Skyline College
SUSTAINABILITY PLAN

Skyline College
ACHIEVE

3300 College Drive
San Bruno, CA 94066
www.SkylineCollege.edu

June 2013

ACKNOWLEDGMENTS

The authors of this plan would like to acknowledge the following individuals for their efforts and support in the creation of the Skyline College Sustainability Plan.

Skyline College

- Dr. Regina Stanback Stroud – President
- Dr. Sarah Perkins – Vice President of Instruction
- Skyline College Sustainability Ambassador Network
  - Anjana Richards, Co-chair – Director of Workforce Development and Sustainability
  - Carina Anttila-Suarez, Co-chair – Professor, Environmental & Biological Sciences
  - Sabrina Lawrence-Gomez –Sustainability Coordinator
  - Katharine Harer – Professor, Language Arts and Learning Resources
  - Aaron Wilcher – Faculty Coordinator, Career Technical Education
  - Ray Hernandez – Dean, Science, Mathematics and Technology
  - Regina Morrison – Director of Financial Aid
  - Jennifer Mair – Adjunct Faculty, Language Arts and Learning Resources
  - José Luis Sanchez – Student Body President
  - Nick Kapp – Professor, Biology
  - Cherie Napier – Director of Marketing, Communications and Public Relations
  - Dave Haw – Facilities Manager
  - Deanna Badong – Student, Environmental Club
  - Kevin Chak – Bookstore Manager
  - Lucia Lachmayr – Associate Professor, Language Arts and Learning Resources
  - Pat Tyler – Division Assistant, Science, Mathematics and Technology

Other Contributors

- José Nuñez – Vice Chancellor Facilities Planning, Operations & Public Safety
- Karen Pinkham – Project Manager, Facilities Planning Department
- Amy Titus – Librarian
- Bruce Greenstein – Instructor, Energy Systems Technology and Management
- Christine Case – Professor, Biology
- Amber Lincoln – Student/ President, Environmental Club
- Cindy Moss – Professor, Mathematics
- Hugo Ramos – Pacific Dining
- Jarrod Feiner – Instructor, Language Arts and Learning Resources
- Jaye Akin-Taylor – Project Director, International Education
- José Iniguez – Student, Environmental Club
- Richard Inokuchi – Facilities Manager
- Lori Slicton – Professor, Anthropology
- Richard McMahon – Pacific Dining
- Mike Williamson – Workforce Development
- Rashin Parsa – Student, Environmental Club and ASSC
- Richard Porter – Student, Christian Club
- Tony Gulli – Chief Engineer, Facilities
- Matt Sullivan – Consultant, Newcomb Anderson McCormick
- Danielle Moultak – Project Manager, Newcomb Anderson McCormick

TABLE OF CONTENTS

SECTION 1.

EXECUTIVE SUMMARY

The intersection of the climate crisis with the national and state economic crises, resource scarcity and socioeconomic disparity substantiates a need to address sustainability in higher education. Sustainability, defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs," encompasses the environment, society and the economy. With its commitment to excellence and innovation in the classroom and the global community, Skyline College aims to incorporate sustainability into its educational curriculum and facilities operations, and to encourage the adoption of sustainable practices within its community of students and employees.

As an educational institution, Skyline College recognizes the need to educate, inspire and empower our college community to address sustainability. Skyline College is creating an institutional culture with a strong commitment to sustainability by pursuing the goals and priorities outlined in the 2013-2019 Education Master Plan: innovative programs and curriculum, student and community engagement, and updated facilities.

As a public agency, Skyline College recognizes the environmental, economic, and social benefits of resource efficiency and sustainability.   Building on the passage of the California Global Warming Solutions Act (AB-32) and the establishment of a Sustainability Policy by the California Community College Board of Governors, Skyline College continues to create and support a comprehensive approach to sustainability planning.

The Skyline College Sustainability Plan articulates the College's commitment to sustainability.   The Plan adopts Best Practices of sustainability in higher education, utilizes available resources and complimentary programs, and satisfies state regulations. Developed by students, faculty, and staff in coordination with other campus stakeholders, this comprehensive plan meets the diverse needs of Skyline College. This Plan is designed to guide the campus toward institutional sustainability, educate students for careers in the green economy, and prepare Skyline College for the anticipated environmental and regulatory challenges of the 21st century. The following Sustainability Plan articulates the vision, goals and objectives, as well as the necessary strategies for achieving campus sustainability.

> ## Sustainability Vision Statement
>
> *Skyline College will inspire a collaborative, global community of learners to empower and transform the College and the community, advancing social equity through environmental stewardship and sustainable practices.*

SECTION 2.

BACKGROUND

2.1 HISTORY OF SUSTAINABILITY EFFORTS TO DATE

As a higher education institution in one of the world's most technologically advanced communities, Skyline College has been offering courses centered on sustainability since its establishment in 1969. Sustainability has historically been taught in many of the Biology and Geology courses. Major and non-major Biology courses encompass principles of ecology and conservation. Geology and Oceanography courses also have modules covering the environmental impact of human behaviors and have discussed climate change in depth for the last 10 years. By 2005, many four-year colleges and universities were establishing Environmental Science and Environmental Studies programs and courses. To prepare students for matriculation to these programs in four-year institutions, Skyline College created the Environmental Science and Technology department. This department and its classes prepare students for the interdisciplinary nature of the study of the environment and sustainability, encompassing the concepts of ecology, conservation, climate change, sustainable practices and human behavior and interaction with the environment. The first course developed and approved for both general education and major's program matriculation was ENVS 100 – Introduction to Environmental Science.

As interest in sustainability grew, so did the interest and need for career training in "green jobs" and jobs to support the local clean tech industries. With funding from the Department of Labor, Skyline College led both the Bay Area Clean Energy Consortium (BayCEC - 2009) and the Home Energy Retrofit Occupations (HERO - 2010) projects to provide career pathways training in energy efficiency and solar technology. With funding from California Employment and Development Department, Skyline College created and led a Green Innovations Challenge project to train workers in new technologies for the automobile industry.

As a community leader, Skyline College has taken recent strides to become a cultural center for sustainability. In 2011, a grant from Skyline College President's Innovation Fund helped create the Sustainable Campus Initiative, a campus-wide effort to integrate sustainability into curriculum and campus culture, increase student engagement and connection to Skyline College, and affect positive change in the community. The grant helped create a Faculty Award for sustainability curriculum, create cultural partnerships to foster sustainable thinking, give students a stake in sustainability projects on campus through Skyline Students Step Up, and create the Environmental Service Learning Course to give students experiential learning opportunities while supporting the community and the environment.

Skyline College has also been at the forefront of sustainability in its facilities and has made significant strides in energy efficiency. In 2002, the San Mateo County Community College District (SMCCCD) conducted a comprehensive energy audit and has since implemented over $20 million of energy efficiency measures including energy efficient lighting, heating, ventilation and air conditioning (HVAC) and lighting Energy Management Systems, evaluated the feasibility of roof-mounted solar photovoltaic systems, roof-mounted pool solar thermal systems, and fuel cells and micro-turbines, installed lighting control systems in classrooms, and installed two cogeneration units that meet 57% of peak electricity needs on-site more efficiently and cleanly than utility company generation. 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. Skyline College continues to identify new sustainable technologies for the built environment and promotes sustainable practices with students, faculty and staff.

While energy conservation has been a focus of facilities management on campus, there are many other areas of sustainability where programs are being actively implemented. The District has implemented water conservation strategies including the conversion of eight out of ten SMCCCD athletic fields to artificial turf, saving 5.8 million gallons of water and approximately $370,000 per year in water costs. Skyline College 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 Skyline College sustainability efforts see the Implementation Programs and Plans Checklist, which is in Appendix H.

2.2 CREATION OF THE SUSTAINABILITY PLAN

To create this Sustainability Plan, Skyline College followed the process and utilized the tools provided in the California Community Colleges Sustainability Template, and shepherded the plan through the college governance process, including the Institutional Planning Council and College Governance Council for integration into overall college planning. 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.

Commitment from Campus Administration

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

2.3 CAMPUS SUSTAINABILITY COMMITTEE

In order to manage the process and to develop this Sustainability Plan, the campus established a campus sustainability committee called the Sustainability Ambassador Network (SAN), consisting of faculty, staff, and students to provide representation from the different campus stakeholders. The SAN will be responsible for developing and implementing the sustainability programs and projects described in sections 4.1 and 4.2 of this plan to achieve Skyline College's sustainability goals.

The Sustainability Ambassador Network co-chairs are Anjana Richards, Director, Workforce Development and Sustainability Initiatives and Carina Anttila-Suarez, Professor, Environmental & Biological Sciences. A former co-chair, Briana McCarthy, Instructor, Environmental and Biological Sciences, also significantly contributed to the Plan. Anjana and Carina can be reached at richardsa@smccd.edu and anttilasuarezc@smccd.edu, respectively.

2.4 THE POLICY CONTEXT OF SUSTAINIBILITY PLANNING

Sustainability can provide environmental, economic, and social benefits to the College campus and the community served by the College. In addition, there are other motivations for the Skyline 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 Skyline College.

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

2.4.1   CCC BOARD OF GOVERNORS ENERGY AND SUSTAINABILITY POLICY

To guide 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 (VMT) 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 CARB and the US EPA.

VISION STATEMENT, GOALS, AND PRIORITIES

Skyline College has developed the following Vision Statement to guide the College in its Sustainability Planning efforts.

Skyline College will inspire a collaborative, global community of learners to empower and transform the College and the community, advancing social equity through environmental stewardship and sustainable practices.

To realize this Vision Statement, Skyline College 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	**Student Engagement**	Integrate sustainability into all facets of student life, including student government, clubs, and organizations. Align student programs with Education Master Plan (EMP) Service Learning initiative by: inspiring participation in and the advancement of student-led sustainability initiatives, encouraging innovation and entrepreneurship, and supporting Environmental Service Learning ENVS 680. Issue a grant for $5,000 for three student-led sustainability projects by spring 2014 as a part of Skyline Students Step Up. Create and adopt an ASSC student body sustainability statement by 2014.

Goal Number	Area of Sustainability	Established Goal
2	**Campus and Community Education and Awareness**	Encourage participation in and awareness of sustainability issues through effective education and engagement. Publicize sustainability events and programs in campus media outlets including Skyline Shines, the Skyline View and the campus sustainability website. Positively influence the campus community to embrace and champion sustainable behaviors at Skyline, in the community, and in their personal lives. Establish Skyline College as a cultural center for sustainability and environmental justice in the north County of San Mateo. Institutionalize the Sustainable Ambassador Network as a shared governance Task Force by Fall Semester 2013.
3	**Curriculum Development**	When appropriate to a program of study, creatively integrate environmental awareness, social responsibility and sustainability into existing course student learning outcomes (SLOs). Connect institutional student learning outcomes (ISLOs) with sustainability, and explore the creation of sustainability theme pathway in General Education core requirements. Develop new curricula and training programs focused on sustainability and the environment. Create certificate and degree programs in Environmental Science and Energy Systems Technology and Management by spring 2014; continue to create service learning opportunities with sustainability focus.
4	**The Built Environment**	Collaborate with SMCCCD Facilities to develop the next generation of Master Planning Sustainability Goals for the Built Environment. Existing goals include: • Reduce Operating Costs through Renewable and Energy Efficient Capital Projects • All new projects to be LEED Silver and modernization projects designed to be LEED Certified • Every new project to exceed Title 24 requirements by 15% • Mandatory PG&E Energy Efficiency/Savings by Design Application • Mandatory Life Cycle Cost Analysis on Major Equipment

Goal Number	Area of Sustainability	Established Goal
5	**Energy Efficiency**	Perform a campus Facilities Measurement, Verification, and Benchmarking Study using the Association of Physical Plant Administrators' (APPA) FPI, Energy Star Portfolio Manager or other appropriate benchmarking tools by end of 2013. Based on the results, establish annual energy use reduction goals (minimum 15% below average) and plan appropriate energy efficiency measures to meet reduction goals by mid-2015. Evaluate goals every year. Explore the integration of workforce training and student learning into energy efficiency projects.
6	**Water Conservation**	Perform a campus Facilities Measurement, Verification, and Benchmarking Study using APPA FPI, Energy Star Portfolio Manager or other appropriate benchmarking tools by end of 2013. Based on the results, establish annual water use reduction goals and implement appropriate water efficiency measures to meet reduction goals. Evaluate goals every five years.
7	**Solid Waste Management**	Continue to implement the landfill diversion program, expand it to include all sectors of recycling and waste reduction to landfills, including electronic waste, green waste and food waste composting, comply with recycling program requirements of AB-341, and strive to meet the statewide landfill recycling goal of 75% by 2020.
8	**Transportation**	Review and/or update existing transportation studies to establish a VMT baseline for the campus by Spring 2014. Create systems and infrastructure to reduce reliance of students, faculty and staff on single-occupancy gasoline vehicle commutes by 10% within the next 5 years. Encourage use of carpooling, bicycling and public transportation. Encourage use of electric vehicles by installing electric vehicle charging stations by Spring 2013. Work with SMCCCD and Public Transit Agencies to improve Skyline College access to efficient and affordable public bus and rail transportation.

Goal Number	Area of Sustainability	Established Goal
9	**Sustainable Procurement**	Partner with Auxiliary Services to increase efforts to source campus food, materials, supplies, information technology equipment and resources from organizations committed to social responsibility and environmental sustainability. Procurement standards will be established by Fall 2013, reviewed bi-annually, and updated as necessary.

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 College 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 College 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

The mission of Skyline College is to inspire, empower and transform a global and diverse community of learners to achieve intellectual, cultural, social, economic and personal fulfillment. To achieve this mission, Skyline College strives to create learning opportunities for students: engage students in experiential learning, increase student involvement on campus, create innovative curriculum for students, encourage active sharing of current and evolving content, and engage faculty in sustainability curriculum development. Through the integration of community service, experiential learning, and use of the campus infrastructure as a pedagogical tool in curriculum, Skyline College can develop curriculum that creates meaningful learning experiences for students.

Creating a skilled workforce while addressing sustainability in the local economy has placed Skyline College at the forefront of higher learning institutions offering environmental-oriented career education. Numerous courses and newly created degree programs focus on preparing and inspiring students to become leaders of sustainable change, as well as support the green economy in solar and energy efficiency technology. Skyline College will continue to incorporate sustainability in its programs and desired educational outcomes to prepare students for articulation into four year institutions.

4.1.2 PROVIDE PROFESSIONAL DEVELOPMENT AND CREATE A FACULTY FORUM

Since faculty drive change in curriculum, professional development and recognition are key drivers of sustainability curriculum development. Skyline has provided professional forums and a Flex Day workshop for faculty to share ideas around curriculum enhancements and revisions including the following:

- Sustainable Curriculum Faculty Learning Community: In 2011, a small group of faculty committed to enhancing and integrating sustainability concepts into their course curricula met monthly over the course of the year. Areas of focus ranged from sharing resources to "greening" lessons to coordinating campus-wide, cross-disciplinary events (Earth Day events, film nights) that connected to in-class topics.

- Curriculum Work Group of the Sustainability Ambassador Network: The Sustainability Ambassador Network, established in fall 2012, brings together faculty, staff, and students to weigh-in on and

implement decisions related to sustainability on campus. The Curriculum Work Group has identified the following goals:

- Create a Sustainability Teaching Square (a community of four teachers who support one another in implementing sustainability concepts into curriculum)
- Develop a student learning community focused on sustainability in basic skills courses
- Create a sustainability focused General Education track and an interdisciplinary service learning course that offers projects aimed at increasing sustainable practices in local non-profits and on-campus departments

Additionally, utilizing funds from the Skyline College President's Innovation Fund in 2012, the Sustainable Campus Initiative sponsored a faculty award program which offered three Innovative Sustainability Education Awards. Faculty who integrated sustainability concepts into curriculum and evaluated students on knowledge and attitudinal shifts applied for recognition and a monetary award. In spring 2012, the Sustainable Campus Initiative convened a six-person decision committee consisting of community stakeholders and honored two recipients. The Sustainable Campus Initiative will offer the award program again in spring 2013.

4.1.3   UTILIZE DIFFERENT PATHWAYS TO INTEGRATE SUSTAINABILITY IN THE CURRICULUM

Skyline College has integrated sustainability into the campus curriculum by offering the following coursework and degree and certificate programs.

4.1.3.1   INTEGRATED COURSEWORK

Skyline College has been offering courses centered on sustainability since the college's establishment and continues to expand offerings, even in the midst of budget cuts. The following are courses that integrate themes of sustainability into curriculum:

- **Biology 101—Our Biological World**. Study of biology as it relates to humans and their environment, with special emphasis on ecological interrelationships, evolution and genetics, and topics of current importance. Instructors include Chris Case and Shari Bookstaff.

- **Biology 110—Principles of Biology**. Using natural selection and physiological survival as a unifying theme, this course deals with the basic problems common to all living systems, and compares the functional solution that various organisms have evolved, illuminating the unity in diversity that characterizes life on earth. Instructors: Kevin Davis, Genievive del Mundo, Carla DiGennaro, Anne Gearhart, Paul Hankamp, and Nick Kapp.

- **Biology 140—Animals, People, and the Environment**. This course will familiarize the student with the methods and importance of behavioral investigation in animals. Emphasis on past and current human-animal relationships, the impact on animal populations and increasing need for wildlife protection. Instructors include Shari Bookstaff and Genievive del Mundo.

- **Biology 145—Plants, People, and the Environment**. A survey of plants emphasizing those aspects of plant biology that have affected the lives of people. Topics include: the success and failure of modern

agriculture, the impact of humans on the environment, and the importance of plants in solving critical problems of hunger and conservation of energy. Attention is given to modes of inquiry or ways in which scientists carry out their investigations.

- **Biology 675—Honors Colloquium in Biology**. Topics cover technology, scientific principles, and issues of meeting the needs of human population in the context of the global struggle for water and energy for the 21st century. For more information please see the following links:

  - **The Global Struggle for Water:** http://skylinecollege.edu/case/BIOL675_water/
  - **Energy for the 21st Century:** http://skylinecollege.edu/case/BIOL675_energy/

- **English 100—Composition.** Designed to help the student recognize and critically evaluate important ideas in short and book length texts, and express facts and thought logically and gracefully in clear and correct prose. Students will write critical expository essays dealing with a variety of ideas at a skill level appropriate to a transfer level college course. Multiple sections include sustainability-focused readings, discussions, and writings. Instructors include Jarrod Feiner and Katharine Harer. Texts include *Omnivore's Dilemma, Ishmael, Earth, and Post-Carbon Reader*.

- **English 110—Composition, Literature, and Critical Thinking**. Course is designed to introduce students to the major imaginative genres of poetry, drama, and fiction from diverse cultural sources and literary critical perspectives. Students will write analytical essays, employing methods of literary analysis and demonstrating critical thinking skills appropriate to a college-level writing class. Texts, art works, and essays address social issues, many of which focus on sustainability as a solution. Instructor: Anna Marie Erwert.

- **English 846—Reading and Writing Connections**. Introduces students to college-level reading and writing, covering thesis construction, organization, development, sentence skills, text-based writing, and effective reading strategies to improve comprehension, analysis and vocabulary. Environmental themes are incorporated into basic skill development in these remedial English sections, taught by Susan Zoughbie and Lucia Lachmayr. Texts include *Silent Spring, Affluenza, and Eating Animals*, and articles on the green economy.

- **Environmental Science 100—Introduction to Environmental Science.** An interdisciplinary introduction to aspects of environmental and natural resource issues and their impact on human welfare. Exploration of causes of environmental issues in a natural sciences, social sciences, business and engineering context. Study of sustainability and potential solutions to environmental problems. Instructors: Carina Anttila-Suarez and Paul Hankamp.

- **Environmental Science 680SD—Environmental Science Service Learning.** Through on- and off-campus, community service oriented projects students address community needs, explore science behind environmental issues, and engage in real-world solutions. Instructor: Carina Anttila-Suarez.

- **ELEC 110—Fundamentals of Electronics.** Activity-based introduction to the fundamentals of DC and AC electrical/electronic circuits. Course covers the basic mathematical laws, terminologies, testing and measuring of simple circuits. Laboratory exercises will emphasize the use of tools, electrical test

instruments and measuring devices.

- **ESTM 400—Clean Energy Concepts, Policies, Industries**

- **ESTM 402—Introduction to Residential Construction**

- **Geology 105—Environmental Earth Systems**. Investigation of environmental earth science topics including aspects of weather and climate, ground and surface water, geologic processes and land forms, recovery and utilization of natural resources, air and water pollution, and energy. Emphasis on understanding and avoiding the dangers of natural hazards such as storms, floods, earthquakes, and landslides. Instructor: Mel Zucker.

- **MGMT 100 —Introduction to Business Management.** Introduction to the principles and functions of contemporary management. The functional areas of management include planning, organizing, leadership, operations management and control, and legal and ethical issues affecting decision making in business today.

- **Nutrition 310—Introductory Nutrition**. Basic concepts of nutrition. Role of nutrients in maintenance of life processes; utilization of food by the body; hunger and appetite; personal nutrition evaluation, the relation between proper nutrition and healthy lifestyle. Special emphasis given to nutrition education and community, national and world nutrition problems. Instructor: Claire Muller-Mosely.

- **COOP 670—Vocational Cooperative.** Education 75 to 300 paid job hours/semester. Prerequisite: Permission of the Cooperative Education Office, concurrent enrollment in a planned vocational program, and employment in a college approved job directly related to the student's academic major.

  The following business courses will be taught in fall 2013 and incorporate topics on sustainability:

- **Business 100—Introduction to Business**

- **Business 150—Entrepreneurship: Small Business Management**

- **Business 296—New Economy Marketing**

- **Business 297—Business Planning for Success**

- **Business 401—Business Communications**

4.1.3.2 FOCUSED COURSEWORK

In addition to the above integrated courses, Career and Technical Education (CTE) course work is offered at Skyline College. These courses offer students challenging academic standards and provide relevant technical knowledge and the skills necessary to prepare for careers in current or emerging fields by attaining a certificate or associate degree. Skyline College offers relevant career programs in a variety of fields taught by experienced, award-winning faculty. Many CTE offerings focus explicitly on environmental technology as described below:

- **Automotive 510—Basic Hybrid Powertrains.** A survey of today's hybrid vehicle powertrains. Hands on experience performing scheduled hybrid maintenance services. Introduction to hybrid vehicle diagnosis and repair. Development of entry-level skills needed to work on hybrid vehicles in a professional environment. Instructor: Richard Young.

- **Automotive 511—Principles of Hybrid and Electric Drives**. A comprehensive survey of today's hybrid vehicle powertrains. Lectures on subjects such as battery packs, power electronics, and electric motor theory are supported by labs covering intermediate and advanced diagnosis of hybrids and/or electric drives. This course is a core requirement of the Hybrid and Electric Drives certificate program.

- **Energy Systems Technology and Management 410—Solar Installation and Integration**. Omer Thompson, the program director for Skyline's T-Com program, developed this course with staff at SolarCity. He leads this introductory course for electricians, carpenters, and new entrants to the field alike. Topics include electrical theory and practice, photovoltaic theory and integration, and solar installation skills. The course is a balance of theory, hands-on practice, and real world examples.

- **Energy Systems Technology and Management 411—Introduction to Solar Photovoltaics (PV) Systems and Markets.** Provides a foundation of knowledge and skills to understand and sell basic solar energy systems. Includes fundamental economic principles and incentive programs related to solar systems, design of PV and solar thermal systems, sizing and cost estimation of solar systems, and fundamental customer service and marketing practices. Focus will also be on increasing student's marketability in the renewable energy job marketplace.

- **Energy Systems Technology and Management 412—Solar Photovoltaics (PV) Design Fundamentals**. Doug Faust, formerly of Solar Monkey, teaches this introduction to the global solar PV market, fundamentals of electricity and PV technology, and fundamentals of the site survey process for a solar PV array.

- **Energy Systems Technology and Management 413—Solar Photovoltaics (PV) Finance and Sales**. Doug Faust teaches this introduction to the global solar PV market, introduction to incentive programs related to solar systems and fundamentals of the site survey process for a solar PV array.

- **Energy Systems Technology and Management 421—Principles of Building Science, How Houses Work**.

- **Energy Systems Technology and Management 426—Building Performance Retrofitting**.

- **Energy Systems Technology and Management 427—Introduction to Whole Home Heating, Ventilation, and Cooling (HVAC)**.

- **Energy Systems Technology and Management 428—Field Training and Credential Exam Preparation for Energy Efficiency**. Doug Faust teaches this introduction to the global solar PV market, fundamentals of electricity and PV technology, introduction to incentive programs related to solar systems and fundamentals of the site survey process for a residential solar PV array. (This course is the first of three 2-unit courses training students on solar design, estimation, and sales. The second and third round will be offered in summer 2013).

- **Energy Systems Technology and Management 441—Solar Thermal Technology and Design**. Instructor is Pete Shoemaker from PG&E. An overview of industry standards and best practices for residential and commercial solar hot water heating. Topics include industry overview and policy incentives; identifying collectors, components, and system types; performing financial analysis for cost savings; practices in selecting equipment and components, citing, designing, constructing, and installing systems. This course is taught at the PG&E Pacific Energy Center in partnership between PG&E instructors and Skyline College faculty**.**

- **Energy Systems Technology and Management 445—Commercial Solar Photovoltaics (PV) Finance and Sales.**

- **Energy Systems Technology and Management 665—Selected Topics in Energy Systems Technology Management.**

- **Energy Systems Technology and Management 490—Capstone Project in Energy Systems Technology Management.**

- **Energy Systems Technology and Management 680—Experimental Topics in Energy Systems Technology Management.**

- **Energy Systems Technology and Management 425—Building Performance Assessment.** Provides a foundation to conduct home energy audits and sell home energy upgrade products and services. Topics include fundamental building science concepts, best practices for auditing and data analysis, BPI standards and the Title 24 energy code. Prepares students for the Building Performance Institute certification exam. Taught by our lead energy efficiency faculty, Bruce Greenstein of Impact Energy, this is Skyline College's flagship home performance course taught at Skyline's new onsite, full-scale energy efficiency test house lab, the Solar and Building Science Learning Center. It provides a foundation to conduct home energy audits and sell home energy upgrade products and services and prepares students for the Building Performance Institute (BPI) certification exam. http://www.skylinecollege.edu /envs/ certificates industry.php.

4.1.3.3   CREATE A NEW CERTIFICATE OR DEGREE PROGRAM

Presently, Skyline College is working to develop an Associate in Science transfer degree in Environmental Science, utilizing Transfer Model Curriculum (TMC) framework in conjunction with Cañada College. The coursework proposed in the TMC includes classes from Economics, Geology/Geography, Biology, Chemistry, Math, and Environmental Science.

In fall 2012, Skyline College established the Energy Systems Technology Management (ESTM) Department, which offers courses in environmental technologies. The focus of this new department is to provide training skills for careers in clean energy. Three certificates of achievement are offered through the ESTM Department: Energy Efficiency, Solar Photovoltaics, and Small Business Entrepreneurship.

In addition to certificate offerings, ESTM also offers Associate in Science degrees which incorporate certificate requirements and add additional technical core requirements, electives, and a capstone course in three

emphases—solar, energy efficiency, and entrepreneurship/small business management. Students will be able to earn Associate in Science degrees in ESTM by choosing one of three program emphases in the following areas:

- **Associate in Science Degree in Energy Systems Technology Management with an Emphasis in Solar Technology and Business.** The Emphasis in Solar Technology and Business prepares students for a wide variety of jobs in the energy and construction sectors, especially related to solar. The program provides a breadth of knowledge in solar photovoltaics (PV) and solar thermal with coursework in residential and commercial applications. The program prepares students for jobs as solar installers, compliance and quality assurance analysts, account representatives, rebate specialists, program and project managers, solar designers, solar sales representatives, crew leads, contractors, and energy consultants.

- **Associate in Science Degree in Energy Systems Technology Management with an Emphasis in Energy Efficiency.** The Emphasis in Energy Efficiency prepares students for a wide variety of jobs in the energy and construction sectors, especially related to energy efficiency. The program provides a breadth of knowledge in building science, design and construction practices, and assessment and retrofitting techniques. The program prepares students for jobs as energy auditors, compliance analysts, business account representatives, rebate processors, program and project managers, retrofit technicians, crew leads, and sales representatives.

- **Associate in Science Degree in Energy Systems Technology Management with an Emphasis in Entrepreneurship and Small Business Management.** The Emphasis in Entrepreneurship and Small Business Management prepares students for supervisory roles and to start businesses of their own in the construction and energy sectors. The program provides a solid foundation in business, management, sales, marketing, accounting, law, as well as a breadth of knowledge and skills in energy efficiency and solar theory and applications. The program combines the Entrepreneurship and Small Business Management certificate program requirements in the Business division and ESTM curriculum.

The certificates and associate's degrees are intended primarily as CTE programs, whose units transfer mainly to CSUs as electives. The main objective of the program is to prepare experienced workers for skill upgrades and providing pathways to employment for new entrants to the field. Preparatory curriculum prepares students in relevant construction, math and computer skills, and business communications; a core course, ESTM 400 provides an overview of industry standards and credentials, as well as an introduction to California energy markets and policies impacting construction and energy companies' business practices and sales strategies. Elective courses allow students to gain breadth in complimentary skills including business management, planning, and marketing, and solar design, finance, and sales courses. Capstone courses in the solar, energy efficiency, and entrepreneurship (ESTM 490) and small business management tracks (BUS 297) provide students with the opportunity to develop a practical, hands-on project portfolio in collaboration with an employer partner.

4.1.5 TRAINING OPPORTUNITIES FOR STUDENTS

Skyline College will employ the following strategies, in conjunction with CTE programs, 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 unemployment rates, the market for green jobs has continued to grow in California. Through the above mentioned certificate and degree programs and the following courses and internships, Skyline College prepares students to take advantage of the green job growth in the state.

- **ENVS680SD – Environmental Science Service Learning**. Training offered through projects include basic data collection, use of scientific instruments, work with live organisms, sharpening of communication skills, and development of professional portfolios. Students can choose to continue service with project partners and explore career opportunities.

- **ESTM Internship Programs – Energy Systems Technology and Management.** Students enrolled in these courses earn co-operative education credit or course credit toward the ESTM certifications and associates degrees. Training and internships offered with various community based organizations and businesses allow students hands-on opportunities to engage in energy projects in professional and community settings.

- **Sustainable San Mateo County Internship.** Students provide marketing support and participate in outreach activities for the Energy Upgrade California program. They also perform energy assessments and make referrals to qualified area contractors.

- **San Mateo County Energy Watch Internship.** Interested students learn about benchmarking and audit theory through ESTM curriculum and cooperative education and attend a three-day training at the PG&E Pacific Energy Center. At the training, students learn how to conduct energy audits for small and medium sized commercial buildings. Utilizing the skills acquired at the workshop, students work with Coordinators at Energy Watch to conduct benchmarking assessments for more than 100 Bay-Area K-12 schools.

4.1.5.2 FACILITATE HANDS-ON CAMPUS PROJECTS

Students have many opportunities to engage in on-campus projects by utilizing the campus as a living lab. In Environmental Science Service Learning (ENVS680SD), students focus on campus sustainability. Past projects have included performing waste audits, researching renewable energy feasibility, and engaging students in sustainable behaviors.

In BIOL675, students perform energy assessments and collect water quality data on campus to inform decision-making and hone professional and academic skills. Students in Energy Systems Technology and Management have the opportunity to participate in hands-on learning through Skyline College's Solar and Building Science Learning Center. A full-scale energy efficiency test house allows students the opportunity to conduct home performance energy assessments. A solar inverter lab provides opportunities for students to learn how to design and install solar systems. The Solar and Building Science Learning Center in Pacific Heights, Building 19, was inaugurated in March of 2012. Developed with a grant from the Department of Labor and matched with funds from SMCCCD, the facility supports the ESTM programs specifically for its solar and energy efficiency courses. Skyline College hopes to further integrate existing curriculum into on-campus projects through experiential

learning. Through the participation of community partners such as PG&E, San Mateo County Energy Watch, consulting firms, and other educational partners, Skyline College hopes to engage students in co-operative education through planning, training, and implementation of energy efficiency projects at Skyline College.

4.1.5.3   ENCOURAGE SOCIAL SERVICE

Environmental Science Service Learning (ENVS680D) provides students the opportunity engage in service projects within the community both on and off-campus that directly address environmental issues and community needs. Examples of community partners include:

- **The Marine Science Institute (MSI):** In spring 2012 and fall 2012, a total of four students engaged in community service at MSI. Projects included fish data collection aboard a research vessel, valuable research about invasive species for curricula, and inventorying aquarium animals to enhance educational guides.

- **City of South San Francisco (SSF):** In spring 2012, three students performed water audits of city buildings utilizing the CALGreen code. This data informs planned retrofits for buildings such as City Hall and the library. In fall 2012, a service learning student participated in the restoration of Colma Creek, which is located adjacent to the SSF Water Quality Control Plant and falls under the jurisdiction of SSF compliance staff.

- **Oceana High School:** In fall 2012, a service learning student helped to develop a "Chick Care Guide" for incoming young chickens to the Oceana High School community garden.

- **Golden Gate Audubon Society:** In fall 2012, a service learning student collected salinity and bird count data to inform ongoing monitoring of wetland health.

4.1.5.4   INVITE NOTABLE SPEAKERS

Skyline College hosts numerous speaker series, including the Call to Consciousness Speaker Series and the Science Lecture Series. Future directions can involve reaching out to guest speakers who specialize in sustainability, environmental and social justice and green careers. In spring 2013, Skyline College will be hosting U.S. Navy Commander Shackleton, a polar explorer, to speak during Earth Week about polar exploration and polar-ice loss as a result of climate change.

4.1.5.5   SUPPORT STUDENT COMMITTEES AND CLUBS

Skyline College supports efforts of student clubs that focus on the intersection of sustainability and other important campus issues. Clubs and initiatives include the following:

- The environmental club, Skyline Go Green, encourages the Skyline College community and administration to adopt practices that promote environmental awareness, and maintain and protect the natural landscape of the campus and its surrounding area.

- TRiO, a federally funded tutoring assistance and counseling program designed to help students from disadvantaged backgrounds, supports 330 students that reflect the diversity of Skyline College. The Sustainable Campus Initiative will co-host a cultural event with TRiO centered on multi-ethnic, sustainably grown foods in spring 2013. A future collaborative project will focus on environmental justice. The Sustainable Campus Initiative will also build on an existing relationship with First Year Experience (FYE), a yearlong program in which a group of students stay together in a set sequence of classes, through coordination of Earth Day activities, outreach for the College's composting pilot program, and other events.

- In 2012, Skyline College's student honors club Phi Theta Kappa chose science education as their honors service project to help support the College's status as a leading academic center for the community and to prepare the region's workforce in this field. The students were also motivated by the national goal to "move American students from the middle of the pack to the top in science."

4.2 CAMPUS AND COMMUNITY EDUCATION OUTREACH

The sustainability of a campus is highly dependent on the actions of individual students, faculty, and staff. While energy efficient equipment, low flow water devices, and separate bins for source separation of waste can make Skyline 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.

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

4.2.1 CREATE A WEBSITE DEDICATED TO CAMPUS SUSTAINABILITY

Skyline College is in the process of creating a website dedicated to campus sustainability initiatives. The website will serve as a publicity tool for campus sustainability news and events and as a resource for students, faculty and staff who want to learn more about sustainability programs on campus. The website will include information about sustainability initiatives throughout the campus in the following areas: facilities, curriculum, and campus and student activities. The website will be managed by the campus Sustainability Coordinator, and will be fully integrated and in alignment with the main Skyline College website.

4.2.2 HOLD WORKSHOPS AND PRESENTATIONS

Skyline College has set a precedent of environmental education within the campus culture by hosting workshops and presentations for faculty and students. These events inform the campus community about sustainability initiatives and projects on campus as well as educate students and faculty in the built and natural environment. Workshops have included:

- Interpretive Nature Walks led by Biology students during Earth Day. Students led the campus community through trails surrounding Skyline College educating participants about invasive, native and edible plants in the region. They also discussed the effects of climate change on plant reproduction.

- Energy Efficiency Workshop at the Solar and Building Science Learning Center led by the Energy Efficiency Program during 2012 Earth Day.

- Sustainability and Green Building Practices workshop led by the Skyline College's Facilities Manager in February 2012. Participants were given a tour of the cogeneration unit in the campus boiler room by Chevron project managers. A tour of campus landscaping elements that reduce potable water consumption was also given.

4.2.3 SUSTAINABILITY EVENTS

Skyline College has and will continue to encourage awareness of sustainability efforts through a variety of effective educational and engagement methods, including forums, fairs, events, campaigns and competitions. The Solar and Building Science Learning Center will be utilized for these events as a community space providing support for education of the built environment and energy conservation.

4.2.3.1 COORDINATE SUSTAINABILITY EVENTS

Skyline College has held the following events to encourage sustainable behavior and educate campus members about the importance of environmental action:

- **Skyline Speaks Sustainability Forum:** The Skyline Speaks Sustainability Forum was held by the Sustainable Campus Initiative, the Communications Department and Environmental Science Department in November 2012. The forum provided an opportunity for students to voice their ideas about how to make Skyline College a more sustainable campus. Students were given the tools and resources to create projects and apply for grants through the Presidents Innovation Fund to implement their project.

- **Green Transportation Day:** A planned event for 2013, where campus members will be encouraged to commute to campus by public transportation, carpooling, walking, or biking.

- **Earth Day Events:** Earth Day is an annual event at Skyline College. In 2012, Earth Day was coordinated and hosted by the Environmental Club, Sustainable Campus Initiative, and a number of faculty and staff. Earth Day events included:

  - **The Green Fair**: The fair included over 20 displays and booths from student clubs, classes, and community partners highlighting sustainability efforts within each group's mission. Student posters and displays included work from ENVS 100 Introduction to Environmental Science, BIO 110 Principles of Biology, ENVS 680SD Environmental Science Service Learning, the Energy Systems Technology and Management program, and the Hybrid-Electric Vehicle program.

  - **Interpretive Nature Walk**: Led by biology students and faculty, these hikes highlighted the ecosystems of the Golden Gate National Recreation Area and provided students an opportunity to learn experientially about the natural landscape.

- **Energy Efficiency Workshop:** Led by Energy Systems and Technology Faculty, participants were given a tour of the Solar and Building Science Learning Center getting hands-on experience with energy efficiency.

- **TRiO Event**: In partnership with TRiO, the Sustainable Campus Initiative will be hosting a sustainability focused cultural event in spring 2013.

4.2.3.2   HOLD SUSTAINABILITY CHALLENGES AND COMPETITIONS

In an effort to reduce the purchase of bottled water, Skyline College held a "Take Back the Tap" campaign. The campaign consisted of a screening of the documentary "Tapped", a pledge against the use of plastic water bottles, an interactive plastic water bottle waste display, and a clean-up of Colma Creek. The campaign resulted in a proposal for the campus "Hydration Station."

4.2.4   CAMPUS SPECIFIC OUTREACH & AWARENESS

By employing the following strategies, Skyline College will spread awareness about sustainability on campus.

4.2.4.1   POST BEHAVIORAL REMINDERS

Skyline College will use the sustainability initiatives on campus as opportunities to educate the campus community about the impact and environmental importance of sustainable behavior. Such initiatives include: the "Take Back the Tap" campaign, the "Hydration Station," the many recycling bins on campus, "Meatless Monday's" at the campus cafeteria, a planned sustainability section in the library, and discounts on beverages when providing your own reusable mug at the campus café. To improve recycling awareness and demonstrate proper recycling techniques on campus, Skyline College will install larger signs above receptacles with clear visuals and recycling facts. Similar signage will be used in the campus cafeteria for the reusable cup discount program.   These signs will simultaneously advertise the program and educate the campus about the environmental and economic benefit of participating.

4.2.4.2   NEW STUDENT ORIENTATION

Skyline College will plan on using the New Student Orientation to introduce students to the College's sustainability plans, goals, and commitments. New students will be informed about sustainability events, clubs, and curriculum on campus so that they are encouraged to become active members of the college and community during their time as a student and beyond.

4.2.4.3   CAMPUS NEWSPAPER OR NEWSLETTER

In an effort to improve awareness of sustainability initiatives on campus, Skyline College will publicize sustainability events and programs in campus media outlets including Skyline Shines, the Skyline View, and the campus sustainability website. The Sustainability Coordinator will submit regular editorials or articles to keep the campus informed about ongoing efforts and to encourage participation.

4.2.5   COMMUNITY SPECIFIC OUTREACH & AWARENESS

Skyline College has connected with local neighborhoods to encourage cooperation and spread awareness about sustainability in the local community by employing the following strategies.

4.2.5.1   PARTNER WITH LOCAL K-12 SCHOOLS

Skyline College works closely with high schools throughout the Bay Area to create curriculum for K-12 teachers and students interested in sustainability and environmental topics.

High School Programs

In partnership with Strategic Energy Innovations, a non-profit organization which empowers schools to save money through energy and resource efficiency, two High School Sustainability Certificates have been created to provide a pathway into the Skyline College's Energy Systems and Technology Management program. Completion of each Certificate provides high school students with the opportunity to earn college credit from SMCCCD. Funding for the High School Sustainability Certificate series was provided by a U.S. Department of Labor Community Based Job Training grant and by the U.S. Department of Energy. The following courses articulate with ENVS 400 Environmental Literacy for Career Technical Education at Skyline College:

- Climate Change and Sustainability
- Fundamentals of Energy
- Tackling Energy Waste
- Generating Clean Energy
- Towards Zero Energy
- Green Collar Workforce

A network of high school teachers provides an ongoing support structure for teachers who need curriculum assistance with incorporating sustainability and clean energy topics into existing science curriculum. Currently, Skyline College is in the progress of reinvigorating this integrated faculty network which allows for co-teaching, co-curriculum design, facilities sharing, and field trips at the high school level. To engage local high schools in these efforts, Skyline College has presented at four local schools in November 2012 with plans of presenting to several more in 2013. To continue to improve and expand these programs Skyline College will:

- Recruit high school students for contextualized math and English training as preparatory work for energy and construction training programs at Laney College in Oakland
- Design pathways for K-12 students to enter institutions of higher education and the workforce through Science, Technology, Engineering and Mathematics (STEM) education and workforce training
- Design sustainability modules and green building curriculum in collaboration with SEI

Middle School Programs

Expanding Your Horizons (EYH) is a math-science conference for girls that seeks to encourage the success of women in science and math-related fields and to promote education as a means for young women to achieve a desirable lifestyle. EYH at Skyline College has received national and state recognition. Math and science were

chosen as a conference focus to help break down sex-stereotyping regarding the success of females in traditionally male-dominated careers and to provide role models and encouragement for the young women attending EYH. The conference targets girls because the number of women in scientific and technical fields is not proportional to the population. EYH curriculum has been increasingly focused on topics of sustainability within the field of science.

4.2.5.2   ENCOURAGE VOLUNTEER WORK AND COMMUNITY SERVICE

Skyline College encourages students to become active members of the community by providing opportunities for service learning and community outreach.

Environmental Science Service Learning course (ENVS680SD), a 2-unit, CSU-transferrable course, engages students in service learning projects both on- and off-campus. Students enrolled in the course complete a 30-hour, environmentally focused project under the guidance of a community partner and are challenged to incorporate their service experiences within the classroom through discussions, presentation, written reflections, and readings. Projects must work towards positive environmental change, meet a community need, and be communicated to the public.

Phi Theta Kappa, Skyline College's student honors club, has chosen to evaluate the impact of introduced and invasive plants on undeveloped parts of the Skyline campus as their 2013 service project. Through the removal of an invasive plant, Cape Ivy, students hope to restore the native habitat surrounding Skyline College and the Golden Gate National Recreation Area.

4.3 GREEN PURCHASING

Skyline 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

Food sustainability and quality has consistently been a top priority discussed during Skyline College's Sustainability Action Network meetings and during the Skyline Speaks Sustainability Forum held in November 2012. The Forum allowed concerned students to voice which areas of sustainability were the most relevant and important to campus life. The following initiatives were identified at the forum: host a Campus Farmer's Market weekly or bimonthly; provide organic, local food in the campus cafeteria, café, and vending machines; limit the provision and consumption of meat on campus by holding weekly "Meatless Mondays" at the campus cafeteria.

Pacific Dining, the District food service provider is committed to urging suppliers to purchase local and organic produce when feasible and is fully supportive of "Meatless Mondays." Sysco, Pacific Dining's main supplier, is committed to sustainability throughout its business and operations. In addition, all baked goods sold through the campus coffee shop are sourced through local bakeries.

4.3.2   GREEN PURCHASING PRACTICES

With assistance from the US Environmental Protection Agency's (EPA) Comprehensive Procurement Guidelines, Skyline College will create a Green Purchasing Policy in 2013 aimed at campus-wide, sustainable procurement. The College will explore the possibility of bulk purchasing all office supplies through the campus bookstore, which will reduce the amount of deliveries made to campus, the amount of waste associated with packaging, and will enable the College to ensure purchasing guidelines are followed. Currently, Skyline College requires campus departments to purchase paper with recycled content and uses compostable flatware in the campus dining areas. As is noted in section 4.6.8, "Implement a Green Cleaning Program," Skyline 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 a variety of products that are environmentally friendly including makeup, biodegradable supplies, and "green" office supplies made of recycled content. Overall, the bookstore prioritizes sustainability in its purchasing practices when student demand is demonstrated and necessary price points are met.

4.3.3   SOCIALLY RESPONSIBLE PURCHASING

In addition to organic and local food requirements, Skyline College will explore opportunities to purchase products and provide food from producers 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.

4.4   MANAGEMENT AND ORGANIZATIONAL STRUCTURE

In order to implement an effective Sustainability Plan, it will be important for Skyline College to have a policy mandate for sustainability, 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   ADOPT A DISTRICT SUSTAINABILITY POLICY

The Skyline College Sustainability Vision Statement and the following 2013-2014 Board of Trustees Sustainability Goals will be presented to the San Mateo County Board of Trustees for adoption in spring 2013.

2013-2014 Board of Trustees Sustainability Goals

San Mateo County Community College District 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. Skyline College has fulfilled this task by creating a part-time Sustainability Coordinator position for the College. The coordinator will work with staff, faculty, students, and community organizations to identify, implement, and monitor the sustainability efforts at Skyline College. In addition, SMCCCD will hire a full-time Energy Management Coordinator who will be responsible for energy management and sustainability programs, and will coordinate facility-level sustainability, utility, energy efficiency and renewable initiatives across the District.

4.4.3   APPOINT A CAMPUS SUSTAINABILITY COMMITTEE

The Skyline College sustainability committee (known as the Student Ambassador Network, SAN) consisting of students, faculty, and staff was established in October 2012 to develop the Sustainability Plan and to manage and track its implementation. The Committee will work within the existing governance structure by coordinating their efforts with the College governance council. The Committee will meet bi-monthly for 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

Skyline College provides several sources of funding for sustainability activities on campus. For example, the 2011 Sustainability Initiative was funded through a successful application to the President's Innovation Fund. Curriculum development is supported through Program Improvement Funds and Instructional Division allocations. Students can also get funding through the Associated Students of Skyline College. Program development is also supported through grants.

Currently, the San Mateo County Community College District utilizes three funds to finance energy efficiency and facilities-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 financed through the remaining two funds, the Emergency Building Repair Fund (EBRF) and the Small Projects Fund, 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

San Mateo County Community College District 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 PLANS

Skyline College identifies sustainability as one of the campus values in the Mission-Vision-Values statement for the College. Skyline College has an Educational Master Plan that includes the Facilities Plan developed by the College and the District Facilities Planning, Operations & Public Safety Department. Skyline College has incorporated sustainability into the campus Education Master Plan. The College provides students with the opportunity to work and participate in the green economy through several degree and certificate programs, including Associate of Science Degrees in energy efficiency and solar photovoltaics, and a variety of sustainability-oriented coursework. A detailed description of sustainable curriculum offered at Skyline College can be found in Section 4 under 4.1 "Student and Curriculum Development."

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

Skyline College is specifically committed to integrating sustainable design practices, materials, and technologies in new construction and renovation projects in order to:

- Reduce operational costs
- Provide leadership and community responsibility
- Raise the public's awareness about the importance of sustainability
- Create facilities that represent an example of sustainable practices

For 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.

4.5 ENERGY EFFICIENCY

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

The following energy efficiency programs and projects will be implemented at Skyline College.

4.5.1 SET ENERGY EFFICIENCY GOALS

Skyline College will perform a campus facilities Measurement, Verification and Benchmarking Study using APPA FPI, Energy Star Portfolio Manager or other appropriate benchmarking tools by the end of 2013. Based on the

results, the College will establish annual energy use reduction goals at a minimum of 15% below average and plan appropriate energy efficiency measures to meet reduction goals by mid-2015. Skyline College will evaluate these goals every five years to ensure continued progress.

4.5.4   CONDUCT COMPREHENSIVE FACILITY ENERGY AUDITS

Implementation of energy efficiency projects is prioritized according to SMCCCD's most recent audit recommendations (PG&E 2011).

The San Mateo County Community College District had a comprehensive energy analysis performed by Chevron Energy Solutions 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 Skyline College is listed in Appendix A, "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.

4.5.5   IMPLEMENT NEW AND EXISTING AUDIT RECOMMENDATIONS

As described above, SMCCCD has aggressively pursued a variety of the audit recommendations presented by Chevron Energy Solutions since 2002 and is in the process of identifying and implementing recommendations made by the 2011 PG&E audit. These efforts have and will continue to save the District in excess of $1 million per year in utility and maintenance costs and drastically reduce their annual GHG emissions. As SMCCCD looks to the future, the District will continue conducting comprehensive facility energy audits as needed and prioritize the implementation of audit recommendations.

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. SMCCCD has installed a UtilityVision energy information system and 17 meters at key facilities, allowing the District to track and monitor energy consumption. SMCCCD is currently in the process of expanding 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, cost-saving manner, and evaluate the short and long-term impact of these efficiency projects.

4.5.8   IDENTIFY AND TAKE ADVANTAGE OF GRANT AND INCENTIVE PROGRAMS

Skyline College has been and continues to be an active participant in the CCC/IOU Energy Efficiency Partnership and PG&E Savings by Design programs, and actively explores and takes advantage of grants where appropriate. A list of projects undertaken at Skyline 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

Skyline College has performed a variety of energy efficient lighting retrofit projects in recent years including LED exterior lighting at campus parking lots, a measure that was performed in response to the comprehensive energy audit performed at SMCCCD in 2002. High energy efficiency lighting systems have been installed District-wide and lighting controls have been prioritized on campus through the installation of occupancy sensors and multi-switching circuits. Additionally, all vending machines on campus are required to meet federal guidelines for energy efficiency.

4.5.11 INSTALL ENERGY EFFICIENT HVAC SYSTEMS

In addition to energy efficient lighting measures, the College has also retrofitted and replaced HVAC systems in recent years. HVAC monitoring and replacement or repair, when necessary, will continue to be a priority for Skyline College. Several projects undertaken at Skyline College are listed with their respective rebate amounts in Appendix C, "HVAC Measures Implemented."

4.6 FACILITIES OPERATION

Skyline 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 required 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 offered through PG&E and the 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. Skyline 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 Skyline College is 68°F – 72°F and has been programmed through the campus Building Management System. 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.

4.6.5   OPTIMIZE HVAC EQUIPMENT SCHEDULING

HVAC systems at Skyline College are programmed according to building occupancy and operation hours. The systems are either activated through the Building Management System or manually on a building-by-building basis. SMCCCD has implemented an alert system to notify Facility Managers and Chief Engineers of HVAC system 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 Skyline College. Computers are programmed to "time-out" at 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 desktops printers as possible and has shifted printing to centralized, more efficient print stations. In 2013, the SMCCCD will make efforts to expand server and desktop virtualization and power down digital signage monitors when campus is not in use.

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 the use of permanent whole-building metering and energy monitoring. Skyline College is planning to participate in the CCC/IOU Energy Efficiency Partnership MBCx program in 2013. MBCx projects are currently underway at the College of San Mateo and Cañada Community College.

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 minimizing the impact on the local environment by 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. Skyline 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, presented by Flex Your Power, California's statewide energy efficiency campaign. 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

Skyline College has established the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Silver rating as their building standard. 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 Skyline College must exceed California Title 24 Building Standards by at least 15%. For example, the College's Student and Community Center constructed in 2007 is 28% 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 achieve the following facilities 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."

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. Skyline 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. Skyline College requires that 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

The Sustainable Design standard contains the following measures that should be considered for incorporation into each capital project including:

- Solar Income: Building integrated PV's, Building Integrated Solar water heating, outside air preheating
- Wind Income: wind turbines, natural ventilation
- Ground water: geothermal slab cooling, geothermal heat pumps
- Rain: rain water harvesting
- Architectural: use of day lighting, double facades, high levels of insulation, efficient visible glass, orientation, programming (relaxed temperatures), thermal mass, green roof, and indoor environmental quality
- Engineering: double facades, day lighting, high levels of insulation on walls and roofs; efficient visible glass, orientation, programming (relaxed temperatures), thermal mass, green roof, 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, indoor environmental quality

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 (produced without HCFC's or CFC's 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), lessening the need for more energy-consuming mechanical lighting. The manufacturer of these panels is committed to environmentally sound production processes
- 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"

4.7.3 USE AN INTEGRATED SYSTEMS APPROACH IN BUILDING DESIGN

Sustainable building goals 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

Skyline College commissions all new buildings on campus 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.

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 installing wind turbines at Skyline College. The findings of the report indicate that mini-wind turbine installations are technically feasible given the available wind resources from the Pacific coast. However, the College's inability to use tax credit incentives leads to a low return on investment for systems purchased directly by SMCCCD. Given the limitations, ABB does not recommend mini-wind turbine technology at Skyline College. A full text of the report can be found in Appendix F, "Skyline College Mini-Wind Turbine Feasibility Study."

The District previously installed two cogeneration units, a 375 kilowatt unit at Skyline College and a 560 kilowatt unit at the College of San Mateo. These units are capable of generating 56.5% of SMCCCD's peak electricity needs more efficiently and cleanly than utility company generation. The waste heat created by the cogeneration units is captured and used in central heating systems. Overall, cogeneration at SMCCCD reduces overall annual electric purchases by over 6.7 million kilowatt-hours.

4.8.5 IDENTIFY AND TAKE ADVANTAGE OF GRANT AND INCENTIVE PROGRAMS

The San Mateo County Community College District applied for and received utility incentives for the cogeneration unit at Skyline College.

4.9 TRANSPORTATION, COMMUTING, AND CAMPUS FLEET & TRAVEL

Skyline College will strive to reduce Vehicle Miles Traveled (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.

The following programs and projects will be implemented at Skyline College.

4.9.1 UNDERSTAND COMMUTE AND TRAVEL PATTERNS

An understanding of how students, faculty, and staff commute to the campus is a first step towards improving travel patterns at Skyline College. The District began this process in 2006 by contracting with Traffic Data Service and Hexagon Transportation Consultants, Inc. to perform a traffic analysis of the vehicle entries to Skyline College. The College will conduct additional surveys to determine single occupancy trips to campus. Data collected will be utilized to help the College create strategies to decrease VMTs and the GHG emissions of the campus community by modifying transportation trends and modes.

4.9.2   ENCOURAGE AND ENHANCE PUBLIC TRANSPORTATION AND RIDESHARING OPTIONS

Skyline College has and will continue to 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. The San Mateo County Transit District (SAMTRANS) serves Skyline College with three bus lines, which provide service to three Bay-Area Rapid Transit (BART) stations; Colma, Daly City & San Bruno. However, current public transit options at Skyline College are not sufficiently meeting campus needs. The College will evaluate programs offered by SAMTRANS and meet with the agency to seek additional services.

4.9.2.2   INCENTIVIZE PUBLIC TRANSPORTATION AND RIDESHARING OPTIONS

Skyline College encourages carpooling on campus through optimally located carpool vehicle parking spaces reserved for vehicles transporting a minimum of three passengers. The College will explore a ridesharing networking resource to better assist campus members in finding compatible carpoolers and vanpoolers.

4.9.2.3   ENCOURAGE FUEL EFFICIENT VEHICLES FOR COMMUTERS

The San Mateo County Community College District received a grant in fall 2012 for the installation of 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 in premium locations on campus 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 driver. Installation of the stations will be completed by summer 2013.

4.9.3   ENCOURAGE AND ENHANCE BICYCLING OPTIONS

Skyline College has installed additional bike racks in key locations on campus to encourage the use of bikes and public transportation.

4.9.4   IMPROVE CAMPUS FLEET & TRAVEL

The San Mateo County Community College District currently operates seven electric vehicles, as well as electric carts and scooters which are used by District support services, general services, and Campus Safety personnel. Overall, SMCCCD prioritizes efficient vehicles during purchasing decisions and aims to replace diesel vehicles with electric or high average mile-per-gallon fuel efficiency vehicles over time.

4.9.5   ENHANCE STUDENT DISTANCE LEARNING & UTILIZE VIRTUAL MEETING PLATFORMS

The San Mateo County Community College District is currently in the process of expanding the number of hybrid or full online courses offered. Currently, approximately 10% of courses at SMCCCD have online components. SMCCCD has also installed the infrastructure necessary to host virtual meetings. Online courses and virtual

meetings have a variety of environmental benefits including reducing the GHG emissions of commuting to and from campus as well as reducing the energy, and maintenance costs associated with operating campus facilities.

4.10 WATER, WASTEWATER, AND SUSTAINABLE LANDSCAPING

Water conservation is an important component of sustainability and is aggressively pursued by Skyline College. The College strives to reduce potable water use as well as waste water discharges to both the sewer and storm water systems. In addition, the College reduces waste water pollution by minimizing chemical fertilizers and pesticide use in association with landscaping practices.

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

4.10.2 IMPLEMENT WATER CONSERVATION STRATEGIES

Skyline College has made water conservation a priority for both environmental purposes and in order to achieve cost savings. The College has installed artificial turf on two soccer fields and a baseball field. The synthetic turf installed District-wide saves approximately 5.8 million gallons of water and $370,000 per year in water costs. In addition to eliminating the need for irrigation, Skyline College has been able to reduce the use of air polluting lawn mowers, chemical pesticides and fertilizers, and maintenance labor.

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, Skyline College plans to employ the following strategies to reduce these discharges.

4.10.3.1   REDUCE STORM WATER RUNOFF

Skyline College works closely with the local jurisdiction 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.

4.10.3.2   REDUCE CHEMICAL USAGE

Skyline College works actively with vendors, suppliers, and maintenance staff to effectively manage, reduce, and responsibly use chemicals throughout the campus. As detailed above in section 4.6.8, "Implement a Green Cleaning Program," Skyline 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 how to 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, Skyline College has exchanged traditional grass for low-maintenance ground-covering plants that require less water. Water conserving and drought tolerant plants are prioritized on campus for all new and replanted landscaping.

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.

4.11 SOLID WASTE REDUCTION AND MANAGEMENT

Skyline 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, and have included the installation of several digital advertising boards located throughout the campus. The Student Services center on campus has "gone paperless" and has since dramatically reduced both the use and waste of paper. The College will continue aggressively pursuing waste reduction and recycling efforts in all aspects of campus operation.

4.11.1 CREATE WASTE REDUCTION GOALS

The College has adopted the following diversion goals:

- Continue to implement the landfill diversion program and expand it to include all sectors of recycling and waste reduction to landfills, including electronic waste, green waste and food waste composting
- Comply with recycling program requirements of AB-341, and strive to meet the statewide landfill recycling goal of 75% by 2020. This will require the college to regularly measure the amount and type of waste being land filled, recycled and composted

4.11.2 MAXIMIZE PROGRAMS OFFERED BY CONTRACTED WASTE HAULER

Skyline College is currently in the process of maximizing programs offered by its contracted waste hauler, Recology. These include recycling, green waste (such as yard trimmings), and food waste composting programs. In addition, the College also performs construction and demolition (C&D) recycling. The District will hold a Waste Summit in spring 2013 where it will collaborate with local jurisdictions, waste haulers, and public agencies to evaluate and pursue "best in class" waste management options across the District. It may be necessary for Skyline College to employ multiple waste haulers in order to receive all of the services necessary for the College to meet campus sustainability goals.

4.11.3 REDUCE THE WASTE STREAM TO THE LANDFILL

Skyline College has implemented or has plans to complete the following additional steps to reduce its waste stream.

4.11.3.1   RAISE AWARENESS OF WASTE REDUCTION

Skyline College would like to help educate the campus and local community about the benefits of waste reduction through recycling and composting and proper disposal of materials, such as hazardous and electronic waste. This will be done through creative campus-wide events orchestrated by Skyline's student environmental club, Skyline Go Green, as well as through clear, effective recycling and composting signage on campus.

4.11.3.2   MINIMIZE UNNECESSARY WASTE

Skyline College has made a great effort to reduce waste produced on campus. These efforts span all areas of the campus and include projects such as the installation of plants that reduce trimming waste, a book buy-back program through the campus bookstore that allows for the reuse of textbooks (3.63 tons of books reused at SMCCCD in 2011), and numerous paper reduction measures listed below under Section 4.11.3.3, "Reduce Paper Use". "Hydration Stations," or water dispensers designed specifically for refilling water bottles, have been installed to promote the use of reusable bottles on campus and limit plastic waste.

Started eleven years ago, SMCCCD's textbook rental program continues to grow at an exponential rate and has saved students across the District over $5 million dollars on textbook costs since its inception. Looking forward, the District would like to continue to expand the used and rented textbook program and increase the use of electronic textbooks District-wide.

Skyline College, in cooperation with Pacific Dining, will consider banning the sale of bottled water on campus to decrease the amount of plastic waste. Pacific Dining has already committed to banning water bottle sales directly within the campus dining area and will make reusable beverage containers available for sale. To incentivize sustainable behavior, discounts are given to those who provide their own beverage container at campus dining locations. Plastic "to-go" bags are no longer available in the dining area and "to-go" box usage has been limited. In addition, all disposable supplies used at the campus café contain recycled content.

4.11.3.3   REDUCE PAPER USE

Skyline College has specifically focused on reducing the use of paper on campus through a number of initiatives including the extensive application of electronic versus printed media (e-mail, downloadable forms, document scanning, web-based information sites, computer kiosks, electronic bulletin boards, and on-line request submissions) and the installation of copiers that print double-sided copies. The College uses web-based collaboration tools and platforms such as SharePoint, WebSMART and DegreeWorks, which greatly reduce the need for printed materials. Over 150 District-wide committees, departments, and organizations currently use SharePoint for meeting agendas, minutes, surveys, forms, picture libraries, and more. SMCCCD uses PeopleAdmin, an online tool that eliminates the need to print resumes or other materials during the employee hiring process. The document imaging system at the College also reduces paper use by allowing faculty and staff to scan reports and distribute documents electronically. In addition, SMCCCD offers vendors and employees the option of payment through direct deposit, significantly reducing the amount of written and printed checks distributed across SMCCCD. Lastly, approximately 80% of classrooms at SMCCCD are "smart classrooms" where installed projectors eliminate the need for printed materials within the classroom.

4.11.4 IMPROVE EXISTING RECYCLING PROGRAMS

In April 2007, Skyline College implemented "single-stream" recycling on campus in cooperation with Recology. This adjustment has increased recycling efforts by making it easier for end users to dispose of recyclable materials. The College has deployed over 30 new, aesthetically pleasing recycling containers across campus that have also greatly contributed to the college's recycling efforts. "Big-Belly" solar-powered trash compactors have been installed on campus which reduce the number of times trash must be collected, therefore reducing the greenhouse gases associated with waste hauling.

In addition, Skyline 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 encourages all campus members 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. ITS will revise and update the e-waste recycling program in 2013 to streamline electronic recycling and ensure all devices are properly disposed.

The current recycling programs can be improved through educating the campus community about the distinctions between which items are recyclable, compostable, or disposable and by advertising the availability of recycling locations. This will be accomplished through clear signage above recycling receptacles and through campus-wide awareness events and activities facilitated by the Environmental Club.

4.11.5 COLLECT AND SELL OR DONATE ALL RECYCLABLE MATERIAL

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, Skyline College currently recycles all metal waste created on campus.

4.11.6 GREEN WASTE AND FOOD WASTE COMPOSITING

Skyline College is actively pursuing food waste composting on campus. As of October 2012, a pilot composting project has been underway in the campus cafeteria in collaboration with Recology and Pacific Dining. This pilot is being used by Recology to demonstrate its composting services to the City of San Bruno and, if successful, could lead to future city-wide composting efforts. The College and Pacific Dining will explore expanding composting to campus bathrooms and catered events. Food waste composting will be discussed during SMCCCD's 2013 Waste Summit with a goal of expanding these efforts.

4.11.7 ADOPT CONSTRUCTION AND DEMOLITION (C&D) RECYCLING

For building renovations or the demolition of old buildings, Skyline College requires construction and demolition 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

As with any successful program, the ongoing progress and performance of sustainability plan activities should be *monitored and compared to goals and criteria*. This will require continuous participation of the Campus 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 Skyline College's progress towards its sustainability goals, the Sustainability Action Network plans to collect information on the following key metrics at the regular intervals described below.

Goal Number	Area of Sustainability	Goal Description	Performance Metric and Measurement Frequency
1	**Student Engagement**	Integrate sustainability into all facets of student life, including: student government, clubs and organizations. Align student programs with Education Master Plan (EMP) Service Learning initiative by: inspiring participation in and the advancement of student-led sustainability initiatives, encouraging innovation and entrepreneurship, and supporting Environmental Service Learning ENVS 680.	Grant $5,000 for three student-led sustainability projects by spring 2014 as a part of Skyline Students Step Up. Create and adopt an ASSC student body sustainability statement by 2014.

Goal Number	Area of Sustainability	Goal Description	Performance Metric and Measurement Frequency
2	**Campus and Community Awareness**	Encourage participation in campus sustainability efforts and awareness of sustainability issues through effective education and engagement. Publicize sustainability events and programs in campus media outlets including Skyline Shines, the Skyline View and the campus sustainability website. Positively influence the campus community to embrace and champion sustainable behaviors at Skyline, in the community, and in their personal lives. Establish Skyline College as a cultural center for sustainability and environmental justice in the north County of San Mateo.	Develop and implement an Outreach and Awareness Plan by Fall Semester 2013 to coincide with SAN Task Force formalization. Review and update Plan annually.
3	**Curriculum Development**	When appropriate to a program of study, creatively integrate environmental awareness, social responsibility and sustainability into existing course student learning outcomes (SLOs). Connect institutional student learning outcomes (ISLOs) with sustainability, and explore the creation of sustainability General Education. Develop new curricula and training programs focused on sustainability and the environment.	Create certificate and degree programs in the areas of Environmental Science and Energy Systems Technology and Management by spring 2014.

Goal Number	Area of Sustainability	Goal Description	Performance Metric and Measurement Frequency
4	**The Built Environment**	Collaborate with SMCCCD Facilities to develop the next generation of Master Planning Sustainability Goals for the Built Environment, including: • Reduce Operating Costs through Renewable and Energy Efficiency Capital Projects • All new projects to be LEED Silver and modernization projects designed to LEED Certified • Every new project to exceed Title 24 requirements by at least 15% • Mandatory PG&E Energy Efficiency/Savings by Design Application • Mandatory Life Cycle Cost Analysis on Major Equipment	Develop and adopt "Next Generation" Master Planning Facilities goals with the adoption of next Skyline College Master Plan. Update with each College Master Plan update.
5	**Energy Efficiency**	Perform a campus Facilities Measurement, Verification, and Benchmarking Study using APPA FPI, Energy Star Portfolio Manager or other appropriate benchmarking tools by end of 2013. Explore the integration of workforce training and student learning into energy efficiency projects.	Based on the results, establish annual energy use reduction goals (minimum 15% below average) and plan appropriate energy efficiency measures to meet reduction goals by mid-2015. Evaluate goals every year. Develop ESTM internship to include energy efficiency benchmarking.
6	**Water Management**	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, establish annual water use reduction goals and implement appropriate water efficiency measures to meet reduction goals. Evaluate goals every five years.

Goal Number	Area of Sustainability	Goal Description	Performance Metric and Measurement Frequency
7	**Solid Waste Management**	Continue to implement the landfill diversion program, expand it to include all sectors of recycling and waste reduction to landfills, including electronic waste, green waste and food waste composting, comply with recycling program requirements of AB-341, and strive to meet the statewide landfill recycling goal of 75% by 2020.	Evaluate program and diversion results annually. Update program as needed to meet diversion goals.
8	**Transportation**	Review and/or update existing transportation studies to establish a VMT baseline for the campus by Spring 2014. Elevate knowledge and encourage use of electric vehicle charging stations, carpooling, bicycling, and public transportation. Work with SMCCCD and Public Transit Agencies to improve Skyline College access and connections to efficient and affordable public bus and rail transportation.	Create systems and infrastructure to reduce the reliance of students, faculty and staff on single occupancy gasoline vehicle commutes by 10% within the next 5 years.
9	**Sustainable Procurement**	Partner with SMCCCD and Auxiliary Services to increase college efforts to source campus food, materials, supplies, information technology equipment, and resources from organizations that are committed to social responsibility and environmental sustainability.	Procurement standards will be established by Fall 2013, reviewed bi-annually, and updated as necessary.

5.2 REPORTING PERFORMANCE

In order to keep the campus community informed of the progress of the Sustainability Plan activities, the College is in the process of creating a webpage dedicated to sustainability on the Skyline College website. The Sustainability website will be developed and maintained by the Campus Sustainability Coordinator.

The Sustainability Ambassador's Network will continue to meet on a bi-monthly basis to review progress with Plan implementation and to discuss changes or new initiatives.

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 – SKYLINE COLLEGE MINI-WIND TURBINE 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 Skyline 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
- M3   Underground HHW Piping Repair
- M4   Underground HHW Piping Insulation Repair
- M7   Air-handling System Refurbishment (Core Level)
- M8   Air & Water Balance (Core Level)
- M10   Heating Hot Water Variable Flow Conversion
- M14   Utility Vision
- 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)
- DG1   Cogeneration

GRANT AND INCENTIVE PROGRAMS MEASURES IMPLEMENTED

The following measures and capital projects undertaken at Skyline 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

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

PG&E Energy Efficiency (Core programs)

- Skyline and CSM Co-Generation: November 2004 - $878,557
- District-Wide High Efficiency Lighting Systems: July 2002 - $102,600

CCC/IOU Partnership

Rebates Received

- Skyline 3 VAV Retrofit: May 2007 - $39,686
- Skyline 4: November 2011 - $108,182
- Skyline 5 Library Lighting: April 2009 - $15,203
- Skyline 7 DDC Controls Retrofit: April 2009 - $9,011
- Skyline Transformer Replacement: April 2012 - $7,295
- District-Wide Parking Lot Lighting: April 2009 - $1,914
- District-Wide Burner Replacement: November 2012- $7,970

Rebates Forthcoming

- Skyline Loma Chica Furnace Replacement: In Process- $1,200

APPENDIX C

HVAC MEASURES IMPLEMENTED

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

- Skyline 3 VAV Retrofit: May 2007 - $39,686
- Skyline 7 DDC Controls Retrofit: April 2009 - $9,011
- Skyline Transformer Replacement: April 2012 - $7,295
- Skyline- Loma Chica Furnace Replacement: In Process - $1,200
- District- Wide Burner Replacement: In Process - $7,970
- District- Wide Transformer Retrofit: November 2011 - $8,916
- Boiler Replacement - $850
- DW Burner Replacement: November 2012 - $7,970

DESIGN STANDARD – STRUCTURAL DESIGN GUIDELINES

The San Mateo County Community College District'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 SUSTAINABLILITY

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

SKYLINE COLLEGE MINI-WIND TURBINE FEASIBILITY STUDY

A web-link to the feasibility study conducted by Allana Buick and Bers Inc (ABB) for mini-wind turbines at Skyline College is provided below.

https://sharepoint.SMCCCD.edu/SiteDirectory/CPD/CPD%20Downloads/Districtwide/DW%20Sustainability%20Plan/District%20Wide/Resource%20Documents/SMCCCD%20-%20Skyline%20Mini%20Wind%20Turbine%20Feasibility%20Study%20September%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 Skyline 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 Ambassador's Network.

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

Sustainability Template Plan Summary
Implementation Programs and Checklist

District: San Mateo CCD
Campus: Skyline College
Project: Programs and Plans Checklist v3
Date: 4/9/2013

Click Here to go to **Output Tab**

Plan Section	Template Plan Section Description	# of Programs Available	# of Programs Selected	# of Selected Programs Ongoing & Completed
4.1	Student and Curriculum Development	5	3	3
4.2	Campus and Community Education Outreach	5	5	0
4.3	Green Purchasing	3	3	1
4.4	Management and Organizational Structure	7	6	5
4.5	Energy Efficiency	11	7	5
4.6	Facilities Operation	8	7	6
4.7	Sustainable Building Practices	5	5	5
4.8	On-Site Renewable Energy	5	2	2
4.9	Transportation, Commuting, and Campus Fleet & Travel	5	5	2
4.10	Water, Wastewater, and Sustainable Landscaping	4	3	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
Totals		**69**	**53**	**35**

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: Skyline College
Project: Programs and Plans Checklist v3
Date: 4/9/2013

Chart legend:
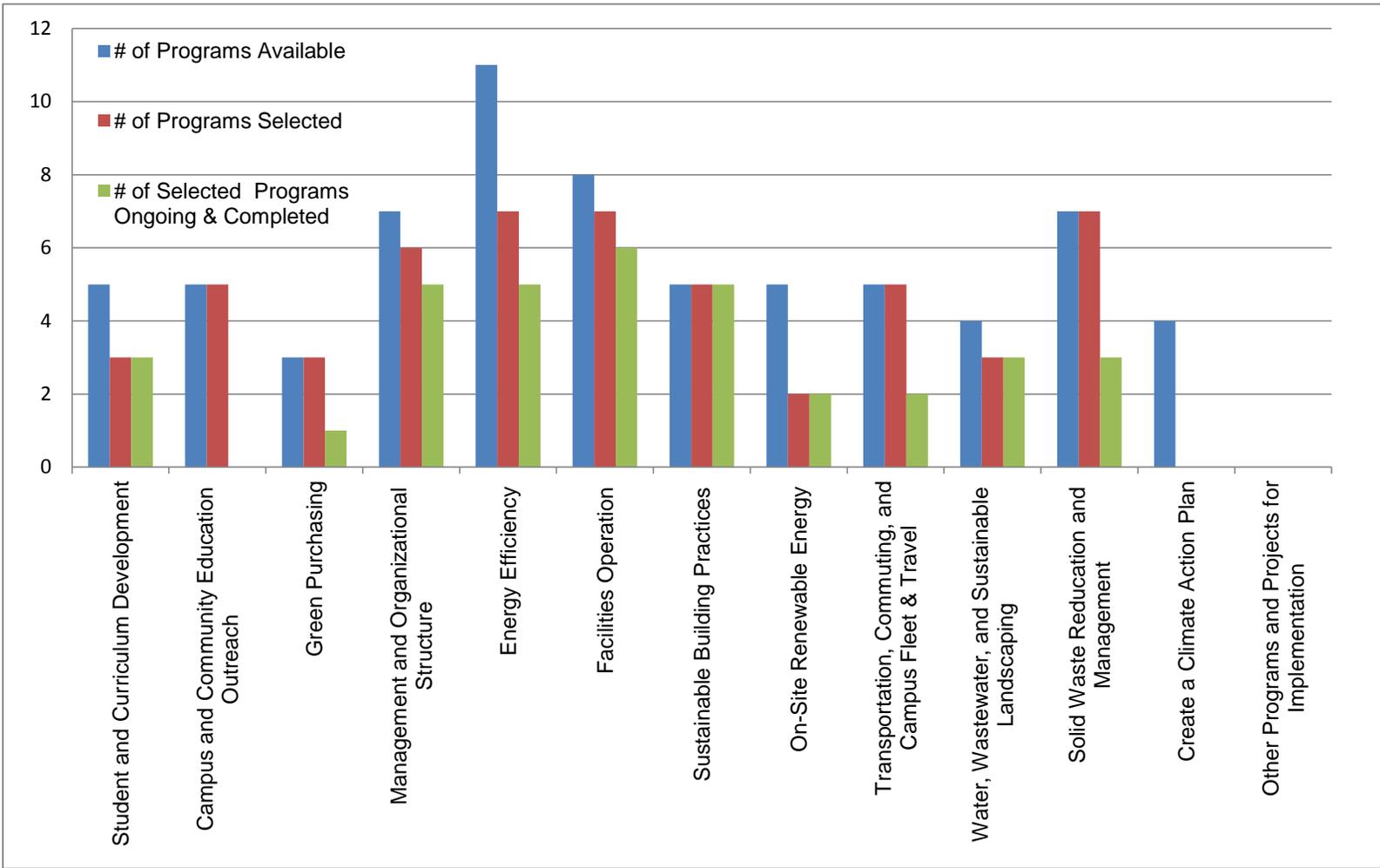- # of Programs Available (blue)
- # of Programs Selected (red)
- # of Selected Programs Ongoing & Completed (green)

Categories:
- Student and Curriculum Development
- Campus and Community Education Outreach
- Green Purchasing
- Management and Organizational Structure
- Energy Efficiency
- Facilities Operation
- Sustainable Building Practices
- On-Site Renewable Energy
- Transportation, Commuting, and Campus Fleet & Travel
- Water, Wastewater, and Sustainable Landscaping
- Solid Waste Reduction and Management
- Create a Climate Action Plan
- Other Programs and Projects for Implementation

Sustainability Template Plan
Implementation Programs and Plans Checklist

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below		
Section 4.1 STUDENT 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*
☐	4.1.7	*Enter Other Program and Project 2, text will change color*

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

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

Back to Summary Tab

District:	San Mateo CCD	
Campus:	Skyline College	
Project:	Programs and Plans Checklist v3	
Date:	4/9/2013	

Priority Implementation Plans Indicated Below

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
☑	4.2.2	Hold Workshops and Presentations
☑	4.2.3	Sustainability Events
☑	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.

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

 Back to Summary tab

District:	San Mateo CCD	
Campus:	Skyline College	
Project:	Programs and Plans Checklist v3	
Date:	4/9/2013	

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below	

Section 4.3 GREEN PURCHASING			**Comments**
☑	4.3.1	Sustainable Food Purchasing	
☑	4.3.2	Green Purchasing Practices	
☑	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.

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

 Back to Summary tab

Sustainability Template Plan
Implementation Programs and Plans Checklist

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below	
Section 4.4 MANAGEMENT AND ORGANIZATIONAL STRUCTURE	**Comments**
☑ 4.4.1 Adopt a District Sustainability Policy	
☑ 4.4.2 Appoint a Sustainability Coordinator (and Establish an Office of Sustainability)	
☑ 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 Plans	
☐ *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.

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

 Back to Summary tab

Sustainability Template Plan
Implementation Programs and Plans Checklist

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below		
Section 4.5 ENERGY EFFICIENCY		**Comments**
☑	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
☑	4.5.5	Implement New and Existing Audit Recommendations
☑	4.5.6	Implement Ongoing Energy Monitoring
☐	4.5.7	Participate in Demand Response Programs
☑	4.5.8	Identify and Take Advantage of Grant and Incentive Programs
☐	4.5.9	Establish an Energy Efficiency Purchasing Policy
☑	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.

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

 Back to Summary tab

District:	San Mateo CCD	
Campus:	Skyline College	
Project:	Programs and Plans Checklist v3	
Date:	4/9/2013	

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below	
Section 4.6 FACILITIES OPERATION	**Comments**
☑	4.6.1	Encourage and Support Energy Efficiency Training of Staff
☑	4.6.2	Install Energy Management Systems
☑	4.6.3	Adjust Temperature Set Points and Schedule Operating Times
☐	4.6.4	Optimize Building Occupancy Scheduling
☑	4.6.5	Optimize HVAC Equipment Scheduling
☑	4.6.6	Activate Energy-Saving Features for Appliances and Computers
☑	4.6.7	Pursue Monitoring-Based(MBCx)/Retro-Commissioning (RCx)
☑	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.

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

Back to Summary tab

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below	
Section 4.7 SUSTAINABLE BUILDING PRACTICES	**Comments**

☑	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	
☐	4.7.6	*Enter Other Program and Project 1, text will change color*	
☐	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.

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

Back to Summary tab

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below			
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	
☐	4.8.4	Evaluate Participation in Community Choice Aggregation	
☑	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.

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

Back to Summary tab

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below	
Section 4.9 TRANSPORTATION, COMMUTING, AND CAMPUS FLEET & TRAVEL	**Comments**
☑ 4.9.1 Understand Commute and Travel Patterns	
☑ 4.9.2 Encourage and Enhance Public Transportation and Ridesharing Options	
☑ 4.9.3 Encourage and Enhance Bicycling Options	
☑ 4.9.4 Improve Campus Fleet & Travel	
☑ 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.

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

Back to Summary tab

District: San Mateo CCD
Campus: Skyline College
Project: Programs and Plans Checklist v3
Date: 4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below	
Section 4.10 WATER, WASTEWATER, AND SUSTAINABLE LANDSCAPING	**Comments**
☐ 4.10.1 Establish Water Conservation Goals	
☑ 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.

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

Back to Summary tab

District:	San Mateo CCD	
Campus:	Skyline College	
Project:	Programs and Plans Checklist v3	
Date:	4/9/2013	

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below	
Section 4.11 SOLID WASTE REDUCATION AND MANAGEMENT	**Comments**
☑ 4.11.1 Create Waste Reduction Goals	
☑ 4.11.2 Maximize Programs Offered by Contracted Waste Hauler	
☑ 4.11.3 Reduce Waste Stream to the Landfill	
☑ 4.11.4 Improve Existing Recycling Programs	
☑ 4.11.5 Collect and Sell or Dontate All Recyclable Material	
☑ 4.11.6 Green Waste and Food Waste Composting	
☑ 4.11.7 Adopt Construction and Demolition (C&D) 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.

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

 Back to Summary tab

District:	San Mateo CCD	
Campus:	Skyline College	
Project:	Programs and Plans Checklist v3	
Date:	4/9/2013	

Priority Implementation Plans Indicated Below

Selected Programs and 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

 Back to Summary tab

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Priority Implementation Plans Indicated Below

Selected Programs and Plans for Implementation are Summarized Below

Section 4.13 OTHER PROGRAMS 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.

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

 Back to Summary tab

Sustainability Template Plan
Implementation Programs and Plans Checklist

District:	San Mateo CCD
Campus:	Skyline College
Project:	Programs and Plans Checklist v3
Date:	4/9/2013

Back to Summary Tab

Priority Implementation Plans Indicated Below

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**
4.1.2	Provide Professional Development and Create a Faculty Forum		High	Complete			2,3		Lucia Luckbair, Carina Anttila-Suarez	luckbairl@smccd.edu; anttilasuarezc@smccd.edu
4.1.3	Utilize Different Pathways to Integrate Sustainability in the Curriculum		High	Complete			1,2,3		Lucia Luckbair, Carina Anttila-Suarez	luckbairl@smccd.edu; anttilasuarezc@smccd.edu
4.1.5	Training Opportunities for Students		High	Complete			1,3		Aaron Wilcher	wilchera@smccd.edu

Section 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			In-Process			1,2		Sabrina Lawrence-	slawrenc@usc.edu
4.2.2	Hold Workshops and Presentations			In-Process			1,2		Carina Anttila-Suarez	anttilasuarezc@smccd.edu
4.2.3	Sustainability Events			In-Process			1,2		SAN	
4.2.4	Campus Specific Outreach & Awareness			In-Process			1,2		SAN	
4.2.5	Community Specific Outreach & Awareness			In-Process			1,2		SAN	

Sustainability Template Plan
Implementation Programs and Plans Checklist

District: San Mateo CCD
Campus: Skyline College
Project: Programs and Plans Checklist v3
Date: 4/9/2013

Back to Summary Tab

Priority Implementation Plans Indicated Below

Section 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			1,2,9	n/a	Tom Bauer	harrisons@smccd.edu
4.3.2	Green Purchasing Practices		Med	In-Process			1,2,7, 9		Sue Harrison	harrisons@smccd.edu
4.3.3	Socially Responsible Purchasing		Med	In-Process			1,2,7,9	n/a	Tom Bauer; Kevin Chak	bauert@smccd.edu; chakk@smccd.edu

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	Adopt a District Sustainability Policy		High	Ongoing			1-9	2/15/2013	Karen Powell	powellk@smccd.edu
4.4.2	Appoint a Sustainability Coordinator (and Establish an Office of Sustainability)		High	Planned			1-9	5/15/2013	José Nuñez	nunezj@smccd.edu
4.4.3	Appoint a Campus Sustainability Committee		High	Complete			1,2		José Nuñez	nunezj@smccd.edu
4.4.4	Funding and Resources to Support Sustainability	Energy Efficiency Fund	High	Complete			1-9	n/a	José Nuñez	nunezj@smccd.edu
4.4.5	Engage Sustainability Professionals as Appropriate		High	Complete			1-9	n/a	José Nuñez	nunezj@smccd.edu
4.4.7	Integrate Sustainability Planning into Campus Master Plans		High	Complete			1-9	n/a	José Nuñez	nunezj@smccd.edu

Section 4.5 ENERGY 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			4,5	1/15/2013	José Nuñez	nunezj@smccd.edu
4.5.4	Conduct Comprehensive Facility Energy Audits		High	Complete			4,5	n/a	José Nuñez	
4.5.5	Implement New and Existing Audit Recommendations		Med	In-Process			4,5	12/1/2013	EMC & Facility Managers (FM's)	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.5.6	Implement Ongoing Energy Monitoring		High	In-Process			4,5	12/1/2013	EMC	TBA
4.5.8	Identify and Take Advantage of Grant and Incentive Programs		High	Ongoing			4,5	n/a	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.5.10	Efficient Lighting and Lighting Controls		High	Ongoing			4,5	n/a	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.5.11	Install Energy Efficient HVAC Systems		High	Ongoing			4,5	na	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu

Sustainability Template Plan
Implementation Programs and Plans Checklist

District: San Mateo CCD
Campus: Skyline College
Project: Programs and Plans Checklist v3
Date: 4/9/2013

Back to Summary Tab

Priority Implementation Plans Indicated Below

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			2	n/a	José Nuñez	nunezj@smccd.edu
4.6.2	Install Energy Management Systems		High	In-Process			4,5	2013	EMC & Karen Powell	powellk@smccd.edu
4.6.3	Adjust Temperature Set Points and Schedule Operating Times		High	Complete			4,5	n/a	FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.6.5	Optimize HVAC Equipment Scheduling		High	Complete			4,5	n/a	FM's	powellk@smccd.edu;
4.6.6	Activate Energy-Saving Features for Appliances and Computers		Med	Complete			4,5	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			4,5	n/a	EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.6.8	Implement a Green Cleaning Program		High	Ongoing			4,7,9	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			4	n/a		
4.7.2	Implement Sustainable Design Practices		High	Complete			4	n/a		
4.7.3	Use an Integrated Systems Approach in Building Design		Med	Complete			4	n/a		
4.7.4	Hire Sustainable Design Professionals		High	Ongoing			4	n/a		
4.7.5	Commission New Buildings		High	Complete			4	n/a		

Sustainability Template Plan
Implementation Programs and Plans Checklist

District: San Mateo CCD
Campus: Skyline College
Project: Programs and Plans Checklist v3
Date: 4/9/2013

Back to Summary Tab

Priority Implementation Plans Indicated Below

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
4.8.1	Evaluate Clean Cogeneration and Renewable Energy Generation		High	Complete			5	6/1/2014	José Nuñez	nunezj@smccd.edu
4.8.5	Identify and Take Advantage of Grant and Incentive Programs	Co-gen.	High	Complete			5	n/a	EMC	TBA

Section 4.9 TRANSPORTATION, COMMUTING, AND CAMPUS FLEET & TRAVEL

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			8		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			1,2,8		Raymond Hernandez	hernandezr@smccd.edu
4.9.3	Encourage and Enhance Bicycling Options		High	Complete			1,2,8		Nick Kapp	kappn@smccd.edu
4.9.4	Improve Campus Fleet & Travel		High	Ongoing			8,9	n/a	José Nuñez	nunezj@smccd.edu
4.9.5	Enhance Student Distance Learning & Utilize Virtual Meeting Platforms		Med	Planned			1, 2,3		Sarah Perkins	perkinss@smccd.edu; vaskelis@smccd.edu

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
4.10.2	Implement Water Conservation Strategies		Med	Ongoing			1,2,6		EMC	TBA
4.10.3	Reduce Storm Water, Sewer Discharges, and Water Pollution		Med	Ongoing			1,2,6		EMC & FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu
4.10.4	Adopt Sustainable Landscaping Practices		High	Ongoing			2,6		FM's	powellk@smccd.edu; hawd@smccd.edu; hashizumej@smccd.edu

Sustainability Template Plan
Implementation Programs and Plans Checklist

District: San Mateo CCD
Campus: Skyline College
Project: Programs and Plans Checklist v3
Date: 4/9/2013

Back to Summary Tab

Priority Implementation Plans Indicated Below

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 4.11 SOLID WASTE REDUCATION AND MANAGEMENT										
4.11.1	Create Waste Reduction Goals		Med	In-Process			7	3/15/2013	SAN	
4.11.2	Maximize Programs Offered by Contracted Waste Hauler	2013 Waste Summit	High	In-Process			1,2,7	12/1/2013	District & SAN	
4.11.3	Reduce Waste Stream to the Landfill	Water bottle ban; Dining area; Paper waste	High	Ongoing			1,2,7	2013	Sabrina Lawrence-Gomez	slawrenc@usc.edu
4.11.4	Improve Existing Recycling Programs		Med	In-Process			1,2,7	2013	Sabrina Lawrence-Gomez	slawrenc@usc.edu
4.11.5	Collect and Sell or Dontate All Recyclable Material		Med	Complete			1,2,7	2013	SAN	
4.11.6	Green Waste and Food Waste Composting		Med	In-Process			1,2,7	2013	Sabrina Lawrence-Gomez	slawrenc@usc.edu
4.11.7	Adopt Construction and Demolition (C&D) Recycling		High	Complete			4,7	n/a	José Nuñez	nunezj@smccd.edu

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 4.12 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										

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