



2012

## Five College Blue Sky Report

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Hooker, Beth; Small, Ezra; Dizard, Jan; Darlington, Sue; Farnham, Tim; and Benkley, Joanne, "Five College Blue Sky Report" (2012).  
*Sustainable UMass*. 2.

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**Authors**

Beth Hooker, Ezra Small, Jan Dizard, Sue Darlington, Tim Farnham, and Joanne Benkley

## Summary Report of the Five College Directors' Initiative

# BLUE SKY BRAINSTORM

### Envisioning Sustainability for the Five Colleges and Beyond

The Five College Board of Directors invites suggestions, ideas, or fully developed proposals for new and improved sustainability initiatives.

All members of your campus community are welcome to meet at the following times and locations to brainstorm ideas for incorporating sustainability into the campus, the Five College consortium and the community. No idea is too big—or small!

### CAMPUS BLUE SKY BRAINSTORM EVENTS:

#### AMHERST COLLEGE

**Tuesday, February 7**  
Porter Lounge,  
3rd Floor Converse Hall  
4:00–5:30 pm

**Wednesday, February 15**  
Porter Lounge,  
3rd Floor Converse Hall  
4:00–5:30 pm

Campus coordinator:  
Jan Dizard  
email: jedizard@amherst.edu

#### HAMPSHIRE COLLEGE

**Monday, January 23**  
Faculty Lounge,  
Franklin Patterson Hall  
3:30–5:00 pm

**Thursday, February 9**  
The Tavern (Prescott)  
3:30–5:00 pm

**Tuesday, February 14**  
The Tavern (Prescott)  
3:30–5:00 pm

**Thursday, February 23**  
East Lecture Hall,  
Franklin Patterson Hall  
3:30–5:00 pm

Campus coordinator:  
Sue Darlington  
email: sdarlington@hampshire.edu

#### MOUNT HOLYOKE COLLEGE

**Wednesday, February 8**  
Dwight Hall, Room 201  
12:15–1:00 pm

**Wednesday, February 8**  
Dwight Hall, Room 101  
7:00–8:00 pm

**Tuesday, February 14**  
Dwight Hall, Room 201  
12:15–1:00 pm

Campus coordinator:  
Timothy Farnham  
email: tfarnham@mtholyoke.edu

#### SMITH COLLEGE

**Wednesday, February 8**  
Neilson Library Browsing Room  
9:00 am–10:20 am  
11:00 am–12:10 pm

**Thursday, February 9**  
Campus Center 205  
9:00 am–10:20 am  
10:30 am–11:50 am

Spring 2012 All Campus  
Blue Sky meetings: all  
are welcome; light  
refreshments will be provided.  
Campus coordinator:  
Joanne Benkley  
email: jbenkley@smith.edu

#### UNIVERSITY OF MASSACHUSETTS, AMHERST

**Wednesday, January 25**  
Campus Center Room 162–175  
1:30–3:00 pm

**Wednesday, February 29**  
Campus Center Room 162–175  
1:30–3:00 pm

There will be two meetings  
on campus open to the  
University community to attend,  
learn about what is already  
happening with campus  
sustainability, and offer ideas.  
Campus coordinator:  
Ezra Small  
email: esmall@facil.umass.edu

For more information, contact the campus coordinator.

To submit sustainability ideas directly to Five Colleges, visit  
[www.fivecolleges.edu/sustainability](http://www.fivecolleges.edu/sustainability)

March 30, 2012

Dear Members of the Five College Board of Directors,

This report includes all of the proposals gathered as part of the Five College Directors' sustainability initiative, "**Blue Sky Brainstorm: Envisioning Sustainability for the Five Colleges and Beyond.**" The proposals are arranged in the same order as the March 7, 2012 report, and each idea is linked to a full proposal. The Five College working committee includes Jan Dizard (Amherst College), Sue Darlington (Hampshire College), Tim Farnham (Mount Holyoke College), Joanne Benkley (Smith College), Ezra Small (UMass Amherst), and Beth Hooker (Five Colleges).

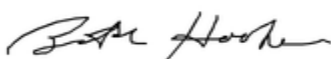
The enclosed list includes ideas submitted at the Initiative website as well ideas generated at the campus meetings. Based on your direction, the nearly 500 ideas have been broadly sorted into the following four categories:

- I. High Impact, Low Cost
- II. High Impact, High Cost
- III. Low Impact, Low Cost
- IV. Low Impact, High Cost

Ideas were sorted into topic areas which included academics (8%), energy (24%), food (7%), green buildings (6%), land use/land conservation (8%), transportation (17%), waste reduction (16%), water (6%), and other (8%). In assessing "cost", we took into account factors beyond monetary assessments such as logistics, campus cultures, technological feasibility, environmental considerations, labor, and other issues. In order to refine the cost parameter, we indicated a "moderate" cost within the categories, as there is a wide range of "costs" within each category. "Impact" was evaluated based on economic, environmental, and social aspects of sustainability. However, the majority of the ideas were categorized as being high impact, because of the multiple ways impact can be assessed. For example, while a solar array might have a measurable high impact with regard to reducing greenhouse gas emissions, the impact of offering a workshop for environmental leadership in the 21<sup>st</sup> century is less easily quantified. However, such a workshop would have a high value for students across the Five Colleges.

Most ideas were submitted by students, staff and faculty members of the institutions and relate to a specific campus or to Five College initiatives. Of course, many ideas suggested for only a particular campus might also be relevant to other campuses or to Five College initiatives.

Sincerely,



Beth Hooker, for the Five College Blue Sky Sustainability Ideas Committee  
Five College Sustainability Programs Coordinator

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# HIGH IMPACT, LOW COST IDEAS

NOTE: In assessing “cost”, we took into account factors beyond monetary assessments such as logistics, campus cultures, technological feasibility, environmental considerations, labor, and other issues. In order to refine the cost parameter, we indicated a “moderate” cost within the categories, as there is a wide range of “costs” within each category. “Impact” was evaluated based on economic, environmental, and social aspects of sustainability. However, the majority of the ideas were categorized as being high impact, because of the multiple ways impact can be assessed. For example, while a solar array might have a measurable high impact with regard to reducing greenhouse gas emissions, the impact of offering a workshop for environmental leadership in the 21st century is less easily quantified. However, such a workshop would have a high value for students across the Five Colleges.

## ACADEMICS

### 1 Better integrate sustainability into classes

Applies to HC *Moderate cost*

**Proposal as submitted:** One of Hampshire’s greatest resources is our people. When we shift the campus to a more sustainable direction, we need to have classes to integrate all of the interests/disciplines/schools/skills within Hampshire in that shift: students making solar charging stations, making artwork, making gardens... Could students work more with Phys Plant, or maybe even an apprenticeship program with Phys Plant?

### 2 Better utilize resources we already have; include more teaching about our landscapes

Applies to SC

**Proposal as submitted:** Begin to utilize the resources we have. Include more teaching into our landscapes. For example, could we have something like a Chinese literature garden that would highlight different plants? This could be used to connect with local children (Chinese immersion school) or other areas of Smith.

### 3 Create materials for sustainable orientation

Applies to SC

**Proposal as submitted:** Continue to add educational pieces into orientation- for students, faculty and staff- that help instill the values of sustainability in them so the culture of Smith becomes one of 'this is the way we do things'.

### 4 Create Sustainability department at UMass

Applies to UMass *Moderate cost*

**Proposal as submitted:** However, if UMass really wants national recognition for sustainable efforts, it is necessary to establish an office or department of Sustainability. Additionally, there is considerable

student demand for a Sustainability major, just look at how many students incorporate the topic into BDIC majors.

## 5 Create targeted education campaigns for incorporating sustainability into the campus culture

**Applies to UMass**

**Proposal as submitted:** UMass should organize campaigns to educate students about saving energy, consuming less, etc. The university could organize "no buying" days once a week, invite major environmentalist speakers and scholars regularly, inform students about climate change, distribute information especially for car owners who rent parking space (each should receive a full specific package every semester informing them of other means of transportation and scientific evidence of climate change, insisting that worldwide the scientific community has never been so close to unanimity on any topic and that climate denialism is misinformation, etc.) Campaigns AGAINST GROWTH and for sustainable de-growth, anti-consumerism should be systematically organized.

## 6 Develop database of operational sustainability initiatives that could be potential student projects

**Applies to SC Moderate cost**

**Proposal as submitted:** Develop a database of operational sustainability initiatives that could be potential student projects. Ideas include researching: black star capabilities, efficiency (utilizing co-gen numbers), and undertaking a cost/benefit analyses that would give us a better idea of where we are at.

## 7 Develop a Five College curriculum on alternative economics

**Applies to FC Moderate cost**

**Proposal as submitted:** 5 College curriculum around alternate economy; more cooperatives for a sustainable economy/sustainable environment; creating a humane economy. (UMass Econ Dept.; could we link the new course at UMass with the SEARCH student group on Hampshire's campus? Tie in with the 5 College currency idea?)

## 8 Develop an environmental studies program at UMass

**Applies to UMass Moderate cost**

**Proposal as submitted:** UMass should also develop environmental studies programs, offer environmental political theory courses as a mandatory gen-ed (graduate students in the Political Science department will happily teach these), or as part of a RAP program, re-distribute research budgets to systematically support, not only mainstream, policy-oriented environmental studies work, but theoretical and humanities work on environmentalism and the environment, as well as work on direct action, on grassroots movements, on local organic farming, the third sector, diverse economies, etc (multiply dissertation and book awards and specific fellowships, funding of all forms etc).



## 9 Develop partnership with Hitchcock Center

**Applies to** MHC; FC *Moderate cost*

**Proposal as submitted:** 5 colleges should form a partnership with the Hitchcock Center to establish a naturalist program for undergraduate students.

## 10 Encourage collaboration with Center for Environmental Civics

**Applies to** SC

**Proposal as submitted:** Have Smith collaborate with the Center for Environmental Civics, a new training center to teach how to intervene at any level in favor of political action.

## 11 Establish a Five College Multi-Disciplinary Water Program

**Applies to** HC; FC *Moderate cost*

**Proposal as submitted:** My work, as a Junior concentrating in Social Design & Water Resources, has come to center around the questions of water and the social effects of water issues. I currently consider the many questions surrounding water in the American Southwest as a “microcosm” of water issues around the world, tying this into my work in Social Design through a strong emphasis on systems thinking, community dialogue and community education initiatives. I am currently leading an EPEC course on Multi-Disciplinary Water Resources, which includes 1) screening a series of films geared towards educating a broad section of the Hampshire Campus on water issues; 2) establishing The WaterTalk Sessions (December 3rd, 2011) as a place for Hampshire faculty and students and local water stakeholders to share work relating water and community; 3) establishing a 5 College Water Symposium, during Spring 2012 semester, in partnership with the Riverscaping Project. These experiences have given me a broad grounding in both global and community-specific water issues from a variety of viewpoints. As the result, I have identified a need for a 5 College Multi-Disciplinary Water Studies Program. Many students, both Hampshire and 5 College, are interested in some aspect of water studies. I see this interest, which may not fall into the traditional category of “Water Studies,” evidenced by participation in such current projects as the Riverscaping Competition; full enrollment in Hampshire courses such as Sustainable Water Resources and Watershed Hydrology; and pre-existent 5 College programs (Mt. Holyoke; Smith; Amherst; UMass; Hampshire). Currently-existing water studies programs tend to focus only on water hydrology, water engineering, and water policy/management, or limit water issues to environmental advocacy. These programs don't treat water as a nexus of policy, economy, culture, health and sustainability issues. Because the effects of “water need” and “water stress” intersect with many disciplines, including those of public health, economy, political science, technology, cultural studies, peace studies, and environmental studies, I see the need for a program which aids 5 College students in creating a cohesive narrative from the complexities surrounding water access, management, hygiene, and perceptions. Such a program would initially serve undergraduate students, although a graduate program might eventually be developed. It would be developed using pre-existent courses and 5 College resources. Some sort of “guiding course,” taught by students and structured much like my current EPEC course, would provide a frame of reference as well as a required component for students. If faculty interest was to be expressed, guidelines would also be provided towards developing new courses towards fulfilling the requirements of the program. The focal point of the program would encourage students of all majors to create their own narrative understanding of water issues as relevant

to their field, with the intent that such a narrative would function as an “access point” for future action, preparing students to make significant contributions towards addressing water issues within and beyond their principle fields of interest. With the recognition that the key to such a narrative is dialogue, I view the 5 College Consortium as an institution ideally situated to become the instigator of such a dialogue, and hope to position the 5 Colleges at the forefront of multi-disciplinary water-interests networking among 5 College institutions, local communities in the Connecticut River Valley, and institutions of higher education throughout the nation.

## 12 Establish a Green Curriculum

**Applies to** HC *Moderate cost*

**Proposal as submitted:** The Green Curriculum would: -Set up a sustainable design fund for projects. - Use appropriate technology. -Generate social entrepreneurship. -Create a platform for renewable art and design. -Allow for more permaculture courses and practice on campuses.

## 13 Expand outreach to local schools around environmental education

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Outreach to community schools! Environmental education program for the children in the greater community!

## 14 Expand Sustainable Living Class at UMass

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Split John Gerber's Sustainable Living Course into two courses: one focused on local issues and the other on international issues. This would require funding to develop the courses and to hire faculty.

## 15 Hold career fairs that address all aspects of sustainability

**Applies to** UMass

**Proposal as submitted:** UMass should have careers' fairs dedicated exclusively to Green jobs, not only in mainstream Green economies, but also cooperative lifestyles and alternate modes of living, Green communes, Green organizing, the third sector, etc. These could include forums on how to work less and consume less, organic gardening, etc.

## 16 Host an annual conference in homage to Lynn Margulis and Julie Graham

**Applies to** UMass

**Proposal as submitted:** Lynn Margulis and Julie Graham's ideas, who were both UMass scholars and who both passed away recently, can be inspiring to all in terms of creating new, Green ethics and ecologies: UMass should host an annual, global conference in homage to each and/or both of them, on diverse economies and environmentalist interdisciplinary research and action. Classes on their work, taught by some of their own former graduate students or by faculty and grad students working in environmental studies, political theory, sociology, communication, geography, etc, should be offered by several department, and could count as global ed or gen-ed requirements.

## 17 Improve transportation and lessen need for it through blended/video courses

**Applies to** HC; FC *Moderate cost*

**Proposal as submitted:** Hybrid/blended courses where students do not have to travel to the other colleges in order to take classes. Broadcasting lectures around 5 Colleges. More cross communication and shared van use for work in Holyoke. More suitable transport to outside of the 5 College area. Working out existing kinks in the transportation system.

## 18 Include sustainability education in orientation

**Applies to** MHC

**Proposal as submitted:** Have a better orientation program for new students, faculty and staff concerning recycling and other environmentally friendly habits.

## 19 Include sustainable living in orientation materials

**Applies to** SC

**Proposal as submitted:** Orientation for all incoming/new campus community members including a significant portion about how we "live" sustainability, so that newbies understand that many day to day ways of operating (lights out, duplex printing or not printing, composting, recycling, using less, 'getting' a reasonable amount, giving back, etc.) are an expected part of being part of our campus community. This would bring about a shift in culture.

## 20 Incorporate civic engagement into FC environmental studies programs

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Work with the Center for Environmental Civics to add a civic engagement component to already existing FC environmental studies programs

## 21 Learn foraging for edible and medicinal plants

**Applies to** FC

**Proposal as submitted:** A short course on foraging in woods or along the roads or in fields. Teach how to identify edible and medicinal plants and how to prepare them. One example is some greens require 2 or 3 hot water baths to decrease the plants' bitterness.

## 22 Make it apparent on the UMass home page that it is a Land Grant University

**Applies to** UMASS

**Proposal as submitted:** Use Cornell's web site for ideas. LAND GRANT is a front-and-center link!  
<http://www.cornell.edu/>

## 23 Offer a local Sustainable Living semester program

**Applies to** FC

**Proposal as submitted:** Living Routes is interested in developing a local semester program, perhaps based at Sirius, but involving sustainable initiatives and communities across the Pioneer Valley. It would be great to have this draw more from the 5C, especially among visiting international students.

## 24 Offer extra grant support for students going abroad who are focusing on the environment and sustainability

**Applies to** SC *Moderate cost*

**Proposal as submitted:** create grants for students going abroad who are focusing their research and experiences around the environment, sustainability, enhancing social well-being, economic development, etc. like Middlebury College.

## 25 Offer Five College Registration for courses through one office

**Applies to** FC *Moderate cost*

**Proposal as submitted:** It would be better, and would sustain the 5 colleges path, if students could register for courses from one website, making it essentially seamless to the student. Right now, it is like a special effort needs to be made to watch dates, register, arrange payment. If these seams were removed, it would greatly enhance the program.

## 26 Offer a second workshop in “Environmental Leadership in the 21st Century”

**Applies to** AC; HC; MHC; SC; FC *Moderate cost*

**Proposal as submitted:** In 2010, Amherst College received a grant from the Thoreau Foundation to offer a workshop during January term (2011), “Environmental Leadership in the 21st Century.” Thirty-eight students, with several students from each of the five colleges (including one graduate student from UMass) participated. Three faculty from Amherst College (Jan Dizard, Katherine Sims, and Edward Melillo, joined by Sarah Barr from the CCE and Mary Ramsay from Amherst’s Development Office) collaborated on preparing the grant proposal and planning and executing the workshop. Student response to the workshop was uniformly positive, even though two unusually heavy snow storms disrupted our schedule and prevented some speakers from traveling to Amherst.

Based on the success of the workshop, conversation was initiated with Environmental Studies faculty at Smith, MHC, and Hampshire over the past summer to explore making this workshop a collaborative endeavor. As a result of these conversations, Andrew Guswa (Smith), Tim Farnham (MHC), Steve Roof (Hampshire), and Jan Dizard (Amherst) have agreed to return to the Thoreau Foundation for funding for a workshop to be offered for a week in January, 2013. For reasons made clear in the full proposal to Five Colleges, we are also seeking additional support from the Blue Sky initiative to provide the necessary matching funds for the grant to the Thoreau Foundation. We request a total of \$25, 000, the details of which are included in our full proposal.

Submitted by:

Jan E. Dizard, Amherst College

Andrew Guswa, Smith College

Timothy Farnham, Mt Holyoke College

Steve Roof, Hampshire College

## 27 Prioritize making all students better environmental citizens

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** I think we all do a great job of educating the students that are interested in environmental studies/engineering etc. but our goal should be that all graduates leave as good environmental citizens. I don't know how best to accomplish this, but maybe a forum for discussion of the issue would be valuable (there may already be one I am not aware of ). At a recent environmental committee meeting at Hampshire, they discussed faculty development seminars to help faculty incorporate environmental issues into a wide range of courses. I think this could be done at the five college level benefiting a large number of students. It seems like a program with grant funding potential.

## 28 Promote faculty leadership in sustainability through workshops and fellowship opportunities

**Applies to** UMASS, FC *Moderate cost*

**Proposal as submitted:** Start forming long-range plans for faculty/librarian professional development around sustainability. Here's a sort of multi-tiered idea, featuring three types of opportunities: 1) Our faculty/librarians attend a "Sustainability Across the Curriculum Leadership Workshop" A 2-day experience with Peggy Barlett and Geoff Chase (offered 2x/year at Emory and San Diego University) <http://www.aashe.org/events/workshops/curriculum> 2) Our faculty/librarians apply to be a "AASHE Faculty Fellow" A new 6-month program <http://www.aashe.org/aashe-faculty-fellows-2012> 3) We establish our own campus-based faculty sustainability workshops Examples here: <http://sites.duke.edu/trillium/workshop-may-2010/aashe-list-of-campus-with-faculty-sustainability-workshops>

## 29 Support "green communications" intern to highlight work being done around sustainability

**Applies to** SC

**Proposal as submitted:** Have a "green communications" intern through CEEDS who works to highlight work being done with regards to sustainability.

## 30 Sustaining Learning: Cross Department Collaboration

**Applies to** UMass, FC *Moderate cost*

**Proposal as submitted:** The amount of knowledge generated can (potentially) increase many-fold if departments have a forum for communication. I propose that in order to sustain an environment of

eclectic learning, we create inter-department forums where both departments will benefit from interacting (Ex: Anthropology and English). Students can then interact and present a play, a paper or whatever else they want by collaborating. It would be helpful to have a mix of International and Native students so both can benefit from each other's perspectives.

### **31 Utilize Design Clinic to work on a Smith based project that explores efficiencies**

**Applies to SC**

**Proposal as submitted:** Utilize Design Clinic to work on a Smith based project that explored efficiencies.

### **32 Work with chemistry labs across the Five Colleges to reduce waste and use fewer toxic chemicals**

**Applies to SC; FC**

**Proposal as submitted:** Create a green chemistry affiliation at Smith with the Five Colleges- create organic chem labs that use less (reduce waste) and less toxic chemicals for the same or equivalent learning experience. Create a database that can be consulted for replacement suggestions- for chemicals and supplies. Create a sharing between the FC's.

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## **ENERGY**

### **1 Adjust radiators in residence halls**

**Applies to MHC**

**Proposal as submitted:** Teach MHC students living in old dorms how to adjust their radiators so they don't spend the winter with the windows open!

### **2 Assess travel footprint so it can be addressed**

**Applies to SC**

**Proposal as submitted:** Capture what our travel footprint is so we can address the issue appropriately! Ask the Controller (or appropriate person) to require that all budget managers determine a way that all travel be made visible- e.g. marked with an activity code, etc.

### **3 Better control room temperatures, especially in summer**

**Applies to UMass**

**Proposal as submitted:** I have always been wondering why the room temperature inside buildings here tend to be very cold in the summer, and warm in the winter. I am not complaining about how warm it is inside during the winter, but in the summer the temperature is unnecessarily low. Last summer I have asked basically everyone I know, and almost everyone thought it's too cold. Many of us have to bring extra sweaters or jackets to keep warm. We have a monitor in our office room in Campus Center, during the summer the room temperature is normally between 68-70 when we set it at the highest possible level. But when the weather cooled down, the air-conditioned room temperature

increased to 72-74. This in no way makes any sense to me. I wonder whether the committee can do a research: if we allow the AC room temperature go up 5 degrees in the summer, how much energy we can save. I know some countries have a minimum AC temperature for the summer to save energy. Is it something we cannot do here?

#### **4 Better monitor building use; promote programs that increase awareness of resource consumption**

**Applies to SC**

**Proposal as submitted:** More building control and monitoring regarding building use. We could begin programs that would increase awareness of resource consumption. For example, we could send departments electric bills and give them incentives to lower it (they would not, have to actually pay them, obviously). So, if you lowered your consumption by 2% you might get X amount back for your department.

#### **5 Celebrate the SOLAR Ner Tamid for Beit Ahavah, the Reform Congregation of Greater Northampton**

**Applies to Community; FC**

**Proposal as submitted:** Dear Friends, We would like to build a Solar Ner Tamid for our Synagogue which is on Pine Street in Florence. While this is a small project and the energy savings is not huge, we believe the installation would send a strong message far and wide in our community and demonstrate a strong and deep commitment to alternative energy sources. "Every Jewish Synagogue has an Eternal Light (Ner Tamid) which hangs above the ark. It is associated with the menorah which stood in front of the Temple in Jerusalem. The Ner Tamid is a symbol of God's eternal and imminent Presence in our communities and in our lives." "Where once the Ner Tamid was an oil lamp, today most are fueled by either gas or electric lightbulbs. There is at least one Ner Tamid, located at the Adat Shalom Reconstructionist Congregation in Bethesda, Md., perpetually lit via a photovoltaic power source (solar). The Eternal Lights are never extinguished or turned off." We expect that the creation and installation of the Ner Tamid could also be accompanied by a grand celebration and perhaps Jewish student groups at the Five Colleges would like to help plan and celebrate the event. We know that many Smith College students come to celebrate the Jewish Holy Days with us each year. If possible, we would like to light the Ner Tamid during Hannukah in December 2012. Thank you for your time in considering our sustainable Ner Tamid idea. We welcome your questions. BethAnn Albro-Fisher Beit Ahavah

#### **6 Concentrate purchasing to avoid excessive deliveries**

**Applies to SC; FC**      *Moderate cost*

**Proposal as submitted:** Use the College's primary suppliers to avoid the number of trucks making deliveries on campus. For instance, the College's primary office supplier, WB Mason, makes deliveries on campus several times a week. However, many people purchase on-line at Staples and at the Staples store. Having additional trucks delivering the Staples product or having employee drive to a Staples store creates more emissions.

## 7 Convert all light bulbs to CFL; purchase only energy star appliances; fix faucet drips

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** I have a few ideas: Change over to all CFL light bulbs Purchase produce from local suppliers Purchase all energy star appliances when buying washers, dryers, etc. Fix all faucet drips on campus Reduce paper use in the classrooms Promote bus transportation

## 8 Convert dashboard laptops in campus security cars to operate by battery

**Applies to** SC *Moderate cost*

**Proposal as submitted:** (1a) campus security cars often idle because the dashboard laptops inside these security cars are powered by the running engine - it would be much greener if these laptops ran on high-power batteries so the security cars could turn off and stop emitting

## 9 Create a FC sustainable living campaign

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Head up a behavioral changes campaign - examples eating with seasons, taking shorter showers

## 10 Create an energy rating system for campus buildings

**Applies to** SC

**Proposal as submitted:** Identify the worst energy users on campus which would allow us to then create a rating system as another basis for renovations.

## 11 Decrease nighttime lighting to save energy and for a sense of well being

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Outdoor lighting at Smith should all be full-cutoff. This would save 30-50% in energy required for the lighting and in the cost of providing that lighting. And then we would be able to see the stars and feel more connected to the natural world around us.

## 12 Educate students on more sustainable fume hood practices

**Applies to** SC

**Proposal as submitted:** create policies and educational materials around fume hood use. these use an incredible amount of energy to operate, yet students leave them open and are not aware of the energy they are 'wasting' or why they should do things differently then they do.

## 13 Eliminate leaf blowers

**Applies to** MHC

**Proposal as submitted:** Leaf blowers are not only noisy and annoying, they are energy hogs. Why not have a couple days in the fall and spring when students get together to rake leaves and help grounds



personnel make the campus beautiful? The MHC crew team does leaf raking in the fall in South Hadley as a fundraiser already, so perhaps we could enlist the teams to help organize it?

## 14 Eliminate paper statements/return envelopes

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Something I think about every time I receive my monthly Procurement Card statement is what a waste it is that JP Morgan includes a return envelope with their mailing. We never send in payments, so we don't need the envelope. I've been receiving return envelopes every month for the last three and one-half years that I've worked at Smith, and each one has gone in the recycle bin. If that is true for every Smith employee that has a procurement or travel card (I think the number is about 400), we're throwing away about 4800 envelopes each year for no reason. Shouldn't we ask JP Morgan to stop sending envelopes? I would argue further that we don't need to be receiving even the statements by mail. My personal bank and credit card issuer give me the option to view statements online. I can save them to my hard-drive if I want, or print them if I absolutely need the hard copy. Shouldn't we be doing that here at work too? Not only would that save on paper, but after speaking with Linda H. in Purchasing, I was reminded of the fuel and other transportation costs that go into getting paper statements mailed to us. We should be able to view, reconcile, and submit our monthly expenses to the controller's office electronically, without ever having to print or exchange paper.

## 15 Establish college vendor policy and schedule to reduce excess deliveries

**Applies to** SC

**Proposal as submitted:** We should make it a policy that employees purchase their office supplies through the designated college vendor, WB Mason. While most of us do buy from WB Mason, many drive to Staples or other vendors. The more we restrict our supply buying to WB Mason, the better the college's rebate and the more powerful our negotiating leverage becomes. The sustainability issue here is most directly related to fuel consumption - the WM Mason delivery truck comes to campus almost daily and it doesn't make any sense to why an employee would drive to Staples in their own vehicle to make an office purchase. If there was a set delivery schedule so all employees knew the WB Mason was only going to be on campus on Tuesdays and Thursdays, for example, perhaps we would get in the habit of placing our orders on a regular schedule, as opposed to ordering on the spur of the moment. It seems excessive and wasteful to have the delivery come to campus on a daily basis.

## 16 Establish Five College green competition week

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Could we have a green week, in a competition between dorms, or colleges, with a pep rally at the end, to see who could decrease energy usage the most? It would have to be super hyped, and publicized, but it would be neat if the school that won could be awarded solar panels for one of their academic buildings, or dorms, or something like that.

## 17 Establish solar decathlon design competition

**Applies to** SC

**Proposal as submitted:** Regarding ideas for new sustainability initiatives...perhaps you might want to consider the Solar Decathlon - a competition amongst colleges throughout the world who design and build solar-powered homes. What an incredible experience it would be for Smith College students majoring in engineering, architecture, art and design, etc. Here's the website link.  
<http://www.solardecathlon.gov/about.html>

## 18 Exact a carbon 'tax' for travel expenditures

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Put a "tax" on travel expenses in proportion to carbon emissions. Use the resulting fund to pay for on-campus and regional projects that would reduce energy and resource consumption. Off-campus projects could potentially be used as offsets. So, perhaps 50% of tax gets used internally and %50 goes outside.

## 19 Hire a new Five College energy manager

**Applies to** FC *Moderate cost*

**Proposal as submitted:** For years, three of the institutions had an energy manager (engineer), who worked with the facilities offices to implement energy saving practices. This position provided valuable services to those colleges, while also working with student groups to understand campus sustainability. Please, hire a new Five College energy manager.

## 20 Hold a sustainable roofing solutions seminar

**Applies to** Vendor

**Proposal as submitted:** I would like to hold a sustainability seminar (at no cost) for all five college Facility/Plant Managers to educate them on what is available to them in the area of Building Envelope sustainability options. In roofing, sustainability can be accomplished in any of five ways: 1) Through the use of recycled materials 2) Through the use of materials that are, in themselves, recyclable 3) Through extended service life 4) By promoting the more efficient use of energy and other natural resources 5) By using a renewable energy source, such as sunlight The Garland portfolio of high-performance roofing solutions features innovative products and systems in all these categories, including roofing solutions that provide sustainability in multiple ways. Garland sustainable roofing solutions contribute valuable LEED®1 Buildings certification points to your new construction, renovation, and restoration projects.

## 21 Improve energy consumption monitoring and communication

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Invest in monitoring and metering and communication of resource consumption with fine temporal and spatial resolution. This could be used to raise awareness and inspire behavioral change.

## 22 Improve heating controls in dorms

Applies to SC

**Proposal as submitted:** The houses/dorms(at Smith in particular)are overheated. I'm sure it would be much more eco-friendly to bring down the temperature a good 5-10 degrees. I've had my window open all winter.

## 23 Improve heating system controls in Hampshire dorms

Applies to HC *Moderate cost*

**Proposal as submitted:** Smarter heating in the mods and dorms. Currently, there is no control, except for opening the windows in order to moderate and ensure the mods aren't overheating (this in turn makes the heater work harder and generate more heat).

## 24 Improve lighting and energy use

Applies to HC *Moderate cost*

**Proposal as submitted:** Install kill switches for dorm rooms so that it is easier to shut everything down when leaving the room. More light pipes in common areas to reduce daytime lighting.

## 25 Increase visibility of energy dashboard

Applies to SC *Moderate cost*

**Proposal as submitted:** Continue to increase the visibility of the dashboard. Implement the dashboard in all houses.

## 26 Install consumption monitoring systems in housing to promote environmentally friendly behavior

Applies to HC *Moderate cost*

**Proposal as submitted:** Consumption monitoring systems would spur healthy competition between dorms and mods to be the most environmentally friendly.

## 27 Install motion detectors in dorm hallways

Applies to FC *Moderate cost*

**Proposal as submitted:** motion activated lights in the dorm hallways (the lights are currently always on and waste a lot of electricity)

## 28 Install motion sensors for hallway lighting.

Applies to FC *Moderate cost*

**Proposal as submitted:** Turn off the hall lights during the day and put motion sensors on them. There is no reason to have them on all the time.

## 29 Institute brown-out days

Applies to MHC

**Proposal as submitted:** Institute "brown-out Fridays" or "brown-out every days" wherein campus offices are asked to turn off and unplug all unnecessary equipment (lights, printers, microwaves, coffee

machines, etc.) Start a "brown-out" challenge with rewards for reducing wasteful energy use. Incentivize: staff can log their actions on a shared site & submissions can be reviewed by a panel or randomly selected to receive small prizes (i.e. a free lunch at Blanchard)

### 30 Insulate Smith's Rental Housing

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Many of the houses owned by Smith that are rented to faculty or staff are old houses that have none or little insulation. For example, I live at 65 Paradise Road. There is no insulation at all in the ceiling or the walls. There is old tattered insulation in the basement. Last month our gas bill was close to \$400 and I'm sure this month will be even higher. We keep the thermostat at or under 65 degrees. I understand that many of these old houses owned by Smith are not insulated. Smith could significantly decrease its ecological footprint by insulating these houses. There are state funds available to help with insulation. I consulted with Aiden at Cozy Home Performance (<http://www.mycozyhome.org/>) and he said that insulation could provide significant decrease in gas consumption. If the houses owned by other colleges in the consortium have the same issue, but there is potential for significant ecological improvement, as well as cost savings.

### 31 Limit use of inefficient space heaters

**Applies to** MHC

**Proposal as submitted:** This could entail improving heating efficiency in buildings or distributing more efficient space heaters.

### 32 Locate manual charging stations for personal electronics--gym & elsewhere

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Almost everyone now has battery-powered items they carry around, from cell phones to laptops. It's possible to charge these units with manual-powered dynamos. Gyms are full of stationary bicycles, treadmills etc. which could be powering a charging station while in use. If the capital cost was affordable, units could be placed elsewhere as well--in classrooms, offices, cafes and the like. It would be a carbon-neutral way to charge the electronics and also an incentive to exercise.

### 33 Make better use of lifestyle analysis to improve efficiency

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Hampshire could easily put in place systems for higher efficiency showers, timed thermostats, and lights that turn off after a certain amount of inactivity.

### 34 Make carbon inputs/offsets more visible

**Applies to** SC; FC

**Proposal as submitted:** Make it part of travel wherever we are engaging with it that the carbon inputs (and possibility to offset it) is visible. For example, when faculty and staff go to purchase their parking tickets each year, have a carbon calculator built into that form that calculates their footprint and offers the opportunity to purchase an offset as part of the process.

### 35 Make computer turn-off mandatory

**Applies to** MHC

**Proposal as submitted:** I wish computers were turned off completely, when they are not being used. Mine is on a surge protector, so I can shutdown and turn off the surge protector when I leave at night. I presume both steps are helpful in terms of saving energy. I think the computer lab in Carr (Mac's) has computers which stay on. Maybe that's no longer true, and maybe it really is critical for them to run all night.

### 36 Minimize wasted lighting

**Applies to** UMass

**Proposal as submitted:** One lightbulb does not use much electricity, but there are tens of thousands of lightbulbs on UMass Amherst's campus! Turning them off when they don't need to be on could save a lot of energy. For example, many dormitory lounges go unused for the vast majority of a 24-hour period. This of course depends on the residence hall. Also, many classroom lights get left on, and classrooms are often not unused between 10pm and 7am. To solve this problem, we can install timers/motion sensors on the lighting devices used in public spaces. This may have to be focused on one specific area of campus first; this area can be selected by conducting a short survey/audit of all buildings on campus, determining which buildings have the most "wasted light usage," or the most lights on after the building's public spaces empty for the day. I think dorms would be a great place to start. Additionally, practices like dimming hallway lights during "non-peak" hours (hours students are typically asleep or while academic buildings are not being used) could be implemented. I am not sure what potential safety code violations exist if you dim the hallway lights in a dorm. This may not be possible but it is worth looking in to. There are also many public computers on campus. If there was a way to set them to go to sleep, or that they be shut down when the building closes, this would extend the life of the computers and drastically reduce our energy consumption as a university. I could think of more ideas like this all day, in all different areas of sustainability. I would love to work on this committee.

### 37 Offer carbon offsets for students studying abroad

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** develop a partnership with Native Energy of Vermont (or other, more local organization if there is one) to offer carbon offsets to students to purchase as part of their study abroad planning.

### 38 Organize monthly sustainability lunch and learn

**Applies to** UMass; FC

**Proposal as submitted:** Organize a monthly "Lunch and Learn" on topics of sustainability and send the facilitators/presenters to departmental conference rooms across campus. This type of "continuing education" for staff could be started relatively easily with a focus on controversial videos/ presentations that are available via the internet, but that can be used as launching pads for conversations on how sustainability relates to staff's daily work. Then bring the "lessons learned" back to executive staff for discussion by management on opportunities for improvement.

### **39 Provide more transparency about heating/air conditioning costs as well as water use and other utilities; Educate incoming students about making sustainable choices**

**Applies to** HC *Moderate cost*

**Proposal as submitted:** This idea promotes greater transparency in regards to heating + airconditioning costs, as well as water use, electricity use, and other utilities. We would like be to aware of our own environmental impact and resource consumption in this community. Additionally, we propose educating incoming students about their future presence on the campus and choices they can make in order to diminish their ecological footprint. We advocate creating a greater community consciousness about our overall impact, beyond the individual and encompassing also the institutional impact.

### **40 Reassess light use in dorms/buildings**

**Applies to** SC

**Proposal as submitted:** Plan lighting systems that make lights out an option for all but required emergency lighting (e.g. hallways). Currently there are many spaces on campus that are lit 24/7 that could be dark if there were a way to turn the lights off.

### **41 Reconsider how windows can be used to save energy**

**Applies to** HC *Moderate cost*

**Proposal as submitted:** What can we do with windows? North versus south facing windows. Make it feasible to have natural airflow without losing all your heat?

### **42 Reduce energy by cutting electricity at night**

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** One way to reduce energy is to cut electric use for 1 hour from midnight to 1 in the morning.

### **43 Reduce heating and cooling loads**

**Applies to** MHC

**Proposal as submitted:** Reduce heating to 65 degrees max and cooling to 75 (or some other reasonable number) degrees minimum. Reduce heating in hallways/lobbies where folks do not have classrooms/offices (ex. Skinner side entrance closest to Mary Lyon Hall is often sweltering, but no one stays there for more than a minute to come in and out of the building)

### **44 Reduce number of personal printers; switch to MFDs**

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Reduction of printers and fax machines on campus. If an employee has a mutli functional device (MFD) in their area, then they can print, scan and in most cases fax to that MFD. All of the fleet MFD's have the secure print function for privacy. Reducing the number of devices will reduce the plug load and reduce the number of toner cartridges needed for each device.

## 45 Reduce thermostats in residence halls

**Applies to** UMass

**Proposal as submitted:** Monitor the temperature on campus housing. The dorms are so hot that I have a fan in the winter.

## 46 Reduce thermostats to match seasons

**Applies to** UMass, FC

**Proposal as submitted:** Every campus building I enter--library, Goodell, Bartlett, etc.--is extremely HOT. I have to start taking jackets, sweaters, etc. off as soon as enter, or I'll be sweating within minutes. Why shouldn't thermostats be set at 67 or 68 everywhere? People shouldn't expect to dress for summer indoors and winter outdoors--and that includes employees, as well as people coming in and out. It is also dry heat, bad for respiration, skin, etc.

## 47 Reduce unnecessary lighting in buildings

**Applies to** SC; FC

**Proposal as submitted:** Make required lights (hallways, etc.) in academic buildings dim to lower light output between 10 p.m. and 6 a.m. or some similar time frame. Keying the light change to when buildings are locked for the night would make a lot of sense.

## 48 Regulate heat in buildings more effectively

**Applies to** UMass

**Proposal as submitted:** UMass should heat buildings reasonably during the winter (i.e 65 degrees is plenty enough, we do not need to wear T-shirts inside when it's 20 outside: that is UNHEALTHY both for our bodies and for the planet's). UMass should use little air conditioning in the summer (the strict minimum for it to be healthy, i.e around 80 degrees is FINE, we do not need to wear sweaters inside when it's 90 out: that is UNHEALTHY both for our bodies and for the planet's).

## 49 Remove window air conditioning units during winter months to reduce heat loss

**Applies to** FC

**Proposal as submitted:** Many offices across the Five Colleges have window air conditioning units installed. Because of the perceived "cost" of labor to remove these units, they are often left in the windows during the winter months. This results in a loss of heat through the space, similar to leaving the window open. A reasoned policy, based on the full cost of leaving such large objects in the windows, should be instituted so that the units are removed promptly when not needed. In addition to saving energy, the resulting sunlight and fresh air would make the office spaces more pleasant to work in, with other obvious benefits to worker productivity.

## 50 Review engineering practices around energy co-generation

**Applies to** SC *Moderate cost*

**Proposal as submitted:** We need to develop Black Start, Islanding and Exporting capability for our

Central Plant/Co-Gen operations here at Smith. This would be a wonderful co-curricular opportunity for Facilities to work with Engineering students to make this a possibility.

## 51 Switch to motion-censored hallways lights

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Motion-censored lights in the hallways at Smith college houses so these lights aren't on 24/7.

## 52 Switch to power strips that shut off all plug loads when office PC is shut down

**Applies to** UMass; FC *Moderate cost*

**Proposal as submitted:** Roll-out a program to make it possible to turn off all plug loads when shutting down every office computer. I have a power strip for most of my live loads, but I have to remember to turn it off when I leave. There is a new power strip that allows that to happen when the PC is shut off - which is perfect for most offices.

## 53 Train students to assess energy use and participate in community energy auditing program

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Local community energy auditing program, where students audit local buildings' energy use? Train students to assess energy use, then those students give hours to buildings that volunteer to find out their energy use levels and make suggestions for improvement.

## 54 Turn down the heat in the residence halls.

**Applies to** UMass

**Proposal as submitted:** I think the heat in the dorms should be turned down. Assuming the flow of heat can be controlled this should be a simple way of reducing energy use. Furthermore, all of the students I've spoken to think that the dorms are too hot as it is, so turning down the heat should be a very popular strategy amongst the student body.

## 55 Turn off the lights when not in use

**Applies to** UMass

**Proposal as submitted:** Turn the lights off at night when no one is in the buildings

## 56 Turn out the lights

**Applies to** SC

**Proposal as submitted:** reduce lights burning 24/7 across campus buildings

## 57 Turn out the lights when not in use

**Applies to** SC

**Proposal as submitted:** Create signs for the most frequently used lights in each residential building reminding residents to turn them off, and instate a feeling of responsibility for the last person in each



room to turn out the lights. At the end of the night there should be no lights on. This will save an incredible amount of energy, conserving all of the hours spent when residents are sleeping and not utilizing the light.

## 58 Use competitions to create new ecologically-sustainable housing

**Applies to HC** *Moderate cost*

**Proposal as submitted:** Replacing the mods, one at a time, with more ecologically sound structures. (Connect with Arc 5 – creating a “mod design” contest, solicit donors to foot the bill for the first one, then get donors the others too? --- replacing the mods would also help reduce the burden on Phys Plant.) Create competition between the new, ecologically-sustainable mods? Dorm heating, dorm electricity use. Being able to control heaters to bring down heat use.

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## FOOD

### 1 Build a winter-optimized community greenhouse and play structure.

**Applies to UMass** *Moderate cost*

**Proposal as submitted:** A southern facing, winter optimized community greenhouse for growing food year round. Such a greenhouse could be the focus for winter-time kids activities and perhaps include a play structure and a fish pond. Food produced could feed families in need, or go to shares from volunteering. The greenhouse would be built to store and maximize winter solar energy from the southern sky and not need any external source (fossil fuels, etc) for heating. Locally made and energy independent. Food produced could go to families in need or homeless shelters, or be distributed based upon a CSA-like volunteer share. Related project links: <http://solarhowto.us/Frost-FreeCommunitySolarGreenhouse.html> <http://www.roperId.com/science/solargreenhouses.htm> I live in Amherst and have built a smaller version of the winter greenhouse in my back yard: <https://www.facebook.com/video/video.php?v=1671434514828> -Tom Jamate [tomas@admin.umass.edu](mailto:tomas@admin.umass.edu)

### 2 Commit to Real Food Challenge at UMass

**Applies to UMass** *Moderate cost*

**Proposal as submitted:** The Real Food Challenge is working with campuses across the nation to bring real food purchases to college and university dining services. 'Real Food' is defined as community based(local), ecologically sound, humane for animals and fair for workers along the food chain. The idea of the campus commitment is to shift our nations food system through the power of students on campuses by purchasing at least 20% real food by 2020. UMass has worked towards this goal through initiatives like the Permaculture garden, Student farm as well as Dining services as a whole. The goal is to sustain these efforts with students and faculty engagement among the five colleges and the wider community to develop a safe food network.

### 3 Consult Earth Foods and People's market about how to expand their cooperative model in other parts of campus

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Earth foods and the People's market should be consulted on how to generalize their small, cooperative model to the entirety of campus.

### 4 Create a FC free-trade organic coffee blend for all institutions to serve

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Many local and regional coffee roasters will create blends of coffee for large institutions. Consider contracting with someplace like Green Mountain Roasters or Dean's Beans to create a Five College coffee blend. Incorporate education about fair trade and ecologically-based crop production to display in dining halls, offices and on packages for sale in the campus stores. Have a competition to design the logo.

### 5 Create a sustainable agriculture and communities of care program

**Applies to** FC *Moderate cost*

**Proposal as submitted:** I am working with a group of parents of children with autism who are interested in a farm-based community where people with and without disabilities would live and work together in a sustainable agricultural project. The purpose of the project would be to support a group of students interested in pursuing careers in agriculture or human services to live on site with a group of people interested in sustainable agriculture and sustainable lifestyles for people with and without autism. The ratio of people without disabilities to people with disabilities either living or working on the project would be 10:2, mirroring the incidence of disability in the general population. The overall goal of the project would be to provide educational opportunities for students interested in human services or agricultural careers, to provide a model of a sustainable lifestyle for people interested in human services and agriculture, and to provide a sustainable source of fresh food to the community.

### 6 Create edible landscapes

**Applies to** SC *Moderate cost*

**Proposal as submitted:** create an edible landscape- a teaching tool like at the arboretum- so campus members can learn about permaculture, where food comes from and what grows locally.

### 7 Encourage edible landscapes and more awareness of food

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** Use more available/unused space as plots for vegetable gardens. Encourage staff and student leadership & come-weed-as-you-can volunteerism to run these spaces (think Franklin Permaculture Garden at UMass). Mary Woolley Circle would make a great plot! Along these lines, discourage traditional landscaping in favor of more food-producing vegetation. (Plant fruit trees whenever possible, plant veggies instead of shrubs whenever possible.) Establish harvest-time fall

semester gleaning trips to local farms for staff and student volunteers. Usable produce can be donated; unusable produce can be composted.

## 8 Encourage students to participate in organic gardening

**Applies to** UMass

**Proposal as submitted:** UMass should develop incentive for ALL students to PARTICIPATE in organic gardening on and around campus and eat their own vegetables.

## 9 Establish FC bee hive program

**Applies to** FC *Moderate cost*

**Proposal as submitted:** I am surprised that there aren't more beehives at the Five Colleges! Billions of bees across the United States are disappearing because of Colony Collapse Disorder. Without bees, the plant biodiversity in the Pioneer Valley will suffer and our access to fresh fruits and vegetables will be compromised. Although no one truly knows why CCD is happening, one of the most effective ways to support bee populations during these tough times is through beekeeping, which is not particularly difficult or time-consuming. The honey produced from these hives may not be enough to sustain an entire college population's sweet tooth, but using local honey instead of sugar in cooking and baking is not only healthier, but is also significantly more sustainable, as the carbon footprint for sugar production is significantly larger than the carbon footprint for local honey extraction and processing. Bees have the potential to do so many good things for the Five College Consortium, so I hope that beekeeping will become more widespread at each school for years to come.

## 10 Establish SC partnership with Northampton Community Farm

**Applies to** SC

**Proposal as submitted:** Create a partnership between Smith College and the Northampton Community Farm. It is not often that there are opportunities to help shape such large scale projects from the start, so this is a great opportunity with so many potential ways to partner- local food to campus, educational gardens for particular classes, internships, research, etc.

## 11 Expand growing farmers conference into Five College sustainability conference

**Applies to** HC; FC

**Proposal as submitted:** growing farmers turn into a five college sustainability conference. incorporate the growers conference into a larger conference with institutional support. Right now it is only student run and very difficult to support.

## 12 Explore possibilities for preserving summer food for winter at Hampshire

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Sudexo at Hampshire has been doing an impressive job communicating and working with the Hampshire Farm Center, however, we should do more work on preservation of food

from the summer to allow for continual food throughout the winter. This could be an EPEC course, a work study, etc.

### **13 Facilitate closer connections with local farmer's markets; is it possible to have one on campus?**

**Applies to SC**

**Proposal as submitted:** Facilitate a closer connection with local farmer's markets. Have a market on campus regularly?

### **14 Ideas for the Campus Garden at MHC**

**Applies to MHC**

**Proposal as submitted:** The biggest idea I have works well with the internship position advertised for the garden this summer 2012. I have an idea about expanding the student garden so more crops can be 1) produced for use by MHC Dining Services and 2) offered (on a larger scale than of current) to plot sharing for student consumption (an alternative meal-plan, perhaps?). To expand the garden would involve a preliminary study of soil nutrients in order to determine of which elements the soil is deficient and of which elements exist in excess. After determining which local, non-invasive plants should be planted to provide natural fertilizer (i.e. plants that aid in the nitrogen cycling to attain appropriate levels of nitrogen), those committed to the project (plus any volunteers, of course!) could help with aerating the land, planting the plants, and tending to the garden afterward. This would promote environmental sustainability and foster a sustainability-based community at Mount Holyoke and possibly within the 5 College Consortium.

### **15 Increase vegetarian and vegan offerings in dining halls.**

**Applies to MHC**

**Proposal as submitted:** Have more vegan options for food or dessert. The meat/dairy industry has a large footprint and this could be helpful.

### **16 Invest in on-site gardens and farms; support local slaughter house**

**Applies to SC Moderate cost**

**Proposal as submitted:** Better Food - On site gardens maintained by staff and work study students. On site animal husbandry. Support local slaughter house.

### **17 Make compost from uneaten dining hall food at UMass**

**Applies to UMass Moderate cost**

**Proposal as submitted:** Every day when I go to the dining hall I wonder what happens to all the uneaten food people leave on their plates. Before dishes get cleaned they are cleared. What if we separated paper products like napkins (the silverware should already be separated) from the food. Then we could take all the left over food and use it to make our own compost and natural fertilizer for areas around campus or possible even sell it and use the money toward more sustainable improvements such as recycled napkins or easily decomposable napkins so we would not have to separate them from our compost.

## 18 Make connections with Bean-Allard Farm; use farm as (Smith) campus resource

**Applies to** SC; FC

**Proposal as submitted:** Connect with the Bean-Allard farm that is currently owned and managed by Grow Food Northampton. Smith could partner with the farm through: CEEDS, CCC, Off Campus Work Study, College Relations. Connections could be anything from class visits to the farm to student run internships there. Smith could take the lead but this could be a part of 5 College identity. Smith could eventually hire a farmer who would grow local food for us and mentor students.

## 19 Offer local, seasonal food in dining halls

**Applies to** MHC; FC *Moderate cost*

**Proposal as submitted:** I would really love to have a dining hall that offered local, seasonal food year round. Perhaps we could alter our meal plans to make that option available for people for a slightly higher cost? I'm currently obligated to pay for a meal plan that doesn't reflect my values and supports farming industries that I do not support. I would definitely be willing to pay more to eat local food.

## 20 Promote composting and farming

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Continue promoting composting and farming

## 21 Rethink food services in terms of environmental and human health

**Applies to** SC

**Proposal as submitted:** A campus whose eating habits reflect an understanding of where our food comes from and its costs- in terms of both the environment and human health, i.e. more local food, less meat and seafood for ALL (faculty and students), the most sustainably sourced food possible, more in-season foods, reasonable portions prepared, etc.

## 22 Strengthen connection between Hampshire dining commons and the farm

**Applies to** HC *Moderate cost*

**Proposal as submitted:** At Hampshire, strengthen connection between the dining commons and the farm center.

## 23 Work to change mindset about food supplies

**Applies to** HC

**Proposal as submitted:** We need a more permanent mindset towards food in general. Creating a food forest to supply Hampshire's campus in back of Greenwich would be an interesting project. We need more edible plants in the center of campus, such as fruit trees and edible plants.

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# GREEN BUILDINGS

## 1 Create sustainable building guidelines for all new construction and renovations

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Instate policies that require any newly built building to be LEEDS certified or require all renovation processes to culminate in LEEDS certification. Or even grander, have all renovation projects culminate in carbon neutral buildings.

## 2 Design new buildings with natural cooling systems

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Begin to design our buildings to have natural cooling systems (which would help us to maximize co-gen).

## 3 Establish 5 College Solar Decathlon Team

**Applies to** FC

**Proposal as submitted:** I believe a great way to encourage interest in renewables and sustainability would be to have a 5 College solar decathlon team. This would help to solidify the Five College Consortium as a leader in sustainability. Additionally, this would allow students to take interest in renewables and familiarize themselves with the technologies available. What is the solar decathlon? The U.S. Department of Energy Solar Decathlon challenges collegiate teams to design, build, and operate solar-powered houses that are cost-effective, energy-efficient, and attractive. The winner of the competition is the team that best blends affordability, consumer appeal, and design excellence with optimal energy production and maximum efficiency. <http://www.solardecathlon.gov/>

## 4 Establish sustainable project planning and construction policies

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Establish policies that lay out the priority for sustainability in project planning and construction. - reuse or auctioning of materials, -making our values, not just \$ determine how planning takes place

## 5 Promote sustainability for the sports teams and gym users

**Applies to** UMass, FC *Moderate cost*

**Proposal as submitted:** (1)Get rid of water fountain. Use water facets and water bottles to store and drink water. (2)Install shower time monitors in the gym. (Or auto light out after 5min). (3)Mingle concept of fitness with personal sustainability. (4)Get rid of Soda vending machine if any. (Maintaining them requires lots of electricity. And they produce very unpleasant machine noises). (5)Monitor and lower machine noise levels in the gym? (6)Install a gallery of global sustainability initiatives around the track and field area in the gym. (7)Calculate weight of sports bags before sports team trips to reduce gasoline usage. (8)Encourage students to listen to radio stations on headphones rather than watching TVs while they are on treadmiles. (Save electricity? Less radiation?) (9)Put pots of plants in the rec

center to refresh the air. (10)Install realtime data visualization of water and electricity usage at the gym entrance. (11)Encourage business-minded students to do sustainanalytics for the rec centers/gyms.

## 6 Work with physical plant to reassess efficiency of buildings

**Applies to** UMass; FC *Moderate cost*

**Proposal as submitted:** Campuses sometime commission their buildings when they are new, but rarely conduct retro-commissioning projects that check if a building is performing according to plan and whether it needs to be tuned up. But we don't have to wait for over-worked physical plant personnel to do this work for us - as users we can commit to greater consciousness of how we occupy our buildings by staging a lunch-time building user meeting (including cleaning staff) and requesting help to understand how each building on campus works (or doesn't) and what we can do about it. We can get help from students to draw maps of thermostat location and how we can control building temperature for better function and greater energy savings (i.e. turn thermostat down when the last person leaves). We can agree on the hours of occupancy for our building. We can work with our Physical Plant to survey equipment and make sure it doesn't waste energy at the end of the day. We can meet our janitors and talk about how to manage waste better and how to reduce lighting energy load. We can help to understand current building resource use and track how we can do better. If families can do it (and many are in order to save on utilities), then we can do it as well with our workplace family!

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# LAND USE/LAND CONSERVATION

## 1 Contribute toward the conservation of land as a fundamental step toward making the community more sustainable

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Kestrel Land Trust is pleased to have the opportunity to submit our ideas for sustainability through the Five College Blue Sky Brainstorm. We applaud the Five Colleges for taking this visionary initiative.

Kestrel Land Trust is a regional land trust dedicated to conserving the land that sustains the ecological integrity and quality of life of the Connecticut River Valley. Founded in Amherst in 1970, Kestrel now serves a 19-town region and has conserved with our partners over 23,250 acres of forests, farms, fields, and wetlands. In 2011, Kestrel led the completion of the largest Conservation Restriction on private land in Massachusetts history, permanently conserving the 3,486-acre Paul C. Jones Working Forest on Brushy Mountain in Leverett and Shutesbury. We would welcome the opportunity to partner with the Five College Sustainability Program to continue to accelerate the pace of land conservation in the Connecticut River Valley.

The foundation of sustainability is the conservation of enough land to provide the resources that we and future generations need to survive. In addition to food, water and clean air, the land provides the

ecosystem services that our society needs to function and evolve. For this reason, Kestrel urges the Five Colleges to contribute toward the conservation of land as a fundamental step toward making the community, of which we are all a part, more sustainable.

First, Kestrel urges each institution within the Five Colleges to permanently conserve 90% of its open lands in perpetuity. By donating a Conservation Restriction (CR) to a qualified conservation agency — such as Kestrel Land Trust, a municipal Conservation Commission, or a state environmental agency — the members of the Five Colleges can retain ownership of their lands and maintain the right to sustainably use the natural resources of the land for agricultural or forestry purposes. Taking this step would send a strong message to local communities that the Five Colleges are committed to protecting their lands for the sake of future generations.

The Connecticut River Valley leads the Commonwealth in land conservation. Amherst has the highest percentage of conserved land of any municipality in Massachusetts. Hadley leads the state in conservation of agricultural lands with over 2,000 acres of farmland under Agricultural Preservation Restrictions (APR). These lands were conserved because private landowners had the foresight and desire to maintain the natural values of their land, no matter what changes the future may bring. Now it is time that the Five Colleges took the lead to conserve their own lands forever.

Secondly, Kestrel asks that the Five Colleges contribute financially to the conservation of lands in the municipalities where they are located. The Massachusetts Community Preservation Act (CPA) has provided a critical local match to help fund the conservation of farmland and forests through a surcharge on residential tax bills. Every resident of Amherst, Northampton, Hadley, Pelham, Sunderland, Belchertown, Easthampton, Southampton, Hatfield, and Whately currently pays an additional 1-3% of their tax bill, which amounts to an average of about \$150/year to help fund the conservation of land, historic, and recreational resources, as well as affordable housing. In lieu of paying this CPA surcharge, we urge each of the Five Colleges to contribute an equivalent and fair amount toward a Five College Land Fund. These funds could be distributed as challenge grants or as local matches to help leverage additional state grants and federal funding to acquire and conserve land.

For example, a typical Agricultural Preservation Restriction (APR) on a farm costs \$10,000/acre. On a 100-acre farm, that requires a \$1 million public investment in conserving that farm, which in turn contributes to the sustainability of our local food supply. The Massachusetts APR program will pay 80% of that value, leaving the land trusts and the communities to contribute 20% for each farmland project. Another example: the Mount Holyoke Range State Park, the scenic backdrop for all of the Colleges and a block of undeveloped forestland that contributes to local biodiversity, is only partially protected. The Massachusetts Department of Conservation and Recreation has limited funds to conserve lands on the Range and often has to turn landowners away for lack of funding. A Five College Land Fund would contribute immensely to the capacity of the Valley's land trusts and communities to conserve the rural and ecological values of our Valley. Compared to the hundreds of millions of dollars that educational institutions spend on new and renovated buildings, devoting a fraction of each college's capital budget to local land conservation would be a true investment in the sustainability of our region.



If Five Colleges finds these ideas intriguing in its effort to become more sustainable, Kestrel Land Trust would be more than happy to work with the Colleges to achieve these goals. The students, alumni, professors, and employees and their families who live in and visit the Valley would certainly welcome this kind of investment in conserving the local landscape that we all love and rely upon.

Thank you for your consideration of these ideas. I can be reached at 413-549-1097 or [Kristin@kestreltrust.org](mailto:Kristin@kestreltrust.org) if you would like to discuss them further.

## 2 Create opportunities for better use of the Hampshire Forest

**Applies to HC**

**Proposal as submitted:** How to use the forest we have? How to emphasize them as a space for students/community? Could we have art installations and trails? Would that disrupt the ecosystem – more that 1,500 college students already do? Could we have maps showing what we own? Because a lot of Hampshire students don't know about the acreage we have at Hampshire.

## 3 Change the way we use/think of green spaces

**Applies to HC Moderate cost**

**Proposal as submitted:** Changing the ways in which we use our green spaces, this idea would alter the mowing of lawns on campuses. A space that is fundamentally misused based on historic understandings of space and class, reducing lawn mowing and landscaping would provide colleges with the opportunity to reduce greenhouse gas emissions and cut costs. Covering lawns with alternative ground cover, such as clover or violets would keep the terrain cropped and aesthetically pleasing. Additionally, creating a student-designed project of rideable mowers that run on local grease would be an excellent way to promote green values on campuses.

## 4 Consider complete re-development of Smith waterfront; explore relationship between Smith and the Mill River

**Applies to SC Moderate cost**

**Proposal as submitted:** Have Smith address a complete re-development of Smith's waterfront which would explore our relationship with the Mill River.

## 5 Continue SC commitment to Mill River Greenway Initiative

**Applies to SC**

**Proposal as submitted:** commitment to the Mill River Greenway Initiative

## 6 Convert landscapes to organic ones; work to change ideas of what makes a landscape beautiful

**Applies to SC Moderate cost**

**Proposal as submitted:** Implement all organic landscapes as part of a greater aesthetics campaign which attempts to change ideas of what makes a landscape beautiful.

## 7 Create FC and campus-specific conservation corridors

Applies to SC; FC *Moderate cost*

**Proposal as submitted:** Land conservation on a grand scale- here on campus and as group (FC) to help create conservation greenways and corridors

## 8 Create opportunities for students to design sustainable landscapes

Applies to UMass

**Proposal as submitted:** My idea is to incorporate the wealth of sustainable landscaping knowledge of the Landscape Architecture school and Stockbridge School, the willingness of the student body to make a difference, and the yearning for increased sustainability by the general public. UMass landarch students, Stockbridge students, and active community members could attend seminars/installations of simple to complex sustainable landscapes. This could be applied at many levels, but a good starting point could be simple drainage solutions and associated plantings, or plantings to take advantage of passive solar gain. This knowledge could be perpetuated through the schools involvement with local communities- ie, the first projects could be on campus with invitations extended to local community members interested in learning these practices for their home use, and then could move off campus with momentum. I have many ideas on this topic, and would like to discuss further.

## 9 Establish conservation easements on Smith College land

Applies to SC *Moderate cost*

**Proposal as submitted:** Put Smith's land into a trust. Continue to encourage conservation easements.

## 10 Establish teaching and permaculture gardens at Smith

Applies to SC *Moderate cost*

**Proposal as submitted:** Have teaching gardens and permaculture gardens around Smith's landscape.

## 11 Explore new means of green land use

Applies to HC *Moderate cost*

**Proposal as submitted:** -Replace turf with i.e. violets which require less water and no mowing. Or hay. -Solve erosion problems, i.e. Prescott. Erosion from downspouts. Capturing the water from rainspouts would help solve this problem. Use for rain gardens. -Give lawns another function in addition to grass. Monthly installation dedicated to sustainability. Ongoing project. -Use sheep, rather than lawnmowers. Five College sheep and goat rotation. (goats eat poison ivy) -No more lawn mowers, period. More edible gardens, less lawns.

## 12 Get rid of the grass

Applies to UMass *Moderate cost*

**Proposal as submitted:** There are many perennial grasses that could be planted that do not require routine cutting as lawns do. Consider natural landscaping with rocks and this grass, and cut down on the amount of lawn cutting, fuel, expenses for lawnmowers, and pollution.

### 13 Get rid of the grass

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** Replace turf with gardens and have all college community members tend to them.

### 14 Incorporate sustainable turf management

**Applies to** SC *Moderate cost*

**Proposal as submitted:** stop cutting the grass!

### 15 Incorporate tree management and planting into campus building designs

**Applies to** UMass

**Proposal as submitted:** Better management of trees with respect to construction activities on the UMass campus. Trees in developed landscapes provide many well-known and robustly quantified benefits. The USDA Forest Service has a software suite that quantifies many of the benefits (iTREE). In order to maximize such benefits, the planting of trees must be carefully planned (for example, not planting trees too close to built infrastructure) and trees must be properly maintained (for example, good pruning and, especially, protection during construction). There are innumerable examples of trees being dismissed in the planning process at UMass as shown by egregious violations of the previous examples. Here is one example of each: 1) As part of the landscape around the new parking lot (52), trees were planted too close to utility wires, even immediately adjacent to older, larger trees that have been horribly disfigured to reduce conflict between the tree and the wires. Such poor planning increases costs (both financial and carbon-wise) due to excessive and avoidable; it also increases the likelihood of poor tree health and structural instability due to the formation of decay. 2) A large and significant Eastern cottonwood (*Populus deltoides*) west of Goessmann Hall has been damaged during construction. Construction has destroyed nearly half of the tree's root system which will induce physiological decline and structural instability over time. A laughable "tree protection zone" constructed of flimsy orange snow fencing is daily adjusted by the contractors to accommodate digging and equipment in the sensitive root zone. A large tree like the cottonwood sequesters a substantial amount of carbon, but it will surely decline as a result of the construction; again, increasing costs to campus and the environment. Decline may take years to manifest itself to an untrained eye, which is why it is often very hard to convince others involved in managing infrastructure on campus that their actions can be deleterious to trees. Any meaningful conversation about sustainability must include better planning and post-planting management of trees on our campuses.

### 16 Integrate permaculture into campus landscapes

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Integrate permaculture into the daily landscapes of the campus.

### 17 Invest in trees

**Applies to** HC

**Proposal as submitted:** - Planting trees – Planting nut trees is a great way can: o Sequester carbon o

Supply food to the community (they could be built in community spaces so everyone has access) o Build community/social capital if planting and maintenance are community activities. - Trees for Health Project: Medicinal tree arboretum – planting trees to research ancient medicinal theories. - Tree Buddies – involves young people in things related to planting trees. Linked to some immigrant community (opportunity for MCP here). Go with your tree buddy to plant a tree. Community building, social capital building.

## 18 Make Smith botanic garden more sustainable

**Applies to** SC *Moderate cost*

**Proposal as submitted:** here's a link to a page detailing conservation and sustainability efforts at the U.S. Botanic Garden. It inspires me to think that we might develop something similar (both the effort, and the webpage promoting it) for Smith. <http://www.usbg.gov/plant-collections/conservation/index.cfm>

## 19 Plant ground cover that is low impact and sustainable; question the traditional image of what a New England college looks like

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Begin to change ideas of what the "perfect New England college" looks like. Plant stately ground cover that also is fairly low impact and sustainable.

## 20 Promote transition to sustainable turf management

**Applies to** SC *Moderate cost*

**Proposal as submitted:** "Turf wars" Transition to electrical lawn mowing tractors. Reduce amount of turf we are caring for and putting energy (in all forms) into and increase the amount of ground covers. Use sump water for irrigation.

## 21 Reduce grass lawns and replace with shrubbery or other more sustainable ground cover

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Could we plant some shrubbery or grasses on the hillsides by the parking lots, etc. and in those funny little spaces by the sidewalks rather than having lawns? So much energy is wasted maintaining grass patches that no one really can enjoy as a recreational space, that it seems energy could be better spent elsewhere. We can still keep the quads and big areas, but just limit the grass on the sidelines.

## 22 Replace concrete walkways with permeable paving

**Applies to** FC *Moderate cost*

**Proposal as submitted:** <http://www.stabiligrd.com/> <http://www.soilretention.com/> I'd love to see the college set up a test plot of many of the permeable options that now exist for lots, walks, etc.

## 23 Replace most campus lawns with biodiverse plantings

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Campus lawn spaces should be evaluated and those that are unused or un-iconic would be turned over into meadow or native wildflower and/or grass plantings. This would save money and energy used on pesticides, fungicides, and fertilizers. I presented a poster on this at the Smith College Celebration of Collaboration Spring 2011 if you would like more details.

## 24 Replace mowed lawns with biodiverse ground cover

**Applies to** FC *Moderate cost*

**Proposal as submitted:** NO MOWN GRASS LAWNS ON CAMPUSES WITHIN 3 YEARS. Instead, they can be planted with vibrant, biodiverse, abundant, perennial forest gardens. Students can design, implement, and work with staff to maintain. Pros of grass lawns: Looks 'nice' Picnic friendly Cons: Require pesticides (poison) Require mowing (\$, fossil fuels) Produce no edible foods Not habitat Pros of forest gardens: Look nice Picnic friendly (can have some bare areas) Provide habitat Self maintaining Attract attention Improve food security Cons: Intimidating to the mown lawn paradigm ...? LET'S CHALLENGE OURSELVES, FOLKS! TICK TOCK!

## 25 Replace trees lost to weather with native species

**Applies to** FC

**Proposal as submitted:** The loss of many campus trees as a result of severe weather will require replacements. Because regional wildlife populations are ecologically dependent on native plant species with which they have evolved, it is important to replace the trees with species native to this region rather than with exotic species chosen for artistry, past history, economy or convenience. "Increasing the percentage of native [plants] in suburbia is a grassroots solution to the extinction crisis," states Douglas W. Tallamy, Chair, Entomology and Wildlife Ecology, Univ of Delaware in Bringing Nature Home: How You Can Sustain Wildlife with Native Plants, Timber Press, 2009. Five College biology and forestry programs and clubs could play a role in selecting, growing, and/or seeking gifts of native specimen trees to replace damaged trees and add new regional beneficial trees to campus landscapes.

## 26 Return to previous land management practices

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Bring the campus (back) into the future: - Local/native grass meadows (with signage) - Sheep to graze portions - locally sourced food -

## 27 Review opportunities for permanent land conservation/protection across the Five Colleges

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Think big about land conservation across the five colleges. This is an opportunity to make a leadership statement about land and water conservation and protection.

## 28 Transition section of land on all campuses to become fully organic

Applies to SC *Moderate cost*

**Proposal as submitted:** I wanted to propose transitioning a portion of each 5 college campuses grounds to an organic approach free of synthetics and pesticides. See Williams College for example of successful program.

## 29 Undertake a campus-wide open space assessment

Applies to SC

**Proposal as submitted:** Undertake a campus wide open space assessment.

## 30 Use perennial plantings instead of annuals

Applies to HC

**Proposal as submitted:** I think that gardens around campus signs, etc. should be planted so that they don't have to be dug up and replace shrubs/bulbs/etc every season.

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# TRANSPORTATION

## 1 Acquire zipcars for Mount Holyoke

Applies to MHC *Moderate cost*

**Proposal as submitted:** MHC should have its own zipcar program.

## 2 Change/improve bike culture

Applies to FC *Moderate cost*

**Proposal as submitted:** Better streetlights between Hampshire and Amherst, and dedicated bike lanes on roads. Lights on the bike path, as well as more night security to make the bike path safer at night. Repaving the bike path to make it less dangerous. Bette bike locking areas on Hampshire Campus, currently they are not secure (particularly those outside of FPH).

## 3 Create a Five College bike path map

Applies to FC

**Proposal as submitted:** Educate people about the bike paths that already exist between noho and Amherst. As a first year, they are hard to find! But I know they exist and would make biking much more enjoyable. If there was an easily accessible map of bike paths in the area, I think people would be more inclined to ride bikes!

## 4 Create a Five College Rideshare program

Applies to FC *Moderate cost*

**Proposal as submitted:** there should be a more accessible ride share program for both getting to classes and out of the valley

## 5 Create incentives for reduced automobile use

**Applies to** FC *Moderate cost*

**Proposal as submitted:** I am particularly interested in increasing use of public transit (I am a bus and bike commuter) and increased use goes hand in hand with a more reliable convenient system. When I wait for the bus I see a lot of SOVs (single occupancy vehicles) pass by. I know that Smith has or had a program which gave staff and faculty incentives for not bringing cars on campus.

## 6 Create new incentives to encourage cyclists

**Applies to** FC *Moderate cost*

**Proposal as submitted:** When I first moved here as a new junior faculty member, I was gung-ho to ride my bike to campus from Northampton. But I quickly realized that it wasn't very feasible -- it's too long a ride not to get sweaty (especially during warmer weather) and there was no place to shower and change or keep clothes in a locker (without paying for a gym membership). It would be great if there were some way to make facilities available for cycling commuters.

## 7 Create website for traveling faculty/staff to explore carpool options

**Applies to** FC

**Proposal as submitted:** When development officers visit relatively close areas of the country, they often drive to their destination. It stands to reason that at any given time, development officers from the five schools are in the same city having used multiple cars to get there. My proposal is for a very simple website where development officers can post their planned visits to see if they can carpool to nearby areas.

## 8 Encourage ridesharing at MHC

**Applies to** MHC

**Proposal as submitted:** I wanted to think of ways to encourage ride sharing. There are a lot of students (30-40%) who have cars on campus. Yet a lot of students continue to complain about the Five College Bus system and difficulty getting off campus, whether to take a class elsewhere, or to go to the mall, etc. I have talked to Charlyn Puza at Campus Police about encouraging ride sharing by offering several select parking spots on campus to those students who commit to sharing their cars some minimum amount per semester. I was thinking we could have four spots in front of Skinner designated as "green parking spots" and another four spots next to Porter also set aside for students (currently that lot is exclusively for faculty).

## 9 Encourage Telecommuting across the Five Colleges

**Applies to** MHC; FC

**Proposal as submitted:** Since commuting is a large resource use, we should take advantage of our computers and have at least one telecommuting day per month for all employees. Save on gas, pollution, and it would likely improve morale of employees.

## 10 Establish commuter parking lots to encourage carpooling/use of buses

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Establish commuter parking lots in key areas to encourage carpooling or use of the Five College bus service.

## 11 Establish Five College car sharing service

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Similar to zip car, but with the one way possibilities, pick up and drop off at any campus.

## 12 Extend and/or join up car sharing across the Five Colleges

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Zipcar is at Smith in a few locations and WeCar is at the UMass garage, but it would be great if cars could be exchanged between them and/or they extended to the other campuses as well.

## 13 Hold a public transportation education day

**Applies to** FC

**Proposal as submitted:** Encourage people to use the buses to get around by having a special day where volunteers help people plan their day to day trips through public transportation. Reps could be at the bus stops with schedules and advice about PVRTA and UMass transit systems. Would be a great way to start the fall semester, encouraging new students as well as faculty & staff to use the buses

## 14 Implement carbon neutral travel policy for alums

**Applies to** SC

**Proposal as submitted:** I would welcome a Smith program to identify and implement an appropriate mitigation program so that alumnae travel is carbon neutral. It would be exciting to see our engineering students and other members of the student body working with their professors to quantify impacts, identify mitigations, and apply appropriate mitigations. In that way, when an alumna signs up for a Smith trip or registers to attend reunion, she can be confident that responsible reliable mitigations will be implemented as part of her action.

## 15 Improve climate for cyclists

**Applies to** HC; FC *Moderate cost*

**Proposal as submitted:** -Bike shelters may convince more people to bring their bikes. Let's make a better climate for cyclists. -Faculty showering facilities for cyclists -Public transit, upper and lower valley, community and college based Looking at old maps there is a ton of rail that has been destroyed during the 50s Is it possible to either restore or rebuild a rail system in Amherst/PV? -Make nicer, safer bike paths. There is no good way to get to Holyoke, dangerous road to Amherst, etc. Changing the right of way rules to favor pedestrian and cycle areas could be good. Shut down some streets to pedestrians only. -Smith has a policy of offering financial incentives to Students and faculty who don't bring their



cars. Could Hampshire do the same? -5 college ridesharing program, daily commutes -Cuban model – by law you have to stop for hitchhikers

## 16 Increase incentives for alternative transportation

**Applies to** AC; FC *Moderate cost*

**Proposal as submitted:** I would like to see a program implemented at all the colleges that mirrors Smith's pay for not driving. The details are at: [http://www.smith.edu/campuspolice/parking\\_optout.php](http://www.smith.edu/campuspolice/parking_optout.php) Many of the colleges have staff that live slightly out of "easy" biking distance, and a little incentive would help many of those choose to bike more often.

## 17 Institute a Five College telecommuting program

**Applies to** FC

**Proposal as submitted:** Here's the thing... Very simply, we are in desperate need of a comprehensive Telecommuting Policy, along with a clear process for implementing the policy at our 5 campuses. I am a graduate of the Master in Regional Planning program at UMass Amherst. For the entirety of my academic time at UMass, I was employed as a graduate research assistant in the Department of Transportation Engineering, conducting research for the Department of Transportation. Upon graduation, the assistantship was turned into a full time professional staff position, and I was offered the job. I love research and have enjoyed the opportunities that have become available to me having worked at this University. However, as the University moves toward a more Sustainable future, I see telecommuting as an integral piece of this plan. In general, we work for too many hours at our desks in our offices. We drive to work in our cars. We spend 8 hours sitting in uncomfortable chairs, eating unhealthy foods. The more we work and commute to our jobs, the less time we have for family, exercise and actually seeing the sun in the sky. There is so much research focused on the benefits to employees and employers alike... of less time in the office, more flexibility around work times, etc. Obviously, working from home or from some location other than the office doesn't work for everyone. And to be certain, incredible management is required in order to keep people motivated, on task and connected to fellow employees. But telecommuting is becoming more and more popular as a mechanism for decreasing overhead, decreasing air pollution from commuting, increasing the health and well-being of employees, and increasing overall productivity. The University of MA President's Office has a policy for telecommuting already in place. However, the policy is old and lacks detailed procedures. I'd love to revisit this policy and create something new for the future of 5 College employees.

## 18 Invest in better bike infrastructure (racks, shelters, repair advice)

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Increase bike traffic by increasing bike infrastructure in the form of better bike racks, bike shelters, and education about how to fix your bike.

## 19 Offer summer bus service to MHC

**Applies to** FC *Moderate cost*

**Proposal as submitted:** PLEASE, PLEASE find a way to have summer bus service to Mount Holyoke. Summer is the only time of year (due to less schedule pressure and the weather) that I could use public

transportation. I live a mile from a PVTA stop that goes to UMass - but then I'm stranded! No way to get to South Hadley for all of May-August.

## 20 Offer Zip cars at Mount Holyoke College

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** At Mount Holyoke - Get a couple of Zip Cars (preferably hybrid cars), that people can use for occasional car needs - hopefully encourages some to forego having a car, or having a second car. I know Amherst College has done this (I'm not sure how successfully) so they could provide information on how it works.

## 21 Organize departmental car pool systems; prioritize bike routes and parking to promote greater bike use

**Applies to** UMASS *Moderate cost*

**Proposal as submitted:** 1. Transportation 1. Car pool system can be created within the departments. When people know each other very well, they would feel secured. Same directions, rotating duty, creating time tables, making a second route just in case person on duty cannot make it. 2. Use more bicycles: to do so, more bike-routes and parking for bikes need to be established on campus.

## 22 Participate in green passport program so that students are more aware of real costs of going abroad

**Applies to** SC; FC

**Proposal as submitted:** participate in the green passport program- create an affiliation with the study abroad offices to create a culture of students and faculty who are aware of the costs of their travel and actions while abroad.

## 23 Provide more direct buses to Hampshire mall

**Applies to** HC; MHC *Moderate cost*

**Proposal as submitted:** If you are at Smith or UMASS you can get to the Hampshire Mall via the B43 bus. But if you are at Mount Holyoke or Hampshire College you have to take a long route to get there by bus. Couldn't there be direct buses from Hampshire College to the Hampshire Mall?

## 24 Reduce work related travel and use carbon banking

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** reduce college travel or use carbon banking for necessary trips

## 25 Review travel patterns to promote sustainable travel

**Applies to** HC; FC *Moderate cost*

**Proposal as submitted:** One idea: carbon offsets for air travel tend to be a large consideration in sustainability plans. Could Hampshire carefully review airline miles and plan institutionally to improve? For example, how often are we sending 2, 3 or more individuals on trips that one person should be able to handle well? Or picking the best one person might improve our results? Do we do stretches of business in one well-planned trip or are we making multiple trips to trips to the same region extending

miles by back and forth travel? Do we plan travel in advance year to year? Just one I have thought of and don't know if we can improve both in offsets and saving expenditures. I don't suggest we do anything that would challenge operations. But maybe we could review to see if we could plan better in that area. Cost/benefit? 2 additional thoughts on this: 3 people flying = 3 hotel rooms and meals Skype means we can think more thoughtfully, also. For example, are we doing our first round of interviews by Skype now? From what I've read, most schools do and then bring in only 2 to 3 candidates. Time and money saved are as important to our sustainability as offsets. Plus, travel thought more about up front might reduce exhaustion on some highly valuable personnel.

## 26 Ride your bike to school/work day

**Applies to** UMass; FC

**Proposal as submitted:** Have a special day(s) to encourage students/staff to ride their bike to work. Encourage/bribe folks by having free coffee, water and fruit available on campus and on bike routes for bike riders. Perhaps also music and costumed folks to support riders.... If people try it on the "fun" day, they might realize it's not that far/hard to commute on a bicycle and they might do it more often.

## 27 Run campus vehicle fleets on biofuel

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** This may already be happening? When I worked at Keene State, the college switched its physical plant vehicle fleet over to biodiesel (2003 or so). If I recall, there was a summer fuel blend and a winter fuel blend. The goals were to improve human health and environmental sustainability outcomes. There were no adverse vehicle performance issues, and no increase in fuel/vehicle maintenance cost.

## 28 Support telecommuting option for faculty and staff

**Applies to** MHC; FC

**Proposal as submitted:** Put in place a robust telecommuting option for faculty and staff - perhaps through telecom-Fridays where everyone whose work allows can come to work electronically one day a week. This would help the environment by reducing travel around the valley, and would help prepare us for emergency events (like an ice storm) where personal mobility might be limited.

## 29 Tax travel in proportion to carbon cost; use funds for energy saving projects on campus

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Begin to have a travel tax in proportion to carbon cost. These funds could then be used to do energy saving projects on campus (such as retrofit buildings). We could also begin to tax alumnae trips. This could also bring in the whole Five College consortium - we could have mild competitions to see who could reduce their carbon footprint in the biggest/fastest way.

## 30 Transition all campus security vehicles to hybrid or other high mpg vehicles

Applies to SC *Moderate cost*

**Proposal as submitted:** (1b) transition all campus security vehicles to hybrid or better technology vs SUVs and low mpg vehicles

## 31 Use social media to create site for exchanging rideshare info

Applies to FC

**Proposal as submitted:** Could we have a website for rideshare stuff? It seems like to help everyone get around it would be great to use social networking techniques to get people to post rides and pick up extra passengers.

## 32 Work with delivery organizations to optimize driving routes

Applies to UMass

**Proposal as submitted:** Organizations such as FedEx have mapped out the routes that their delivery trucks take. Using GPS technology, they are able to design routes that take less time, and are more efficient based on patterns of turning, etc. Consider engaging them to look at our current delivery routes to see if there are opportunities. Others have found that they have been able to cut their fuel costs, and associated with that less carbon burden.

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# WASTE REDUCTION

## 1 Add recycling options

Applies to MHC

**Proposal as submitted:** More recycling for products like fabric and styrofoam

## 2 Assure access to filtered drinking water; stop selling bottled water

Applies to UMass *Moderate cost*

**Proposal as submitted:** I believe there should be places on campus where water is filtered and available to students to fill their water bottles. Selling bottled water and soda on campuses increases an incredible waste in plastics.

## 3 Better label recycling bins

Applies to MHC

**Proposal as submitted:** What can we put in recycling bins? It is not entirely clear.

## 4 Change college printing policies

Applies to HC

**Proposal as submitted:** Changing printing policies at Hampshire. There's such a lot of waste paper,

especially from teacher's handouts. With Moodle, more papers could be turned in digitally, and more can be read as PDFs online. Reading on the computer is difficult, especially if older or inexperienced with it, however with practice one grows accustomed. Sharper LCD screens cause less distress to the eyes, as well as screens like the Kindle.

## 5 Compost food with vermiculture at the Five Colleges, Inc. office

**Applies to** FC

**Proposal as submitted:** Worm composting at the Five Colleges. Can be located in the basement or in the kitchen pantry. Depending on how big an operation we want. Suggest small operation to start with.

## 6 Compost leftovers from cafeteria

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** compost leftovers from cafeterias

## 7 Create a coordinated end-of-year tag sale or donation of unwanted items

**Applies to** SC

**Proposal as submitted:** Create a coordinated end-of-year clean out that takes usable items (clothes, furniture, refrigerators, printers, etc.) out of the waste stream and either auctions them or donates them, etc.

## 8 Create a more efficient and broader recycling system

**Applies to** FC *Moderate cost*

**Proposal as submitted:** More efficient recycling measures (not just bottles and cans and paper, but plastic bags and other recyclable plastics as well, so they don't have to go into the trash).

## 9 Create better recycling program for plastics

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Amherst does not have a recycling program for plastic bags, packaging and other plastic film material. The Five Colleges could implement this program and either start an in house recycling facility or export these plastics to a recycler elsewhere. Naturally collection programs would have to be implemented on each campus as well. This type of recycling was started in California a few years ago.

## 10 Create FC purchasing program focused on full life cycle products

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Look at the possibility of purchasing 'full' life cycle products within the Five Colleges. Perhaps buying carpet or floor tile as a consortium, for example, from a company that installs the product then replaces with new- the old is recycled into more new.

## 11 Create policy for material reuse

**Applies to** SC; FC

**Proposal as submitted:** Creating a policy around renovations at Smith that requires that materials are re-used or salvaged as much as is possible so as to keep items out of the waste stream that still have use/value.

## 12 Create swap shed for unwanted but functional furniture/appliances/electronics

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** This semester I am the Waste and Recycling Intern for the UMass Amherst Campus Sustainability Initiative. I am working closely with the Office of Waste Management to try to reduce campus waste, increase recycling rates, and divert waste from landfills. Currently, UMass offers a facility to campus departments and faculty, which allows them to drop off or pick up unwanted furniture. This furniture is then made available to other departments on campus and eventually, if unclaimed, to local non-profits. I would like to propose a similar facility for students that would accept unwanted but functional furniture, appliances, electronics etc. and make them available to other students for free.

## 13 Develop cloud printing for the five colleges

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Send documents into the "cloud" and print from anywhere in the five colleges with the swipe of a one card. This will reduce waste, as 20% of printed materials does not get picked up.

## 14 Eliminate paper catalogs

**Applies to** SC

**Proposal as submitted:** Eliminate paper catalogs. An enormous amount of paper catalogs come through the mailroom each year. Using on-line catalogs would eliminate the paper used to create the catalog and reduce emissions used in trucking the catalogs.

## 15 Eliminate stand alone printers and mandate use of copiers as printers

**Applies to** UMass

**Proposal as submitted:** Remove all stand alone printers and mandate copiers to be used as printers. Stand alone printers' use extra electricity and cartridges are expensive and often difficult to recycle. Toner is included with service contract on copiers. Reinstall all print drivers for copiers to default to 2 sided black printing and "secure" print. Secure printing holds jobs at the copier until a user enters a PIN to claim them. A time-out feature deletes unclaimed jobs, preventing stacks of forgotten prints from piling up at the device. Xerox Secure Print also prevents unauthorized viewing of confidential/sensitive documents—a necessity in many offices at UMASS. Secure printing saves paper by allowing users to delete a job (or simply not release it) at the copier if it was sent by mistake or with an error. Two sided printing cuts paper use in half; super easy way to reduce paper consumption.

## 16 Encourage all events to be waste free

**Applies to** SC; FC

**Proposal as submitted:** make waste-free events a regular occurrence at Smith

## 17 Encourage less paper waste

**Applies to** FC

**Proposal as submitted:** Everyone should be encouraged to print more responsibly - most documents should be printed double-sided, and paper that has been printed on one side should be reused and printed again on the back. We need the infrastructure to do this (i.e., printers/copiers with the right capabilities and settings), we need to provide knowledge/instructions of how to do this, and we especially need to facilitate conversation about this at our campuses. For example, students often think it's not OK to print their assignments double-sided - some faculty may be concerned about this, but many faculty don't mind, yet the students don't feel comfortable asking about it. Same in administrative departments - except in very special circumstances, there is no reason why things that are printed for files or internal use can't be printed double-sided or on paper that has already been used on one side. We use an incredible amount of paper, and we could make an enormous difference through these simple actions. I even see people throwing completely blank paper into the recycling (or even garbage!) because they're too lazy to put it back into the printer/copier drawer. This is outrageous, and we need to create a culture that encourages everyone to take responsibility for their paper use.

## 18 Ensure that no trashcan stands alone--always in tandem with recycling containers

**Applies to** UMass

**Proposal as submitted:** The basic problem is that if you put a bottles recycling bin 10 ft from a trash bin, people WILL NOT walk the extra ten feet to properly sort their waste. It's so simple, and I see it everywhere. The only way to fix this is to make it a POLICY that no trash can ever stand alone, that it at least have a bottle recycling next to it, or in school buildings that it have a mixed paper bin too. This means that if you have more trash cans than you do recycling bins, just don't put out the trash cans. The thing I've learned is that people will not litter (usually) but they will willingly throw bottles and paper in the trash. Another important part is that they be RIGHT next to each other, not around a corner, not kinda hidden, but organized in the most logical way to encourage people to properly recycle. Like, for example, at a gym cafe that gives out smoothies, the most often thing people throw out immediately after are straw liners. Now, there's a mixed paper bin on the other side of the room, but a trash and a bottle recycling directly on the way to the exit. So, everyone throws away (or improperly sorts) these pieces of paper, and they will never be recycled. How sad, just because people don't know how to organize bins effectively. We need to stop just throwing trash bins half-hazardly around, and expect that people won't throw incorrect items in them. People WILL throw trash in a recycling bin if the trash is too far away. People WILL throw recyclables away if the recycling is simply out of reach. We need to EXPECT THIS, and plan for it, or else we'll never truly improve.

## 19 Ensure that there are recycling bins in individual offices

**Applies to UMass**

**Proposal as submitted:** Every office should have several recycling bins. We have some in the kitchen area, but not in each individual office. This makes it very easy to throw away items that could be recycled.

## 20 Ensure that recycling is done property at UMass

**Applies to UMass**

**Proposal as submitted:** I work on campus and every time the maintainers come in to take out the trash/recycling I see them dump the contents of all three bins into one big trash barrel, despite them having been sorted appropriately. I wonder if new ideas will be effective when even one so simple as recycling seems to be ineffectively practiced. I hope that some way of making sure that proper recycling actually does occur can be worked into your plans for sustainability initiatives.

## 21 Establish a Five College Freecycle Group

**Applies to FC**

**Proposal as submitted:** Create a Five College Freecycle-like group to allow people to offer unwanted or unneeded items to others who may want them.

## 22 Establish end of year recycling/reuse program

**Applies to HC**

**Proposal as submitted:** We propose generating a system through which we could sort and store all materials left behind at the end of the school year in Spring with the potential to be re-sold at the beginning of the school year in the Fall. At Hampshire College, there is already a group in charge of this, however it needs to be undertaken on a much larger scale. The amount of recyclable materials is immense, and the potential usages for it even greater. Designating a Spring drop-off point for sorting and storing would save both students and the college money.

## 23 Expand ban the bottle campaign throughout five colleges

**Applies to FC**

**Proposal as submitted:** Make the Ban the Bottle Campaign a Five College initiative. UMass students have already been in contact with Hampshire students, but Mount Holyoke, Smith, and Amherst have not been involved yet and should be.

## 24 Experiment with "waste-free" events, moving towards all events being zero-waste; require students to bring containers for "grab and go" meals

**Applies to SC**

**Proposal as submitted:** Begin to have waste free events, move towards all zero waste events. Change Smith's "grab a go" so that all students are required to bring their own containers to get lunches.



## 25 Explore new ways to recycle, repurpose, reduce, reuse

**Applies to** HC

**Proposal as submitted:** -Debuilding before you build. Take down piece by piece and you end up with reusable materials. Some sort of building materials depots. -Anti water bottle campaign. How can we reduce our consumption of water bottles? "Five college take back the tap" o Hydration stations o Make it fun to recycle. Put a counter or buzzing sound on recycle bins to encourage people to recycle. -Free store to give away mod/dorm stuff at end of year -Compost paper hand towels -Buy reusable silverware and plates or bring your own to events. Provide wash stations.

## 26 Find a way to sort biodegradable to-go containers so they can be composted

**Applies to** SC

**Proposal as submitted:** I work in Dining Services, as an Area Manager. One of the kitchens I am responsible for is Chapin Grab & Go. We use a massive amount of biodegradable containers at this operation. Right now we have no way of separating the containers and having them break down so they are able to be used as compost. I was wondering with the Blue Sky project could the college work with some engineering students to come up with a machine that would break down these products. (I have been told the closest place to Smith that does this is in VT) It is just an idea, and I was wondering if this is the kind of project your committee is looking for. I know the Cafe and Catering also use biodegradable products and they could also benefit from this. I would think some of the other 5 colleges must use these product too.

## 27 Find ways to reuse/redistribute items left on campus at the end of the year

**Applies to** HC

**Proposal as submitted:** At the end of the school year, we should set up a trailer that can contain the leftover materials people leave behind. It is a large job, but it would save so much stuff. We could rent this out to students, particularly items such as microwaves, fridges, rugs, lamps, etc. to pay for the program. It would serve as a way to furnish the mods with less turnover. Also, dumpsters on campus should not be policed, as it saves money and is more sustainable for students to reuse unwanted items.

## 28 Five College Food Recovery Network

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Start a project where volunteers will collect excess food from dining halls and donate to local homeless shelters. This has been claimed to be illegal (due to cases of being sued for food poisoning etc), but this is covered by a bill signed in 1996 by President Clinton and universities like UMD and Brown have started their own projects, as well as a couple others. The bill is called the Bill Emerson Good Samaritan Act <http://feedingamerica.org/get-involved/corporate-opportunities/become-a-partner/become-a-product-partner/protecting-our-food-partners.aspx> and the website is: <http://www.foodrecoverynetwork.org/> It is sustainable in that we are recycling much of our perfectly good dining food and serving the larger community. I would like to see this in action here!

## 29 Hire a recycling coordinator for the 5 colleges

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Hire a recycling coordinator for the 5 colleges

## 30 Improve labels on recycling bins

**Applies to** SC

**Proposal as submitted:** Make it easy for recycling - better labels and the inclusion of solar compactor recycling bins.

## 31 Improve recycling systems at Hampshire

**Applies to** HC

**Proposal as submitted:** Creating a recycling bin program that gives CEL-1 & 2 credit for students. We could obtain a grant that would support an EPEC course on different methods of recycling, using social entrepreneurship for recycling initiatives. Putting recycling bins on campus, next to the gazebos in particular. Can we turn recycling bins into social spaces? Can recycled materials be used as art materials, such as the DART installation at the Hampshire College bus stop? We must put more resources into supporting the Phys Plant, and working in parallel with them in order to make recycling come to fruition.

## 32 Increase recycling opportunities by more thoughtful bin placement

**Applies to** FC

**Proposal as submitted:** Place more recycling bins all over campus and especially near food areas. They had way more at my undergraduate university in Montreal.

## 33 Increase use of digital media

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Use digital media better to cut back on everything from paper use to air travel.

## 34 In-House Composting

**Applies to** SC *Moderate cost*

**Proposal as submitted:** I propose that each house gets a composting station in the kitchenette(s) and, ideally, small composting buckets (with lids) for the dorm rooms.

## 35 Install and maintain compost bin in every pantry on campus

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** We have telephone reps and service reps. How about a compost rep for every department? The job definition is to install and maintain a composting bin in every pantry on campus. Let's capture all of the food waste that ends up in the trash and let's work with Auxiliary Services and Student Businesses to collect it on a weekly basis.

## 36 Install opportunities for compost collection in dorms

**Applies to** UMASS *Moderate cost*

**Proposal as submitted:** I notice that a lot of people eat a lot of different things in their dorms, but a

lots the uneaten food is put into the regular trash. I think it would be a great way to work towards 0 waste. It would also be a way to involve more of the campus community in environmentally sustainable efforts. There would have to be collection bins or containers placed in a common area on each floor. The container would have to be emptied everyday to keep the floor and food-trash from spoiling. This could be done by the help of student volunteers in the building, maintenance staff (?), or an environmental program. I would help in my dorm if this idea became a reality.

### 37 Install recycling bins outside

**Applies to** HC

**Proposal as submitted:** Outside recycling bins at Hampshire College are greatly needed. If these were there, more people would be mindful and considerate. There is a problem with insufficient staff to maintain them, but it's so important. If it's too difficult for people to recycle, they simply will not.

### 38 Make recycling more fun to enhance adoption

**Applies to** UMass, FC

**Proposal as submitted:** I took a Public Health class and the idea I got was if we made recycling more fun or in some way rewarding will people be more involved. this can be a study done in colleges and elementary to high school. through this we can imprint on young minds to pick up good behaviors for the future.

### 39 Obtain procurement and travel card statements electronically

**Applies to** SC

**Proposal as submitted:** Obtaining procurement and travel card statements on-line versus on paper via the mail. This will eliminate the trucking and emissions generated in mailing and delivering the statements.

### 40 Offer eco-cups for all FC students and staff

**Applies to** FC *Moderate cost*

**Proposal as submitted:** All of the colleges could have Eco cups (at MHC), instead of spending money on to go cups. Also Amherst college is using the SGA money from the UMass Fine Arts center to buy an electric car, that sounds like a great option for the other colleges

### 41 Offer reusable plates and cutlery for "Grab and Go"

**Applies to** SC

**Proposal as submitted:** Have cheap or free reusable plates/cutlery for students to take food from the dining halls. Would counteract students taking plates from dining halls and also the 'compostable' plastic containers at Smith's Grab and Go that end up in the trash.

### 42 Organize a monthly exchange of goods

**Applies to** UMass

**Proposal as submitted:** UMass should organize a day per month of exchange of commodities, where

students can and are encouraged to conduct tag sales all over the grass areas of campus, but with exchanges only, no money circulating

### 43 Place compost bins in all buildings

**Applies to** SC *Moderate cost*

**Proposal as submitted:** composting in all buildings on campus

### 44 Provide better labeling for recycling bins

**Applies to** MHC

**Proposal as submitted:** Could we relabel the cans/bottle recycling bins to include everything that can be recycled in them? People are often confused about what to put where.

### 45 Provide compost bins for all campus buildings

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** This would include residence halls, although storage before collection may cause some difficulties...

### 46 Provide compost bins in addition to trash and recycling

**Applies to** UMASS *Moderate cost*

**Proposal as submitted:** Offer bins throughout the campus that are for compost items specifically- places like Portland OR do this all over the city. food items, and materials like corn made plastic cups can then be disposed of in the compost bins instead of the trash.

### 47 Provide compost bins in offices

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** I would recommend that each individual office be provided with one compost bin with a series of bags inside. The maintenance staff would need to empty the bins nightly to reduce pests and odor and the individual bags would need to be made of compostable material. However, implementing this would greatly reduce the amount of compostable material (including the newly compostable packaging the university is using) out of the trash. Currently, we are doing a great job of sustainability by using reusable materials (in dining halls, campus eateries, etc), but there is a huge number of folks who get things "to go". These take away materials are brought out and away from any places where there can be properly composted, which defeats the purpose of the use of such items. Having a proper receptacle would allow us to properly compost and reduce waste.

### 48 Reduce amount of renovation materials thrown out; can it be offered to others in the community?

**Applies to** SC; FC

**Proposal as submitted:** Reduce the amount of renovation material that is put in the dumpster. Could there be a Five College "garage sale" or something of that sort?

## 49 Reduce food waste

### Applies to SC

**Proposal as submitted:** World hunger has risen SIGNIFICANTLY over the past few years. People in underdeveloped countries (sub-saharan, asian, south american families) have cut down the amount of food they feed their kids. Children are withdrawing from school to work and feed their families. But here at SMITH we are fortunate enough to be fed and sometimes overfed. Working in the dining halls the past semester, I have seen food go into the trash and disposal. Smith wastes food a lot! People are hungry, so please let's not, not, not, waste food! Let's help others who are less fortunate at finding the food that we do or let's simply respect its value and NOT waste it. This suggestion is not so much an eco-friendly but WORLD-friendly.

## 50 Reduce number of trash cans/increase number of recycling bins

### Applies to MHC

**Proposal as submitted:** Reduce trash cans and increase recycling bins

## 51 Reduce our paper footprint

### Applies to FC

**Proposal as submitted:** reduce paper footprint: 1. require use of paper with high % of recycled content 2. set all printers to default to double-sided printing 3. discourage printing of routine emails and draft documents

## 52 Reduce paper waste in offices by instituting paper stock quota for departments

### Applies to FC

**Proposal as submitted:** I work in an administrative office and notice that my coworkers print out a lot of emails, recipes, chain letters, blank pages, etc etc etc. Most people know that paper comes from trees, but there isn't any imperative to change their behavior. My idea is to institute a paper stock quota by departments to limit unnecessary printing. It might be difficult to implement and politically unpopular, but real change doesn't come easy.

## 53 Reduce resource use, increase responsible consumption

### Applies to HC

**Proposal as submitted:** -Engaging together to work on responsible and ethical consumption. This could utilize technology (computer programs, websites, iPhone apps) to monitor student consumption and calculate impacts. Take advantage of people's competitive nature to create responsible consumption incentives. -Hold energy consumption reduction competitions between the five colleges. -Recyclemania is a nationwide recycling competition that could be implemented on campus. -Five College mess kit. There could be a Five College design competition to design the most ergonomic mess kit that students could bring to events that serve food. Washing stations at the events are important. These could also be used for Bridge café food which currently uses paper dishware as well. -Oberlin College: Resource monitoring for students. Tells you where your electricity is coming from, how much you are using, where your water is coming from, and what your consumption is -Mixed housing faculty/staff/students

## 54 Reuse or re-purpose electronic equipment

**Applies to** UMass

**Proposal as submitted:** electronics reuse/repurpose before electronics such as printers and computers are tossed out maybe they could be used in another department if they still work. If they dont work maybe the students would like to have a chance at fixing or using the parts for projects. Like using the stepper motors out of a printer to construct a 3D printer or robot. the act of disassembling things is very educational in its self and then maybe the waste from that would be more easily recycle.

## 55 Systematically analyze recycling and compost needs

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** UMass should come up with a much more general, thorough going, systematic plan for recycling and composting as much trash as possible

## 56 Urge students to use green paper for informal assignments

**Applies to** AC

**Proposal as submitted:** Promote student use of the green paper from the library printers for problem sets and other informal written assignments.

## 57 Use compostable materials for all campus events

**Applies to** FC

**Proposal as submitted:** What if every event on every one of the 5 college campuses had compostable cups, forks, etc.? From faculty meetings to student dining we could really make a difference.

## 58 Use printer settings to use less paper

**Applies to** UMass

**Proposal as submitted:** For all networked printers in the institution, make sure they are set so that they print in draft mode, and on two sides of the paper. For printers that are not networked, develop a quota of paper that can be used by departments. Knowing there is a set amount will likely lead to a change in printing behavior.

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# WATER

## 1 Ban bottled water

**Applies to** UMass

**Proposal as submitted:** Old idea but worth rehashing: Ban bottled water on campus. Provide numerous and easily accessible bottle refilling stations on campus (and maintain them!).

## 2 Ban bottled water

**Applies to** HC; FC

**Proposal as submitted:** NO MORE WATER BOTTLES @ Hampshire (or 5 Colleges). Mount Holyoke has water fountains with a tap for reusable water bottles that monitor use and generate data. We need water that does not just come in plastic (glass?) and reusable cups for drinking water for sale in places like the Bridge.

## 3 Capture more storm water runoff

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Capture more stormwater runoff! Use rain barrels around campus.

## 4 Create a Five College Plastic-Free Campus Campaign

**Applies to** FC

**Proposal as submitted:** In conjunction with the MHC Environmental Action Coalition's efforts to kick bottled water off campus, I recommend that the 5 colleges join the Plastic Free Campus campaign. <http://plasticpollutioncoalition.org/projects/plastic-free-campus/> This campaign would involve educating the student bodies and wider campus communities about the dangers and sources of plastics pollutions and getting everyone involved in eliminating those sources of pollution.

## 5 Drastically reduce bottled water usage with hydration stations

**Applies to** UMass, FC *Moderate cost*

**Proposal as submitted:** Locate "hydration stations" throughout the five college campuses: [www.britahydrationstation.com/brita-hydration-station/](http://www.britahydrationstation.com/brita-hydration-station/). Encourage students and staff to fill reusable water bottles from these stations instead of purchasing bottled water. Track reduction in waste, possibly fostering friendly competition between campuses or a collaboration to meet a shared goal. I already submitted an idea for campus hydration stations. This vendor seems perhaps better suited than competitor Brita/Hayes for campus installation: <http://www.elkayusa.com/cps/rde/xchg/elkay/hs.xsl/ezh2o.aspx>

## 6 Eliminate bottled water on campus

**Applies to** UMass

**Proposal as submitted:** Additionally, I think we should follow UVM's lead by phasing out all bottled water on campus (including vending machines) and providing more opportunities for folks to fill up filtered drinking water. Additionally, all eateries on campus should be providing solely filtered water, juices/milks and fountain drinks. Hence reducing the amount of plastic bottles left to pollute.

## 7 Eliminate water bottles by installing water bottle-friendly water fountains

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Eliminate water bottles on campus and instead install a spout for filling up Nalgene bottles on all water fountains. Nalgene bottles can then be sold in the DCs or bookstores.

## 8 Embark upon a local water campaign

**Applies to** UMass; FC *Moderate cost*

**Proposal as submitted:** You should put up information about bottled water because students should start getting rid of that buying nalgene bottles. It is important to minimize plastic but also people have myths that tap water is not good. This is false.

## 9 Install shower timers equipped with automatic shower shutoff

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** We all take long showers, so a way to reduce how much water we use is an automatic shower shutoff. A specific amount of time in the shower and it shuts off automatically.

## 10 Install timers in showers

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Some sort of built in feedback mechanism for showers so students know how long they have been showering. We have small hand held devices that are high demand but they they often break and then are not replaced.

## 11 Institute a FC ban on bottled water

**Applies to** FC

**Proposal as submitted:** The Five Colleges could send a powerful message about the environmental problems associated with bottled water by ending the sale of this product across all the colleges. The tap water in Massachusetts is perfectly safe, and supporting this public resource over unnecessary privatized water would be beneficial, especially from a leadership standpoint. The Five Colleges as a whole speak louder than any one college in the consortium.

## 12 Offer education about water issues, including taking soft drink vending machines out of the dorms

**Applies to** UMass

**Proposal as submitted:** Education points/examples include: \*Water is a medium that cycle nutrients and pollutants around the globe. \*Global water supply spotlight-India water crisis due to foreign bottling plants (such as Coca-Cola) over-extracting groundwater, lowering the water tables and leaving farmers and the local community unable to dig deep enough to get to vital water supplies. \*GE polluted the part of Hudson River in Pittsfield,MA many years ago. Even now the river does not freeze in the winter. \*Plastic soda bottles/cans one American throws out a year can surround the earth many times (excessive solid waste). In the contrast, tea is healthier(less obesity issues), creates less solid waste and is totally compost-able.

## 13 Put timers in the showers

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Pretty self-explanatory , just a visible clock in the shower room to let us get a sense of how long our showers are and prevent us from getting caught up day-dreaming/singing etc.



## 14 Remove auto flush option toilets to save water

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Remove auto flush option on toilets. They flush multiple times per use, sometimes while still in use! Instead add flush system for choice of flush- more or less water- depending on use.

## 15 Say H2NO! to Disposable Water

**Applies to** MHC

**Proposal as submitted:** I am a member of the Environmental Action Coalition (EAC) at Mount Holyoke, and we have begun a campaign to ban the sale of non-reusable bottled water on campus. The main reasons why we decided to implement this campaign are that there are a variety of economic, environmental, and personal health costs associated with the production of non-reusable bottled water and that the tap water in the Pioneer Valley is actually very safe. Other educational institutions such as Washington University in St. Louis, the College of Saint Benedict, and Seattle University have already implemented bottled water bans on their campuses. It would make quite a statement if the Five Colleges followed suit.

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## OTHER

### 1 Adopt living futures campus policies and guidelines

**Applies to** SC *Moderate cost*

**Proposal as submitted:** adopt living futures campus policies and guidelines

### 2 Better utilize FC sustainability website as clearing house/portal for sustainability information

**Applies to** FC

**Proposal as submitted:** Use the Five Colleges sustainability website to act as a clearing house portal for sustainability information.

### 3 Build awareness around sustainability

**Applies to** HC

**Proposal as submitted:** A student group could visit mods and conduct energy audits with the residents to help build community, create awareness about issues, and get the residents to be thinking about their consumption. Advertise i.e. Magic Board. Make sustainability initiatives and environmental issues (with ways that the intended audience can make an impact) very obvious on campus. Express these in art forms or exhibitions on campus. Clever advertising campaigns and reminders. - i.e. during the Bush years you could flip off the light switch to 'flip off George Bush' Hampshire or Five Colleges to take up a Transition Town style movement.

## 4 Collaborate with the Amherst Transition Town coalition

**Applies to** Community; FC

**Proposal as submitted:** Transition towns are a community effort to foster a more vibrant and resilient community around the world. Transition Amherst has recently become #102 transition town in the USA and we are a small but very active and committed group of citizens. We are looking to increase our integration with the colleges (students, faculty, anyone!) to launch a celebration of Amherst and excite the community to join in the conversation on what being sustainable really means, the importance of knowing your neighbors and creating local resiliency. Please check out our website (<http://www.transitionAmherst.org/blog/>) and get involved with our efforts! We have many ideas on how to make Amherst a model transition town, and would love to have more enthusiastic and inspired people cooperating in our efforts. I will be happy to chat with anyone about this initiative... Sorry I could not be at the meeting.

## 5 Create a Five College database/social network site for sustainability issues

**Applies to** FC

**Proposal as submitted:** 5 College database/social network site for sustainability issues: even within Hampshire there's a serious disconnect between the environmental initiatives. New Leaf has a hard time even getting in contact with the UMass sustainability group.

## 6 Create a sustainability fund for student work

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Support student groups doing sustainability work.

## 7 Encourage campus-wide efforts to change individual behavior towards energy conservation; include it in honor code; make sustainability a full part of the culture.

**Applies to** SC

**Proposal as submitted:** Have campus wide shift towards modifying behavioral change towards energy conservation. This includes turning off the lights and lowering water use. Maybe we could put something in the honor code? Make sustainability fully a part of Smith's culture. Begin educating new students at the time of orientation a "this is what we do at Smith" type approach. Get house leaders and res life leaders on board too.

## 8 Encourage FC collaboration

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Continue to cultivate closer connections between and among the college campuses

## 9 Establish "Opening Windows" competition for Arts & Sustainability

### Applies to HC

**Proposal as submitted:** The arts community is often overlooked when considering sustainability initiatives for organizations and communities. I envision a sustainable arts competition called Opening Windows, using office and classroom window spaces on campus: students are to design an art piece that incorporates the window and the solar/air movement/visual elements of the window in some way, without significantly impeding visibility. This could raise awareness of the outside environment for settings in which people spend a majority of time inside (i.e. academic settings), as well as raise awareness of energy consumption/solar energy, wind energy, and how architectural building design affects the ways people perceive and interact with the natural environment.

## 10 Expand and improve eco-rep program at Hampshire

### Applies to HC

**Proposal as submitted:** Eco-rep program: someone goes to talk to floors, once a month, to say where the recycling bins are, etc. Could the RAs be working into it? Could this go through the new SGA? Could they have an liaison to the Environmental Committee?

## 7 Explore and address more complex sustainability questions

### Applies to HC

**Proposal as submitted:** - Social footprint – how do we increase our social footprint (social capital) while reducing our carbon footprint? - It would be nice to get involvement from people who are not specifically involved in sustainability issues. - How can we move toward a more sustainable consensus? Or how do we build consensus? o Perhaps a large part of the problem is attitudes toward sustainability. If we understood how critical the problem is, we might move forward with more determination. - Long term development has struggled on campus possibly because of the constant cycling of students. Many problems (including sustainability) are recurring because each year there are brand new students. o Maybe this can be solved with closer interaction between upper and lower class students. o Strengthen the role of alumni within the Hampshire community - What do students want to do with the Hampshire program? o Redesigning and improving the use of spaces to incorporate sustainability and use considerations. o Actual Engagement in activities. o It is important that when sustainability measures are taken there is a high level of visibility and transparency. o The campus should serve as a practice area for students to carry out any projects that they develop. It needs to be a place that truly supports creativity. - A large part of our consumer society is that we are so disconnected with the impact of our consumer decisions. - Sustainability is evolutionary. We got good at surviving; now we need to learn how to do it sustainably. - There has been so much emphasis on the technology side, and very little emphasis on behavioral changes. - Sports teams are a huge recipient of money – how do we take advantage of competition? - It may be okay that some colleges are wealthier – the opportunities are probably different for each college and the wealthier do not necessarily have an advantage. - Some low hurdle hands-on projects – Students don't necessarily need to build buildings, but they could do a smaller scale didactic activity. They could do permaculture experiments, building materials durability tests, and other small scale research projects on campus. - Five colleges could be looked at as an entity that is very technologically advanced and knowledgeable. Work on transferring this knowledge to the

rest of the world to reduce the technology gap. - Students should: Generate as many ideas as possible so they can start moving us in the right direction – large scale. However, if students are interested in small Hampshire scale projects, why not go ahead? The Blue Sky Initiative is strictly about ideas brainstorming. - Students interested in smaller scale projects should, nevertheless contact and share with Blue Sky. - It is important to prevent the separation of Blue Sky initiative and small scale student projects. The student project portion can be a part of a Blue Sky proposal. Think honeycomb o Student initiatives are one cell in the honeycomb. - Systemic changes. National GSA – all purchasing for government stuff. They have led the way on some sustainability issues because they are so big. The Five Colleges can be like this. Change the market with purchasing power and lead the way for everyone in the PV. o What are the holes or barriers for people? Whether it is access to sustainable goods, infrastructure, services, etc., perhaps the Five Colleges could lead the way.

## 11 Hold a FC Sustainability Art Contest

### Applies to FC

**Proposal as submitted:** There is a lot of passion for environmental issues in the Five Colleges, but there is also a disconnect between the people who are always interested in sustainability, and those who study other things and therefore don't think much of it. One possible way to get more people in different disciplines thinking about sustainability and environmental issues would be to hold some kind of sustainability art contest - this would not have to be limited to visual arts, but could include music, poetry, dance, etc. Basically harnessing people's diverse creative talents to connect to sustainability issues. The contest aspect could motivate participation, perhaps there could be some sort of big event to showcase all of this (Earth Day?). The main idea would be to get people thinking who are not necessarily thinking about sustainability all the time, and in a fun and creative manner.

## 12 Increase sustainability networking, campaigning, and education

### Applies to HC

**Proposal as submitted:** -There are a lot of large public windows where sustainable related art projects could be displayed. -Really tap into skill and brain power on campus. -Campus consortium wide educational campaigns. Get a couple students at the magic board with a laptop trying to get sustainability ideas. -Create an online Five College network for sustainability groups to contact each other. Include sustainability projects or interests so that groups and students can connect with people who want to collaborate on similar projects -More transparency about energy consumption. Make students aware of what is going on at different levels of the supply chain.

## 13 Join Pioneer Valley Sustainability Network

### Applies to FC

**Proposal as submitted:** Join the PVSN, a network founded through an EPA grant to a couple of UMass Professors and the Pioneer Valley Planning Commission. PVSN is a broad-based network of organizations and individuals who are dedicated to creating a just and sustainable future for the Pioneer Valley region. Our members include a broad community of sustainability activists and professionals working together to create a flexible and effective regional model for actively advancing sustainability in the Pioneer Valley, which can be applied in other regions of the country. Our mission is to strengthen our members'

ability to pursue sustainability and environmental equity effectively by: information and idea exchange collaborative approaches to problem solving and visionary thinking giving members the tools they need to integrate sustainable practices and scientific information into both regional and community decision-making.

## 14 Make sustainability visible

**Applies to** SC

**Proposal as submitted:** Make sustainability visible on campus- solar arrays, monitoring, electric car charging ports, farmer's markets on campus, create signage about initiatives that are hidden, etc.

## 15 Move towards participatory democracy at UMass in terms of making environmental policy decisions

**Applies to** UMass

**Proposal as submitted:** - UMass should further develop participatory democratic means of making environmental (and other) policy decisions and programs. This survey is a step, but it's not enough: student-initiative based referendums should be organized, regular university wide debates should be scheduled on one class-free day per semester with incentives for students and faculty and staff to all participate (extra credit for students, free meals, etc)

## 16 Offer eco-friendly custom apparel

**Applies to** Vendor

**Proposal as submitted:** Did you know that you could have screen printed apparel such as uniforms and t-shirts done with eco-friendly products? Soy and water based inks are wonderful options when screen printing is needed. I represent Mantis Graphics in Easthampton and we not only provide eco-friendly products, we also manage our business in an eco-friendly manner. We use non-toxic products and have invested in a drainage system that stops any excess ink from re-entering the public water system.

## 17 Offer locally produced items at school stores

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** I wish that we could have more locally made/manufactured items in the school store at MHC. Why do our MHC sweatshirts and toiletries have to come from all over the world. I'd love to have the choice to buy local.

## 18 Organize 2-day future search conference about poverty eradication aspect of sustainability

**Applies to** AC; FC

**Proposal as submitted:** I would like to organize a two day Future Search session on poverty eradication in the Pioneer Valley. I am concerned that sustainability conversations may get overly focused on energy use reduction (an important goal but not the entire goal for sustainability efforts. Future Search is designed to engage all the relevant actors in two days of action planning.

## 19 Put on a sustainability fair to generate awareness and build collective efforts

**Applies to FC** *Moderate cost*

**Proposal as submitted:** Sustainability Fair that is a Five College event focused on practical activities, but set up like a country fair. There students could showcase green sustainability projects (this is already in existence at Umass). This Sustainability Fair would generate awareness and build collective efforts. It would also be an opportunity for social networking and community building. Additionally, it would provide a venue for community businesses to collaborate with green initiatives, and bridge a generational gap.

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## HIGH IMPACT, HIGH COST IDEAS

NOTE: In assessing “cost”, we took into account factors beyond monetary assessments such as logistics, campus cultures, technological feasibility, environmental considerations, labor, and other issues. In order to refine the cost parameter, we indicated a “moderate” cost within the categories, as there is a wide range of “costs” within each category. “Impact” was evaluated based on economic, environmental, and social aspects of sustainability. However, the majority of the ideas were categorized as being high impact, because of the multiple ways impact can be assessed. For example, while a solar array might have a measurable high impact with regard to reducing greenhouse gas emissions, the impact of offering a workshop for environmental leadership in the 21st century is less easily quantified. However, such a workshop would have a high value for students across the Five Colleges.

## ACADEMICS

### 1 Fund research on algae biofuels

**Applies to FC** *Moderate cost*

**Proposal as submitted:** Funded research on Algae biofuel.

### 2 Establish strong environmental science program at Smith with 3 tenure track faculty

**Applies to SC** *Moderate cost*

**Proposal as submitted:** A Smith Environmental Science and Policy Program that includes at least 3 tenure track faculty, 1 from each division (or with cross divisional representation), whose research and teaching are interdisciplinary in nature and whose teaching and advising obligations are entirely within the ES&P Program.

### 3 Foster the new 'glocal' campus

Applies to SC; FC *Moderate cost*

**Proposal as submitted:** FC curriculum integration for preparing professional working through telepractice. Use technology to expand the use of expertise from around the world and bring it to campus. The new 'glocal'.

### 4 Use open farmland to create sustainable agriculture center for teaching and learning

Applies to UMass; FC *Moderate cost*

**Proposal as submitted:** There is a lot of empty/open farmland which UMass, specifically the Stockbridge School could use as a teaching and production center. We could teach the students in the Stockbridge school how to produce locally grown produce and environmentally friendly and effective fertilizers in order to provide the Amherst/Hadley area with education about sustainable agriculture and help produce more locally grown food for the five college area.

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## ENERGY

### 1 Adopt renewable energy measures

Applies to UMass; FC *Moderate cost*

**Proposal as submitted:** Adopt further renewable energy measures - solar power - wind power

### 2 Centralize Hampshire physical plant; invest in electric trucks

Applies to HC

**Proposal as submitted:** Hampshire College's phys plant should be situated closer to campus, and should be given electric trucks. Currently it is costing over \$70,000 for phys plant staff to drive (Leslie Cox knows of the specific data from this study) back and forth from phys. plant to the center of campus.

### 3 Convert gym equipment to generate power for a Sustainable Gym

Applies to UMass, FC *Moderate cost*

**Proposal as submitted:** University of Massachusetts Amherst

### 4 Create an alternative energy co-op

Applies to FC *Moderate cost*

**Proposal as submitted:** Create a co-op for alternative energy, such as solar and wind. Individuals and the colleges invest in energy, and sell it back to the Grid.

### 5 Create an electronic conference center to minimize travel

Applies to SC; FC *Moderate cost*

**Proposal as submitted:** create a top of the line electronic conferencing capability to reduce travel

## 6 Create an energy efficient recreation center

**Applies to** UMass; FC *Moderate cost*

**Proposal as submitted:** University of Massachusetts Amherst

## 7 Create central monitoring room in buildings

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** This room could tell residents how much energy and water was being used, where lights are on, when washing machines are free and other interesting and environmentally pertinent information

## 8 Create FC "carbon offsets" fund to support local energy projects

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Create a "carbon offsets" fund to support local energy projects. Monies to offset the travel footprints of faculty, staff and students would be placed in this fund on a regular basis. This could be a Smith or Five College effort.

## 9 Develop building energy monitoring center

**Applies to** SC; FC

**Proposal as submitted:** Develop a building energy monitoring center ( staffed by operators 24/7/365) that monitors the energy use / alarms in all of our buildings across the three or five campuses that are part of the Initiative. This also presumes that we would all have updated building controls ( which we need to invest in across all campuses & meters for gas, electric, water, steam & chilled water). The University of Kentucky has a center that I have seen that comes close to this model. Developed properly, there would be immense savings of energy used in the three/five campuses and the response to out of parameter temperatures/conditions would be dispatched to the trades staff on each of the campuses for repair.

## 10 Develop cooperatively-owned solar & wind technology company along with electric car co-op

**Applies to** HC; FC

**Proposal as submitted:** Developing a cooperatively owned solar and wind energy company that community members, including as students, faculty and alumnus, may invest in. This idea could include an electric car co-op for members of the Pioneer Valley.

## 11 Develop infrastructure that uses chilled water pipes to aid in lowering air conditioner use

**Applies to** SC

**Proposal as submitted:** Implement an infrastructure that uses chilled water pipes (or something else) to aid in lowering our air conditioner load use, since this represents our highest draw.



## 12 Diversify energy sources

**Applies to** HC; FC *Moderate cost*

**Proposal as submitted:** With a wide range of alternative energy sources for the campus -- solar, wind, from rainwater in downspouts, the stationary bikes, hydrogen -- we could produce energy year-round. We need energy storage capability to do this.

## 13 Encourage Dorm Energy Efficiency by linking payment to energy use

**Applies to** HC *Moderate cost*

**Proposal as submitted:** A lot of energy, both in the form of heat and electricity, is wastefully used in the dorms of most colleges (not to mention water usage). Part of the problem is that students are not directly paying for these utilities beyond their initial housing costs - which are very expensive. So the logic is, if we are already paying so much for housing, let's use as much heat/electricity/water as we want. What if there was some sort of system in place that REDUCED the initial housing cost, and instead somehow charged student accounts based upon how much heat and electricity their rooms used. Water would be more difficult to keep track of since it is shared by all, but at least with heat, major savings could probably be achieved if there was an incentive to save. I personally have not turned on the heat in my room yet this year, I live in Merrill C2 at Hampshire, and I do just fine - I dress warmly and have warm blankets. If some people want to use more heat, that's fine, but doesn't it make sense for me to pay less for housing when I am using no heat? Maybe more people would be conscious of their heat use if they knew their college costs would be lowered by using it conservatively. Obviously this would be an ambitious system to put into place and would require a lot of thinking - but it's an idea.

## 14 Explore possibilities for energy capture and transformation

**Applies to** HC *Moderate cost*

**Proposal as submitted:** - Waste heat from drain lines, heat recovery - Downspout energy generation - Generation from spinning and other exercise equipment - Biomass fueled co-Gen station. Heat, water and electricity - Large scale co-Gen plant producing electricity and waste heat is collected to send hot water to buildings on campus - Solar hot water

## 15 Explore the use of geothermal

**Applies to** SC

**Proposal as submitted:** Explore the use of geothermal.

## 16 FC Facilities monitoring center

**Applies to** FC

**Proposal as submitted:** Building controls and monitoring center for all five colleges

## 17 Generate electricity with gym exercise machines

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** Generate electricity with gym exercise machines

## 18 Harness energy generated by student workouts

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Connect treadmills, exercise bikes and elliptical machines to the energy grid to offset the electrical usage in the Rec Center and nearby buildings. For more information on implementation, check out <http://www.egreenrevolution.com/default.aspx>.

## 19 Harness power of exercise machines to provide electricity

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Hi, I'm a sophomore at UMass, and every time I go to the gym, the treadmills and ellipticals are PACKED, there's not a free workout machine in sight. I was just thinking, what if there's a way to harness all the energy created by the students working out and use it to power the lights and electricity in the gym? Kind of like those flashlights that you crank and to turn on instead of using batteries? Obviously the gym would need backup generators/batteries, but I've noticed that most people go to the gym at night, and even if they could just power the lights at night it would save a ton of energy. I know this would take a considerable amount of effort and planning, and I'm not an engineering major so I have no idea how it would work, but just an idea.

## 20 Harness the power of treadmills, elliptical trainers, and bicycles to generate electricity for sustainable gyms

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Harness the energy generated every day in the exercise facilities- the rowing and walking/jogging machines are just the obvious places.

## 21 Implement energy capture and transformation at Hampshire College

**Applies to** HC

**Proposal as submitted:** Recover waste heat from drain lines; generate energy from downspouts; generate energy from spinning; Biomass fueled co-Gen station. Heat, water and electricity ; Large scale co-Gen plant producing electricity and waste heat is collected to send hot water to buildings on campus; Solar hot water

## 22 Implement large scale geothermal heat pump systems

**Applies to** SC

**Proposal as submitted:** large scale geothermal heat pump systems

## 23 Improve Hampshire Prescott House heating and lighting

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Prescott's heating systems are TERRIBLE. They are ineffective and extremely wasteful. Here are some things that could be done, in order of (probably) cheapest to most expensive: 1. fix heaters so that more of them actually work 2. update thermostats so that the heat in students' rooms a) is easier to control and b) has more settings than "on" and "off"--maybe programmable thermostats for different temperatures at different times? 3. put insulating blinds on the windows 4.

expand balconies into second floor common space so that main rooms don't have such high ceilings--more heat would stay downstairs, and there would be more floorspace (so that even if it took more energy to heat it, the heat would at least be in spaces people could use) 5. update the insulation 6. tear down Prescott and put up new buildings (you'd probably make it back pretty quick) As for lighting, the lighting currently installed is very bad at actually lighting the house, so students have to bring in lamps and sprinkle them liberally around the place--probably less efficient than installing effective lighting in the first place. I mean, putting my light above my closet unit? Seriously? Why not put it in the ceiling like normal people? And there is NO general light in the kitchen--one over the stairs, one over the stove, and one over the sink, none of which light up the center of the room at all. Again, expanding balconies might be a way to deal with this.

## 24 Increase solar panel arrays

Applies to FC *Moderate cost*

**Proposal as submitted:** Waaaay more solar panels

## 25 Install more solar panels

Applies to SC; FC *Moderate cost*

**Proposal as submitted:** solar panels- more alternative energy generation - including some visible on campus sources

## 26 Install urban wind turbines on buildings and other suitable areas

Applies to UMass *Moderate cost*

**Proposal as submitted:** I propose that Urban wind turbines be installed atop certain applicable buildings as well as well suited areas. Either vertical axis turbines mounted on their sides atop buildings or the architectural urban turbines (fancy horizontal axis turbines) found in certain places. Perhaps certain lamp posts could have spire turbines attached and/or solar cells.

## 27 Install wind turbines on tall buildings

Applies to FC *Moderate cost*

**Proposal as submitted:** wind turbines on tall buildings

## 28 Invest in alternative energy collectively

Applies to FC *Moderate cost*

**Proposal as submitted:** The 5 colleges should jointly invest in wind power and/or other alternative energy sources.

## 29 Invest in Five College wind farm and increase use of solar panels; transition to white roofs

Applies to FC

**Proposal as submitted:** Build a Five College wind farm and introduce an environmental engineering/studies major. There could be a collaborative wind farm combined with other renewable energies such as solar panels that can go on rooftops and the sides of buildings, perhaps even a solar

panel farm beneath the wind turbines. All the colleges could produce their own power and, with faculty supervision, it could be run by students. The students majoring in environmental engineering would be responsible for maintaining the turbines and solar panels. The turbines could be made from recycled materials and constructed by the students. It may be expensive, but it's an investment in the future, sustainability, and education. Another idea is to paint rooftops white. This lowers the albedo and reflects the sun's energy back into space so less heat energy is captured here on earth. This would be a bit simpler and it helps with global cooling. White roofs reduce air conditioning costs by 20% or more in hot months (<http://www.nytimes.com/2009/07/30/science/earth/30degrees.html>).

### 30 Invest in hydropower at MHC

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** Install small demonstration power generators on the three waterfalls on campus

### 31 Invest in more renewable energy

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** We need more renewable energy on campus and in the community. As former Eco-Rep Coordinator, I know that there are a number of logistical issues that mostly surround the high price of solar panels. Facilities Management has been investigating this for years, but MHC doesn't qualify for tax credits or subsidies, the payback period is at least 7 years, and there is not room in their budget just yet. This is especially frustrating since MHC just hired a solar panel expert, Alexi Arrango, who would like to use the panels as an educational tool in class.

### 32 Invest in more solar technology

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Get solar panels on everything!

### 33 Invest in renewable energy (solar/wind)

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Hampshire Can establish a solar tower that could produce enough energy to power the campus or sections of the campus. We will be able to create our own energy and no longer rely on fossil fuels.

### 34 Invest in Solar Energy for the Five Colleges

**Applies to** FC

**Proposal as submitted:** Have all five colleges contribute funds for a large solar array located somewhere central, like Hadley. Or have a solar installation at one of the institutions that is funded but all five colleges, and the benefits get redistributed from the host institution.

### 35 Invest in solar energy on MHC campus

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** Put solar panels on top of Kendall Hall, the Art Building, and any other building that makes sense.

### 36 Invest in solar panels

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Solar panels in open spaces on on the roofs of more buildings around Smith.

### 37 Invest in windmills and solar panels; investigate new paint technologies that save energy

**Applies to** UMass

**Proposal as submitted:** Ok, there's plenty that the campus could do to improve. Firstly, we have the tallest building in the area, so why not put windmills on top of it? Also, I've heard that there's this paint that's filled with silicon which collects solar energy through the walls of a building. Going back to the library, we could paint the whole building, and although it wouldn't create a ton of energy, it would put a dent in the energy bill for the campus. Finally, we could put solar panels on the buildings around campus, as well as improve the way we get rid of trash, (so something along the lines of composts off campus).

### 38 Place nuclear reactor at UMass to power campus and support research

**Applies to** UMass

**Proposal as submitted:** I think we should consider using nuclear power. Many colleges are allowed to have research reactors, and this would greatly improve UMass's reputation as a leading school for the sciences. If we had a research one, it would make sense to use it at times to produce energy, which would reduce our dependence on fossil fuels, while also being the safest form of energy production.

### 39 Place solar installations on all buildings

**Applies to** SC *Moderate cost*

**Proposal as submitted:** install solar panels on all the buildings around campus!

### 40 Place solar panels on UMass Fine Arts Center

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** The University should set up solar panels on the south-facing aspect of the Fine Arts Center. Not only would these panels generate electricity to offset our carbon footprint, but they would serve as a visible symbol of UMass' commitment to sustainable endeavors. I also miss the solar panels that were located by the Engineering quad, curse you microburst! Thank you for opening up this dialog to include community voices as the Five College Consortium builds its plan for a more environmentally equitable future.

## 41 Purchase power solely from sustainable sources

**Applies to** SC

**Proposal as submitted:** purchase only energy that has been produced sustainably- e.g. via GreenStart or other option via the utilities.

## 42 Regulate the heaters in the dorms so that they only come on when needed

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** Currently the heaters in the dorms turn on at odd times (apparently randomly) such that we are sometimes chilly and but most often way too warm (at least in Torrey). If the heaters could be regulated so that the rooms remain at a comfortable temperature (so that we can wear clothes without feeling sticky) we wouldn't have to resort to opening our windows and would be more sustainable. [Many of us would prefer wearing sweaters to wearing summer clothes in our dorms (at least during the cold months).] This could be done by installing thermostats that had a maximum temperature available, so that those who don't want to be so warm wouldn't have to be (and wouldn't have to waste the heat to the outdoors to get comfortable).

## 43 Renovate existing buildings to be more efficient rather than build new ones

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** UMass should quit building new buildings and exclusively focus on renovating new ones so as to make them carbon zero: thick walls to regulate temperatures in winter and summer, etc.

## 44 Replace single pane windows

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** I work in Stockbridge Hall where we have very drafty single pane windows. Looking around campus I guess that this is the case in other buildings, too. Replacing these windows would reduce heat loss, making UMass more sustainable and saving money.

## 45 Replace windows in older buildings with new, energy efficient windows

**Applies to** FC *Moderate cost*

**Proposal as submitted:** There are many old (and beautiful) buildings across the Five Colleges. Unfortunately, many of these have older windows, which allow for much heat loss during the winter, as well as loss of cooled air in the summer. Assess all buildings and create a plan for replacement of all windows that are not energy efficient.

## 46 Research and implement geothermal options

**Applies to** SC; FC

**Proposal as submitted:** research and implement geothermal options at Smith and within the Five Colleges. Harness the carbon 'free' warming and cooling available in the natural systems on location.

## 47 Re-think the ways that power is distributed

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Convert the campuses radial feed/open-loop power distribution systems into closed-loop system using intelligent switchgear which will help the campuses to achieve a higher level of power reliability. Further details: Incorporate solar panels and or wind turbines onto the roofs of campus buildings to generate power for the electricity. Couple the system with a master controller which can disconnect buildings from the grid if they can generate enough electricity to cover their building's demands.

## 48 Transition from coal and nuclear-powered energy to solar and wind

**Applies to** UMass

**Proposal as submitted:** UMass should quit using any coal or nuclear energy for electricity and systematically invest in solar panels on roofs and a few windmills to produce its own energy and even sell some.

## 49 Use alternative energy--wind, sun, and water

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Wind power! We live in a pretty windy area. Plus Solar Panels and Connecticut river power (turbines)!

## 50 Use campus lands for solar and wind power generation

**Applies to** HC; AC; FC

**Proposal as submitted:** Amherst College is the largest landowner in the Five College area. It would be a straightforward sustainability plan to use some of this land for PV and wind power. Hampshire College owns land on Notch, which could also be used for wind power generation.

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# FOOD

## 1 Build greenhouses on campuses to grow local food

**Applies to** FC

**Proposal as submitted:** Build more greenhouses on each of the campuses to produce food for the campuses during the winter.

## 2 Centralize Smith College Dining Services

Applies to SC

**Proposal as submitted:** Create one centralized dining facility at Smith.

## 3 Convert campus land to farmland

Applies to HC *Moderate cost*

**Proposal as submitted:** We should use our land for farming! It would be a great initiative to lease the lands to alumni, and bring farms to other campuses as well.

## 4 Create a Five College working farm to provide food for the institutions

Applies to FC *Moderate cost*

**Proposal as submitted:** All 5 colleges use a local piece of land to develop and grow fresh produce/dairy. Students from all campuses participate.

## 5 Create vertical farm to produce food for school and local economy

Applies to HC *Moderate cost*

**Proposal as submitted:** Hampshire can create a vertical farm in which we can create a man-made environment that can produce vegetables and fruits for the school and local economy. The farms could re-use its water and we could install rooftop wind turbines to provide electricity for the farm. Also put in electric and hydrogen car stations for delivery to local communities for small revenue.

## 6 Establish a Central Organic Farm for the 5 colleges

Applies to FC *Moderate cost*

**Proposal as submitted:** Could grow veggies and livestock (?) for all 5 colleges and students could work it year round. Perhaps expanding Hampshire's current program?

## 7 Establish a Five College farming system

Applies to FC *Moderate cost*

**Proposal as submitted:** A five college farming system!

## 8 Purchase farm shares at UMass

Applies to UMass *Moderate cost*

**Proposal as submitted:** UMass could purchase farm shares in the area (a tremendous proportion of the national organic farming production comes from the Valley...).

## 9 Serve local, organic food in dining halls

Applies to FC *Moderate cost*

**Proposal as submitted:** Local (organic) food in our dining commons!



## 10 Serve local, seasonal food in dining halls

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Move dining to entirely seasonal and local foods

## 11 Transition to all local and organic food at UMass

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** UMass should go ALL ORGANIC. No more food or beverages would be sold on campus unless they are local and organic. Few places would serve meat, and even there it should be one out of many many items on the menus. Vegetarian and vegan food should predominate instead of the opposite.

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# GREEN BUILDINGS

## 1 Build a sustainability residence hall (mod) at Hampshire

**Applies to** HC

**Proposal as submitted:** Create a sustainability identity based mod – would include constructing a new sustainable mod

## 2 Build carbon neutral residence halls

**Applies to** HC

**Proposal as submitted:** carbon-free housing: Convert old or build new dorms that are carbon-neutral, using green or recycled materials, with sensors for lights, water, and heating. Programmable thermostats that are accessing via the web to set if your schedule changes and you are not home to turn them down. Give a price break to students who live in such housing to demonstrate that ultimately they are cost-efficient. Hopefully the students will carry these lessons with them when they graduate.

## 3 Collaborate with Amherst-area Sustainable Housing Initiative

**Applies to** Community; FC *Moderate cost*

**Proposal as submitted:** TO: The Five College Board of Directors FROM: Amherst Future/Amherst Chamber of Commerce CONTACT: Connie Kruger, ckruger@crocker.com. 413-253-1448 SUBJECT: BLUE SKY BRAIN STORM---SUSTAINABLE HOUSING INITIATIVE DATE: Feb. 28, 2012 Summary: The Amherst area Sustainable Housing Initiative (SHI) is a proposal to establish a working process of cooperation and collaboration among the area institutions of higher education, local municipalities, and other key stakeholders, to identify innovative and effective public private partnerships for developing sustainable housing. For the purposes of this initiative sustainable housing means housing that provides for: • Efficient use of land: compact development, pedestrian scale, areas for recreation, and passive open space. • Location reduces energy consumption: located near employment, school, and retail/services, and/or easily accessible to public transportation. • Energy conservation: building technology that achieves energy conservation standards (i.e. LEED for Neighborhood Rating System) and employs

renewable energy systems when feasible. • Community values: supports the development of community within and around the development and is well managed for diverse incomes, ages, and cultural mixes of residents. Statement of Need: Amherst, and its surrounding area communities, has a long-standing housing shortage that limits housing choices and drives up housing costs. This affects the economic vitality of the area while creating challenges for recruitment of staff and faculty at academic institutions and other area employers (1990 Regional Commission on Affordable Housing Needs of Academic Communities). Junior faculty and staff, service workers and other area employees, graduate and undergraduate student households often choose a long commute to Amherst out of economic necessity. The lack of adequate housing supply has the socially unsustainable result of “pushing” student households out in to Amherst neighborhoods. Options for quality housing for seniors who may wish to downsize and prefer to stay in Amherst, are severely limited. That more housing is needed is inarguable, but viable solutions remain elusive. Solving the area housing shortage is challenging and needs new solutions. The Sustainable Housing Initiative borrows from the successful Five Colleges, Inc., model of cooperation and collaboration as it seeks to identify housing opportunities for private public partnerships for the creation of sustainable community housing to meet the diverse housing needs of the community and the academic institutions. Sustainable housing is development that is environmentally responsive, contextually sensitive, extremely energy efficient, and is attractive in site and building design. This proposal does not have a preconception of what the solutions are to building the housing we need but suggests a process for identifying partnership models, financing mechanisms, and potential sites and design criteria. The Sustainable Housing Initiative will start with a series of facilitated discussion hosted by each of the key members. The initial meetings will determine the membership of the group going forward and will decide on the structure for its on-going activities. The group will also plan and host an open community forum, similar to the 1996 conference held at the University of Massachusetts, “Shaping Our Common Destiny: Town Gown Relations”. The SHI forum will be an opportunity for presenters from around the New England region to demonstrate examples of successful models of community and academic institutions working together to develop sustainable housing. A second product of the product of the Sustainable Housing Initiative will be a Sustainable Housing Action Plan. Phases and Products: Phase I: Initial meetings and agreement on Sustainable Housing Initiative project structure and budget. Phase II: Sustainable housing discussions to identify need and explore strategies and solutions. Phase III: Plan and host a community forum on Sustainable Housing for the Amherst area. Phase IV: Produce a Sustainable Housing Action plan. Resources: It is envisioned that the area academic institutions, Five Colleges, Inc., and the participating municipalities will fund this initiative. Contributions of staff and technical assistance are anticipated. Resource contributions will be negotiated based on the resources and technical capacity of participating members.

#### **4 Consider passive solar systems in new construction**

**Applies to HC Moderate cost**

**Proposal as submitted:** New construction should include passive solar systems

#### **5 Create a "Sustainability House" at Smith College**

**Applies to SC Moderate cost**

**Proposal as submitted:** Establish a "Sustainability House" that can be used as a showcase for all the

residential possibilities.... the educational benefit of knowing what you might be able to have once you graduate Smith or the kinds of decisions you can make that will make a big difference would be amazing.

## 6 Create a Sustainable Living House at MHC

**Applies to** MHC *Moderate cost*

**Proposal as submitted:** “Living sustainably means a lot of things and different things to different people.” The most obvious meaning to students who live on campus is to live sustainably on their own accord. It would be nice if Mount Holyoke and the Five College System took the lead in sustainable campus living by incorporating a net-zero housing option on campus. The house/dorm could be built from sustainably-harvested wood and recycled building supplies, incorporate a PV electrical system, solar hot water system, and an advanced cold climate heat pump that extracts energy from the outside ambient air. Students would be required to take a more official pledge to live sustainably by living in the “eco-house.” In order to live in there, students would need to apply through a competitive process, where they explain their personal sustainable habits and explain how they plan to volunteer their time to local environmental causes. These students would act as role-models for being energy efficient, recycling, composting, and cooking local food. The students who would live there would be responsible for maintaining a small wind turbine from which they would run some of their appliances, and a small worm composting system from which they would compost materials.

## 7 Create green rooftop gardens

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** I also recognize how the proposed campus master plan will create a dearth of green spaces on campus. Therefore, I suggest that the Stockbridge School, Engineering Department, and Plant Soil and Insects Department collaborate to create rooftop gardens, starting with Worcester Dining Commons. These otherwise unused rooftop spaces would be put to excellent use supporting vegetation, for aesthetic as well as agricultural uses. This idea also ties in with our university's original identity as an agricultural school.

## 8 Create roof gardens

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** create roof gardens on top of buildings with roof access. Roof gardens help insulate buildings against excessive cold and heat. They also provide fresh produce to the building's residents/employees. Finally, students/residents who live/work in the buildings can tend to their gardens and/or harvest during their study/lunch breaks.

## 9 Create sustainable housing opportunities

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Re-creating greenwich houses or any housing complexes to be more sustainable and create incentives for individuals who want to give the new homes a test run. This will make other students want to be more sustainable and encourage other colleges to potentially do the same.

## 10 Create/develop affordable housing closer to campuses for faculty, staff, and students

**Applies to** HC; FC

**Proposal as submitted:** There are very limited options when it comes to find truly affordable long-term housing in the Five College area that are close to campuses, and easily accessible by bus. This idea would be designed to accommodate the needs of students, staff, and faculty, by providing affordable housing opportunities in the forms of rentals and condos, using the model of Tree House in Easthampton ([http://www.treehousecommunities.org/easthampton\\_tem.htm](http://www.treehousecommunities.org/easthampton_tem.htm)). It would also provide co-housing opportunities, and be intergenerational.

## 11 Establish green rooftops at UMass

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Gardens and trees on top of the UMass buildings.

## 12 Establish on-site sewage treatment and bio-digestion system at Hampshire

**Applies to** HC

**Proposal as submitted:** On site sewage treatment plant and bio-digestion system

## 13 Improve campus-closeness for community and environmental reasons

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Hampshire campus is too spread out. It would be a good idea to close off the bus ring, and make it a pedestrian only campus. We could fill in the large empty spaces with mixed-use buildings. At the moment, we have more students than we can house, and the distance between housing areas is too great. Creating more connections between students and student housing will lead to a greater level of efficiency, with the possibility for "co-gen" energy.

## 14 Increase solar panels

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Put solar power panels on roofs

## 15 Install educational green roof on Lyman Plant House

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Install an educational green roof on the office wing of Lyman Plant House. (Joanne Benkley has a full proposal) Below is an example of this trend in environmental education using this system. Ours would be monitored and readily available on line. This one I think is not.  
[http://www.arboretum.umn.edu/green\\_roof.aspx](http://www.arboretum.umn.edu/green_roof.aspx)

## 16 Install green roofs and plant vertical gardens

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** With all the construction of new buildings on campus and those current why couldn't UMASS Amherst try reducing its Carbon footprint through green roofs and vertical gardens. Vertical Gardens could be implemented by using peat, drip line irrigation system, and by planting low maintenance plants. The drip line could use rain catches placed on the top of the roof utilizing gravity to deliver the water. Peat can come in a form that could be molded to fit the desired sizes needed. Plants would be used for aesthetics, food sources (Vegetables, Herbs, Fruits), or just purely for carbon reduction. A good spot could be the wall space near the new permaculture garden by Franklin. Green Roofs could be very easily planted and specifications can be found for the proper installation methods. Research would have to be done to classify which roofs can support the additional weight added to the roof. If they can withstand a large amount of weight then heavier plants or even aesthetically pleasing gardens may be implemented. If there are weight restrictions smaller plants (ex. Sedum) could be used. The benefits of Green Roofs and Vertical Gardens are not only for carbon reduction, but the costs of cooling building in the summer would be greatly reduced versus a regular roof. I believe that UMASS Amherst would not have a problem finding volunteer laborers to partake in these projects and the long lasting benefits in creating these sustainable building methods will send a message that UMASS is trying to lead the charge in the race for sustainability. Not to mention I have yet to see a green roof or vertical garden anywhere in MA and doing so could create opportunity to have classes focused on these topics and even help maintain them or build them. I hope my idea, and I'm sure its many others', could come to pass. Green Roofing and Vertical Gardening are fairly simple projects/concepts yet it is rarely seen. These 2 methods could and hopefully will change the way our cities are structured in the future. Good Luck and Take Care!

## 17 Install rainwater recovery systems to collect water for use on campus

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Rainwater could be collected from the roofs of large campus buildings, and via land channels. This saved rain water could then be used for irrigation, campus landscaping, agricultural, orchard, farm center, and similar projects and uses. Water for these uses would require minimal treatment therefore saving electricity, and in turn fossil fuels. Mass. has average annual rainfall of 43+ inches per year. A standard water recovery project can catch 600 gallons per 1,000 sq.ft per inch of rain. That equals 25,800 gallons of water saved per 1,000 square feet of roof space on the campus buildings. Hampshire College probably has much more than 1,000 square feet of roofing suitable for water recovery, and there must be much more available roofing space on the other campuses. Because of the local climate, water retrieval projects may be far more cost effective than solar projects for the 5-College area.

## 18 Invest in digital controls to monitor water, lights and heat.

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Invest in DDC (digital controls) that would meter water, lights, heat. Have these controls centralized for the Five Colleges.

## 19 Invest in green roofs where possible

**Applies to** FC *Moderate cost*

**Proposal as submitted:** I think it's important for there to be more green roofs on any buildings that have flat roofs. I know that there are many buildings at the Five Colleges with roofs that can accommodate a green roof, especially at Hampshire and UMass. Green roofs can be costly, but they also beautify unused space, help regulate building temperatures (which means that buildings don't have to use as much energy to heat/cool buildings), and make use of precipitation that may fall on the ground and be polluted.

## 20 Invest in Earth Bag-engineered construction

**Applies to** UMass; FC

**Proposal as submitted:** Create collaboration between the Green Building Initiatives, Civil and Environmental Engineering, and on campus activists from the five college area to oversee creation of a document that proves all size buildings can be constructed with Earth Bags. This document would then be used to build all the proposed buildings on the UMass campus. Earth bag buildings have been used in developing and developed nations to provide earthquake proof, bullet proof and beautiful living accommodations at low cost. Earth Bag buildings are extremely well insulated and are perfect for the varying climate of the Pioneer Valley. If Earth Bag buildings were engineered to be built on the scale of housing, lecture halls, laboratories, classrooms, etc. the work would be groundbreaking, would exemplify true sustainable development and save the University millions of dollars that could be saved for the endowment, research, or scholarships.

## 21 Replace current residence halls with sustainable buildings

**Applies to** HC

**Proposal as submitted:** Hello my name is Jack Calvert I am a div II transfer student my major is environmental studies/ sustainability. I think a great sustainability program for Hampshire would be to replace the old mod buildings with new structures that would incorporate green technology. My understanding is that the mod buildings were supposed to be temporary and they are not very energy efficiency. I know the demand for housing is high for Hampshire year round so perhaps it could be done in phased intervals of one structure at a time. At the brainstorming sessions on campus there were so many great ideas and I think a new green residence hall would be a great way to incorporate as many green technologies as possible into one location. This would give students real examples of functioning green systems such as photovoltaic solar panels rain gardens solar or geothermal water heaters motion sensing lights passive solar windows energy monitoring systems Optimally we could even involve students in the construction of these dorms which would provide excellent experience for students interested in sustainability and green technology. I hope this idea could become a reality. Thank you for your time and thanks again for putting together the brainstorming sessions.

## 22 Re-use older buildings

**Applies to** SC; FC

**Proposal as submitted:** Engage engineers, historians, architects, ES&P to come together to figure out how to creatively re-purpose old, interesting buildings rather than see them be demolished

## 23 Update SC houses to incorporate sustainable living practices

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Make all houses more sustainable- - energy efficient appliances - motion sensor lights, more of them - compost bins everywhere - better heat regulating system

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# LAND USE/LAND CONSERVATION

## 1 Install Solar Trees to sequester carbon from air

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** Install Solar "trees" as demonstrated in Vienna, Austria in opportune places.

## 2 Irrigate Smith campus with pond water

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Irrigate the campus with pond water.

## 3 Irrigate Smith campus with water from Mill River

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Utilize the mainline that is all ready in place around the campus and irrigate the Smith landscape with water from the Mill River.

## 4 Re-establish aquaculture at Hampshire

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Reestablish the aquaculture tank in Cole Science. The water could come from rainwater collection, and it could create fertilizer for the Farm and other gardens on campus.

## 5 Re-think public spaces

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Recycle public spaces rather than demolishing them- use Taipei as an example (Taipei city government recycled and regenerated many abandoned buildings and turned them into art galleries, etc)

## 6 Transition all FC campus grounds to organic care

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Install organic lawn demonstration projects on the five college campuses with

the goal of fully transitioning all campus grounds from the use of synthetic petrochemical derived fertilizers, herbicides and pesticides to an organic land care strategy (i.e. non-water soluble, slow-release organic fertilizers, weed controls and pest management solutions. Special emphasis will be put on the need to reduce and eliminate high nitrate synthetic fertilizers and pesticide products as a key component of community and storm water protection. It is believed that this will be the first such collaborative effort in pesticide reduction. ROI analysis will be completed during the five year transition project. Additionally, an opportunity for faculty and student collaborative study that makes use of cutting edge digital infrared imagery to demonstrate the effects of conventional versus organic land care strategies on water and soil. This project will measure sequestration of nitrates and sequestration of greater carbon due to organically managed grounds initiatives. Currently, Harvard, Tufts, Northeastern, Swarthmore, Allegheny, Oberlin and the University of Colorado @ Boulder are engaged in transitioning all, or portions of their grounds, to achieve greater environmental and economic outcomes. We believe none are using GIS technology to measure the sustainability of their sites. It is hoped the success of this demonstration project will lead to the adoption of organic land care practices on campuses across the nation.

## 7 Turn Elm St. in front of Smith College into a pedestrian/bike thoroughfare

**Applies to SC**

**Proposal as submitted:** At least once a month, then once a week, then permanently, it would be interesting to divert traffic off Elm Street onto King Street for the purpose of converting Elm Street in front of campus into a landscaped pedestrian and bike thoroughfare from the crest of the hill to State Street. It doesn't really make a lot of sense to have a busy road running right through a college, and it would be healthy to start a conversation about the many reasons the status quo doesn't work so well for Smith College.

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# TRANSPORTATION

## 1 Build a FC light rail system with associated bike paths

**Applies to FC**

**Proposal as submitted:** install light rail and/or bike path between all five colleges

## 2 Build controlled access highway system around Amherst

**Applies to HC; FC**

**Proposal as submitted:** Finish the idea of building a controlled access highway system around Amherst. A four lane highway that follows Bay road to take traffic from Belchertown to Northampton. And a highway that takes traffic from Holyoke, Route 291, to Sunderland, via four lane highway following route 116. Then make another bridge that connects this system to the four lane route 91 at Northampton.



This alignment would help the congestion on the secondary roads that now have MAJOR backups during peak hours, and would preserve the rural culture of the area.

### 3 Change bus system to clean energy bus system

**Applies to** FC

**Proposal as submitted:** This would require massive funding, but what about a clean energy bus system?? Why do our buses run on fossil fuel??? That's horrible, considering how inefficient the bus system is because it has to do so much slowing down, stopping, and starting. This makes the bus system not much more efficient (possibly a few more MPG) than cars, even when they have full occupancy. (an average car gets 28 mpg per passenger, and a full transit bus gets ~ 32 mpg. The bus itself only gets 8-10 MPG aka Gas Guzzler aka POLLUTION). What about putting solar panels on our buses, or biodiesel? OR what about a completely different transportation system all together? I know this has to do with PVTA and not the colleges themselves, but I think it's a serious issue.

### 4 Convert PVTA buses to biofuel

**Applies to** FC

**Proposal as submitted:** PVTA buses should run on biofuels.

### 5 Convert the Smith fleet/PVTA to biofuels

**Applies to** SC; FC

**Proposal as submitted:** Convert the Smith fleet/PVTA to biofuels.

### 6 Create a bike share program and offer solar powered golf carts for transportation around campus

**Applies to** HC *Moderate cost*

**Proposal as submitted:** We need to add more things to be greener, such as yellow bikes and solar powered golf carts.

### 7 Create a FC bicycle-sharing system

**Applies to** FC

**Proposal as submitted:** Bicycle-sharing systems (like Bixi in Montreal and Capital Bikeshare in D.C.) are a great way to supplement public transportation, encourage alternative modes of transport, and increase public health. In an area like this one, they would be particularly helpful for short trips across campuses or between one bus and another--without needing the forethought of bringing a bike, carrying a lock, etc. They are also great for tourists and short-term visitors (parents, alumni...).

### 8 Create a FC bike path

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Bike path connecting all Five Colleges

## 9 Create a FC bike share program

**Applies to** FC

**Proposal as submitted:** UMass should have bike stations all over campus that students, faculty, staff, and the community in the five college area could use for free, as long as they swiped their card on the station and returned them after a given maximum period of time, each time (could be used as many time per day/week/month/year as people want as long as they bring each bike back regularly, etc). If the bikes are damaged, the cards would keep track of the last user and charge a fee corresponding to the damage. There could also be a number of electric bikes available in this way, for a small subscription each month.

## 10 Create bio-fuel recovery program from vegetable oil to power college fleet vehicles.

**Applies to** HC; FC *Moderate cost*

**Proposal as submitted:** Convert used vegetable oil from the cafeterias and local restaurants into fuel. The colleges' fleets could eventually be converted to grease vehicles. There could be a pump at each campus to sell fuel to faculty, staff, students (and the external community if supply is high enough) who may want to convert their vehicle without the hassle of filtering their own fuel. Since many restaurants will donate their used oil for free, and collection and filtering could potentially be part of a class or workstudy position, grease fuel pumps could sell below gas cost and still make a profit! I believe Grease Car in Holyoke was started by Hampshire alum, who may be willing to partner with us and offer training, especially as this could increase business for them!

## 11 Create new bike paths to connect to Hampshire and Mt. Holyoke

**Applies to** FC *Moderate cost*

**Proposal as submitted:** The bike path between Amherst and Smith is so nice, couldn't we have a bike path between Mount Holyoke and Hampshire, etc? The more safe and beautiful the ride is the more people will bike to work.

## 12 Create a Five College transportation and accommodation office

**Applies to** FC *Moderate cost*

**Proposal as submitted:** There are so many faculty and administrators who travel from our institutions, I find myself wondering of an office was created to: negotiate Five-College contracts with major hotel chains; provide assistance and negotiation skills when blocks of rooms are needed for events; advice for the lowest air travel fares available(watching deals); and have the ability to look at the vast number of folks traveling to consolidate trips to and from the train stations/local airports and/or major cities within driving distance might save us all some money and ultimately play a part in reducing our carbon footprints.

## 13 Develop Five College bike share program

**Applies to** FC

**Proposal as submitted:** Develop a Five College bike share program in the vein of those that are currently run in Paris, Boston, NYC, and DC. The bike share program could run similar to Zip Car- where

you pay a fee to have use of a fleet of bicycles. You swipe your card and go off and then return it to a centralized location.

## 14 Develop more bus routes and increase frequency; invest in renewable energy buses

**Applies to** FC

**Proposal as submitted:** UMass should contribute to further develop the bus transportation lines and frequency, and invest in all (renewably produced, i.e no coal no nuclear, wind and solar) electric buses.

## 15 Establish Elementary (and Secondary) Charter School in South Hadley

**Applies to** MHC

**Proposal as submitted:** Many faculty live out of South Hadley because of the perceived low quality of the local public schools. Five colleges should found a charter school for faculty and staff families with the requirement that the families live in the town where they work (in order to cut down on resource use associated with commuting.)

## 16 Establish Five College bicycle sharing program

**Applies to** FC

**Proposal as submitted:** I would like to see the racks of bicycles that students, faculty and staff members would be able to borrow for one way or round trips within and between colleges/university. Check out at one place and check in at another. (Similar to the European bicycle sharing programs and some being piloted at DC and other cities in the US)

## 17 Establish Five College bike swap/rental system

**Applies to** FC

**Proposal as submitted:** We should have a Five College bike rental/sharing/storage system, that would be as simple as swiping a card in order to borrow a bike.

## 18 Expand bike path to connect all five colleges

**Applies to** FC *Moderate cost*

**Proposal as submitted:** It would be safer, and help sustainability if there were a bike path connecting the Five Colleges. Currently, it is very dangerous, especially at night or in winter (when many students are still commuting).

## 19 Five College Bike Share program

**Applies to** FC

**Proposal as submitted:** Bike share system- organized at the Five College level, run via campus stations

## 20 Foster bike use with clear linked bike trails and sheltered bike racks

**Applies to** FC *Moderate cost*

**Proposal as submitted:** sheltered bike racks on all campuses, clear, linked bike trails to/from all campuses

## 21 Improve efficiency and comfort of FC buses; improve bike paths/lanes to encourage commuting by bike and foot

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Better Transportation - more efficient buses, more comfortable/accommodating to increase ridership, more bike accommodations on the bus and at destinations, better bike paths/lanes. Better side walks, crosswalks.

## 22 Improve public transportation by installing light rail

**Applies to** FC

**Proposal as submitted:** I find it incredibly sad to watch car after car with only one person in it driving down 116. Where are all the people in the Pioneer Valley going? Mostly to the same 10 places. Think about it--how many places are there to go? If we could get public transportation that really works here--not just for the students, but for faculty, staff, and community, we would not only be saving the environment, but we'd be making this area a really desirable place to live. We could attract job producing industries, more students would be willing to come here from urban places, and everyone who lives here could actually take advantage of the wealth of culture. Of course this doesn't come easily. The best solution would be light rail, and even improving the bus system (and its Byzantine schedules) would be expensive, but the potential pay off is huge. We need to invest in reducing the need for cars in this area, and we need to make it a priority.

## 23 Improve PVTa bus system

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Currently, the buses are not dependable. Better and more consistent schedules are needed to allow potential rides to plan better. Also, more routes needed to the south of the colleges (Holyoke and Springfield).

## 24 Improve transportation to cities, outlying communities

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Better transportation between here and Boston, Springfield, outlying communities. (Turners Falls down to Springfield?)

## 25 Increase financial support of FC bus system to increase availability

**Applies to** FC

**Proposal as submitted:** Double monetary contribution to the FC bus system. This would increase the number of buses and reduce the time spent waiting and travel time so that more students would use

the system. This would in turn reduce the number of student cars on campus and relieve some of the tension with neighbors over parking issues among other things.

## 26 Increase support of PVTA

**Applies to FC**

**Proposal as submitted:** Increase support to the PVTA which would allow for more frequent bus use. If we doubled our financial support we could increase the entire schedule to run far more frequently.

## 27 Invest in a Five College monorail

**Applies to FC**

**Proposal as submitted:** Monorail from UMASS Multimodal center (at bike trails?) with links at NHTN RR station

## 28 Invest in electric vehicles; offer more Zip cars to reduce private car use

**Applies to FC Moderate cost**

**Proposal as submitted:** Should have electric vehicles, or at least run with alternative fuels. Should have more cars people can use (like Zip cars) to reduce private cars. Create solar charging stations on each campus.

## 29 Invest in Light Rail for the Valley

**Applies to FC**

**Proposal as submitted:** Do away with the bus system and build light rail that would run on a loop. How great would that be!!

## 30 Invest in more efficient PVTA buses

**Applies to FC Moderate cost**

**Proposal as submitted:** Is there any way that the PVTA buses could be persuaded to run on biodiesel, or ethanol? Or could we work with PVTA to get them to purchase very fuel efficient buses when its necessary for them to add to their fleet?

## 31 Invest in more robust Five College bus system (increased summer/holiday service)

**Applies to FC Moderate cost**

**Proposal as submitted:** Hello. One thing that I feel is sorely lacking that would address both sustainability as well as boost better collaboration and cooperation across 5C is a much more robust bus system. Having virtually no service over holidays, summers, etc. means driving back and forth to other campuses. Having to take multiple buses to v=certain locations is a hindrance to collaboration and means more driving, parking, etc. I appreciate the buses being there for getting from, say, MHC to Hampshire, but if I need to get to Northampton I usually end up driving.

### 32 Invest in PVTB buses using alternative fuels; better track density of ridership and plan accordingly

**Applies to** FC *Moderate cost*

**Proposal as submitted:** The new PVTB buses should be alternative fuel buses. They should also measure the density of their ridership, and this should correspond to what size bus is traveling what route, at what times. Currently, there is a predicament between changing stuff versus changing behaviors that is seen in the electric buses + a higher ridership.

### 33 Make roads/communities more bike-friendly

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Widen the bike path between Amherst and Northampton here it is. Wouldn't hurt to add more bike lanes along main routes too. Here's an excellent, short video summarizing Portland, OR's experience with "bike boulevards", which are regular roads (State St.?) made much safer and more welcoming to bikes and peds by calming car traffic. Lots of good ideas here we could adopt to make some of our 180 miles of roadway (even more) bike-friendly, and excellent complements to our growing (rail-)trail system. <http://vimeo.com/16552771>

### 34 Offer bus service to Hampshire mall

**Applies to** HC; MHC *Moderate cost*

**Proposal as submitted:** Could we have buses to the Hampshire mall from Hampshire college? It would help Hampshire and MHC students get supplies.

### 35 Offer Five College bus system year round

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Hi, I think it would be great to continue the 5 college bus system throughout the summer for staff, faculty, and students on campus. There really is no viable alternative bus route between the colleges during the summer and we have to rely on individual cars- not as good as public transportation for groups of people, especially in low-emission buses. Thanks for this opportunity!

### 36 Plan and install an electric vehicle charging station

**Applies to** UMass; FC *Moderate cost*

**Proposal as submitted:** Involve the engineering and architecture students in planning and installing an electric vehicle charging station. Federal funding toward this effort may still be available (it definitely was available last year). The station could be at least partially powered by a solar photovoltaic array, potentially yielding a zero carbon transportation example. Petrochemicals are a finite resource and over 60% of the greenhouse gases emitted in the US are from the transportation sector. The Five Colleges should at least follow the example of other campuses in the nation and provide an example of a low carbon alternative transportation fuel source.

### 37 Provide more and more-efficient transportation system

**Applies to** FC

**Proposal as submitted:** There is an urgent need for more transportation methods within the Valley. At

Hampshire College, the greatest source of emissions comes from cars driving to and from, however there are still not enough options for students to comfortably travel. This idea would create a carpooling network to and from specific addresses, generating a carpooling network for students to travel freely and save money and cut emissions, as well as provide an alternative to bus routes.

### **38 Purchase new PVTAs that run on renewable resources**

**Applies to** FC

**Proposal as submitted:** Make the PVTAs run on renewable resources!

### **39 Reduce fleets of college vehicles; any new vehicles purchased must be hybrid or electric**

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Reduce the colleges fleet of vehicles. Any new vehicles purchased should be required to be either hybrids or electric vehicles.

### **40 Replace campus vehicles with natural gas powered vehicles**

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Smith, either alone or with the Five Colleges, should replace trucks and other vehicles with natural gas powered vehicles. This will save money (natural gas costs at least \$1 less per gallon) and it will also reduce emissions and, therefore, increase air quality. This change would require investments in both vehicles and in natural gas fueling stations. However, I think the payback, both in dollars and in cleaner air, justifies the investment.

### **41 Run PVTAs in the summer**

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Bus systems should continue to operate in the summer, because Hampshire campus is entirely inaccessible to workers and students during the summer months. Particularly for people from Northampton, there is a very pressing need. I would consider paying a fee to offset costs for buses, in order to be given the chance to act responsibly and sustainably during the summer. In the summer, there is no choice to be sustainable. Also, the arbitrary and inconvenient bus schedule can be a deterrent from taking the bus and being sustainable.

### **42 Upgrade fleet vehicles to include electric and hybrid vehicles**

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Upgrade fleet vehicles to electric and hybrid.

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## WASTE REDUCTION

### 1 Buy (or create) machine that can compact EPS (polystyrene) packing materials locally

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Smith, and our 5-College partners, receive a very large quantity of expanded polystyrene (EPS) packaging material. Most equipment arrives protected with this material and student purchases add quite a lot more EPS to our trash. The material is very resistant to bio-degrading but is a significant component of our landfill burden. Some estimate that it is the largest non-biodegradable product by volume in landfills. EPS is very recyclable to produce polystyrene products like lumber-substitutes and even to remake EPS. The problem is the material has such extremely low density that transporting a meaningful amount by weight requires an enormous volume. This makes it not cost-effective to transport. (I think the nearest EPS recycling center is in Worcester and that may not be still operating. Others are much farther away. The fuel cost to drive a tractor trailer to these locations is prohibitive considering that there may only be a few hundred pound of material in the entire trailer. There's an effort to reuse "small peanuts" on campus and the UPS stores will also accept them free. But most EPS does not come in the form of peanuts and Smith (and the other colleges) contribute a giant amount of this material to the landfills. The answer is to reduce the volume by compacting the material ON SITE. In other words, removing the air. Some machinery for doing this is advertised with claims that EPS can be reduced to 2% of its original volume. Transporting this relatively dense material then becomes cost effective. Some re-manufacturers will pay 30 cents/pound or perhaps more for clean compressed polystyrene. Not only might this end up being profitable, it would significantly reduce Smith's (and 5-college) trash removal and disposal expenses. I've heard these costs are not small. Reusing polystyrene also saves considerable energy and petroleum and contributes to global conservation too. Two solutions: One is for Smith to buy commercially available machinery for compacting EPS. Slower, less expensive but with some educational benefit, would be for an engineering class to design and build one or more of these machines. Here are some links that provide information to support my suggestion: Suppliers for commercial small EPS recycling machines: <http://goo.gl/bKGwA> Video of one shredder/melter machine in operation: [http://www.youtube.com/watch?v=hvHuX32\\_--g](http://www.youtube.com/watch?v=hvHuX32_--g) A very small version of this kind of machine: <http://www.youtube.com/watch?v=ZHYot6Msahs&feature=related> Video of one shredder/compactor machine in operation: <http://www.youtube.com/watch?v=3zMP1g5VJN8&feature=related> An interesting aside is that China, which faces a giant environmental crisis, has recently become very scrupulous about recycling EPS in this way. There are other low-tech methods, like dropping the material in a large vat of citrus oil, but this is much slower, messier, and reduces the value of the material to re-manufacturers.

### 2 Provide better summer storage space on campus

**Applies to** HC *Moderate cost*

**Proposal as submitted:** To cut down on the amount of things discarded at the end of the school year and the amount of rental cars and trucks that have to drive back and forth, it would be wise to create a



new storage space on Hampshire's campus. We could use one of the old barns, or build a new barn to store student property.

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## WATER

### 1 Design more efficient waste water systems

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Hampshire students have designed a variety of systems to manage waste water, as well as human waste. Why have these not been instituted? We need to make these systems and these ideas visible and accessible.

### 2 Develop an effective greywater system

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Develop an effective greywater system. Use greywater in toilets and for other watering needs.

### 3 Explore new means of water and energy efficiency

**Applies to** HC *Moderate cost*

**Proposal as submitted:** - Low pressure water system - Motion sensor water faucets - Timed showers. Push a button periodically to keep the water flowing, otherwise it will automatically shut off. - Dryers and laundry - Rainwater routed to washing machines, use bio-degradable soap, grey water from laundry could be used for plants. - Cold water only. - Dorms need a better way to regulate temperature. - Greater control - Programmable thermostats - Rainwater collection

### 4 Install rain collection systems to existing gutters

**Applies to** HC *Moderate cost*

**Proposal as submitted:** Every roof has gutters. Those gutters can be directed to rain collection systems. Especially Cole could collect rainwater for use in the community gardens. A cistern could be built. For daily use a solar powered pump can raise the water to an elevated container for gravity feed watering. But all over campus rain collection could reduce the amount of city water we use for plants and animals.

### 5 Install two level flushing system in all of Smith's buildings

**Applies to** SC *Moderate cost*

**Proposal as submitted:** Install two level flushing system in all of Smith's buildings.

### 6 Rainwater or grey water for irrigation systems

**Applies to** SC; FC *Moderate cost*

**Proposal as submitted:** Feed rainwater and or sumped water into cistern to feed irrigation system

rather than using potable water purchased from the town. (e.g. pumped water from the campus center basement)

## 7 Transition to composting toilets in some areas and use living machines to manage larger volumes

**Applies to HC**

**Proposal as submitted:** Hampshire College admissions should have composting toilets. Other areas should consider them as well. We should use our woodland space to create living-machines which manage our waste.

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## OTHER

### 1 Address larger systemic issues at UMass before focusing on smaller initiatives

**Applies to UMass**      *Moderate cost*

**Proposal as submitted:** I am reluctant to propose new ideas because we are not addressing the source of our initial issues particularly on the UMass campus. The UMass campus is similar to a small city in and of itself and faces the same system-wide inefficiencies. However, at the core, no single sustainability initiative will work without an overhaul of the system itself. Sustainability for a campus is about providing seamless access to opportunities by the most efficient means. Sustainability is more than environmental initiatives, it is about creating a systematic approach for prioritizing challenges and creating interconnected opportunities. UMass has an educational mission and image problem. As a student, my department is housed in a condemned building while millions are poured into the football stadium and new construction. Is this sustainable? No. And I hope that these issues will be addressed. However, from a day to day campus planning perspective sustainability can be achieved by: - decreasing the campus scale, which will lead to: - Interconnected pathways that are accessible by walking, biking, by wheelchair and cutting back on the car and bus centric transportation methods by which this campus is best accessed. The campus circulation and pathways do not serve us in an efficient manner that would allow for reasonable 'sustainability' initiatives such as a bike share program, bus stops etc. Because the system has problems that need to be addressed first. - create a linked system of natural areas and green space (it's a shame that the Hasbrouck bus stop which services the campus center, library, and center of campus is closed for dorm construction until further notice and the only green way on campus disappearing. The campus pathway inefficiency is unbelievable. Forget taking a business class and then trekking across campus to natural resource conservation back to back. I might as well stay home and skip class due to not being able to make it to class due to a lack of efficient interconnect pathways that can get me across campus. I might as well take online UMass classes while the mega infrastructure looms over the landscape empty as the UMass clients (students) walk out. At least there

will be a nice football field. Think twice about small sustainability initiatives because our foundational system, particularly at UMass, is broken.

## 2 Establish a Five College currency

**Applies to FC** *Moderate cost*

**Proposal as submitted:** Apparently Valley Dollars, a local currency, already exists but is not widespread. A Five College currency could be tied to this (or join it) to make it more widespread and viable and keep our money local.

## 3 Increase cooperation across the Five Colleges in terms of construction management

**Applies to FC** *Moderate cost*

**Proposal as submitted:** I think a sharing of information, forms, standards, contracts, legal services, budget reporting systems and even senior management positions for construction management on a Five College Basis could be a consideration. In terms of direct project management, coordination with constituents and interaction with the operations trades and those who have detailed knowledge of campus buildings, events and services, it's best to keep campus staff focused on their own turf. Ultimately, we are a customer service entity and that has to be balanced with efficiency. Something akin to the Four Seasons hiring A-1 Housekeeping service in lieu of training their own in-house staff.

## 4 Offer Life Cycle Costing Calculator to use with Green Fund programs

**Applies to UMass; FC** *Moderate cost*

**Proposal as submitted:** Develop a Life Cycle Costing Calculator to use with Green Fund programs (similar to Harvard Sustainability Initiative) and to codify return-on-investment (ROI) calculations in a way that ties them to the existing cost of funds, life cycle cost of maintenance and utilities, realistic escalation estimates and to pre-established LCC periods (i.e. 7 yr. payback and/or 15 yrs. for first cost capital investments).

## 5 Showcase sustainable architecture - replace the Du Bois Library

**Applies to UMass**

**Proposal as submitted:** The W.E.B. Du Bois Library is an architectural travesty - the University continues to slap band-aids on a sorely outdated space, which continues to waste resources by the nature of its structure, through outdated HVAC and lighting systems. Rather than spending millions over time, the University should invest money up front to build a new LEED certified building which showcases the commitment that the University has to preserving natural resources and thinking of the future generations. As the epicenter of the research community, what better way to inform people of a large-scale University commitment and investment than having the Library as the showcase?

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## LOW IMPACT, LOW COST IDEAS

NOTE: In assessing “cost”, we took into account factors beyond monetary assessments such as logistics, campus cultures, technological feasibility, environmental considerations, labor, and other issues. In order to refine the cost parameter, we indicated a “moderate” cost within the categories, as there is a wide range of “costs” within each category. “Impact” was evaluated based on economic, environmental, and social aspects of sustainability. However, the majority of the ideas were categorized as being high impact, because of the multiple ways impact can be assessed. For example, while a solar array might have a measurable high impact with regard to reducing greenhouse gas emissions, the impact of offering a workshop for environmental leadership in the 21st century is less easily quantified. However, such a workshop would have a high value for students across the Five Colleges.

### ACADEMICS

#### 1 Create a partnership with David Sobel at Antioch New England

**Applies to** MHC

**Proposal as submitted:** MHC should look for a partnership with David Sobel and his CBL program

#### 2 Institute community reading around sustainability

**Applies to** MHC

**Proposal as submitted:** Institute a common read for employees centered around sustainability (either the same as the students' or a more practical, hands-on, here's-how-you-can-make-immediate-and-easy-changes type read like "The Urban Homestead" by Kelly Coyne and Erik Knutzen).

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### ENERGY

#### 1 Reduce use of landscape power tools

**Applies to** MHC

**Proposal as submitted:** When I first came to MHC, leaves were raked by hand and paths were shoveled by hand. With the advent of the leaf blower and snow blower everything changed. I understand that power tools are faster and more efficient, (possibly cheaper?) but they consume fuel, and, more important, they are horribly disruptive-- the noise drowns out classes in buildings near where they are operating. They have transformed our serene campus into a stressful and noisy place. Try leading a creative writing seminar when there's a machine grinding back and forth under classroom window! Raking leaves and shoveling snow is good exercise--- perhaps our athletic teams could be harnessed!

## 2 Use body heat to warm buildings

Applies to UMass *Moderate cost*

**Proposal as submitted:** Another idea would be to use body heat in order to warm buildings. In many cases, the excessive heat siphoned off crowded areas via fans etc can be used to heat cooler areas.

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# LAND USE/LAND CONSERVATION

## 1 Design and build a disc golf course

Applies to UMass *Moderate cost*

**Proposal as submitted:** UMass Amherst Disc Golf Course would enable students and people of the Amherst community to interact and enjoy the sport of disc golf. Disc Golf courses are simply and easy to create without cutting or planting needed. Disc Golf courses are the definition of sustainability.

## 2 Make College Lane (at Smith) pedestrian only

Applies to SC

**Proposal as submitted:** The road from Green Street to Elm Street that goes by the Botanic Garden is not a major thoroughfare because of the speed bumps, but why not just shut it down entirely and make it a pedestrian walkway?

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# TRANSPORTATION

## 1 Ban cars on campus for first year students

Applies to HC

**Proposal as submitted:** Cars - Ban cars for first year students, or on campus in general (as is done at Bowdoin). Reward people without cars. Buses would need to be more efficient at transporting Hampshire students, and go to places like the mall more directly.

## 2 Enforce policies regarding college vehicles, especially around idling.

Applies to SC

**Proposal as submitted:** Do a better job of enforcing policies on the books with regards to Smith's vehicle fleet. Mainly with regards to idling.

### 3 Invest in a Five College pedi-cab service that uses the bike trail

**Applies to** FC *Moderate cost*

**Proposal as submitted:** Five College Pedi-Cab service making use of the bike trail that goes from Northampton to Amherst could service Hampshire College, Smith, and Amherst Colleges.

### 4 Restrict cars for first year students

**Applies to** UMass

**Proposal as submitted:** Discourage or prohibit the ownership of cars on campus by first year undergraduates. This might be done by limiting parking permits or other mechanism. For those students who have grown up in a car-only culture this could be part of their education about other methods of transport.

### 5 Restrict cars on campus.

**Applies to** UMass; FC

**Proposal as submitted:** UMass allows freshman students to have cars on campus. Restricting this would decrease the over-all number of students driving vehicles.

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## WASTE REDUCTION

### 1 Change the way events are publicized

**Applies to** HC

**Proposal as submitted:** Changing the ways in which we publicize on campus. Flyering and postering on campus is very wasteful. If you put up a flyer, your name & group should be on the bottom, in order to create a sense of responsibility, and also to make students take them down themselves. Monitors for bulletin boards to make sure that students are being conscious with their postering techniques. Creating a schedule that is accessible to students so they know when posters will be taken down, so that they are not ripped down and thrown away right after being posted up. Designated bulletin board areas, as well as Magic Board (projections) for events.

### 2 Convert to electronic timesheet system

**Applies to** MHC

**Proposal as submitted:** I am hiring students for the first time this semester and they informed me that they still have to fill out hard copies of time sheets?!?!?! One used the phrase "fill in the bubbles." This seems extremely antiquated and a waste of paper and resources. Invariably, someone in payroll then has to enter this into a computer program anyway. So students should be able to enter their hours via an online timesheet, a supervisor should be able to login and approve the sheet, and then it should be sent to payroll or whatever automatically. I would think most institutions already use such a system. In addition, when I mentioned that timesheets should be electronic, one of my students said "yes, especially since they lost mine." So doing so should improve the process in many ways.

### 3 Decrease margins to save paper

**Applies to SC**

**Proposal as submitted:** Work to instate behavioral changes such as simply changing default settings on Microsoft so that the margins are smaller.

### 4 Eliminate plastic ware, when silverware is available

**Applies to MHC**

**Proposal as submitted:** Silverware in Blanch!!! Why do we only have plasticware even when people are sitting and eating there? Such a waste!

### 5 Eliminate W.B. Mason boxes

**Applies to Smith**

**Proposal as submitted:** I have sent this to the Smith sustainability person before but I have seen no movement. At Smith items from W.B. Mason are mostly packaged in boxes to keep the orders together. This is incredibly wasteful. I cannot imagine how much cardboard is recycled per week here. I am told UMASS uses recyclable plastic buckets. I don't care if we use plastic boxes or paper envelopes that can be used over and over again - but please no more boxes, and preferably not plastic envelopes either.

### 6 Envision new alternatives to postering on campuses

**Applies to HC**

**Proposal as submitted:** To reduce paper waste, we should put up more magic boards at Hampshire, and make them free to use. We should paint chalkboard paint on poles/walls to allow for more advertising space for events. There should additionally be a website that organizes fliers by day, theme, etc.

### 7 Install hand dryers to replace paper towels

**Applies to UMass**

**Proposal as submitted:** Use hand dryers instead of paper towels in bathrooms.

### 8 Purchase and install solar garbage collectors

**Applies to UMass**

**Proposal as submitted:** Not sure if you utilize them, but there do exist solar garbage cans, with compactors that allow you to collect waste less frequently, cutting down on manpower hours, fuel, and garbage expenses. Consider purchase.

### 9 Reduce plastic bag use at campus book store

**Applies to UMASS**

**Proposal as submitted:** This can be implemented anywhere where students shop. I was driven to share my idea after purchasing books at the Textbook Annex at UMass. I think that students should be encouraged more from the Textbook Annex to not use bags, or to bring reusable ones for when they buy books. There should be signs all around that remind students that there are reusable bags (they could sell for a dollar or less. I also noticed that many students come with backpacks which they have to

leave at the door. Many of these students get only a few items that are very easy to carry without a bag, but they get one anyways and then they walk two feet to their backpacks where they could have just put the books. I'm saying that I'm sure most of these students aren't dead set on getting a bag with their purchase, they are just given one with no questions asked. I think that the cashiers should at least ask if they want a bag for a small amount of things. We would save so much plastic waste! Thanks for reading my long response.

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## WATER

### 1 Encourage reduced flushing of toilets

**Applies to SC**

**Proposal as submitted:** I'd like if an allotted number of stalls in each bathroom, preferably in dorms, were designated "If It's Yellow" stalls, where people do not need to flush the toilet when they urinate. This will help greatly reduce water waste as well as toilet paper waste, and certainly make a huge impact especially in larger dorms. Typically bathrooms on campus are cleaned daily so there is no health hazard, they will most certainly be flushed every 12 hours which is the grace period before it gets too gross and becomes an issue of bacterial growth. This is a great, sanitary, and effective way to be sustainable!!

### 2 Establish a student-run green cleaning service (extended)

**Applies to HC**

**Proposal as submitted:** Because students are so messy, and are can use extra money, we propose beginning a green-cleaning service for the mods and dorms, which would use natural products and allow students to positively invest in their own community. Student cleaning services would do laundry using grey water systems, and eco-friendly products. It would also serve as an educational project to inform the community on healthy products to use, and the sustainable design of new water conservation systems. This project could work in collaboration with the ban the bottle campaign, only using non-disposables and promoting a decrease in waste generation by students, as well as greater recycling efficiency.

### 3 Transition to crock-style water stand until filtered drinking water available in all buildings

**Applies to SC**

**Proposal as submitted:** Ideally we would have good, safe filtered drinking water in all buildings on campus. In the meantime I'm hoping that , except in places where access to cold water is important and not otherwise available, the college might consider having us transition to the crock-style water stand, which Belmont stocks. It neither heats nor cools, so would offer an extra energy saving, being energy neutral. The hot water is not hot enough to make tea, and we find that we only use it to temper the coldness of the cold water, ie, the waters are being used to cancel each other out, which doesn't make



energy sense, to say the least. Josten Library will be getting a crock-style base soon, since our hot-cold base has broken. The delivery person kindly informed me about this option. I'm going to pass this along to our Libraries' staff. I hope that in time, filtration may make delivering water a thing of the past. Having potable water contributes a great deal to our morale, and is a fairly recent development in the libraries, but I'm also aware that driving water around, and housing it in plastic, is not the best plan environmentally.

## 4 Turn off the pond fountains at UMass

**Applies to UMass**

**Proposal as submitted:** Just not wasting more energy on pumping them. That is, unless they serve some important purpose...

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## OTHER

### 1 Convert to electronic system for major declarations

**Applies to MHC**

**Proposal as submitted:** It seems silly at this point to have students have to print off/pick up major declaration forms, take them to the chair of the department, have the chair sign them, and then take them back to the registrar. It shouldn't be too difficult to make a function in ISIS where chairs can simply click a box next to each name to approve major declarations. This would save a lot of paper, but also time, and make things less complicated and convoluted.

### 2 Create a sustainable clothing event

**Applies to FC**

**Proposal as submitted:** The big part of a college student's expenditure is on clothes and entertainment, as they attempt to express who they are. Many people love collect clothes and accessories. Women love shoes, Victoria Secret products, party dresses, and handbags. Men are usually into cool shirts, shoes, jackets and hats. Would it be fun if five colleges hold an unusual fashion show/speed dating event, in where people dress up in their favorite clothes and talk about where their clothes were from? And by lottery 20 participant will go on a fun camping field trip/retreat into Appalachian trail in the summer?

### 3 Create Five College idea & project sharing network

**Applies to FC**

**Proposal as submitted:** A network which spotlights projects community members (public, students & faculty of 5 College area) are currently working on, and provides contact information and links to their work. Allows for idea sharing, and creates potential for broader networking between individuals.

## 4 Create Five College Wall Street & currency

**Applies to FC** *Moderate cost*

**Proposal as submitted:** Gathers community members together based on shared interest in community development and sustainability. Allows community members to bring what they have and know to the table, giving value to the individuals unique talents and potential contributions. Five College Wall Street would be a literal investment in the local economy, and networking with larger businesses (e.g. Target) for cooperation on sustainability projects would benefit both local towns and their larger corporation's presence in the Pioneer Valley.

## 5 Create system to donate extra money on meal cards to charity

**Applies to MHC**

**Proposal as submitted:** I don't know how the meals budget works, but if we had the option to swipe our extra swipes at blanchard not for junk food that we really don't need (but buy anyway, to use our meal dollars), we should have option of swiping to donate three dollars to a charity of the campus's choice.

## 6 Embrace Industrial hemp

**Applies to Vendor; FC**

**Proposal as submitted:** Here in America we have yet to embrace the capacity the industrial hemp offers us to restore harmony with the environment. IN Europe, Canada uses for industrial hemp are gaining traction, while in this country we are forced to import it, and awareness of this historically valuable agricultural commodity is next to non-existent. Building with industrial hemp creates a better than carbon-zero effect, it is a carbon-negative method that uses on average 75% less fuel per building to heat and cool. Meaning the buildings themselves sequester carbon into their walls as they calcify. There are even more reasons to embrace industrial hemp as the 4th cornerstone of renewable energy. Wind, Solar, Hydro and Hemp should be our mantra. Industrial hemp provides the raw material for composites tough and lightweight that will replace our current use of metals for cars, it can make bio-plastics. Go ahead and look up Ford's hemp car on you tube to see what could have been done right had not monopolies on Timber and Nylon used back door dealings to block this commodity from growing with the textile industry. What the five colleges should do is five-fold 1) build a hemp car, that runs on fuel made from hemp and flax oils -you should know that we are behind the world in this regard, if you look up hemp cars you will see a canadian Kestral hemp car, as well as Mercedes and Lotus models that are incorporating industrial hemp. 2) build a hemp building : Look up the Adnams beer factory in the UK that has not installed heating system because the insulate properties of the industrial hemp/ lime make it unnecessary. 3) Make Hemp plastic chairs to demonstrate how the hemp can replace our petrochemicals. 4) Help educate the people on how much work will be created by embracing industrial hemp and the answers it holds for our environment, including the way it needs not pesticides and with its deeper root systems it clears out weeds for a higher yield for the next crop in rotation. 5)Challenge the political structure that hinders America from growing this crop. This is the statement we are publishing in Vermont - the formatting will not be accurate in this application, the notice can be viewed at [www.hempfullygreen.com](http://www.hempfullygreen.com). Before I copy that I will add: it is absolutely imperative that the knowledge about and moreover use of - industrial hemp be furthered and quickly, I believe this would

be the most admirable use of the five college power to help the global crisis. L E G A L N O T I C E The People of Vermont hereby state our intention to reintroduce the cultivation of industrial hemp within our borders. Indeed, because of its value to making textiles, the plant was first grown here by our early forefathers (they were literally mandated, by George Washington, to "make the most of the Indian hemp weed"), and then it was grown again, during World War II, with the government's enthusiastic support: "Hemp for Victory." Today, we want to grow it once more, both for its continuing value in producing textiles and, even more critical, for its value to the environment and to building our green economy. We must also categorically make clear that the open cultivation of industrial hemp will in no manner either increase or hide cultivation of marijuana. Moreover, this type of Cannabis has no capacity to create a "high" of any kind. Rather, it provides the raw material to manufacture environmentally beneficial products that outperform products now produced by petroleum and chemical means. In fact, the cultivation of industrial hemp will contribute greatly to the global goals of reducing deforestation; rebuilding topsoil; and reducing the use of pesticides, fertilizer, and water; all while also providing the base material for the manufacture of bioplastics; biofuel; textiles; clothes; paper; fiberboard; fiber-composites for external sheathing for cars, trucks, and planes; combined with lime for carbon-neutral, chemical-free minimal energy use homes and commercial buildings; finally a protein-rich, omega-rich food source. In short, because of renewed cultivation of industrial hemp, most of our petroleum-based products -- and much petroleum itself -- will be replaced. This strain of Cannabis plant, which has qualities that cannot be matched by another plant species is humankind's best friend of the plant world. Currently, the U.S. must import all of its industrial hemp, putting us at an unfair disadvantage when compared to 31 nations -- including Canada, England, France, and China -- who all have government-approved and flourishing industrial hemp industries. NAFTA's Article 713 provides for the use of relevant international standards, without reducing the level of protection of human, animal or plant life or health, as a basis for each NAFTA government's own S&P measures. Specifically, Section 402(2) of the 1979 Act (19 U.S.C. 2532) already requires federal agencies, when developing standards, to take international standards into consideration and, if possible or appropriate, to use the international standards as a basis. The same Section also prohibits federal agencies from engaging in standards-related activities that create unnecessary obstacles to the foreign commerce of the United States. Insofar as Most Favored Nation Trade Status is afforded to Canada, it is obvious that such status must certainly be enjoyed by Vermont and all other states within our own country, as well.. In other words, preventing Vermont -- or any other state -- from the competitive cultivation and manufacture of hemp is a violation of NAFTA.

page 1 of 2 The citizens of Vermont can no longer muster patience where immediate, strong action is called for. It is obvious that industrial hemp can be as integral to our economic and environmental well-being as are solar, wind, and hydro power -- in other words, that its production can be a cornerstone of our renewable resources. Therefore, through our elected officials, we have legalized full support for the reintroduction of the production of Industrial Hemp within our borders. We will no longer wait for Federal policy to catch up to the urgency of our global situation. It has become amply clear to us that federal politicians demonstrate a dangerous lack of motivation when it comes to the prevention of the harmful corporate pollution which now endangers life on Earth. Science begs Vermont to act and lead. In light of the impressive number of green works in which Vermonters will be able to be engaged by means of cultivating industrial hemp, it would be true negligence for us to continue to observe, enable, and obey the flawed federal classification, by the Drug Enforcement Agency (DEA), of industrial hemp as

a “controlled substance.” Again, we must clarify that the industrial hemp we are referring to has only .05%- 1% of THC -- an amount comparable to the amount of opiates in the poppy seeds that we eat in, for example, muffins or bagels or pastries. Inappropriate DEA policy must be replaced by vigorous Federal support for our efforts to reduce global toxic emissions by the means of reintroducing industrial hemp. Thus We the People of Vermont gracefully suggest that the DEA stand down from any intent to block our good work with criminal charges for what is clearly a non-criminal fiber crop. We ask the Federal Government to give Vermont its blessings in our efforts to remove toxic materials from our environment through the restoration of the industrial hemp industry and the subsequent manufacture of all manners of life-sustaining environmentallyfriendly products. Publication of this statement advises the DEA and other Federal officials that Vermonters will begin the return of industrial hemp to our fields in the spring of 2012; let it be known that our doing so is not intended to be disrespectful to the DEA or to Federal policies but rather to be a crystal-clear indication that leadership in Vermont is now needed to manifest allegiance to the well-being of our Earth, upon which our lives depend. Vermont herein notifies the DEA /Federal government that it must publish any objections or intentions to block or criminalize our efforts to restore industrial hemp productivity, and that it must do so within two months of the date of this publication, in this same publication (The Burlington Free Press), in an equally open and visible manner. Failure to do so will result in the forfeiture of any right or responsibility by the DEA/FED to criminalize, limit, or restrict our green work of restoring industrial hemp Cannabis to the fields, farms, and factories of Vermont.

## 7 Offer a public wall for graffiti artists

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** So what my idea entails is a way for students to show artistic abilities on campus but not in a way in which vandalizes the Universities buildings, property in general. This project wouldn't be considered sustaining the environment but actually the appearance. My idea would be to construct a concrete wall somewhere on campus where people would be allowed to spray paint, or tag essentially, without the possibility of being penalized. Maybe every 6 months or so it would be painted over in order for new designs to be painted but would be a mural for students to take part in. Hopefully those that would respect the art of Graffiti wouldn't damage others works and would keep people from ruining other's work. I think it would be a great project for the campus since it will bring others together for an art form that is considerably seen as a negative action.

## 8 Reconfigure eco-rep system at Smith

**Applies to** SC

**Proposal as submitted:** Re-configure the eco-rep system at Smith to be more effective. It isn't working.

## 9 Use default font on computers to save ink

**Applies to** SC

**Proposal as submitted:** I would like to propose that all five colleges use the default font on their computers including email to Century Gothic. This is the font that I read uses the least amount of ink.

## 10 Use social media to involve alumni in sustainability issues

**Applies to** HC

**Proposal as submitted:** Allowing alumni to be involved, using Facebook and other social media as a thinktank for sustainability idea generation and circulation.

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## LOW IMPACT, HIGH COST IDEAS

NOTE: In assessing “cost”, we took into account factors beyond monetary assessments such as logistics, campus cultures, technological feasibility, environmental considerations, labor, and other issues. In order to refine the cost parameter, we indicated a “moderate” cost within the categories, as there is a wide range of “costs” within each category. “Impact” was evaluated based on economic, environmental, and social aspects of sustainability. However, the majority of the ideas were categorized as being high impact, because of the multiple ways impact can be assessed. For example, while a solar array might have a measurable high impact with regard to reducing greenhouse gas emissions, the impact of offering a workshop for environmental leadership in the 21st century is less easily quantified. However, such a workshop would have a high value for students across the Five Colleges.

## OTHER

### 1 Provide free ebooks

**Applies to** UMass *Moderate cost*

**Proposal as submitted:** It would also be a good idea to have FREE ebooks for every class, written by the professors etc, so that students do not need to buy a paper copy.

### 2 Install solar panels on buses for electronics charging stations

**Applies to** FC

**Proposal as submitted:** Solar panels on buses. These could be used to provide charging stations in the buses.

### 3 Improve insurance plans and explore cooperative insurance possibilities across the 4 colleges

**Applies to** FC

**Proposal as submitted:** There is a pressing need to consolidate health plans for Hampshire College employees with the other colleges to save money for staff members. This would make Hampshire more competitive in terms of wage and salaries, especially as insurance premiums are incredibly detrimental. The four colleges (Umass being the exception, as it is unionized) could join together under one healthcare plan. It is necessary to make health care plans accessible for gay and queer couples.

Collaborative insurance would create a greater community sense of health. Creating a bigger pool would give savings to the entire 5 college area, as an incredibly large amount of people would be involved. Rising health care costs have made it nearly impossible to participate and receive benefits from 5 college insurances, and are the greatest impediment towards continuing to work as 5 college staff.

#### **4 Replace lighting to reduce light pollution**

**Applies to UMass**      *Moderate cost*

**Proposal as submitted:** Replace existing lamp posts with more modern ones designed to reduce light pollution.

#### **5 Provide student housing/have Five College center in Holyoke**

**Applies to FC**

**Proposal as submitted:** A student residence located in Holyoke for 5 college students interested in working on any kind of collaborative project in Holyoke. While attending the recent Holyoke Bound orientation, I was made aware of how many Five College students are engaged in projects based in Holyoke. Here at Hampshire getting transportation to and from Holyoke has been a chronic issue, but why not have a residence in Holyoke for students? This eliminates the transportation issue, saves commuting time, gas and vehicle usage, and allows the students to immerse themselves in the community, which will greatly inform the work they are doing, and having a 5 college residence will make for greater collaboration among students from different institutions working on similar projects that might otherwise not communicate. In addition, the Holyoke community will benefit from the student presence. I see how much business is generated in Northampton and Amherst because of the student populations, and think this could be a similar boost to the Holyoke economy. Real estate is cheap in Holyoke right now, and it would be wonderful to build mutually beneficial partnerships among the communities that will ultimately strengthen them all.

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