



Napa Valley Community College Sustainability Plan

Produced by Facilities Services and the Facilities Committee

April 29, 2014

INTRODUCTION

Higher education institutions have taken an increased leadership role regarding sustainability and have integrated sustainability goals into strategic initiatives. Although some institutions have addressed sustainability on a broad, district-wide level, most institutions, including Napa Valley College, have carried out individual and incremental efforts that promote various components meeting sustainability objectives. This Sustainability Plan will enable Napa Valley Community College to address sustainability in a holistic manner, while adapting our efforts and principles to local conditions and needs.

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

Sustainability is defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” The purpose of this Sustainability Plan is to prepare Napa Valley Community College for the anticipated environmental and regulatory challenges of the 21st century, to guide the campus towards becoming a more sustainable institution, and to prepare students for the green economy.

BACKGROUND

Napa Valley College has been active for many years in energy conservation, energy efficiency and sustainability. In fact, the College began installing energy management system controllers in 1981 and our first thermal storage system was commissioned in 1985. As new technologies emerged, the District staff has evaluated the options these technologies and systems presented and weighed the benefits for Napa Valley College.

With the passage of Measure N in 2002, Napa Valley College began many several infrastructure, remodeling and new building projects.

Sustainability Measures and Practices

(Currently in place)

Energy Conservation:

- Photovoltaic installation 1.18 megawatt online since May, 2006
- Central hot water heating plant Oct, 2006
- Dedicated high efficiency boilers for swimming pool water Oct, 2006
- Central Chiller plant and thermal storage system online since Feb, 2007
- Day lighting usage Life Sciences building, print shop, ceramics building, LLRC
- Building mechanical upgrades (HVAC, VFDs, DDC, indirect cooling, radiant heating and cooling, etc.)
- Enhanced bus stop, pedestrian mall and bicycle pathways

Re-use/Recycling

- Mixed stream recycling throughout campus (glass, aluminum, plastic, mixed paper, cardboard)
- Specific stream recycling:
 - o Tires
 - o Batteries
 - o Telephone books
 - o Metal
 - o Wood
 - o E-waste
 - o Composting pilot program for paper towels

Landscaping

- Composting yard waste
- Mulching mower use on all athletic fields
- Drip irrigation
- Reclaimed water use on most irrigation
- Sheep for weed abatement in solar field
- Riparian corridor constructed to enhance wetland plants and animals

PLAN DEVELOPMENT

On April 11, 2013, Napa Valley Community College Board of Trustees made a commitment to improve the campus's sustainability by adopting BP 3910; Environmental Stewardship and Sustainability. This marked the beginning of the Napa Valley Community College Sustainability Plan and the establishment of the Campus Sustainability Committee to spearhead this effort.

The Campus Sustainability Committee followed the process and guidelines outlined on the Chancellor's Office website including the Sustainability Plan Template and samples from Citrus Community College and San Bernardino Community College District to develop the Sustainability Plan.

In order to manage the process and to develop this Sustainability Plan, the campus established the Campus Sustainability Committee, consisting of faculty, staff, and students to provide representation from the various campus stakeholders. The Committee is responsible for reviewing and updating the sustainability plan as needed. The Committee will also offer guidance as appropriate to campus groups in developing and implementing the sustainability programs and projects described in this plan to achieve the sustainability goals.

The Campus Sustainability Committee Chair is Matt Christensen, Director of Facilities Services, and can be reached at mchristensen@napavalley.edu or 707-256-7580.

VISION

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

PLAN ORGANIZATION

The Sustainability Plan will assist in guiding the District's future sustainability efforts. The plan is based on 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
- Addenda and Supporting Benchmarks

CREATE A CAMPUS-WIDE CULTURE OF SUSTAINABILITY

It is critical to build awareness and support among campus communities and engage students, faculty and staff in the implementation of the sustainability plan. The responsibility of each individual must be encouraged, instilling the desire to reduce one's own carbon footprint.

Recommended Strategies

The District will educate the college community on the positive sustainability benefits through the College website and other appropriate means.

The Sustainability Committee will consider sponsoring events and themed activities to increase exposure and highlight existing sustainable curriculum and programs.

Campus communities will be educated on being "power wise" and to conserve energy and resources. A mechanism to report waste will be developed.

New and renovated buildings should be teaching tools which educate the campus and external community on sustainable design. These features should be highlighted on the website whenever possible.

INCORPORATE SUSTAINABILITY INTO THE DEVELOPMENT OF NEW AND RENOVATED FACILITIES AND LANDSCAPE FEATURES

It has been estimated that public buildings account for 36% of total energy use 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. Additionally, the indoor environment has a significant effect on health, productivity and learning.

It is our intent to create superior spaces for work and learning that effectively support occupants' health, productivity and well-being, and are environmentally responsible.

Current Strategies

Many of our current strategies are listed in the Background section summary. Though LEED (Leadership in Energy and Environmental Design) certification was not formalized during Measure N construction, Silver level was used as the baseline for new building design. Energy conservation and building management controls, water conservation and recycled or recyclable products were used during construction.

Recommended Strategies

The District will pursue Silver LEED rating (or higher) for future construction projects.

The appropriate stakeholders will be given opportunities to contribute ideas for building design.

Landscaping features will have low water and maintenance requirements; help building heating and cooling properties and support sustainable practices.

The District will highlight and further develop exterior natural features along the greenbelt through campus to include opportunities for outdoor education as well as creating areas for the campus community to interface with our unique environment.

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 with encourage reuse and recycling materials. Buildings should be designed so that interior spaces are flexible and able to accommodate multiple uses without major remodeling when 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 and supplies.

Invest in Renewable Energy and Energy Efficiency Programs

The use of energy from conventional results in a dependence upon an available but limited resource (i.e., carbon fuels) as well as significant environmental impacts.

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

Current Strategies

During design phase and implementation of Measure N construction, alternative energy options were considered for all projects. The central boiler plant was converted to hot water boilers from steam boilers to more efficiently heat the campus. Nearly all building projects were scheduled to incorporate solar technology. Because utility incentives were at an all-time high, the decision was made to install one large photovoltaic field to capture as much funding as possible. Our 1.18 Megawatt solar field went online May, 2006 and was the 3rd largest in the state of California at the time.

Daylighting was incorporated into the design of the Life Sciences building, the Ceramics building, the North Gym, and the LLRC. Digital building controls have been included in all projects further enhancing the energy savings during building operation as well as increasing the comfort of our students and staff.

Recommended Strategies

Additional construction and renovation projects need to be designed and built with energy conservation and efficiency in mind. Further energy reduction measures using special funding such as Prop 39 should be put in place to further reduce energy use. LED lighting projects, equipment modernization and replacement, and additional building control should be carried out when possible.

Wind technology as well as more solar installations should be examined as possible energy sources on the main campus as well as the Upper Valley Campus in St. Helena.

Develop a More Sustainable Transportation System

Transportation to and from the College campus by students and staff is predominately done in single passenger vehicles. Although there has been a marked improvement in ridership via Napa Transit, additional alternative means of transportation will result in more sustainable travel behavior due to improved access to the College. Given the College's limited parking, ride sharing and alternative means need development.

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 College campus.

Current Strategies

Enhancements were made to the Napa Transportation bus stop that has resulted in increased ridership. Additional expansion of bus service has added routes to the southern end of the county to American Canyon and Vallejo as well as a daily route to Suisun City. Improved bicycle paths were added to the North end of the campus, creating a safer campus route. Challenges still exist getting the cyclist to the campus property line.

Recommended Strategies

The College will continue to work with Napa Transportation to investigate a northbound stop as well as enhancing ridership.

The College will educate the campus community on the availability of alternative transportation opportunities and the positive benefits through the College website, sustainability activities and other appropriate means.

The College will continue its efforts to develop safe pathways to the city connections at the north end of College property and work to mitigate the dangers of the Imola intersection.

Expansion of online educational administrative services will be encouraged as appropriate to reduce the frequency of traveling to campus.

The College will continue developing enhancements to student activities and food service options on campus including student union facilities. Current limitations in food service and lounge space increase the likelihood that students leave campus between class breaks to get food from nearby shopping areas and drive unnecessarily.

Electric vehicle charging stations will be considered as well as alternative fuel options for College vehicles.

Develop a System for the Purchase of More Sustainable Supplies and Materials

Supplies and materials are purchased annually to support the operations of the College. 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.

The District will continue to pursue and implement efficient procurement processes that utilize technology to reduce the use of paper.

Current Strategies

The District has begun phasing out inkjet printing and is developing strategies to increase the use of network printing to minimize desktop printers. Two sided copying and electronic documents are encouraged for all committee meetings.

NVC includes environmental attributes in purchase decisions, including energy star and EPEAT (Electronic Product Environmental Assessment Tool) registered equipment. Dell, one of our primary computer vendors, consistently leads other manufactures in this area. Their equipment has low power consumption to performance ratios, has comprehensive power saver savings, is manufactured responsibly, and is shipped in recycled or recyclable materials (for example, no polystyrene foam as other vendors use).

Additionally, our equipment disposal is done sustainably with donation or repurposing as preferred paths. Used equipment not suitable for donation or repurposing is sent to e-waste processing.

The District has implemented a pilot composting program with Napa Valley Garbage Service for paper hand towels as part of the commercial food composting process.

The Facilities Services department uses Integrated Pest Management principles in weed, insect, and rodent control to minimize chemical use.

Recommended Strategies

The District will evaluate the potential of specifying that desktop computers, portable computer devices, and monitors meet (EPEAT) certification.

Custodial staff will continue to evaluate Green Seal cleaning products for effectiveness and make recommendations for alternative cleaning methods when appropriate.

The District will develop guidelines for Low VOC (volatile organic compounds) content purchasing procedures to minimize VOC content for new furnishings for new buildings and replacement items.

Enhance Curricular Educational Opportunities for Sustainability

One of the responsibilities of higher education is to provide students with a sense of environmental responsibility and the knowledge and skills to help create and maintain a healthy economy, society, and environment.

Our institutional learning outcomes listed below outline Napa Valley College's commitment. Please refer to <http://www.napavalley.edu/AboutNVC/Planning> for more information about ILOs and individual department and course SLOs.

Students who receive a degree from Napa Valley College will demonstrate the following:

1. Communication & Collaboration
2. Critical Thinking & Information Competency
3. Global Awareness & Civic Responsibility
4. Personal Responsibility

Current Strategies

There are several degree or certificate programs with an emphasis on sustainability through course content and learning outcomes including Associate of Science in Natural Science and Mathematics, Environmental Science Certificate, and Associate of Science in Viticulture and Winery Technology.

Recommended Strategies

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

- Infusing sustainability themes into the curriculum such as developing sustainability focused courses and/or courses with a distinct sustainability component.
- Consider the possibility of allowing sustainability focused courses to apply toward general education requirements.
- Showcasing capital projects which implement sustainability principles.
- Explore opportunities to use our unique natural environment along the campus greenbelt.