

1. EXECUTIVE SUMMARY

The purpose of this Executive Summary is to highlight some of the key information contained in this report, including CCSU's current sustainability successes, as well as the top recommendations for areas of improvement.

1.1 CCSU'S SUSTAINABILITY SUCCESSES

In general, CCSU has been involved in sustainability initiatives for years, the majority of which have not historically been widely publicized or communicated to the University or outside communities. The limited amount of publications regarding these initiatives may have led people to assume that the University is not committed to sustainability, but this is not the case. While this report includes recommendations to help the University become more sustainable, it also identifies and establishes a baseline of some of the excellent initiatives that CCSU has already implemented successfully. These praise-worthy initiatives should be communicated to the University community. Some highlights of CCSU's successful sustainability initiatives are summarized below:

- **New Energy Center.** CCSU makes energy conservation a key priority and has a long history of prioritizing conservation and efficiency. The new, state-of-the-art, efficient Energy Center illustrates CCSU's dedication to energy conservation, particularly because it has cogeneration capabilities. The Energy Center is more efficient and cleaner-burning compared to regional plants and the antiquated 50-year old Power House that it replaced. The Energy Center project began with an evaluation of CCSU's infrastructure and the development of an energy conservation plan in the mid-1990s. Facilities Management Staff have worked tirelessly to develop and build the Energy Center. Like most college campuses in New England, some of the buildings at CCSU are old and were built to inefficient standards. CCSU is committed to continuous improvement and has systematically identified key buildings and systems in need of renovation and upgrades to new, more efficient standards. All new buildings at CCSU are tied into the Energy Center for heat and chilled water. As older buildings are renovated, every effort is made to upgrade mechanical systems, lighting, windows, doors, and insulated roofing to the extent that upgrades are technically and economically feasible. In addition, CCSU is directly involved in creating newer, greener standards for the CSU System and the State.
- **Recycling Program.** CCSU currently recycles cardboard, white paper, and scrap metal. The campus also recycles fluorescent lamps, batteries, used oil, and other items regulated as universal waste. CCSU's current recycling rate of 31% would have put it in 13th place out of the 45 schools participating in the nation-wide competition called Recyclemania in 2006 (if CCSU had participated). While CCSU's recycling program could be improved, the fact that the University is already involved in recycling a variety of waste streams should be publicized.
- **Water Conservation Measures.** CCSU has already enacted water conservation measures across campus. CCSU currently has individual water metering at each building, parking garage, and other water-using features on campus (this is not the case at most college campuses). The metering helps determine water usage issues, and the progress of current conservation efforts. The majority of residences on campus (five out of nine, or 56%) currently have low-flow features installed. These include low-flow showerheads and faucets, as well as reduced flush toilets. Vance Residence Hall also has low-flow showerheads, toilets.
- **Green Purchasing Practices.** CCSU's Purchasing Department has developed quite a few procedures to reduce waste, encourage recycling, and promote sustainability. One example is adding language to promote sustainability to some of the University's contracts. Also, where

possible, Purchasing makes an effort to buy greener office supplies and reduce packaging, as well as only buying what is needed for classes to reduce storage.

- **Hazardous Waste Minimization.** Individual CCSU departments have done an excellent job of culling out old chemical inventories, re-organizing stocks of teaching/research chemicals, and streamlining and categorizing chemical inventories. In comparison with other schools its size, CCSU generates a relatively small quantity of hazardous waste.

Several years ago, CCSU began a program of identifying excess chemicals for elimination while reducing inventory of on hand storage. Every chemical request is reviewed with Purchasing and the Health and Safety Officer and each department makes efforts to reduce any storage and purchase a level of chemical needed for current semester classroom experiments.

- **Green Building Design.** With respect to building design and construction, CCSU and the State of Connecticut make an attempt to design buildings that are as green as possible. Some of the buildings on campus have efficiencies such as energy-efficient lighting, motion-sensored fixtures, daylighting, low-flow water systems, and central HVAC systems. Also, CCSU has committed to constructing new buildings in accordance with Leadership in Energy and Environmental Design (LEED and CCSU) standards, in accordance with State law.
- **Green Cleaning Chemicals.** Housekeeping makes a conscious effort to purchase and use green chemicals for cleaning purposes, which are dispensed in custodial rooms. These purchases are reviewed with industry initiatives and the Health and Safety Officer.

Please note that these are just a few examples of successful initiatives that CCSU has enacted to become more sustainable. More examples of successful programs are described throughout this report. Additional baseline data are provided in each section of this report. Other specific sustainability initiatives at CCSU include the construction of a sustainable building, student involvement in Earth Day activities, biology classes that label trees, and athletic teams' programs for collecting redeemable bottles and cans.

1.2 POTENTIAL AREAS FOR IMPROVEMENT

For each section of the report, Woodard & Curran has described recommendations for programs, procedures, or processes that will help the University become more sustainable. Recommendations that, if implemented, could have the most positive environmental impact, include the following:

- **Hire a Sustainability Coordinator.** CCSU should seriously consider hiring a part- or (preferably) full-time Sustainability Coordinator to oversee implementation of CCSU's sustainability efforts. This person could also use some of their time ensuring that CCSU's recycling program is implemented and maintained. A Sustainability Coordinator could also work with a web developer to get a CCSU Sustainability Website up and running.
- **Re-Evaluate the Financial Feasibility of Increasing Cogeneration.** While the Energy Center is clearly more efficient than the old equipment it replaced, CCSU should continue to explore the environmental benefit of the cogeneration capabilities of the plant. Specifically, the cogeneration engines have not been used to generate a significant portion of the campus's electricity demand because of the relatively high cost of natural gas over the past few years. Steam for heat and chilled water is provided almost exclusively by the combustion of natural gas using traditional (although efficient and clean-burning) boiler technology. Electricity is provided almost exclusively by Connecticut Light & Power (CL&P) and is derived from predominantly

non-renewable sources such as coal, gas, oil, and nuclear. While the electricity and steam generated by these engines is not “renewable,” it is more efficient than generating steam in a traditional boiler and buying power from the grid (and would reduce CCSU’s carbon footprint).

- **Assign Recycling Coordinator Tasks and Implement Recycling Management Plan.** Overall, CCSU is recycling some waste streams successfully; however, compared with other comparable institutions, there are waste streams that CCSU is not currently recycling. Specifically, while CCSU recycles white paper and cardboard, it does not recycle other types of paper or containers, and its white paper recycling program is implemented on an inconsistent basis throughout the campus. White paper and cardboard are typically large portions of the waste stream, so capturing a significant portion of these streams was sufficient to achieve competitive recycling rates with other institutions. One way to help ensure that the recycling program is successfully implemented is to hire a full-time recycling coordinator. CCSU had indicated that it prefers to rely on existing staff to implement the recycling program. Also, if CCSU hires a sustainability coordinator, this person can spend some of their time on the recycling program.
- **Launch Educational Campaign on Water Conservation, Energy Conservation, and Personal Reduce, Reuse, Recycle.** CCSU should consider implementing a campus-wide educational campaign focused on water conservation, energy conservation, and personal habits of reuse, reduce, and recycle. Following an educational campaign, CCSU should aim to increase student involvement in sustainability efforts.
- **Develop, Adopt, and Implement an Environmentally Preferable Purchasing Policy.** This could also be called a Sustainable Purchasing Policy or Green Purchasing Policy. This policy should have sign-off by University administration, and be enforced. The policy should also reflect the requirements of any applicable Executive Orders and State Statutes, as well as describing how CCSU can work within the confines of State contracts to promote sustainability.
- **Continue Hazardous Waste Minimization Efforts.** Even though CCSU currently generates small quantities of hazardous waste, there are still numerous ways that the campus can continue to decrease its waste generation, as well as reducing the overall number of chemicals used on campus.
- **Develop, Adopt, and Implement a Green Building Policy.** While CCSU currently has a number of green building practices that it has employed for new building construction (as well as building renovations), the University should consider formalizing its commitment with a Green Building Policy. This Policy could be very broad and explain in general terms how the University plans to comply with CT State LEED building standards, as well as adhering to its own set of standards. Conversely, the policy could be detailed enough to include the specific types of green building standards that the University aspires to. It should be noted here that CCSU is currently directly involved in creating newer, greener standards for the CSU System and the State.

In conjunction with the Office of Policy and Management, the “Connecticut State Facilities Building Standard Guidelines Compliance Manual for High Performance Buildings” has been developed for use on campus.

- **Green Cleaning and Maintenance.** CCSU should continue to ensure that proposals from outside cleaning and maintenance companies use green chemicals to the maximum extent possible. The facilities department, as well as Environmental Health & Safety, can continue to

work with Purchasing to draft RFPs to include this condition. These current policies should be formalized as part of a green purchasing policy.

- **Reduce Transportation Impacts and Related Emissions.** CCSU should consider developing a trip reduction program to encourage carpooling, mass transit, bicycling and the use of alternative fueled vehicles, as well as optimizing routes to reduce trip time and idling time for campus vehicles. CCSU should also gradually replace CCSU vehicles with alternative fueled vehicles or traditional vehicles that are at least more fuel efficient. The University should also strongly consider adopting a formal policy to reduce the amount of vehicle idling time, possibly installing hour meters in an effort to reduce unnecessary idling.
- **Reduce the Use of Disposable Containers.** Suggestions for achieving this include: (1) providing pitchers of water at meetings and catered events instead of bottled water; (2) provide reusable silverware and dishes at catered events instead of disposable; (3) provide a discount for students who provide their own mug or container at takeout facilities.

Please note that these are just a few examples of recommendations that are included in this report. Additional recommendations are provided in the Recommendations part of each section.

Also, where possible, we have included sample policies as Appendices to this Plan to facilitate CCSU's creation of their own policies (see Appendices C — E).

1.2.1 Top Five Recommendations

While the above list highlights some of the recommendations in the report that are considered the most important, the following five recommendations are ones that CCSU should focus on over the next two years. These “Top Five” recommendations, if implemented, can result in the greatest cost savings and are the best ways to reduce the campus's overall environmental footprint:

1. **Assign Sustainability/Recycling Coordinator to Implement Recycling Management Plan**
2. **Launch Educational Campaign on Water Conservation, Energy Conservation, and Reduce/Reuse/Recycle**
3. **Re-Evaluate Financial Feasibility of Increasing Cogeneration**
4. **Develop, Adopt, and Implement a Green Building Policy**
5. **Develop, Adopt, and Implement an Environmentally Preferable Purchasing Policy (see manual)**

Collectively, these Top 5 recommendations show that sustainability initiatives are incredibly interconnected. For example, when green buildings are built in accordance with a green building policy, water conservation is realized, energy use is lower, there are facilities in the building for recycling, and the materials that are purchased for the building (and used to furnish the building) are more sustainable. Overall, these five elements represent the most significant ways that CCSU can reduce its environmental footprint.

If an additional recommendation were to be added to the Top Five, it would likely be increasing the sustainability of food service operations on campus. However, this recommendation is not included in the Top 5 because CCSU's level of food service is not very large, considering that it is primarily a commuter school. CCSU should strongly consider the recommendations listed in the food service section of this report, but these recommendations were not significant enough to appear in the top five. Another

recommendation that is important but does not appear in the Top Five is decreasing transportation impacts. CCSU is a commuter school and therefore impacts the environment through all of the vehicles used by students to access the campus on a daily basis. It is likely that improving the transportation program at the University will be a long-term effort, which is why this recommendation is not included in the Top 5, which are shorter-term initiatives.