



CRAFTON HILLS COLLEGE



SAN BERNARDINO COMMUNITY COLLEGE DISTRICT  
**Sustainability Plan 2011**  
**DRAFT**

SAN BERNARDINO VALLEY COLLEGE





## Message from the Chancellor

The San Bernardino Community College District is proud to join with colleges and universities across the state in an effort to lessen our environmental impact and to improve the quality of life for our students, faculty and staff and for those in our communities. This Sustainability Plan is our first venture into planning specifically how and over what time line we will achieve those goals.

Our Board of Trustees approved the Sustainability Policy and Procedure on December 9, 2010, which called for the development of this plan as a means of moving our District down the path of becoming more responsible global citizens. We are striving to encourage our campus communities to be mindful of the impacts we have on each aspect of the world around us, through LEED design in our new buildings, energy conservation and the use of alternative energies, water conservation, waste management and recycling, through transportation agreements and through our business practices and academic instruction and workforce trainings.

We have already started to “walk the walk” – through our pilot program with Omnitrans Transportation, which permits our students to ride the buses free, not just to class and back but everywhere Omnitrans runs, with just a swipe of their student ID card. With more than 20,000 students at our two colleges, this can free up parking spaces and best of all, reduce gas and oil consumption and reduce noxious emissions into the environment because of the lessened numbers of vehicles on the road. Supporting the use of mass transportation is a ‘win-win’ for everyone in the community.

Both campuses are embarking on solar panel usage and building LEED-certified buildings, with the help of the community through the Measure M and Measure P bonds. Crafton Hills College (CHC) will eventually be completely off the electricity grid, possibly generating more solar energy units than it can even use. San Bernardino Valley College (SBVC) has already completed their first LEED-certified building, the Physical Sciences Building. Both colleges also have very active student environmental clubs.

Training the next generation of Green workers is a vital aspect of our Plan, and SBVC is teaching the Fundamentals of Solar Energy as part of an associate’s degree in Electronics, and CHC offers an associate’s in Environmental Science. Our Economic Development and Corporate Training Division is one of the few in the nation offering Nanotechnology Training and “Green Collar” job training through the Clean Energy Workforce Training Program, among others.

Please join us in helping make San Bernardino County and the San Bernardino Community College District leaders in sustainability and a healthy environment.

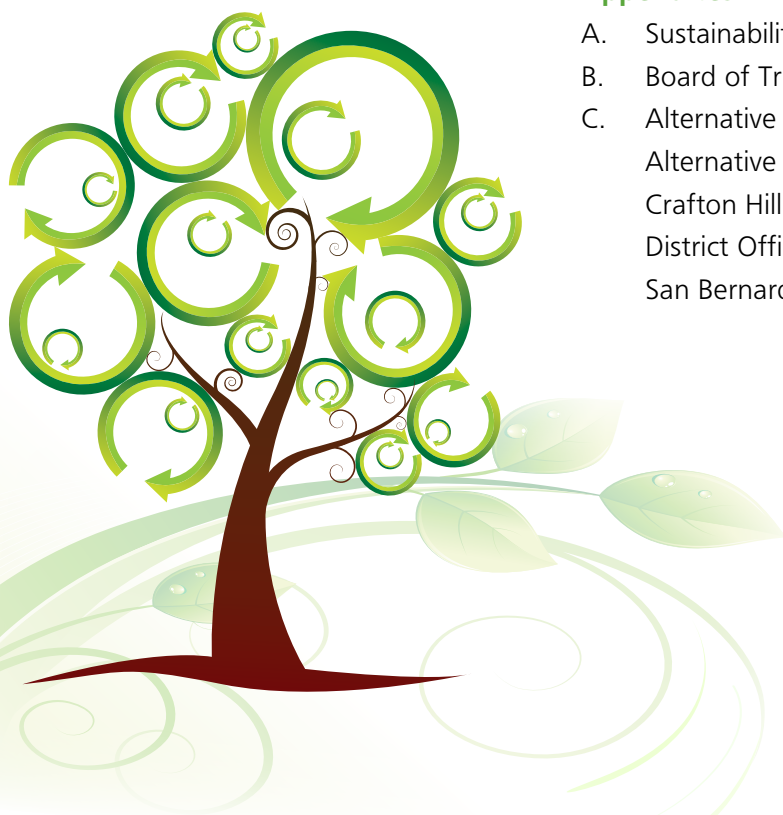
Bruce Baron  
Chancellor





# Table of Contents

<b>Background</b> .....	2
<b>Introduction</b> .....	3
Sustainability	
Successful Leadership in Implementing Sustainability	
Engagement of Stakeholders	
Board of Trustees Action	
<b>San Bernardino Community College District</b> .....	5
<b>Sustainability Plan</b>	
Vision	
Organization of Plan	
<b>Goals</b> .....	6
Create a campus-wide culture of sustainability.....	6
Incorporate sustainability into the development of new and renovated facilities .....	7
Invest in renewable energy and energy efficiency programs .....	9
Develop a more sustainable transportation system .....	10
Develop a more sustainable system for the purchase of materials and supplies .....	12
Enhance curricular educational opportunities for sustainability.....	13
Establish a commitment to climate action.....	15
<b>Appendices</b> .....	17
A. Sustainability Plan Committee Membership-2011	
B. Board of Trustees Board Policy and Administrative Policies	
C. Alternative Energy Concept Plans:	
Alternative Energy Plan Summary Powerpoint	
Crafton Hills College	
District Offices	
San Bernardino Valley College	





# Background

The San Bernardino Community College District is one of 72 community college districts within the California Community College system, the largest educational system in the world, which encompasses 112 community colleges. The District has an 85 year history of providing its community and students with quality and affordable vocational certificates, associate’s degrees, and preparation for transfer to a four year college or university through San Bernardino Valley College (SBVC) and Crafton Hills College (CHC). In addition, the Economic Development and Corporate Training Division (PDC) and KVCR TV-FM provide professional development and cultural and educational information to the community at large.





# Introduction

Over the past several years, sustainability has increasingly become integrated into the strategic initiatives of higher education institutions. Although a number of institutions have established sustainability goals to address sustainability on a broad level, more frequently higher educational institutions have pursued individual and incremental efforts, which promote environmental values. This Sustainability Plan will enable the San Bernardino Community College District (“District”) to address sustainability in a holistic manner, while adapting sustainability principles to local conditions and needs.

## Sustainability

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

The recognition that there are negative consequences from previous and current human activities (as well as financial costs) has spurred higher education practices to begin to implement practices, which reduce or mitigate such consequences. These practices have ranged from constructing buildings in a more environmental friendly manner (e.g., LEED) to modifying campus operations to reduce the impact upon environmental resources.

As a responsible member of the world community, the San Bernardino Community College District is pursuing a commitment to environmental stewardship through the development of a Sustainability Plan.





## Successful Leadership in Implementing Sustainability in Higher Education

A number of key elements have been identified which are necessary for the successful development and implementation of sustainability plans in higher educational institutions:

- Providing active leadership on the sustainability program by the chancellor (or president) on an ongoing basis.
- Actively engaging faculty, students and staff in the sustainability program. In many cases, students have been a catalyst to take bold steps toward sustainability.
- Building awareness and support among campus programs and departments of the sustainability program.
- Using milestones, symbolism, and public events to underscore the institutional significance of sustainability.
- Fostering expectations, practices and rules by college/university leadership, which reinforce the importance of implementing sustainability principles.
- Working with external organizations on sustainability programs.

These elements provided the foundation for developing the San Bernardino Community College District Sustainability Plan.

## Engagement of Stakeholders

Engagement of stakeholders within the District and the Colleges has been accomplished through the establishment of a District-wide Sustainability Steering Committee.

The Sustainability Steering Committee provided input and guidance to the development of the Sustainability Plan. This role included articulating a vision for the sustainability program and recommending goals and strategies to implement the vision. Input from stakeholders on the draft plan will be obtained during the Fall 2011 semester.

## Board of Trustees Action

As a member of the greater San Bernardino community, the San Bernardino Community College District plays a critical role in the educational and economic health of the region. As part of this responsibility, the District's Board of Trustees have recognized the importance of addressing sustainability in daily operations to provide stewardship of the environment, as well as to provide students with the knowledge and skills to succeed in the green economy. In December 2010, the Board approved Board Policy and Administrative Policies which enables the District to provide a leadership role in sustainability and guide future sustainability efforts. These policies are included in the appendix of this Sustainability Plan.



# The San Bernardino Community College District Sustainability Plan

## Vision for Sustainability at SBCCD

The District and the Colleges will nurture an ethic of environmental stewardship by exercising an active leadership role in promoting sustainability values within the culture of District and College communities, integrating sustainable principles within institutional programs and practices, and partnering with the local community. Sustainability is both an institutional and individual responsibility.

## Organization of the Plan

The Sustainability Plan will assist in guiding the District's future sustainability efforts at the District, and at Crafton Hills College and San Bernardino Valley College. The Plan is based upon the following goals:

- Create a campus-wide culture of sustainability. Incorporate sustainability into the development of new and renovated facilities.
- Invest in renewable energy and energy efficiency programs.
- Develop a more sustainable transportation system.
- Develop a more sustainable system for the purchase of materials and supplies.
- Enhance curricular educational opportunities for sustainability.
- Establish a commitment to climate action.

Strategies are included in the Sustainability Plan for each of the above goals.





# Goal 1: Create a Campus-wide Culture of Sustainability

It is critical to build awareness and support among campus communities for sustainability and to actively engage students, faculty and staff in the development of this sustainability program.

## Existing Strategies

The District established a Sustainability Committee in 2011 to help guide the development of this Sustainability Plan.

## Recommended Strategies

The establishment of a sustainability “theme” year will be considered, which would provide for courses across the curriculum to highlight sustainability.

The District will also consider sponsoring campus events relating to sustainability in the same time frame.

The District will educate the College and District communities on the positive sustainability benefits through the District’s website, a District Sustainability Day, and by other appropriate means.

Campus communities will be educated to be “power wise” and to conserve energy.

New buildings should be a teaching tool which educates the campus and external communities on sustainable design. Examples include exposing sustainable elements of the building or the site and communicating such elements through websites, dashboards, and displays.







## Goal 2: Incorporate Sustainability Into the Development of New and Renovated Facilities

It has been estimated that buildings account for 36% of total energy use, 30% of greenhouse gas emissions, 30% of raw material use, 30% of waste output, and 12% of potable water consumption (UC Davis, Blueprint for a Green Future, January 2006). As a result, buildings have a major impact upon the environment. Furthermore, the indoor environmental quality of buildings has an effect upon human health, productivity and learning. It is thus critical to address the indoor environment of the built environment in a sustainability plan.

It is the intent of this goal to create superior spaces for work and study that effectively support occupants' health, productivity and well-being, and are environmentally responsible.

### Current Strategies

The Leadership in Energy and Environmental Design (LEED) Green Building rating system is a voluntary, consensus-based national rating system for developing high-performance, sustainable buildings. LEED addresses all building types and emphasizes state-of-the-art strategies in five areas: sustainable site development, water savings, energy efficiency, materials and resources selection, and indoor environmental quality. The highest LEED rating is Platinum, followed by Gold, Silver and Certified. The District is currently in the process of obtaining LEED certification for two Measure P bond projects.



ENERGY  
EFFICIENCY



## Recommended Strategies

The District will pursue the Silver rating (or higher) for Measure M bond projects.

The District will conduct an eco-design charette, which would include architectural firms assigned to capital projects, to develop a number of key common green building elements which will be integrated into all projects.

New buildings will address sustainable site planning through such features as: addressing the placement of building and design of building envelope for optimal energy performance, conserving water resources, and considering environmental and climatic conditions (e.g. solar orientation, sun shading).

Landscaping implemented through the building program will have low water and maintenance requirements, help shade buildings, and be attractive. The Science departments of Colleges will be consulted on major landscaping improvements.

New buildings and major renovated buildings will more efficiently utilize materials and resources through such actions as selecting materials with low life-cycle costs, utilizing recycled, reused, repurposed and rapidly renewable materials, and developing construction waste management plans which encourage reuse and recycling of materials. In addition, buildings should be designed such that interior spaces are flexible and able to accommodate multiple uses without major remodeling, as appropriate.



New buildings and major renovated buildings will use similar fixtures/equipment to the extent feasible to minimize the need to purchase and store multiple parts.

New buildings and major building renovations will utilize water more efficiently through such measures as utilizing high efficiency water fixtures, high efficiency landscaping, and sustainable wastewater technologies (e.g., submetering/monitoring water, capturing rainwater, using gray water).



In addition, new building projects will address the management of stormwater (e.g., decrease runoff, capture/reuse water).

New buildings will provide a healthy indoor environment through such elements as providing appropriate ventilation, ensuring good visual quality (e.g., daylighting), limiting VOC emitting materials, and providing proper acoustical conditions.

Equipment or containers should be provided to allow for the efficient and effective collection of recycled materials.





## Goal 3: Invest in Renewable Energy and Energy Efficiency Programs

The use of energy from conventional sources results in a dependence upon a limited available resource (i.e., carbon fuels), as well as significant environmental impacts (e.g., air and water pollution, greenhouse gas emissions).

It is the intent of this goal to reduce the use of electricity and invest in alternative energy sources (e.g., solar PV) to reduce the reliance upon carbon fuels, and thus help address the environmental impacts of energy use.

### Current Strategies

In 2011, the San Bernardino Community College District completed alternative energy plans for San Bernardino Valley College (SBVC), Crafton Hills College (CHC), and District facilities, which are intended to reduce electrical consumption and peak demand, reduce greenhouse gas emissions, and minimize the operating fiscal impact from future electrical rate escalation. The Alternative Energy Plans are intended to reduce the reliance of the District upon the electrical grid system by over 50% through implementation of energy efficiency, central plant/thermal energy storage, and renewable energy projects.

### Recommended Strategies

Alternative Energy Plans for San Bernardino Valley College, Crafton Hills College, and District facilities will be implemented through the Measure M bond program, California Community Colleges-Investor Owned Utilities (CCC-IOU) Partnership incentive program, and other financial programs (e.g., California Solar Initiative).

New buildings and major renovated buildings will utilize energy more efficiently through such measures as maximizing energy efficient design, providing energy efficient equipment and appliances, and monitoring energy use of individual buildings. In addition, the District will pursue financial incentives through the CCC-IOU Partnership program to allow for the more efficient design of new and renovated buildings.



## Goal 4: Develop a More Sustainable Transportation System

Transportation to and from the Colleges and the District offices by students, faculty and staff is predominantly accomplished through the use of single occupant vehicle (SOV) travel. Due to environmental impacts associated with such travel, it is critical to develop and implement Transportation Demand Management (TDM) strategies which reduce overall travel demand and SOV travel in particular. In addition, other strategies can be employed which lessen the frequency of traveling to the District or to Colleges. Ultimately, these strategies will result in more sustainable travel behavior due to the improvement of access for the District and College communities, reduction in traffic congestion, improvement of air quality, and reduction in fuel use.

It is the intent of this goal to reduce the amount of air pollution, traffic congestion, and energy consumption by providing safe and accessible alternative transportation options and increasing awareness of such options to the District and College communities.

### Current Strategies

The District is currently working with Omnitrans to implement a College Free Pass pilot program, which would provide free bus passes for students at both colleges during an academic year. The intent of the program is to establish a pattern of transit use among students, and thus encourage continued use of transit. At the end of the academic year, students will be given the opportunity to vote on a measure to assess a transportation fee to all students to fund the College Free Pass program on a long-term basis.





## Recommended Strategies

The District will actively work with Omnitrans to encourage the location and scheduling of bus routes which provide the maximum extent of convenience for students, faculty and staff at the Colleges.

The District will investigate the feasibility of implementing actions which encourage the use of alternative transportation, such as the addition of carpool/transit preferred parking, the provision of a guaranteed ride home for those who need to respond to unexpected personal emergencies, the establishment of a “zipcar” program which provides vehicles for use on an hourly and daily basis, and the provision of a rideshare matching program. The District may wish to investigate the use of a “zimride” rideshare matching system which uses a social network platform to allow individuals to view profiles of potential rideshare partners for common interests.

The District will educate the College and District communities on the availability of alternative transportation opportunities and the positive sustainability benefits through the District’s website, a District Sustainability Day, and by other appropriate means.

The District will investigate the feasibility of developing a bike rental program which would allow students, faculty or staff to rent bicycles to travel across campus—rather than using a car. However, the use of bikes should not interfere with the safety of pedestrian access.

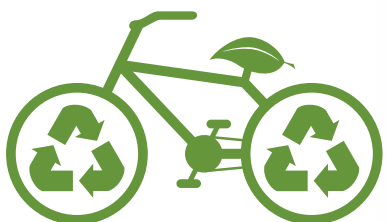
Site and landscaping improvements on campuses will be provided through the building program to provide a more “walkable” and pleasing environment.

The expansion of online educational and administrative services will be encouraged, as appropriate, to reduce the frequency of traveling to campuses.

The potential for revising the schedule of work days/hours and implementing telecommuting work programs will be considered, provided that the level and quality of services at the colleges are not compromised.

The District will develop a plan for the potential conversion of fleets to alternatively fueled vehicles and/or fuel efficient vehicles, as appropriate.

The provision of electrical charging stations for vehicles will be considered.





# Goal 5: Develop a More Sustainable System for the Purchase of Supplies and Materials

Supplies and materials are purchased annually to support the operations of the Colleges and the District. The District has an opportunity to have a positive effect through sustainable purchasing policies and practices to address the manufacturing, transportation and disposal of products.

It is the intent of this goal to reduce the environmental impacts associated with purchasing decisions.

## Current Strategies

District administrative procedures were revised in 2011 to include a guideline which provides that equipment and appliances acquired by the District will be Energy Star and meet Energy Star specifications for energy efficiency, if technical specifications can be met.

## Recommended Strategies

The District will develop Environmentally Preferred Purchasing (EPP) procedures, with input from stakeholders, which reduce the negative impact on human health and/or the environment as compared to other similar products and services that serve the same purpose. Such procedures reduce the resource impact associated with the supply, purchasing, use and disposal of products; reduce waste in the production and use of products; and properly treat and/or recycle waste content during the production or lifetime of products.

The District will evaluate the potential of specifying that desktop computers, computer notebooks and monitors meet Electronic Product Environmental Assessment Tool (EPEAT) certification at the bronze, silver or gold level. EPEAT is a global registry that addresses the use of environmentally sensitive materials, recycled content, end of life use or disposal, product longevity, energy use, and packaging content associated with electronic equipment.

Cleaning supplies which are purchased by the District will be Green Seal certified. Green Seal offers third-party certification for products and services which meet specified sustainability standards.

Purchasing procedures will be developed by the District which encourages the use of low volatile organic compound (VOC) content (in furniture, carpeting and paint) in new and existing facilities.

Procedures will be developed by the District to assist in implementing EPP policies, such as encouraging the purchase of products which are durable and long lasting, contain recycled content, are biodegradable, and have minimal packaging.

The District will investigate the possibility of donating leftover food products to food banks and/or for composting purposes.





## Goal 6: Enhance Curricular Educational Opportunities for Sustainability

It is the responsibility of higher education institutions to provide students with a sense of environmental responsibility and the knowledge and skills to address sustainability in their chosen field of work, as well as to help create a healthy economy, society and environment.

Courses at the District should specifically help students achieve the following:

- Understand and be able to effectively communicate the concept of sustainability.
- Become aware of and explore connections between the student's course of study and sustainability.
- Develop technical skills or expertise necessary to implement sustainable solutions.
- Understand the way in which sustainability thinking and decision-making contributes to the process of creating solutions for current and emerging social, economic and environmental issues.

### Current Strategies

The water supply technology program, career technical programs, and a class on the fundamentals of the solar industry at San Bernardino Valley College provide skills used in green technologies.

The District Economic Development and Corporate Training (EDCT) program currently provides customized performance improvement training solutions and short-term professional development services for preparing the workforce for jobs in the high demand and high growth industries.





## Recommended Strategies

The District will develop a plan to implement strategies for integration of sustainability and green technologies into the curriculum. Examples of strategies used in higher education include:

- Infusing sustainability themes into the curriculum.
  - Developing sustainability-focused courses that concentrate on the concept of sustainability, and/or
  - Developing sustainability-related courses that incorporate sustainability as a distinct course component.
- Considering the possibility of allowing sustainability-focused courses to apply toward general education requirements.
- Creating opportunities for students to shadow professionals working in sustainability fields.
- Showcasing capital projects which implement sustainability principles.

The District will provide support to faculty to enhance their ability to embrace sustainability. A plan shall be developed to achieve this objective through such strategies as:

- Providing diverse opportunities for faculty to learn about sustainability and how it can be integrated into courses.
- Developing incentives for faculty to incorporate sustainability into courses.
- Sponsoring campus-wide events to recognize faculty and student efforts in sustainability.

The EDCT program at District will continue to pursue grant opportunities which involve workforce training in “green” jobs.

The EDCT program will integrate sustainability or green principles into workforce training courses.







## Goal 7: Establish a Commitment to Climate Action



The American College and University Presidents' Climate Commitment is an effort to address global warming by obtaining commitments from institutions to reduce greenhouse gas emissions. For institutions which sign this Commitment, they are responsible for the development of a Climate Action Plan to reach climate neutrality.

A number of reasons are evident for considering joining the American College and University Presidents' Climate Commitment, including:

- Recognition of the scale and speed of global warming
- Potential to obtain positive economic, environmental, health and social effects (e.g., energy independence) Build upon current sustainability efforts
- Ability to act as role model for community by providing "leadership by example"
- Power of collective action by higher education institutions
- Share best practices and resources among higher education institutions
- Ability to develop a flexible and non-prescriptive program
- Provide faculty and students with knowledge and skills for new challenges of 21st century.

The Climate Commitment does not involve legal or financial obligations to implement the commitment.



## Details of the Commitment

By signing the American College and University Presidents' Climate Commitment, a higher education institution commits to the following:

- Recognizing the need to reduce global emission of greenhouse gases by 80% by mid-century
- Addressing global warming through institutional commitments to reduce and neutralize greenhouse gas emissions
- Pledging to make a plan to pursue climate neutrality (i.e., elimination of greenhouse gas emissions) in a reasonable time as determined by the institution.
- Providing a target date for achieving climate neutrality

## Recommended Strategies

The District plans to sign this commitment in 2011. Many of the elements of the Sustainability Plan will reduce greenhouse gas emissions, and will thus ultimately be integrated in the Climate Action Plan.

The District will begin to implement this Commitment during 2011 through the following actions:

- Designate the Sustainability Committee as the institutional structure to guide the development and implementation of the plan.
- Begin a comprehensive inventory of greenhouse gas emissions.
- Adopt a policy that the construction of new buildings will be built to the U.S. Green Building Council's LEED Silver standard or greater.

Final draft: 5/5/11





# Appendix A

## **Sustainability Plan Committee Membership February 25, 2011**

Bruce Baron, Chancellor

Charlie Ng, Vice Chancellor, Fiscal Services

Gloria Harrison, Crafton Hills College

Michael Strong, Crafton Hills College

Matthew Adams, Crafton Hills College

Clare Hinkle, Crafton Hills College

James Hansen, San Bernardino Valley College

Susan Bangasser, San Bernardino Valley College

Algie Au, San Bernardino Valley College

Grayling Eation, San Bernardino Valley College

[http://www.sbccd.org/~media/Files/SBCCD/District/District\\_Committees/Sustainability\\_Committee/Sustainability%20Plan%20Committee%20Membership%202-25-11.ashx](http://www.sbccd.org/~media/Files/SBCCD/District/District_Committees/Sustainability_Committee/Sustainability%20Plan%20Committee%20Membership%202-25-11.ashx)



# Appendix B

## **San Bernardino Community College District Board Policy 3580 Sustainability**

As a member of the greater San Bernardino community, the San Bernardino Community College District plays a critical role in the educational and economic health of the region. As part of this responsibility, the District recognizes the importance of addressing sustainability in its daily operations to provide stewardship of the environment, as well as to provide students with the knowledge and skills to succeed in the green economy.

The District will provide a leadership role in sustainability through several means:

- Developing a District/College sustainability plan which concisely identifies the vision for sustainability, guiding principles and actions necessary to implement the plan.
- Actively engaging faculty, students and staff in preparation and implementation of the sustainability program.
- Building greater awareness of sustainability within the colleges and within the greater San Bernardino community.
- Working with other agencies on potential funding opportunities.

APPROVED: December 9, 2010



## San Bernardino Community College District Administrative Procedure 3580 Sustainability

The District Office and the Colleges will develop a Sustainability Plan with participation by a committee comprised of representation from faculty, classified staff, students, College Presidents, and senior administrators, with input from the campus communities through public forums or other means.

The Sustainability Plan will guide future sustainability efforts at the District and at the Colleges. The plan may be organized around the following categories:

- Green Buildings (Leadership in Energy and Environmental Design)
- Energy Conservation and Alternative Energy
- Water Conservation
- Waste and Recycling
- Transportation
- Business Practices and Policies

- Academic Instruction and Workforce Training
- Climate/Greenhouse Gas Emissions (Presidents' Climate Commitment)
- Communication and Outreach
- Funding (Internal and External Sources).

The Chancellor will submit the Sustainability Plan to the Board for its review and provide annual reports on the progress of sustainability efforts.

APPROVED: December 9, 2010



## Appendix C:

### **Alternative Energy Plan Summary Powerpoint (December 10, 2010)**

San Bernardino Community College District

Alternative Energy Concept Plans

Crafton Hills College (January 12, 2010)

District Offices (January 7, 2011)

San Bernardino Valley College (January 12, 2010)

[http://www.sbccd.org/District\\_Faculty\\_-a-\\_Staff\\_Information-Forms/  
District\\_Committee\\_Minutes/Sustainability\\_Plan\\_Committee.aspx](http://www.sbccd.org/District_Faculty_-a-_Staff_Information-Forms/District_Committee_Minutes/Sustainability_Plan_Committee.aspx)