and energy engineers experienced in all phases of the sustainable building design process to assist in constructing energy and resource efficient buildings.

4.4.7 INTEGRATE SUSTAINABILITY PLANNING INTO CAMPUS MASTER PLAN

The San Mateo County Community College District has integrated and emphasized sustainability in the 2011 Facilities Master Plan which reinforces the District's intention to:

- Incorporate energy efficient practices, materials, and technologies
- Raise public awareness about the importance of sustainability for the future
- Develop campuses as learning environments that model sustainable practices

In any projects incorporating emerging technologies to improve sustainability, the District will undertake a rigorous analysis of the cost effectiveness of these technologies and their contribution to overall fiscal responsibility.

In addition to the Facilities Master Plan, Cañada College has also incorporated sustainability in the college Educational Master Plan. One of the four strategic directions within the Plan addresses sustainability. In particular, objective 4.3 states, "Work collaboratively with the Academic Senate and the Curriculum Committee to integrate sustainability into the curriculum by developing new courses and increasing the number of courses with a sustainability component". Further, objective 4.4 states, "Improve sustainability awareness on campus."

4.5 ENERGY CONSERVATION AND EFFICIENCY

Energy conservation and efficiency is one of the most cost effective ways to reduce a campus's energy use and its carbon footprint. When implemented properly, conservation and efficiency measures can decrease energy use and enhance student, faculty, and staff performance, without compromising comfort. Energy conservation and efficiency will be a higher priority than renewable or other on-site energy generation due to more favorable economics.

4.5.1 SET ENERGY EFFICIENCY GOALS

Cañada College will perform a campus facilities Measurement, Verification and Benchmarking Study using APPA FPI, Energy Star Portfolio Manager or other appropriate tools by the end of 2013. Based on the results, the College will establish annual energy use reduction goals at least 15% below the energy use by similar entities and develop and implement strategies to achieve these goals by May 2016. Goals will be evaluated every three years.

4.5.4 CONDUCT COMPREHENSIVE FACILITY ENERGY AUDITS

The San Mateo County Community College District had a comprehensive energy analysis performed by Chevron Energy Solution in 2002. As a result of the study, SMCCCD identified and implemented over \$20 million of energy conservation measures by 2006 including lighting retrofits, mechanical system repairs and replacements, a digital building management control system, underground piping repair, boiler tune-ups, and the conversion to variable speed pumping and fan systems. A detailed description of the energy conservation measures undertaken at Cañada College is listed in Monitoring-Based Commissioning (MBCx), "Energy Audit Measures Implemented." A second comprehensive energy analysis was performed by PG&E in 2011. The District will continue conducting comprehensive facility energy audits as needed and prioritize the implementation of audit recommendations. The College would like to explore using a third party to perform audits in the future.

4.5.5 IMPLEMENT NEW AND EXISTING AUDIT RECOMMENDATIONS

The San Mateo County Community College District aggressively pursued a variety of the audit recommendations presented by Chevron Energy Solutions in 2002 and is in the process of implementing recommendations made by the 2011 PG&E audit. These efforts will continue to save the District in excess of \$1 million per year in utility and maintenance costs and will drastically reduce annual greenhouse gas emissions.

4.5.6 IMPLEMENT ONGOING ENERGY MONITORING

Identification of high-energy usage facilities on campus and overall energy usage patterns is an essential component to reaching campus energy efficiency goals. As a result of the Chevron Energy Solution audit, SMCCCD installed a UtilityVision energy information system and seventeen meters at key facilities, allowing the District to track and monitor energy consumption. SMCCCD will expand this program by installing individual meters on all occupied campus buildings with significant energy consumption. Individual metering will allow the District to continuously monitor energy usage, facilitate future MBCx projects, perform energy saving measures in a timely manner, and evaluate the short and long-term impacts of these projects.

4.5.7 PARTICIPATE IN DEMAND RESPONSE (DR) PROGRAMS

In 2011, SMCCCD received the PG&E Automated Demand Response Leadership Award for successful participation in the Intermittent Renewable Pilot Program, which included PG&E's installation of a DR program at the College of San Mateo. The demand response program allows PG&E to connect to the CSM Building Management System (BMS), enabling the College of San Mateo to contribute to energy load reduction during times of peak energy demand. Cañada College will explore expanding this program to its campus.

4.5.8 IDENTIFY AND TAKE ADVANTAGE OF GRANT AND INCENTIVE PROGRAMS

Cañada College continues to be an active participant in the CCC/IOU Energy Efficiency Partnership incentive program and the PG&E Savings by Design programs. Additionally, Cañada College will continue to explore and take advantage of grants and incentives where appropriate. A list of projects undertaken at Cañada College and their respective rebate amounts are listed in Appendix B, "Grant and Incentive Programs Measures Implemented."

4.5.10 EFFICIENT LIGHTING AND LIGHTING CONTROLS

In response to the comprehensive energy audit performed at SMCCCD in 2002, Cañada College retrofitted campus parking lot lights with High Pressure Sodium (HPS) lighting. The College intends to upgrade the HPS lighting to LED lighting in the parking lots. Also, high efficiency lighting systems, occupancy sensors, and multiswitching circuits have been installed and the College will continue to look for additional opportunities. Further, all vending machines on campus are required to meet federal guidelines for energy efficiency.

4.5.11 INSTALL ENERGY EFFICIENT HVAC SYSTEMS

HVAC retrofitting and replacement projects can potentially result in significant energy and monetary savings for the College and the District. Thus, HVAC monitoring and replacement or repair will continue to be a priority for Cañada College. Several College and District HVAC projects are listed with their respective rebate amounts in Appendix C, "HVAC Measures Implemented."

4.6 FACILITIES OPERATION

Cañada College strives to operate high-performing facilities, buildings, and energy infrastructure systems that are optimized for inhabitant comfort, productivity, and energy and resource efficiency. Current and planned activities in this area are described below.

4.6.1 ENCOURAGE AND SUPPORT ENERGY EFFICIENCY TRAINING OF STAFF

The San Mateo County Community College District encourages campus staff to become trained in energy efficiency through a variety of mandatory programs including an annual building performance training program through Allana Buick & Bers (ABB) and an energy efficiency training course through PG&E and APPA. Facility and Project Managers, all engineering staff, and Custodial Supervisors are required to attend courses for the Building Operator Certification (BOC), a "nationally recognized, competency-based training and certification program that offers facilities personnel the improved job skills and knowledge to transform workplaces to be more comfortable, energy-efficient and environmentally friendly." In addition, SMCCCD regularly holds in-house training sessions for District Engineers that focus on energy efficiency.

4.6.2 INSTALL ENERGY MANAGEMENT SYSTEMS

The San Mateo County Community College District has installed a Building Management System (BMS), which provides centralized reporting and control of campus energy-related activities as well as the campus security

system. Cañada College strives to achieve optimum efficiency in the use of natural gas, electricity, and other energy resources to meet the heating, cooling, and lighting needs of campus facilities.

4.6.3 ADJUST TEMPERATURE SET POINTS AND SCHEDULE OPERATING TIMES

The temperature set point range at Cañada College is $68^{\circ}F - 74^{\circ}F$ and has been programmed through the campus BMS. Faculty and staff are able to adjust the temperature range two degrees in either direction but the system will revert to the default range after two hours, ensuring that excessive heating or cooling does not take place. The College will explore the feasibility of altering the temperature set points to accommodate seasonal temperature changes.

4.6.5 OPTIMIZE HVAC EQUIPMENT SCHEDULING

HVAC systems at Cañada College are programmed according to building occupancy and operation hours. The systems are either activated through the BMS or manually on a building-by-building basis. SMCCCD has implemented an alert system to notify Facility Managers and Chief Engineers of HVAC systems disruptions requiring immediate attention.

4.6.6 ACTIVATE ENERGY-SAVING FEATURES FOR APPLIANCES AND COMPUTERS

Energy-saving features have been activated on all individual and lab computers as well as most printers at Cañada College. Computers are programmed to "time-out" after fifteen minutes of inactivity and all devices in campus computer labs are completely powered down at the end of the day. Desktop virtualization has been installed across the campus which reduces computer energy use and prolongs the life of the equipment. SMCCCD has undertaken a District-wide effort to eliminate as many desktop printers as possible and has shifted printing to centralized, more efficient print stations. In 2013, SMCCCD will make efforts to expand server and desktop virtualization and to power down digital signage monitors when campus is not in use. Further, the College will educate the campus community on how to reduce phantom loads.

4.6.7 PURSUE MONITORING-BASED COMMISSIONING (MBCX)/RETRO-COMMISSIONING (RCX)

Monitoring-Based Commissioning (MBCx) is a process that optimizes building performance for comfort and energy use through permanent whole-building metering and energy monitoring. Cañada College participated in the CCC/IOU Energy Efficiency Partnership MBCx in campus Building 9. Plans are in place to perform MBCx on the Cañada campus chiller in 2013.

4.6.8 IMPLEMENT A GREEN CLEANING PROGRAM

The San Mateo County Community College District is committed to providing healthy, clean and well-maintained buildings that follow green cleaning practices and procedures as required by USGBC LEED-NC and Global Eco-Labeling standards. As such, SMCCCD has establish a comprehensive "Green Cleaning Program" that outlines proper cleaning practices and procedures in order to maintain good indoor air quality, increase occupant health and comfort, assure a clean building, and provide a healthy environment for the custodial crew. In addition, SMCCCD is committed to using environmentally safe, low-impact, cleaning chemicals in all campus buildings. A full description of the Program can be found in Appendix G, "SMCCCD Green Cleaning Practices and

Procedures."

4.7 SUSTAINABLE BUILDING PRACTICES

Construction and renovation of new and existing facilities provides a significant opportunity to reduce the environmental impacts of the built environment through sustainable building practices. Cañada College incorporates energy and resource efficient "Green Building" practices in the design and construction of all new and renovated facilities.

For its efforts, the District's construction practices have earned it several recent awards including:

- The 2005 Flex Your Power Award for continuing commitment to saving energy, money and protecting the natural environment. The District, by implementing a variety of energy efficiency projects, has reduced energy consumption by 56%, saving more than \$1 million in energy costs annually
- The 2005 San Mateo County Grand Jury Commendation for construction management practices. The Grand Jury report recommended that schools in the County base their construction policies and procedures on those employed by the San Mateo County Community College District
- A commendation in the Environment California newsletter
- The 2010 Green California Community College Summit, Leadership Award Pioneer
- The 2008 Energy Efficiency Partnership Program Best Practice Award, HVAC Design, UC/CSU/CCC Sustainability Conference
- The 2011 Sustainability Champion Award, California Higher Education Sustainability Conference
- The 2012 CCC Board of Governor's Energy & Sustainability Honorable Mention Award
- The 2011 PG&E Automated Demand Response Leadership Award for successful participation in the Intermittent Renewable Pilot Program

4.7.1 ESTABLISH A GREEN BUILDING STANDARD

Cañada College has established the U.S. Green Building Council LEED Silver rating as their minimum building standard for new construction. All architect and engineering contracts incorporate this design standard requirement. The LEED rating system is an industry "Best Practice" and is commonly used in higher education and commercial building construction. Additionally, each new project at Cañada College must exceed the California Title 24 Building Standards by at least 15%. For example, the College's Library and Student Resource Center constructed in 2006 is 30% more energy efficient than required by California code. SMCCCD has committed to the following standards in the 2011 Facilities Master Plan:

All buildings will be designed and built with energy efficient materials, practices, and technologies, thus
assuring that the operational savings that accrue are available to enhance the District's ability to fulfill
its core educational mission

In addition to LEED certification, the District requires designers to incorporate as many sustainable features into the structural system of new or renovated buildings as reasonably possible. Some of the criteria include:

- Recovery of waste heat
- Renewable energy sources

• Specify a high volume fly ash foundation concrete mix design to reduce cement production and negate the need for a flooring finish, which reduces cost and improves indoor air quality

- Recycle at least 95% of steel, including steel shapes, reinforcing bars and metal decking
- Utilize recycled aggregates for slab sub-base
- When possible, specify regional materials (within a 500 mile radius), locally harvested products, and locally manufactured products to support local economies and reduce transportation waste

These features will help SMCCCD with the following building related goals:

- Decrease carbon emissions to meet the AIA "2030 Challenge"—a position statement that calls for the
 immediate energy reduction of all new and renovated buildings to half the national average for that
 building type, with increased reductions of 10% every five years so that all buildings designed by the
 year 2030 will be carbon-neutral (meaning that they will use no fossil fuel energy)
- Achieve double digit savings over October 2005 Title 24 energy requirements

For more information please see Appendix D, "Design Standard Structural Design Guidelines," and Appendix E, "Design Standard Sustainability."

Looking forward, Cañada College will strive to attain higher LEED standards or set higher goals within the LEED Silver category for all future construction.

4.7.2 IMPLEMENT SUSTAINABLE DESIGN PRACTICES

All campus new construction, renovation, maintenance, and repair projects are designed with consideration of College sustainability goals and all applicable energy codes and regulations. Energy efficiency and sustainable design is addressed early in the project planning and design phases to maximize cost effectiveness. Cañada College takes full advantage of the PG&E Savings by Design program, which provides technical expertise and incentives to incorporate sustainable design practices in all new construction and building renovation projects. The following elements of SMCCCD's Sustainable Design Standard are taken into account when designing capital projects:

- Recycled materials
- Indoor environmental quality
- Energy and water conservation
- Natural lighting
- Local manufacturing
- Landscaping with native and drought resistant plants
- Public transportation usage
- Embedded energy
- Other sustainable fundamentals

Within the Sustainable Design standard, SMCCCD has compiled the following ideas and concepts that should be considered for incorporation into each capital project including:

- Solar Income: Building-integrated PVs, Building-integrated solar water heating, outside air preheating
- Wind Income: wind turbines, natural ventilation
- Geothermal: geothermal slab cooling, geothermal heat pumps
- · Rain: rain water harvesting
- Architectural & Engineering: use of natural lighting, double facades, high levels of insulation, efficient
 visible glass, orientation, programming (relaxed temperatures), thermal mass, green roof and indoor
 environmental quality, central utility plant for chilled water production, heating only energy recovery
 with run-around coils, variable volume diffusers, microturbine, displacement ventilation, thermal
 storage systems, fan wall systems, heat and mass exchange, low flow fixtures, energy efficient lighting
 and lighting controls throughout all facilities

The following measures have recently been implemented on construction projects at the College:

Green Construction Materials:

- Installed new window treatments (solar shading, glare reduction, thermal insulation)
- Installed eco- carpeting (with low or no VOCs to prevent toxic off gassing)
- Installed Tarkett linoleum flooring (cost of water, detergents, and energy reduced by 50%; overall lower lifecycle cost)
- Installed acoustical ceiling panels that reflect available light (whether daylight or mechanical), reducing the need for more energy-consuming mechanical lighting. The manufacturer of these panels is committed to environmentally sound production practices
- Furniture is purchased from vendors who are committed to environmental sustainability
- Purchased products from companies that are members of the Sustainable Forestry Initiative program and use primary adhesives that are water-based and contain less than 0.4% volatile organic compounds

New Building Construction:

• Included in SMCCCD's design standards is the requirement that buildings and spaces are created to accommodate recycling receptacles in order to facilitate sustainable behavior. Prior to occupancy SMCCCD performs indoor air quality tests to ensure that buildings are properly ventilated and non-toxic. Within one year of the construction of a new building SMCCCD schedules three meetings—one with the building's general contractor, the architect, and the commissioning agent—and performs a thorough review of the building to ensure the building is functioning as it was designed. A complete list of these buildings is listed in Appendix B, "Grant and Incentive Programs Measures Implemented."

The College will invite participation from the college community during the design process.

4.7.3 USE AN INTEGRATED SYSTEMS APPROACH IN BUILDING DESIGN

Sustainable building goals at Cañada College are evaluated in a cost effective manner by identifying economic and environmental performance criteria, evaluating lifecycle savings, and adopting an integrated systems approach. Such an approach treats the entire building as one system and recognizes that individual building features, such as lighting, windows, heating and cooling systems, should be evaluated and designed as

interactive systems. This integrated approach to sustainable design is a feature of the PG&E Savings by Design "Whole Building" process employed at the College.

4.7.4 HIRE SUSTAINABLE BUILDING DESIGN PROFESSIONALS

The San Mateo County Community College District utilizes architectural firms, consultants, and energy engineers experienced in all phases of the sustainable building design process to assist in constructing energy and resource efficient buildings.

4.7.5 COMMISSION NEW BUILDINGS

Cañada College incorporates commissioning agents throughout the entire construction process, from the design phase through building occupancy. Individual systems are also commissioned to ensure that they run as efficiently as possible. Further, the College will implement building occupancy surveys to evaluate the effectiveness of the building design and implementation.

4.7.6 INVOLVE STUDENTS IN DESIGN PROCESS

Cañada College interior design students have participated in past and present remodeling projects and the College will increase opportunities for student involvement in future projects.

4.8 ON-SITE GENERATION AND RENEWABLE ENERGY

The College will explore renewable energy technologies to reduce operational costs, provide educational opportunities, and raise awareness in the community about the potential and benefits of renewable energy.

4.8.1 EVALUATE CLEAN COGENERATION AND RENEWABLE ENERGY GENERATION

In 2011, SMCCCD engaged ABB to evaluate the feasibility of generating renewable energy using photovoltaic systems at Cañada College. The report indicated that Cañada College has the capacity to install a solar PV system up to 1.2 megawatts in size with the potential of offsetting approximately 60% of the campus's electricity consumption. Cañada College will ensure that this feasibility study is shared with the campus community by fall 2013. A full text of the report can be found in Appendix F, "Cañada College Solar PV Feasibility Study." Cañada College will also explore the feasibility of additional cogeneration and renewable energy technologies.

4.8.4 EVALUATE PARTICIPATION IN COMMUNITY CHOICE AGGREGATION

The San Mateo County Community College District has mitigated the increasing energy rate trend by procuring electricity and natural gas at fixed prices over contract periods directly through a consortium of California Community Colleges. Cañada College will explore using joint procurement methods to increase renewable energy purchase.

4.8.5 IDENTIFY AND TAKE ADVANTAGE OF GRANT AND INCENTIVE PROGRAMS

Cañada College will explore grants and incentives programs to produce or procure renewable energy.

4.9 TRANSPORTATION: COMMUTING AND CAMPUS FLEET

Cañada College will strive to reduce VMTs for students, faculty, and staff commuting to the campus in an effort to reduce greenhouse gas emissions and minimize the infrastructure costs related to parking.

4.9.1 UNDERSTAND COMMUTE AND TRAVEL PATTERNS

Understanding how students, faculty, and staff commute to the campus is the first step towards reducing vehicle miles traveled to and from Cañada College. In 2006, the District contracted with Traffic Data Service and Hexagon Transportation Consultants, Inc. to perform a traffic analysis of the vehicle entries to Cañada College. The College will conduct additional surveys (e.g. questionnaire, database queries) by December 2013 to determine single occupancy trips to campus. The College will also obtain additional data regarding use of public transportation and ridesharing. The results will be utilized to help the College create strategies by spring 2014 to decrease VMT and GHG emissions of the campus community.

4.9.2 ENCOURAGE AND ENHANCE PUBLIC TRANSPORTATION AND RIDESHARING OPTIONS

Cañada College will employ the following strategies to encourage and enhance public transportation and ridesharing options.

4.9.2.1 FACILITATE PUBLIC TRANSIT USE

Public transportation is an important strategy to reduce VMTs and resulting greenhouse gases. Anecdotal evidence suggests that current public transit options at Cañada College are not sufficiently meeting campus needs. The San Mateo County Transit District (SAMTRANS) serves Cañada College with only one bus line (274), which provides service to the Redwood City CalTrain Station. The College will evaluate results of their transportation survey and work with SAMTRANS to optimize route schedules and/or seek additional services.

4.9.2.2 INCENTIVIZE PUBLIC TRANSPORTATION AND RIDESHARING OPTIONS

Incentives can dramatically increase the use of public transportation and ridesharing. Currently, Cañada College has only three parking spaces reserved for vehicles transporting a minimum of three passengers. The College will work to increase the number of carpool parking spaces and better publicize their availability on campus. Additionally, the College will explore other incentive program ideas as well as ridesharing networking resources to better assist campus members in finding compatible carpoolers and vanpoolers.

4.9.2.3 ENCOURAGE FUEL EFFICIENT VEHICLES FOR COMMUTERS

Currently, Cañada College has three parking spaces reserved for low emissions vehicles. The College will explore ways to better advertise this program, evaluate its success, and consider expansion. SMCCCD received a grant from the California Energy Commission in fall 2012 to install 19 electric vehicle charging stations, six each at Cañada College and the College of San Mateo and seven at Skyline College. These charging stations will be strategically placed to facilitate and encourage the use of electric vehicles. As an additional incentive, the

College will provide charging at no cost to the electric vehicle drivers. Installation of the stations will be completed by summer 2013.

4.9.3 ENCOURAGE AND ENHANCE BICYCLING OPTIONS

Cañada College has installed bike racks in key locations on campus to encourage the use of bikes and public transportation. Currently the campus has five racks that contain a total of 19 individual bike stalls. Due to the College's location and topography, biking is not practical for most members of the campus community. The College will evaluate the effectiveness of this program and determine how to expand the program if needed. Additionally, the College will explore collaboration with Redwood City's new bike-sharing program.

4.9.4 IMPROVE CAMPUS FLEET & TRAVEL

The San Mateo County Community College District currently has seven fully electric vehicles used by the facilities departments at each campus. Overall, SMCCCD prioritizes efficient vehicles during purchasing decisions and aims to replace diesel vehicles with electric or high average mile-per-gallon fuel efficiency.

4.9.5 ENHANCE STUDENT DISTANCE LEARNING & UTILIZE VIRTUAL MEETING PLATFORMS

Online courses and virtual meetings can help reduce transportation-related GHG emissions, as well as energy and maintenance costs associated with maintaining and operating campus facilities.

In spring 2013, 1534 student seats were filled by online/hybrid students. This represents 9.7% of the total enrollment at Cañada. The College intends to increase this percentage.

The San Mateo County Community College District has installed the infrastructure necessary to host virtual meetings. In fall 2013, Cañada College will assess how often this technology is used and its ease and effectiveness. Additionally, we will work to make committees aware of the availability of this technology.

4.10 WATER, WASTEWATER, AND SUSTAINABLE LANDSCAPING

Water conservation and efficiency is an integral component of sustainability and is aggressively pursued by Cañada College. The College strives to reduce potable water use as well as wastewater discharges to both the sewer and storm water systems. In addition, the College reduces wastewater pollution by minimizing chemical use in cleaning and landscaping practices.

Programs and future plans for water conservation and efficiency at Cañada College are described below.

4.10.1 ESTABLISH WATER CONSERVATION GOALS

Cañada College will perform a campus facilities Measurement and Verification and Benchmarking Study using APPA FPI, Energy Star Portfolio Manager or other appropriate benchmarking tools by end of 2013. Based on the results, the College will establish ambitious annual water use reduction goals by May 2014 and implement appropriate water efficiency measures to meet reduction goals. Cañada College will evaluate these goals every

three years to ensure continued progress.

4.10.2 IMPLEMENT WATER CONSERVATION STRATEGIES

Cañada College has made water conservation a priority for environmental purposes and cost savings. The College has installed artificial turf on the campus soccer field and baseball diamond, saving Cañada College approximately two million gallons of water and approximately \$100,000 per year in water costs. In addition to eliminating the need for irrigation, Cañada College has been able to reduce the use of air polluting lawn mowers, chemical pesticides and fertilizers, and maintenance labor.

To meet the newly established goals, Cañada College will develop and implement new programs and projects. Among other things, the College will explore water conservation and efficiency programs from the local water utility, low-flow water equipment, and opportunities for grey water use.

4.10.3 REDUCE STORM WATER, SEWER DISCHARGES, AND WATER POLLUTION

Storm water and sewer discharges are a prime source of pollutants entering the environment and place the campus at risk for fines or other regulatory penalties. As such, Cañada College plans to employ the following strategies to reduce these discharges.

4.10.3.1 REDUCE STORM WATER RUNOFF

Cañada College works closely with the San Francisco Bay Regional Water Quality Control Board to achieve a "net-zero" runoff rate for new projects. SMCCCD has installed "No Dumping, Flows to Bay" medallions near all campus drains, encouraging the campus community to respect and preserve California's waterways.

The College will continue to look explore ways to reduce storm water runoff including, but not limited to, rainwater catchment.

4.10.3.2 REDUCE CHEMICAL USAGE

Cañada College works actively with vendors, suppliers, and maintenance staff to effectively manage, reduce, and responsibly use chemicals throughout the campus. As detailed in section 4.6.8, "Implement a Green Cleaning Program," Cañada College goes to great lengths to ensure that cleaning chemicals are as environmentally friendly as possible and are used responsibly. In accordance with LEED requirements, the College uses a proportioning system to mix concentrated cleaning solutions. Maintenance personnel are trained to properly use the proportioning system, safely handle and dispose of cleaning materials, and to properly recycle chemical packaging. The SMCCCD Green Cleaning Program emphasizes using no more than the necessary amount of chemicals during all cleaning procedures.

4.10.4 ADOPT SUSTAINABLE LANDSCAPING PRACTICES

Sustainable landscaping practices not only conserve water, but can contribute to achieving many other goals for sustainability. Where feasible, Cañada College has exchanged traditional grass for artificial turf or low-maintenance ground-covering plants that require less water. Drought tolerant plants are prioritized on campus

for all new and replanted landscaping. The College will continue existing practices and also promote the use of native plants in campus landscapes. Further, the College will consider planting trees that provide shade at appropriate locations and use pruning techniques that maximize shade.

The District installed a web-based irrigation system at CSM and Skyline College which adjusts sprinkler settings according to real-time weather. This allows SMCCCD to conserve water by irrigating landscaping only when necessary. Cañada College will explore using a similar technology.

4.11 SOLID WASTE REDUCTION AND MANAGEMENT

Cañada College has prioritized waste reduction and recycling on campus through a variety of initiatives that have successfully increased the campus waste diversion rate from the landfill over the past several years. Efforts have been taken to shift communications from printed to digital media, including the reduction of printed schedules, and the installation of several digital advertizing boards located throughout the campus. The College will continue to pursue waste reduction and recycling efforts in all aspects of campus operation.

4.11.1 CREATE WASTE REDUCTION GOALS

Cañada College currently diverts over 60% of its waste. The College will implement measures to meet or exceed the statewide goal of 75% waste diversion by 2020 and strive to achieve zero waste.

4.11.2 MAXIMIZE PROGRAMS OFFERED BY CONTRACTED WASTE HAULER

Currently, Cañada College solid waste program includes single stream recycling, construction and demolition (C&D) waste recycling, scrap metal recycling, and on-site composting of green waste (such as yard trimmings). The contracted waste hauler provides solid waste collection, as well as single stream recycling services. Green waste is processed and utilized on-site by college facilities staff. Other recycling services are provided as needed by various vendors. The College will explore opportunities to collaborate with the contracted hauler to expand services, such as food waste composting and off-site green waste composting.

The District is planning to hold a Waste Summit in 2013 to coordinate with local jurisdictions, waste haulers, and public agencies to implement cost effective and efficient waste diversion programs. It may be necessary for Cañada College to employ multiple solid waste and recycling service providers to meet campus sustainability goals.

4.11.3 WASTE REDUCTION MEASURES

Using an integrated solid waste management hierarchy, Cañada College will continue to implement and expand the waste reduction, reuse, recycling, and composting programs described below.

4.11.3.1 RAISE AWARENESS OF THE WASTE REDUCTION HIERARCHY

The College will educate the community about the hierarchical approach of integrated solid waste management. This approach includes waste reduction, reuse, recycling, and composting to conserve natural resources. Additionally, the College will also educate the community about the proper disposal of household hazardous

waste, toxic wastes, and electronic waste. This will be done through a variety of educational programs such as educational signage, student activities during special events on Earth Day and America Recycles Day, and an informational website.

4.11.3.2 MINIMIZE UNNECESSARY WASTE

Cañada College has made great efforts to reduce waste produced in all areas of the college. Projects include landscaping with plants that require less trimming, textbook buy-back and rental programs, and numerous paper reduction measures listed below under Section 4.11.3.3, "Reduce Paper Use." In 2012, students reused 5,915 textbooks and rented 6,155 textbooks. Looking forward, the college will continue to expand the used and rented textbook program and increase the use of electronic textbooks.

The College is working with the District food service provider to reduce waste. Plastic "to-go" bags are no longer available in the dining area and "to-go" box usage has been limited. All disposable supplies used at the campus café contain recycled content and some of them are compostable. The College will collaborate with the food service provider to eliminate the sale of single use water bottles and incentivize reusable beverage containers by providing refill discounts. Further, the College will consider installing water bottle filling stations at various locations on campus. For all new construction, the College will install at least one water bottle filling station per building. To maximize the environmental benefits of compostable take-out containers, the college will explore the feasibility of a food waste collection and composting program by the end of 2013.

4.11.3.3 REDUCE PAPER USE

Cañada College has specifically focused on reducing the use of paper on campus through a number of initiatives, including the following:

- Extensive use of electronic versus printed media, such as email, electronic forms, document scanning, web-based information, computer kiosks, electronic bulletin boards, and on-line information requests
- Installation of copiers that enable double-sided copying
- Use of web-based collaboration tools, such as SharePoint, WebSMART and DegreeWorks. Over 150
 District-wide committees, departments, and organizations currently use SharePoint for agendas,
 minutes, surveys, forms, picture libraries, and more
- Use of PeopleAdmin, an online tool that eliminates the need to print resumes or other materials during the hiring process
- The option for vendors and employees to receive payments through direct deposit, significantly reducing the amount of written and printed checks distributed across SMCCCD
- Installation of "smart classrooms" to reduce the need for printed materials. Approximately 80% of classrooms are "smart classrooms" district-wide
- Widespread use of WebAccess to post syllabi, class readings, assignments, and grade books online to reduce paper use

In 2013, the College will develop a best practice guide for classroom and office paper reduction and share it with the campus community.

4.11.4 IMPROVE EXISTING RECYCLING PROGRAMS

In April 2007, Cañada College implemented "single-stream" recycling on campus in collaboration with the solid waste service provider. This approach increased recycling efforts by making it easier for end users to properly dispose of recyclable materials. The College has deployed over 30 new, aesthetically pleasing recycling containers across campus that have improved the college's recycling efforts.

In addition, Cañada College also has ink cartridge, battery, and e-waste recycling programs. Ink cartridges from printers on campus are collected and recycled several times per month. A battery recycling container is located at the Campus Bookstore and all campus members are encouraged to properly dispose of used batteries. When an electronic device is replaced at SMCCCD, Information Technology Services (ITS) either reallocates the device in a position with lower usage requirements or recycles the device if it is no longer needed or functioning properly.

The current recycling program will be improved by implementing education and awareness programs identified in this plan. Further, the College will also consider replacing recycling container lids to facilitate single stream recycling. In 2013, the College will explore opportunities to streamline electronic recycling and ensure all devices are properly disposed.

4.11.5 OFFICE FURNITURE AND EQUIPMENT REUSE PROGRAMS

The San Mateo County Community College District has a well-defined method for disposing of unwanted furniture and equipment. SMCCCD has hired Dovetail Decision Consultants to inventory all furniture and equipment, a service that provides a methodical process to identify items that can either be donated or reused on campus. If an item is no longer needed at SMCCCD, a local survey is taken to identify possible locations or schools that could utilize the equipment or furniture. A past example includes the donation of desks to a charter school in Oakland, California. If it is determined that the item is not needed internally or locally, the item is sold through an online service, InterSchola, which specializes in liquidating school furniture. SMCCCD then receives a percentage of profits made. In addition, Cañada College currently recycles all metal waste created on campus and sells this material for profit.

4.11.6 ORGANIC WASTE COMPOSTING

Currently Cañada College has an on-site green waste processing program to process yard waste into soil amendments for campus use. The College will explore off-site composting of organic waste (food and green waste). As of October 2012, a pilot composting project has been underway at the Skyline College campus cafeteria in collaboration with Recology and Pacific Dining. Additionally, organic waste composting will be discussed during SMCCCD's 2013 Waste Summit.

4.11.7 CONSTRUCTION AND DEMOLITION WASTE RECYCLING

For building renovations or the demolition of old buildings, Cañada College requires construction and demolition waste recycling in building construction contracts to ensure the recycling of materials. The College seeks to meet or exceed the LEED Standard diversion rate (50%) of construction and demolition waste.

SECTION 5.

MEASURE AND REPORT PERFORMANCE

Ongoing progress and performance of sustainability plan activities should be *monitored and compared to goals and criteria*. This will require continuous participation of the Sustainability Committee, college staff, and other participants in the process. To communicate results and ensure transparency and accountability, the *results of the Sustainability Plan activities should be communicated to the larger campus community on a regular basis*.

The following section describes the planned process for measuring and reporting sustainability activities and achievements.

5.1 MEASURING PERFORMANCE

In order to monitor Cañada College's progress towards its sustainability goals, the Sustainability Committee plans to collect information on the following key metrics at the regular intervals described below.

Goal Number	Area of Sustainability	Performance Metric	Measurement Frequency
1	Campus and Community Awareness & Involvement	Implement outreach and educational programs such as sustainability website, workshops, events, orientation, etc. identified in this plan.	Annually
2	Curriculum Development	Inventory existing courses that integrate sustainability as well as courses and program focused on sustainability. Increase offerings in each category.	Annually at the end of the academic year

Goal Number	Area of Sustainability	Performance Metric	Measurement Frequency
3	The Built Environment	Collaborate with SMCCCD Facilities to develop the next generation of Master Planning Sustainability Goals for the Built Environment that exceed at least one of the following metrics: • 10 % reduction in pre-project Operating Costs through Renewable and Energy Efficiency Capital Projects • New capital projects to meet LEED Silver certification criteria • Exceed Title 24 requirements by at least 15% • Implement mandatory PG&E Energy Efficiency/Savings by Design Application during project development • Implement mandatory Life Cycle Cost Analysis on Major Equipment during project development	Project-by-project basis and annual review
4	Energy Conservation and Efficiency	Completion of a campus facilities Measurement and Verification and Benchmarking Study using APPA FPI, Energy Star Portfolio Manager or other appropriate benchmarking tools by end of 2013. 15% reduction (from industry average) in energy usage to be measured by energy consumption analysis	Benchmarking once and consumption analysis annually Revise goals every three years
5	Water Conservation and Efficiency	Completion of a campus facilities Measurement and Verification and Benchmarking Study using APPA FPI, Energy Star Portfolio Manager or other appropriate benchmarking tools by end of 2013. Establish ambitious goals based on the benchmarking study. Efficacy of implementation of water efficiency measures to be measured by water consumption analysis	Benchmarking once by December 2013 Goal setting once by May 2014 and annually thereafter

Goal Number	Area of Sustainability	Performance Metric	Measurement Frequency
6	Solid Waste Management	Efficacy of waste reduction and recycling programs to be measured by the quantity of solid waste land-filled, recyclable material recovered, and organic waste composted.	Annually
7	Transportation	Completion of a VMT baseline for the campus by Spring 2014. Reduction in single occupancy vehicle commutes to be measured by tools such as commuter survey, traffic analysis, parking space usage studies, etc.	Baseline Once by Spring 2014 and reduction analysis at least every five years
8	Sustainable Procurement	Development of procurement guidelines.	Guideline established by Fall 2013, reviewed bi-annually
9	Renewable Energy and Onsite Generation	Review of past renewable energy feasibility studies. Explore opportunities to procure renewable energy from the utility providers. Hold an open forum to share findings and develop strategies.	Once by December 2013 Once by December 2013 Once by June 2014
10	Climate Action Plan	Appoint a sub-committee to begin Climate Action Plan development process. Develop a greenhouse gas inventory methodology by reviewing Climate Action Plans from other entities.	Once by December 2013 Once by May 2014

Goal Number	Area of Sustainability	Performance Metric	Measurement Frequency
11	Sustainability Plan Management	Institutionalize the Sustainability Committee. Evaluate Sustainability Plan implementation by reviewing the performance metric and checklist. Disseminate sustainability plan progress to the campus community through shared governance structure.	Once by December 2013 Annually Annually
		Update the Sustainability Plan at least every three years.	Every three years

5.2 REPORTING PERFORMANCE

5.2.1 SUSTAINABILITY WEBSITE

If the College and/or District develops a sustainability website, the College will use the website to periodically update the community about the progress of Sustainability Plan implementation.

5.2.2 CAMPUS WORKSHOPS

The Campus Sustainability Committee will hold periodic workshops open to all campus members throughout the planning and implementation phases of the project. This will be designed to encourage a two-way dialogue where information is provided to the campus community and feedback is solicited and incorporated into the plan.

34 Cañada College

SECTION 6.

APPENDICES

APPENDIX A: ENERGY AUDIT- MEASURES IMPLEMENTED

APPENDIX B: GRANT AND INCENTIVE PROGRAMS MEASURES IMPLEMENTED

APPENDIX C: HVAC MEASURES IMPLEMENTED

APPENDIX D: DESIGN STANDARD - STRUCTURAL DESIGN GUIDELINES

APPENDIX E: DESIGN STANDARD SUSTAINABILITY

APPENDIX F: CAÑADA COLLEGE SOLAR PV FEASIBILITY STUDY

APPENDIX G: SMCCCD GREEN CLEANING PRACTICES AND PROCEDURES APPENDIX H: IMPLEMENTATION PROGRAMS AND PLANS CHECKLIST

APPENDIX A

ENERGY AUDIT MEASURES IMPLEMENTED

The following energy conservation measures were implemented at Cañada College or throughout the District in response to the comprehensive energy analysis performed by Chevron Energy Solution in 2002.

Key: EMC- Energy Conservation Measure; M- Maintenance; L- Lighting; C- Controls; DG- Direct Generation

•ECM	Description
•M1	Boiler Tune-up
•M2	Boiler Re-tube
•M7	Air-handling System Refurbishment (Core Level)
•M8	Air & Water Balance (Core Level)
•M10	Heating Hot Water Variable Flow Conversion
•M14	Utility Vision
•M15A	Cañada College Chilled Water Plant
•L1	T12 to T8 Retrofit
•L2	Incandescent to Compact Fluorescent Retrofit
•L3	LED Exit Signs
•L4	MV/HPS to Metal Halide Retrofit
•L5	MV/HPS to New T5 Fixtures
•L6	Lighting Controls - Occupancy Sensor
•L7	Lighting Controls - Multi Switching Circuits
•L8	Tungsten/Halogen Retrofit
•C1	DDC Energy Management System (Core Level)

APPENDIX B

GRANT AND INCENTIVE PROGRAMS MEASURES IMPLEMENTED

The following measures and capital projects undertaken at Cañada College or at the district level have received rebate dollars through participation in the CCC/IOU Energy Efficiency Partnership or PG&E Savings by Design and Energy Efficiency Core Programs. The measures are listed with their completion date and respective rebate amounts.

Savings by Design

- •Cañada College Building 6/7A: May 2007 \$38,546
- •Cañada College Facilities Maintenance Center (FMC): Summer 2010 \$1,284

PG&E Energy Efficiency (Core programs)

- •Cañada College Air Handler Retrofits: Jan 2002 \$27,000
- District-Wide High Efficiency Lighting Systems: July 2002 \$102,600

CCC/IOU Partnership

Rebates Received

- •Cañada College 5/6: November 2011 \$37,399
- •Cañada College 8: Summer 2010 \$7,990
- Cañada College 16/18 DDC Controls Retrofit: April 2009 \$11,067
- •District Wide Parking Lot Lighting: April 2009 \$1,914
- •DW Burner Replacement: November 2012 (\$7,970)

APPENDIX C

HVAC MEASURES IMPLEMENTED

The following HVAC replacements, repairs and retrofits have taken place at Cañada College and throughout the District.

- •Cañada College Air Handler Retrofits: Jan 2002 \$27,000
- •Cañada College 16/18 DDC Controls Retrofit: April 2009 \$11,067

APPENDIX D

DESIGN STANDARD—STRUCTURAL DESIGN GUIDELINES

SMCCCD's Structural Design Guidelines establish basic design parameters for the District with the goal of providing enhanced structural performance, optimizing end user flexibility and serviceability, and encouraging green building practices. The guidelines can be found by following the link below.

https://sharepoint.SMCCCD.edu/SiteDirectory/CPD/CPD%20Downloads/SMCCCD%20Design%20Standards%20and%20Construction%20Specifications/Big%20Picture%20Design%20Standard%20Topics/Structural%20Design%20Guidelines DS V1 2007 06 28.pdf

APPENDIX E

DESIGN STANDARD SUSTAINABILITY

Provided below is the web link for SMCCCD's Design Standard which outlines the District's commitment to sustainability when designing capital projects.

https://sharepoint.SMCCCD.edu/SiteDirectory/CPD/CPD%20Downloads/SMCCCD%20Design%20Standards%20and%20Construction%20Specifications/Big%20Picture%20Design%20Standard%20Topics/Sustainability_DS_V1_2007_10_27.pdf

APPENDIX F

CAÑADA COLLEGE SOLAR PV FEASIBILITY STUDY

The web link to the feasibility study conducted by Allana Buick and Bers Inc (ABB) for solar panel installation at Cañada College is provided below.

https://sharepoint.SMCCCD.edu/SiteDirectory/CPD/CPD%20Downloads/Districtwide/DW%20Sustainability%20Plan/District%20Wide/Resource%20Documents/SMCCCD%20-%20Executive%20Summary%20-%20Canada%20College%20Solar%20PV%20Feasibility%20Study%20June%208%202011.pdf

APPENDIX G

SMCCCD GREEN CLEANING PRACTICES AND PROCEDURES

Provided below is the web link to SMCCCD's Green Cleaning Practices and Procedures. This document outlines the specific cleaning practices that will be adhered to at Cañada College.

http://www.SMCCCD.edu/accounts/SMCCCD/departments/facilities/GreenCleaningPracticesandProcedures.pdf

APPENDIX H

IMPLEMENTATION PROGRAMS AND PLANS CHECKLIST

The completed Implementation Programs and Planning Checklist is attached. The checklist reflects the Programs and Projects identified in Section 4 of the Sustainability Plan. For each selected program or project, the priority, current status, associated plan goal, target completion date, and responsibility assignments is indicated on the Checklist Summary Report. The estimated cost for each program or project is to be determined based on additional work by the Sustainability Committee.

The Implementation Programs and Plans Checklist will be used by the Sustainability Committee to manage the implementation of the Sustainability Plan.

District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Click Here to go to **Output Tab**

of Selected

Plan Section	Template Plan Section Description	# of Programs Available	# of Programs Selected	Programs Ongoing & Completed
4.1	Student and Curriculum Development	5	3	0
<u>4.2</u>	Campus and Community Education Outreach	5	4	0
<u>4.3</u>	Green Purchasing	3	3	1
<u>4.4</u>	Management and Organizational Structure	7	6	4
<u>4.5</u>	Energy Conservation and Efficiency	11	8	6
<u>4.6</u>	Facilities Operation	8	7	6
4.7	Sustainable Building Practices	6	6	5
4.8	On-Site Renewable Energy	5	3	2
<u>4.9</u>	Transportation: Commuting and Campus Fleet	5	5	2
4.10	Water, Wastewater, and Sustainable Landscaping	4	4	3
4.11	Solid Waste Reducation and Management	7	7	3
4.12	Create a Climate Action Plan	4	0	0
4.13	Other Programs and Projects for Implementation	0	0	0
	Total	s 70	56	32

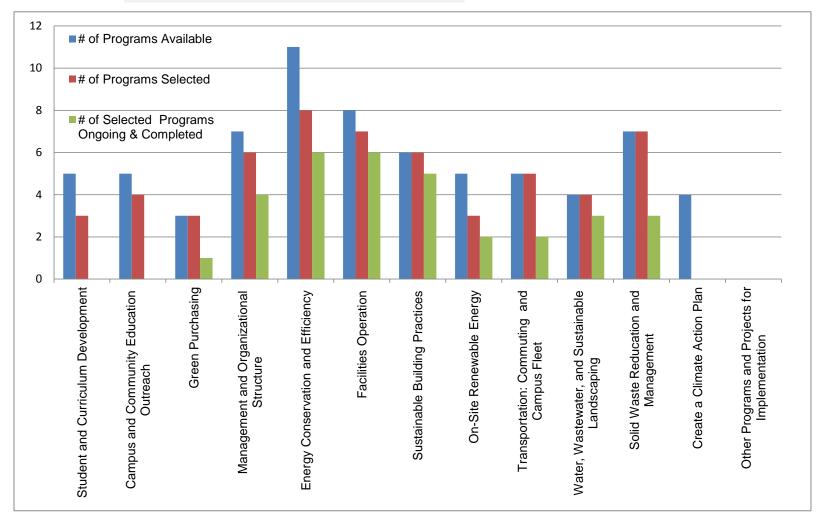
For questions, comments, or feedback, please contact Matt Sullivan, Newcomb | Anderson | McCormick, 415-896-0300, matt_sullivan@newcomb.cc

Sustainability Template Programs Chart

District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013



District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Selected Programs and Plans for Implementation are Summarized Below				
Section 4	1.1 STUDEN	NT AND CURRICULUM DEVELOPMENT Comments			
✓	4.1.1	Utilize Sustainability Committee to Coordinate			
		Sustainability-Related Curriculum			
	4.1.2	Provide Professional Development and Create a			
		Faculty Forum			
✓	4.1.3	Utilize Different Pathways to Integrate			
		Sustainability in the Curriculum			
	4.1.4	Advocate for Change at the Statewide Level			
✓	4.1.5	Training Opportunities for Students			
	4.1.6	Enter Other Program and Project 1, text will change color			
		change color			
	4.1.7	Enter Other Program and Project 2, text will change color			
		chunge color			

See Sustainability Template Plan Section 7.1 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Selected Programs and Plans for Implementation are Summarized Below					
Section 4	.2 CAMPUS	AND COMMUNITY EDUCATION OUTREACH	Comments			
✓	4.2.1	Create a Website Dedicated to Campus Sustainability				
V	4.2.2	Hold Workshops and Presentations				
V	4.2.3	Sustainability Events				
V	4.2.4	Campus Specific Outreach & Awareness				
	4.2.5	Community Specific Outreach & Awareness				
	4.2.6	Enter Other Program and Project 1, text will change color				
	4.2.7	Enter Other Program and Project 2, text will change color				

See Sustainability Template Plan Section 7.2 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College **Project:** Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Selected Programs and Plans for Implementation are Summarized Below					
Section 4	.3 GREEN P	URCHASING	Comments			
V	4.3.1	Sustainable Food Purchasing				
V	4.3.2	Sustainable Procurement Practices				
V	4.3.3	Socially Responsible Purchasing				
	4.3.4	Enter Other Program and Project 1, text will change color				
	4.3.5	Enter Other Program and Project 1 text will change color				

See Sustainability Template Plan Section 7.3 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs a	and Plans for Implementation are Summarized Below	
Section 4	1.4 MANAG	EMENT AND ORGANIZATIONAL STRUCTURE	Comments
✓	4.4.1	Develop and Implement a Sustainability Plan	
✓	4.4.2	Appoint a Sustainability Coordinator (and Establish an Office of Sustainability)	
V	4.4.3	Appoint a Campus Sustainability Committee	
✓	4.4.4	Funding and Resources to Support Sustainability Activities	
~	4.4.5	Engage Sustainability Professionals as Appropriate	
	4.4.6	Consider Sustainability in Endowment Investments	
~	4.4.7	Integrate Sustainability Planning into Campus Master Plan	
	4.4.8	Enter Other Program and Project 1, text will change color	
	4.4.9	Enter Other Program and Project 2, text will change color	

See Sustainability Template Plan Section 7.4 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs a	and Plans for Implementation are Summarized Below	
Section 4	1.5 ENERGY	CONSERVATION AND EFFICIENCY	Comments
V	4.5.1	Set Energy Efficiency Goals	
	4.5.2	Evaluate Mechanisms for the Implementation of Energy Conservation and Efficiency Projects	
	4.5.3	Conduct Facility Prioritization Survey	
✓	4.5.4	Conduct Comprehensive Facility Energy Audits	
V	4.5.5	Implement New and Existing Audit Recommendations	
✓	4.5.6	Implement Ongoing Energy Monitoring	
✓	4.5.7	Participate in Demand Response Programs	
V	4.5.8	Identify and Take Advantage of Grant and Incentive Programs	
	4.5.9	Establish an Energy Efficiency Purchasing Policy	
V	4.5.10	Efficient Lighting and Lighting Controls	
~	4.5.11	Install Energy Efficient HVAC Systems	
	4.5.12	Enter Other Program and Project 1, text will change color	
	4.5.13	Enter Other Program and Project 2, text will change color	

See Sustainability Template Plan Section 7.5 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs and	d Plans for Implementation are Summarized Below	
Section 4	.6 FACILITIES	S OPERATION Comments	
V	4.6.1	Encourage and Support Energy Efficiency Training of Staff	
V	4.6.2	Install Energy Management Systems	
7	4.6.3	Adjust Temperature Set Points and Schedule Operating Times	
	4.6.4	Optimize Building Occupancy Scheduling	
V	4.6.5	Optimize HVAC Equipment Scheduling	
7	4.6.6	Activate Energy-Saving Features for Appliances and Computers	
V	4.6.7	Pursue Monitoring-Based(MBCx)/Retro-Commissioning (RCx)	
V	4.6.8	Implement a Green Cleaning Program	
	4.6.9	Enter Other Program and Project 1, text will change color	
	4.6.10	Enter Other Program and Project 2, text will change color	

See Sustainability Template Plan Section 7.6 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs and	d Plans for Implementation are Summarized Below	
Section 4	.7 SUSTAINA	ABLE BUILDING PRACTICES Comme	nts
√	4.7.1	Establish a Green Building Standard	
✓	4.7.2	Implement Sustainable Design Practices	
✓	4.7.3	Use an Integrated Systems Approach in Building Design	
✓	4.7.4	Hire Sustainable Design Professionals	
✓	4.7.5	Commission New Buildings	
V	4.7.6	Involve Students in Design Process	
	4.7.7	Enter Other Program and Project 2, text will change color	

See Sustainability Template Plan Section 7.7 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Selected Programs and Plans for Implementation are Summarized Below					
Section 4	Section 4.8 ON-SITE RENEWABLE ENERGY Comments					
✓	4.8.1	Evaluate Clean Cogeneration and Renewable Energy Generation				
	4.8.2	Evaluate Load Shifting Technologies				
	4.8.3	Minimize Greenhouse Gas Intensity of Purchased Electricity				
7	4.8.4	Evaluate Participation in Community Choice Aggregation				
V	4.8.5	Identify and Take Advantage of Grant and Incentive Programs				
	4.8.6	Enter Other Program and Project 1, text will change color				
	4.8.7	Enter Other Program and Project 2, text will change color				

See Sustainability Template Plan Section 7.8 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs an	d Plans for Implementation are Summarized Below	
Section 4	.9 TRANSPO	RTATION: COMMUTING AND CAMPUS FLEET	Comments
✓	4.9.1	Understand Commute and Travel Patterns	
V	4.9.2	Encourage and Enhance Public Transportation and Ridesharing Options	
V	4.9.3	Encourage and Enhance Bicycling Options	
✓	4.9.4	Improve Campus Fleet & Travel	
V	4.9.5	Enhance Student Distance Learning & Utilize Virtual Meeting Platforms	
	4.9.6	Enter Other Program and Project 1, text will change color	
	4.9.7	Enter Other Program and Project 2, text will change color	

See Sustainability Template Plan Section 7.9 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs an	d Plans for Implementation are Summarized Below	
Section 4	4.10 WATER,	WASTEWATER, AND SUSTAINABLE LANDSCAPING	Comments
✓	4.10.1	Establish Water Conservation Goals	
V	4.10.2	Implement Water Conservation Strategies	
✓	4.10.3	Reduce Storm Water, Sewer Discharges, and Water Pollution	
✓	4.10.4	Adopt Sustainable Landscaping Practices	
	4.10.5	Enter Other Program and Project 1, text will change color	
	4.10.6	Enter Other Program and Project 2, text will change color	

See Sustainability Template Plan Section 7.10 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs an	nd Plans for Implementation are Summarized Below
Section 4	.11 SOLID W	VASTE REDUCATION AND MANAGEMENT Comments
V	4.11.1	Create Waste Reduction Goals
V	4.11.2	Maximize Programs Offered by Contracted Waste Hauler
√	4.11.3	Waste Reduction Measures
7	4.11.4	Improve Existing Recycling Programs
7	4.11.5	Office Furniture and Equipment Reuse Programs
7	4.11.6	Organic Waste Composting
~	4.11.7	Construction and Demolition Waste Recycling
	4.11.8	Enter Other Program and Project 1, text will change color
	4.11.9	Enter Other Program and Project 2, text will change color

See Sustainability Template Plan Section 7.11 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs an	d Plans for Implementation are Summarized Below
Section 4	.12 CREATE	A CLIMATE ACTION PLAN Comments
	4.12.1	Make a Commitment to Reduce Greenhouse gas Emissions
	4.12.2	Perform a Campus Greenhouse Gas Inventory
	4.12.3	Create and Execute a Climate Action Plan with Prioritized Greenhouse Gas Reduction Measures
	4.12.4	Regularly Monitor and Report Progress to Campus
	4.12.5	Enter Other Program and Project 1, text will change color
	4.12.6	Enter Other Program and Project 2, text will change color

See Sustainability Template Plan Section 7.12 for Details of Implementation Plans.

For questions, comments, or feedback, please contact Matt Sullivan, Newcomb | Anderson | McCormick, 415-896-0300, matt_sullivan@newcomb.cc



District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected	Programs and	d Plans for Implementation are Summarized Below	
Section 4	.13 OTHER P	ROGRAMS AND PROJECTS FOR IMPLEMENTATION	Comments
	4.13.1	Enter Other Program and Project 1, text will change color	
	4.13.2	Enter Other Program and Project 2, text will change color	
	4.13.3	Enter Other Program and Project 3, text will change color	
	4.13.4	Enter Other Program and Project 4, text will change color	

See Sustainability Template Plan Section 7.13 for Details of Implementation Plans.

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District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Back to Summary Tab

Section 4	Section 4.1 STUDENT AND CURRICULUM DEVELOPMENT											
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address		
	Utilize Sustainability Committee to Coordinate Sustainability-Related Curriculum						2,11					
	Utilize Different Pathways to Integrate Sustainability in the Curriculum						2					
4.1.5	Training Opportunities for Students						1,2					

Section 4	ection 4.2 CAMPUS AND COMMUNITY EDUCATION OUTREACH											
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address		
4.2.1	Create a Website Dedicated to Campus Sustainability						1,11					
4.2.2	Hold Workshops and Presentations						1					
4.2.3	Sustainability Events						1					
4.2.4	Campus Specific Outreach & Awareness						1			•		

District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013



Section 4	ction 4.3 GREEN PURCHASING											
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address		
4.3.1	Sustainable Food Purchasing		Med	Ongoing			8		Tom Bauer	bauert@smccd.edu		
4.3.2	Sustainable Procurement Practices		Med	In-Process			6,8		Campus Sustainability Committee			
4.3.3	Socially Responsible Purchasing		Med	In-Process			8		Campus Sustainability Committee			

Section 4	4 MANAGEMENT AND ORGANIZATIONAL STRUCTURE									
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address
4.4.1	Develop and Implement a Sustainability Plan		High	Ongoing			11	2/15/2013	Karen Powell	powellk@smccd.edu
	Appoint a Sustainability Coordinator (and Establish an Office of Sustainability)		High	Planned			11	5/15/2013	José Nuñez	nunezj@smccd.edu
4.4.3	Appoint a Campus Sustainability Committee						1,11			
	Funding and Resources to Support Sustainability Activities		High	Complete			1	n/a	José Nuñez	nunezj@smccd.edu
4.4.5	Engage Sustainability Professionals as Appropriate		High	Complete			3,4,5,9	n/a	José Nuñez	nunezj@smccd.edu
4.4.7	Integrate Sustainability Planning into Campus Master Plan		High	Complete			2,3	n/a	José Nuñez	nunezj@smccd.edu

Section 4	ction 4.5 ENERGY CONSERVATION AND EFFICIENCY											
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address		
4.5.1	Set Energy Efficiency Goals	Reference goal	High	Complete			3,11	1/15/2013	José Nuñez	nunezj@smccd.edu		
4.5.4	Conduct Comprehensive Facility Energy Audits		High	Complete			3,4	n/a				
4.5.5	Implement New and Existing Audit Recommendations		Med	In-Process			3,4	12/1/2013	EMC & Facility Managers (FM's)	powellk@smccd.edu; hawd@smccd.edu;		
4.5.6	Implement Ongoing Energy Monitoring		High	In-Process			3,4	12/1/2013	EMC	ТВА		
4.5.7	Participate in Demand Response Programs		Low	Ongoing			3,4	2014	EMC & Karen Powell	powellk@smccd.edu		
4.5.8	Identify and Take Advantage of Grant and Incentive Programs		High	Ongoing			3,4	n/a	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu		
4.5.10	Efficient Lighting and Lighting Controls		High	Ongoing			3,4	n/a	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu		
4.5.11	Install Energy Efficient HVAC Systems		High	Ongoing			3,4	na	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu		

District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013



Section 4	.6 FACILITIES OPERATION									
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address
4.6.1	Encourage and Support Energy Efficiency Training of Staff		High	Ongoing			1,3,4	n/a	José Nuñez	nunezj@smccd.edu
4.6.2	Install Energy Management Systems		High	In-Process			3,4	2013	EMC & Karen Powell	powellk@smccd.edu
4.6.3	Adjust Temperature Set Points and Schedule Operating Times		High	Complete			3,4	n/a	FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.6.5	Optimize HVAC Equipment Scheduling		High	Complete			3,4	n/a	FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.6.6	Activate Energy-Saving Features for Appliances and Computers		Med	Complete			3,4	n/a	Shared: Auxillary Services, FM's, IT/AV	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.6.7	Pursue Monitoring-Based(MBCx)/Retro-Commissioning (RCx)		High	Ongoing			3,4	n/a	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.6.8	Implement a Green Cleaning Program		High	Ongoing			3,8	n/a	FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu

Section 4	7 SUSTAINABLE BUILDING PRACTICES									
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address
4.7.1	Establish a Green Building Standard		High	Complete			3,4,5,6,8,9	n/a		
4.7.2	Implement Sustainable Design Practices		High	Complete			3,4,5,6,8,9	n/a		
4.7.3	Use an Integrated Systems Approach in Building Design		Med	Complete			3	n/a		
4.7.4	Hire Sustainable Design Professionals		High	Ongoing			3	n/a		
4.7.5	Commission New Buildings		High	Complete			3,4	n/a		
4.7.6	Involve Students in Design Process			Planned			1,2,3			

District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013



Section 4.	Section 4.8 ON-SITE RENEWABLE ENERGY											
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address		
	Evaluate Clean Cogeneration and Renewable Energy Generation		High	Complete			4,9	6/1/2014	José Nuñez	nunezj@smccd.edu		
4.8.4	Evaluate Participation in Community Choice Aggregation		Low	Ongoing			4	n/a	Arline Calibo	calibo@smccd.edu		
	Identify and Take Advantage of Grant and Incentive Programs						4					

Section 4	ection 4.9 TRANSPORTATION: COMMUTING AND CAMPUS FLEET										
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address	
4.9.1	Understand Commute and Travel Patterns		Low	Planned			7		FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu	
4.9.2	Encourage and Enhance Public Transportation and Ridesharing Options		Med	In-Process			1,7		Campus Sustainability Committee		
4.9.3	Encourage and Enhance Bicycling Options		High	Complete			1,7		Campus Sustainability Committee		
4.9.4	Improve Campus Fleet & Travel		High	Ongoing			7,8	n/a	José Nuñez	nunezj@smccd.edu	
4.9.5	Enhance Student Distance Learning & Utilize Virtual Meeting Platforms		Med	Planned			7		IT/AV, shared	vaskelis@smccd.edu	

Section 4	Section 4.10 WATER, WASTEWATER, AND SUSTAINABLE LANDSCAPING											
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address		
4.10.1	Establish Water Conservation Goals	Reference goal	Low	In-Process			5		EMC	ТВА		
4.10.2	Implement Water Conservation Strategies		Med	Ongoing			1,5		EMC	ТВА		
4.10.3	Reduce Storm Water, Sewer Discharges, and Water Pollution		Med	Ongoing			5		EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu		
4.10.4	Adopt Sustainable Landscaping Practices		High	Ongoing			5,8		FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu		

District: San Mateo CCD

Campus: Cañada Community College
Project: Programs and Plans Checklist v4

Date: 4/9/2013

Back to Summary Tab

Priority Implementation Plans Indicated Below

Section 4.	Section 4.11 SOLID WASTE REDUCATION AND MANAGEMENT										
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address	
4.11.1	Create Waste Reduction Goals	Responsibility of Campus Sust. Committees	Med	In-Process			6	2/15/2013	Campus Sustainability Committee		
4.11.2	Maximize Programs Offered by Contracted Waste Hauler	2013 Waste Summit	High	In-Process			6	12/1/2013	District & Campus Sust. Committee		
4.11.3	Waste Reduction Measures	Water bottle ban; Dining area; Paper waste	High	Ongoing			1,6	2013	Campus Sustainability Committee		
4.11.4	Improve Existing Recycling Programs	Responsibility of Campus Sust. Committees	Med	In-Process			1,6	2013	Campus Sustainability Committee		
4.11.5	Office Furniture and Equipment Reuse Programs	Responsibility of Campus Sust. Committees	Med	Complete			6	2013	Campus Sustainability Committee		
4.11.6	Organic Waste Composting	Responsibility of Campus Sust. Committees	Med	In-Process			1,6	2013	Campus Sustainability Committee		
4.11.7	Construction and Demolition Waste Recycling		High	Complete			3,6	n/a	José Nuñez	nunezj@smccd.edu	

Section 4.12 CREATE A CLIMATE ACTION PLAN											
Section	Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address	

Section 4.13 OTHER PROGRAMS AND PROJECTS FOR IMPLEMENTATION											
Section Selected Program or Project	Action Items/Notes	Priority (select)	Status (select)	Linked to	Cost (\$)	Associated GOAL(s)	Target Completion Date	Assigned To	Email address		

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