Sustainable CW Post

- Recycling Summary.................................i
- Recycling Report .................................1
- Composting........................................22
- LED Lights..........................................33

Students:
Xavier Brown, Jr.
Michael Celano
John Hardy
Billy Karavasilis
Erin Pecora
Jackie Rakib
Abrom Shepard

Prof. Scott Carlin
Recycle-Revamp: Hillwood Commons, Spring 2010

Why does C.W. Post need a more extensive recycle program? Environmental protection! Our ecological decisions affect us - and also the surrounding region. By recycling, we can encourage other local towns, schools, and colleges to reduce their carbon footprint. While this mentality may seem exaggerated, it is completely attainable if the administration implements these recommendations. Our Earth and Environmental Science Department class, Applied Conservation, conducted “Project Recycle-Revamp.” Our project shows that campus recycling is on every student’s agenda. - Billy Karavasilis

In order to effectively communicate our project’s intentions to the student body, the class designed and distributed table placards and affixed poster-sized labels to the three recycling receptacles.

During our two-week project period recycling rates in Hillwood Commons significantly increased.

To measure student support, our class analyzed student recycling habits and opinions. The results show that student recycling increases when more recycling bins are present.

Implementation by Fall 2010

Students who use Hillwood’s cafeteria believe that permanent recycling bins should be placed in Hillwood. Students also want a more extensive recycling program across the University. By implementing this expanded recycling program, C.W. Post can become a model for universities across region. It’s time for us to break the old, unsustainable habits of the last century. Strengthening our recycling program can be an important next step for our campus.
Managing a recycling program at C.W. Post is not an easy task, but we proved it could be done. To succeed, we worked collaboratively with Aerie Tirsch, Director of Student Activities, Aramark officials, and student leaders. We needed everyone’s participation to make this program a success. - Erin Pecora

Recycling saves energy, natural resources and space in landfills. When products are manufactured from virgin materials, a lot more natural resources are used. We learned that nearly every piece of plastic ever created still exists today. It can take 700 years for plastic to decompose in a landfill. 80% of plastic bottles are not recycled.

Recycling cans saves 95% of the energy needed to create new aluminum. Recycling 125 aluminum cans saves enough energy to power a home for one day. -- Jacqueline Rakib

Many universities in our region recycle, including Hofstra, Adelphi, St. John’s, and NYU. Parents and prospective students pay attention to these things when selecting colleges. It is part of the competition for students. Billy Karavasilis said it best: “C.W. Post should be no different from all the rest – why should others lead while we follow? We are the Pioneers and a Pioneer is somebody who establishes themselves.” 85% of students agree – we need more recycling receptacles in Hillwood. - - Pioneer story by Michael Celano

A good model for C.W. Post is St. John’s University. They recycle plastic, paper, metal, glass, cardboard, scrap metal, plastic containers, batteries, fluorescent lamps, computer monitors, printer cartages and some furniture. - - Abrom Shepard
Recycling in Hillwood
GGR/ERS 21 Applied Conservation Project

Introduction
By Prof. Scott Carlin

The students of GGR/ERS 21 – Applied Conservation wanted to find out if they could convince their fellow students to recycle in Hillwood.

One reason recycling in Hillwood has been difficult to implement is that it is expensive. It takes a lot of time to deal with the volume of waste generated by student dining. Recyclables have to be clean (and therefore washed) in order to be used. That takes time and money.

It was unclear if students would use the recycling bins. The first few hours of the project were the most challenging. On March 8th students converted existing garbage bins into recycling containers. That created two problems. First, there were three fewer garbage receptacles and the remaining ones filled up more quickly. Once they were full, students used the recycling containers to throw out their garbage.

A major fear for administrators is that students will use recycling containers as garbage receptacles. With so much nonrecycling wastes in those containers, the project would need to be aborted.

Fortunately, Facilities Services was able to install three blue recycling bins in Hillwood the next day. The number of garbage containers was returned to its original level and was now supplemented with three recycling bins. Second, the blue colored bins made it much more obvious to students that these bins were intended only for recycling. For the remained of the project, the blue bins were filled almost exclusively with plastics.

The other management issues were ensuring that a) these temporary changes did not create extra work for Hillwood staff, and b) that our class kept the dining area clean when removing recycled materials from the dining area. Neither proved to be a problem during our two-week project.

The project is a clear demonstration that students at CW Post strongly welcome additional recycling in Hillwood Commons. This fact was confirmed by our student survey, which affirmed students’ broad support for this project.
Erin Pecora
Managing Our Project

As recycling expands on campus, it is important to examine how to improve recycling in the major campus buildings. Hillwood Commons is the center of student life at C.W. Post. In 2009, C.W. Post initiated a new recycling program in Hillwood that included bins at different locations in the building, but not in the dining areas. A work-study student currently manages the Hillwood recycling bins.

Our class wanted to see if recycling could succeed in the dining areas in Hillwood Commons. Our first step was to visit Hillwood and pick the most suitable sites for new recycling bins. We placed one bin in the Fishbowl and two in the East/West Café.

A Cooperative Effort

This project was a success because our class worked closely with Student Activities, the Campus Recycling Committee, Facilities, and Aramark. Each of these departments has specific responsibilities, and we had to ensure that our project would not create any conflicts for these Departments.

Our point person throughout the entire process was Alerie Tirsch, Director of Student Activities. Our class requested a two-week period (March 8 to 18th) in which we would conduct our project and collect recyclables from our bins once each day. Alerie liked our idea of converting the trash receptacles into recycling bins but explained that Aramark would need to give us permission before we could proceed.

Aramark was contacted and they gave their approval for our class to convert three trash receptacles into recycling bins. Each day we would take out the recycling materials to a main recycling bin on the side of the building.

The current Environmental Assistant (EA), Dina Ryske, met with our class and gave us specific instructions on how to collect, clean, and bag the recyclables we were picking up each day. Professor Carlin picked up gloves and plastic bags from Alerie’s office which were kept in our classroom and could be accessible to us when we needed them.

Communication!

We made informative placards to place on each of the dining tables. Our class also designed large posters that were placed on our recycling bins directing students and staff to place cans and bottles into the bins for our project.
Execution

One problem we encountered was the college doesn’t have spare recycling centers for metal, plastic, and paper because these are expensive. If necessary we were going to convert existing trash receptacles into recycling bins, but just as the project began, Facilities installed three blue bins in the dining areas for our class project.

Each day two students would collect the recyclables from our class-designated bins (Dina continued to empty her usual recycling bins in Hillwood. Our project had no impact on her work-study job.) The recyclables were then washed, bagged, counted, and brought out to a plastic shed in the back of Hillwood to be picked up by the appropriate parties. At the end of the project, our daily count helped us assess the amount of recycling that we achieved.
Jacqueline Rakib
Why Recycling is Important

Recycling Saves Energy
When products are manufactured from raw materials, a lot of time, energy and resources are used. However, when new products use recycled items to manufacture goods, time, energy and resources are greatly reduced. For example, production of recycled paper uses 80% less water and 65% less energy, and produces 95% less air pollution than virgin paper production. In addition, there are secondary savings. Using less energy today means fewer pollution problems tomorrow.

Recycling Saves Environmental Conditions and Reduces Pollution
By minimizing the energy spent on industrial production, recycling helps reduce greenhouse gas emissions. In order to gather raw materials many companies spend thousands of dollars on gasoline, coal, and diesel. By switching to recycled products, the harmful gases such as methane and sulfur dioxide are reduced in the environment. Long Island University can make a difference by choosing to create a sustainable and convenient recycling program for students, staff, and faculty.

Recycling Saves Natural Resources
By using recycled products, we prevent the usage and destruction of various natural resources. When products are made from recycled goods, only the core elements of the old product are used. For instance, if an old newspaper is recycled, there is no need to use the resource of another tree to produce new paper products. By recycling, our limited natural resources can be preserved and balanced to ensure that our planet thrives in the future. LIU can do its part by providing thousands of recycled products to recycling plants.

Recycling Saves Space for Waste Disposal
Most of the landfill sites are filled up with a lot of waste products that could have been recycled effectively. While some of these waste materials are non-biodegradable takes a long time to decompose, recycling enables proper usage of these waste products and saves space for landfills. As many people are becoming informed on how quickly landfills are getting filled up, society has increasing concerned. If we do not start following an effective recycling program and spread the word to others, the effects will be clear in the near future. Long Island University has a responsibility to its students, community, state and country to be a model for a sustainable future. By incorporating small changes around the campus, C.W. Post can make a positive impact on earth.

Sources:
http://www.buzzle.com/articles/why-is-recycling-important.html
http://earth911.com/reduce/energy-costs-and-conservation-facts/
Abrom Shepard
Literature Review

The recycling program at Long Island University’s C.W. Post Campus is a young program, still in the early stages of development. C.W. Post has worked with Facilities Services to add recycling bins to almost every building on campus, including dormitory halls, faculty offices, and class buildings.

The recycling program has yet to reach the dining halls on campus because dining halls can be an expensive part of the recycling operation. Recycling requires everyone’s cooperation. If bins are used improperly, the costs of the program rise considerably. Garbage placed in the wrong bin has to be hand separated and washing times increase.

A couple of schools in the New York City/Long Island area are already ahead of C.W. Post when it comes to on campus recycling in dining facilities and other buildings that attract a large population students. St. John’s University, Adelphi University, and New York University are just some of the schools in the area that have well publicized recycling programs.

St. John’s University began its recycling program in 2002, almost six years before C.W. Post. The Facilities Services Department of St. John’s University is responsible for handling all recycled materials for all their campuses across New York City. St. John’s is among the few colleges that not only recycle plastic, paper, metal, and glass but also cardboard, scrap metal, plastic containers, batteries, fluorescent lamps, computer monitors, printer cartages, and some furniture. In 2008, St John’s University “tripled the number of recycle stations for every campus building with new clearly marked recycle containers, distributed hundreds of recycle containers in the corridors of the Residential Village, academic and administrative buildings, and started up the first team of student workers as Sustainability Coordinators” (Goldsmith).

Adelphi University is another college that has recently started its own recycling program. According to Adelphi’s (2010) website: “Adelphi recycles not only cans, bottles, and paper, but also ensures that hazardous waste is not mixed with inert refuse.” The Facilities Management Department of Adelphi is in charge of all on-campus recycling. Adelphi University also “recycles all fluorescent light bulbs, batteries, and computer equipment. Cardboard and metals are also separated into separate containers.” Adelphi has also included many other departments on their campus to reduce their consumption and storage of many chemicals. Adelphi also recycles “all construction debris and the use of environmentally friendly materials whenever possible.” The campus mailroom has also taken great strides to recycle inkjet printer toner cartridges by returning used inkjet toner to its new printing services partner AM Exclusive, which recycles the cartridges and makes them useable again.
New York University has taken great strides over the years to improve its recycling services throughout their campuses in the New York City area. NYU has one of the best recycling programs in New York, and it still continues to improve. NYU recycles paper, plastic, cardboard, metal, glass, cell phones, technoscraps (jewel cases, video tapes, cassettes, diskettes, CD’s, DVD’s and wires), computers, textbooks, plastic bags, and various electronics and clothes. The recycling program at NYU wants to “reduce their ecological impact through materials reuse and recycling and increase awareness of the importance of waste reduction and how it is helping the university and the surrounding community” (Boll).

Long Island University- C.W. Post Campus’ recycling program is still very young. St. John’s University, Adelphi University, and New York University recycling programs are older and more advanced than C.W. Post, but overtime C.W. Post can improve its recycling methods to compete and rival the recycling programs of other schools in New York.

Bibliography


Billy Karavasilis  
What Can Be Accomplished at C.W. Post

Why should C.W. Post pursue a more extensive recycle program? Well, one may argue it is needed for many different reasons, yet they all relate to one major goal of today’s society – environmental protection. Currently there are many different countries, states, provinces, governments, institutions, cities, and towns that have made this common goal one of their top priorities.

C.W. Post should be no different from all the rest – why should others lead while we follow? Our university is a well-recognized education institution on Long Island and abroad. Our decisions do not only affect us but they also effect the surrounding region, which will help inspire and encourage other local towns, schools, and colleges strive for their own reduction in their carbon footprint.

While this mentality may seem too hyped or over exaggerated, it is completely attainable if the administrative officials at C.W. Post consider and implement these suggestions. Now, what kind of changes need to be seen on campus? Here’s one basic change that’s incredibly simple:

**Place permanent recycling bins in different areas across the campus.**  
The benefits of making this change should be taken seriously and should exhibit enough support for helping to make this decision easily. First, the revenue of bottle refunds can be saved for various campus funds and scholarships. The savings over time will help reduce the increasing financial deficit. Second, it would drastically decrease the environmental impact since the recyclables that were previously regarded as regular garbage, are now being sent back and reprocessed, saving enormous amounts of energy and money, while also reducing greenhouse emissions.

**Project Recycle-Revamp**  
The project that was undertaken by our GGR/ERS 21 class began on March 8th and had a duration of two weeks, more than enough time to gather sufficient data concerning recycling in the Hillwood cafeteria before the spring recess.

The initial findings were minimal since the students using the cafeteria were unaware that this program was taking place. To informatively and successfully communicate our project’s intentions to the student body, the class designed table placards and poster-sized labels to be placed on the three trash receptacles to be designated as temporary recycling bins.
As the days progressed, and with the help of facilities in regards to lending our class 3 blue recycling bins, the students began to use the recycling bins more responsibly and at an increased rate, thanks to the informative placards and posters and because the new blue bins stood out next to the regular trash bins. By the time our project time had expired, the data collected was surprising – students in the Hillwood cafeteria are more than willing to recycle when they are presented with more on-site recycling bins.

In further evidence to support this claim, a simple survey conducted by Dr. Scott Carlin’s Applied Conservation class reveals astonishing evidence that a majority of the student body is concerned about the environment and believe that something more should be done regarding the university’s recycling habits – this should make the decision clear enough to any individual in the campus’ administration. If the students care about something, there should be every action taken in order to make the change a possibility. This will also make the students happier and more trusting of our university’s officials – it shows that the administration is listening.

The students that use Hillwood’s cafeteria represent only a small portion of C.W. Post's entire student body. If they believe that permanent recycling bins should be placed in Hillwood, there should be no mistake that the students would also want is more extensive, permanent recycling program at our university.

This decision will help take C.W. Post one-step closer to becoming a true “green college.” The publicity of such an undertaking will also be beneficial, which can eventually lead to higher student enrollments which can in turn inspire the creation of a host of new ecological and environmental classes at C.W. Post. Furthermore, it will provide encouragement to other college campuses that a private institution such as our university was able accomplish and set up a permanent and successful recycling program - something positive for the environment.

**Fall 2010 Recommendation: Permanent Recycling in Dining Areas**

Based on our class’ final research results, C.W. Post administration officials should consider the creation of a permanent recycling program on campus. Initially beginning in the Hillwood Commons cafeteria, it should gradually extend campus-wide with the placement of recycling bins in classroom buildings and campus grounds. The benefits of such an extensive program will have a great and lasting impact in terms of campus finances and more importantly, the environment.

**3-Year Goal: The Creation of a New Office**

What is meant by “the creation of a new office”? Well to be put simply, it’s the establishment of a new Office of Sustainability at C.W. Post! After all, we are the C.W. Post Pioneers. A Pioneer is an individual who does something new for the first time. C.W. Post can lead Long Island forward.

Why should this new office be created? It would oversee all campus activities pertaining to the use and research of new green technologies and ideas that C.W.
Post should consider. This new recycling program is a perfect example of how the new Office of Sustainability would work – placing a major role on the office itself to ensure any program is working efficiently. While Facilities Services is used to dealing with the campus’ recycling, the Office would work closely with Facilities Services staff members in order to make any transition easier for the campus.

The implementation of this recycling program, the Office of Sustainability, and other “green” technologies can make C.W. Post a beacon of inspiration for all universities. It’s time for us to break the old, unsustainable habits of the last century. It’s time for C.W. Post to lead the future.
C.W. Post Pioneer Story: Hillwood Recycles!
By Michael Celano

Project Recycle-Revamp was a two-week effort to gauge student support for expanding recycling in Hillwood Commons. As you know, Hillwood Commons is the center of student life at C.W. Post. In 2009 the University started a new recycling program in Hillwood Commons. Several bins were placed around the building. The largest is right outside of Hillwood Cinema – but none were in the dining areas. Our Applied Conservation class wanted to see if recycling could succeed in Hillwood’s dining areas.

So why should we recycle? It saves energy, reduces pollution, and conserves our natural resources. When products are manufactured from raw materials, a lot of time, energy and resources are used. However, when new products use recycled materials, resources and energy are greatly reduced. Did you know it can take 700 years for plastics to decompose? Or, did you know that recycling one aluminum can saves enough energy to run a 100-watt bulb for 20 hours?

Many universities in our region recycle, Hofstra, Adelphi, St. Johns, and New York University to name a few. Parents and prospective students pay attention to these things when selecting colleges today. It is just part of the competition for students. And by creating a more effective program, our university can inspire and encourage other local towns, schools, and colleges to reduce their carbon footprint. Billy Karavasilis, a student in my class said it best: “C.W. Post should be no different from all the rest – why should others lead while we follow? We are the Pioneers and a Pioneer is somebody who establishes themselves.”

Our class made many efforts to educate our student body. In addition to maintaining three recycling bins in Hillwood for our two-week project, we placed information cards describing our recycling goals on every table in Hillwood Commons. We also made banners and signs that we displayed in Hillwood Commons.

This small project had its share of obstacles. Facilities Services, Student Activities, the Campus Recycling Committee, and Aramark all raised concerns. We needed to hand wash the plastics we recycled, a procedure that required a one-hour training program. The first day of the project was a failure. We used three regular garbage cans in Hillwood for recycling. Once the other garbage bins were full, students used our recycling containers to throw out their garbage. Fortunately, Facilities Services lent us three blue recycling bins the next day and that got the project rolling.

88% of students survey agreed that there should be more permanent receptacles in Hillwood Commons. Did our recycling test work? Well, we collected over 300 bottles in one week, and raised $10 for the campus charity “It takes a Village Foundation.” Almost all of this plastic was being disposed in the regular garbage cans each week. Next year, the campus could raise thousands more dollars for this charity with a properly expanded recycling program. For our class, the project was a success. The sense of community we got out of this project is an experience none of us will soon forget.
Recycling Surveys  
by Xavier Brown Jr.

During class time we went to Hillwood Commons and gave out surveys to a vast amount of students. The survey had six questions on the topic of recycling:

1. Do you believe Project Recycle-Revamp has had a significant impact on improving the campus recycling habits?
2. Were the Hillwood dining area recycling bins located in convenient and appropriate areas?
3. Did you change your recycling habits while the program was occurring?
4. Do you think C.W Post should utilize more recycling bins campus wide?
5. Were the recycling fact cards in the dining tables informative and interesting regarding the recycling facts?
6. Do you support placing permanent recycling bins in Hillwood's dining areas?

Almost 96% of the survey respondents wanted campus-wide recycling; 86% of the students believe that it is a good idea to have recycling bins dispersed throughout campus. Many students told us that recycling bins “would help improve the environment” (Question 1).

Many students preferred having bins “a short walking distance from where I eat.” Without bins close by, most students are not going to recycle. But if the bins were in close proximity, many more students would definitely use them. Our class spent time in Hillwood to find the best locations for our recycling bins to maximize their use; our surveys show 58% of respondents felt the bin placements were “okay” or “very accessible” (Question 2).

If students had recycling bins in convenient locations, students will change their recycling habits. 73% of students said that convenient locations shape their recycling practices (Question 3). This surprised us – a large majority of students surveyed answered: yes they will change their recycling habits if there are more bins. 15% said they were die-hard recyclers; they are willing to carry their plastics until they are able to recycle them. 12% do not recycle; for them “all garbage is garbage.” These students may be suspicious that recycling programs will even work. But only a small percentage of students said that more bins would not influence their behavior. (Maybe this population of students needs to learn more about how recycling materials are managed and ultimately reused.)

85% of students say we need to have more recycle bins, not just in Hillwood but in the classrooms and dorms (Question 4).

Were our placards and posters visible and easy to read (Question 5)? In the surveys most people (58%) replied that they saw the placards but didn’t really read them. Others felt that the posters were not visible or interesting. Lots of surveys came back with comments about making our place cards more colorful with less text. Posters need to catch student’s eyes as they walk through Hillwood.

11
We received excellent feedback from the surveys about how we should improve and bring recycling here. 92% of the students we surveyed advocate recycling (Question 6). Recycling improves our campus quality of life and helps the environment.

The most important thing we learned is that C.W. Post students will recycle more if more bins are available in Hillwood, the classrooms, and dorms. Students want these bins and the recycling signs to be more interesting and appealing. All of these things help students to feel that they are making a difference by recycling.
Question 1: Do you believe project Recycle-Revamp has had a significant impact on improving the campus recycling habits?

Answers (52 surveys):

1. Yes, I've seen the new blue bins and have been using them (26)
2. I had no idea a recycling project was even going (16)
3. I heard about it through a friend, but haven't recycled (4)
4. I heard about it through a friend and started to use the recycling bins (6)
Question 2- Were the recycling bins located in convenient and appropriate areas in the Hillwood dining area?

Answers (52 Surveys):

1. I had no clue that there was recycling in Hillwood (12)
2. I’ve heard there is recycling but I haven’t seen any bins (6)
3. I think they are placed in the right areas its very accessible (16)
4. I think the locations of the bins are okay but (14)
5. Sometimes I am not willing to walk to them (4)

Are the locations good enough?

Other Answers:
- Students should be more involved
- They are in good location but people still don’t recycle
- Needs to add more
- Sometimes I am not willing to walk to them.
Question 3- Did you change your recycling habits while the program was occurring?

Answers (52 Surveys):
1. No. I always recycled even if I have to carry my plastic to a bin outside of Hillwood. (8)
2. Yes. If a recycling bin is there, why not use it (38)
3. No. I don’t recycle or I barely do; its all garbage to me (6)
**Question 4- Do you think C.W Post should utilize more recycling bins campus wide?**

Answers (54 Surveys):
1. Yes (46)
2. No (8)

**Should there be more bins?**

![Chart showing the number of answers for Yes and No]

**Other feedback to Q 4:**
- Quality of life
- They're only in Hillwood, they need to be placed by all vending machines
- We need it because I said so
- They will help the environment
- It would help our budget
- We need to have recycling bins in classrooms
Question 5: Were the recycling placards on the dining tables, informative and interesting?

Answers (52 Surveys):
1. Oh those things? I’ve never paid any attention to them (30)
2. Informative but not interesting (10)
3. Informative and interesting (12)

Were the table placards informative?

![Bar chart showing answers to Question 5]

Additional Feedback:
- I never notice the placards
- I wasn’t drawn to them
- I was eating (not reading)
- Text is too long
- I was too busy (to read them)
Question 6- Do you support the permanent placement of recycling bins in Hillwood?

Answers (52 Surveys):
1. Yes. Everyone should recycle (48)
2. Honestly I don’t care about recycling (4)
3. No I don’t think enough students will recycle at C.W Post (0)

Additional Feed back for question #6
- Bins should be monitored especially during peak times
- Encourage more students to recycle
- There should be some one to walk around with a bag during peak hours helping people
- Needs people to point out the location of the bins
During the first week we constructed a survey to see how well our progress was with project revamp. Most of the students were unaware of our project and also about the current Recycling bin. Most students felt that C.W Post overall performance involving recycling was beyond poor.

Most of the students made comments that suggested that more visible recycling cans would be placed so it could influence recycling. They even made comments that said “if there is a recycling bin person why not use it?” Even with the distribution of the placard a lot of student paid no attention to their existence. With most of these comments we constructed another survey with the probing technique to get a better insight on how the students really felt.
Project Recycle Revamp Needs Your Help

From March 15-25th, Project Recycle Revamp will expand recycling in Hillwood Commons. This Earth and Environmental Science class project has two goals: 1) to collect data and measure levels of student participation; and 2) raise money for the charity - "It Takes a Village."

Please place your plastic bottles and cans in the recycling bins during these two weeks. Show the C.W. Post campus that you support recycling and want to see more permanent recycling bins in Hillwood.

Fun Facts about Recycling:

- An aluminum can that is thrown away will still be a can 500 years from now!
- It can take up to 700 years for plastic to decompose in a landfill.
- 36 billion aluminum cans dumped in landfills last year had a scrap value exceeding $600 million.
- 80% of plastic bottles are not recycled.
- The 36 billion aluminum cans dumped into landfills last year had a scrap value of more than $600 million.
- It can take up to 700 years for plastic to decompose in a landfill.
- Recycling one aluminum beverage can saves enough energy to run a 100-watt bulb for 20 hours, a computer for 3 hours, or a TV for 2 hours.
- Recycling 125 aluminum cans saves enough energy to power one home for 1 day.
GGR 21 Recycle-Revamp Plan
February 25, 2010
Prof. Scott Carlin
Earth & Environmental Science

Rationale: C.W. Post continues to expand its recycling program, but students regularly complain that there is not enough recycling done in campus buildings. Hillwood Commons is one of C.W. Post’s most important campus centers and a major destination for students during the day. Today, Hillwood has several recycling receptacles but not in close proximity to where students eat. Expanding recycling in the Hillwood Commons’ eating areas should be considered an important “next step.”

On February 17th, several students in Hillwood were randomly asked if they knew where the Hillwood recycling center was located. Only Hillwood employees knew where the recycling center was located. There are currently signs in the dining areas that promote recycling. These can only be effective if there are recycling bins in close proximity to these signs.

Goal: For the weeks of March 15 and March 22, students will add three recycling bins, in the Fishbowl and the East/West Café for plastics. The receptacles will be decorated with recycling logos. Each of the dining tables will have a placard explaining the recycling program, so students are given adequate information about this temporary program. Students will collect the recyclables and give them to the “It Takes a Village” program for their fundraising programs.

Layout: The attached diagram explains the location of the existing garbage receptacles and the proposed changes to accommodate recycling.

Schedule: On Mondays, Tuesdays, Wednesdays, and Thursdays for the two weeks, students will remove the recycled materials from the bins and move them into a storage area. If necessary, all of the recycled materials will be washed in Hillwood before being moved for temporary storage outside of the building.

Remove recycling materials:
Monday – Abrom & Mike – 10 am
Tuesday - Xavier & John - 3:30 pm
Wednesday - Billy and Jackie - 11 am
Thursday - Erin 3:30 pm

Logistics:
1. Get permission from Aramark and Campus Facilities.
2. Work with Hillwood Commons Recycling EA, Dina Ryske.
3. Write articles explaining the trial recycling program for the Pioneer and write up articles that explain the results of the trial.
4. Develop bi-fold placards that explain the recycling program. These will be placed on dining room tables each day (see separate attachment).
5. Decorate existing Garbage cans with signs/logos (see separate attachment).
6. Once the program ends, bi-fold cards will be placed on tables explaining the results of the project.
Composting our Wastes
by Jackie Rakib

Composting is the practice of using the decomposition of plant remains and other once-living materials to make a soil addition for plants and gardens. Composting is the way to recycle yard and kitchen wastes as well as reduce the volume of garbage which is sent to landfills. It not only helps the environment but saves money and helps landscape grow naturally. In addition, composting can help regenerate poor soils, suppress plant diseases and pests, reduce the use of chemical fertilizers and reduce the price of waste control.

C.W. Post has both the land and many of the resources to implement a composting station on campus. Composting can be done with very limited space, so there is no reason for Long Island University to delay the process. As C.W. Post is known for its beautiful landscape there are also landscaping resources like fallen leaves, grass clippings, and wood shavings to help aid in the composting process.

Aside from the start up costs, composting saves money. Transporting wastes from the campus to final disposal sites is expensive. Since beginning its composting program in 1993, Middlebury College in Vermont has saved an estimated $102,000. C.W. Post’s beautiful and expansive campus is attractively landscaped and maintained year round; a composting program on campus would save money by reducing the need for purchasing large quantities of soil and artificial soil amendments. Compost material can be used for aesthetic/landscaping purposes, as container mix and potting soils, topsoil blends, nursery beds, backfill for trees and shrubs, and as fertilizer for the campus garden project. In addition to its use on campus, compost is a marketable commodity that can be used by the local community; C.W. Post could advertise its composting program locally, encouraging gardeners and small business owners to purchase and use its excess compost material instead of artificial fertilizers and pesticides. C.W. Post can serve as a model of sustainable behavior and even inspire the local community to practice more environmentally-friendly practices.

This proposal will discuss the cost of implementing a composting program, how composting can be managed on campus, potential problems that might arise, and possible solutions for running an effective waste management program.

**Purchasing a Composting Machine**

Deciding what kind of composting machine that will effectively reduce C.W Post’s Campus waste is a major responsibility. First, the University needs to conduct a food waste audit. In order to do so, one would collect food waste everyday for a period of a week. The volume of food waste collected in gallons would determine the appropriate composting machine. Upon researching many composting machines, I concluded that the best machine for improving organic waste management at the C.W. Post Campus is the A500 Rocket. The A500 Rocket is manufactured by U.K. based Accelerated Compost and is distributed by NATH Sustainable Solutions. The North American Trading House, (NATH) is a Minority-Owned Business Enterprise that is certified by the State of New York and the City of New York. Without conducting the food audit, the information that was gathered was based on the smallest Rocket composter,
the A500 Rocket. The A500 Rocket has the capacity to treat 80 gallons of food waste per week. The technology requires a bulking agent, in this case wood chips which accounts for 50% of the total capacity of the Rocket. Thus, it would hold 50% food waste and 50% wood chips.

How does it work?

The Rocket is a sealed compost machine that does not attract rodents or vermin. The machine is made from the highest grade of stainless steel and makes very little noise. The food is put in the rocket composter from the top of the machine call the inlet hopper. The latch closes and the machine automatically starts the compost procedure. According to NATH, “As the material works its way through the vessel it passes through various stages of the composting process where temperatures of 140°F plus are reached, making sure that all pathogens that may be present due to the inclusion of meat and fish are destroyed. The majority of heat generated is achieved due to the activity of the microbes in the Rocket, however there is also an external, thermostatically controlled heat blanket that ensures the appropriate temperatures are maintained throughout the composting process. The whole process is continuous.”

Thus, every time food waste is fed into the Rocket, it pushes waste further into the machine. Compost is disposed through the outlet on the bottom of the Rocket. In order to help the production of bacteria, there is an option to buy Rocket fuel. Rocket Fuel is “is a liquid that is automatically added to the composting mass via a dosing system that is fitted to the Rocket Composter. Rocket fuel is a mixture of proteins and enzymes that encourage the production of facultative bacteria within the composting mass.”

What is the running cost?

The running cost varies depending on the temperature and the type of waste material being processed. If the Rocket is be kept outdoors, it will need an awning to that it can be covered. In addition it also requires a 60 Hz plug socket. The compost machine only runs or uses electricity about one minute every hour. The Rocket has a low power motor that reduces power consumption and running costs.

What are the benefits?

According to NATH, The Rocket composter:

- Reduces food waste disposal costs.
- Reduces transportation costs and carbon dioxide emissions (CO2).
- Eradicates vermin problems and pest control costs.
- Eliminates trash-related odors.
- Eliminates the need for garbage bags and other non biodegradable products use to dispose food waste.
- Avoids greenhouse gas emissions coming from rotten food in landfills (Methane).
- Decreases the number of waste collection vehicles on campus (and their emissions).
- Offers a unique solution to treat organic waste where it is being produced.
- Allows compost to go back into the soil, creating a closed loop process.
What does it look like?

How much does it cost?

<table>
<thead>
<tr>
<th><strong>Purchasing Option</strong></th>
<th><strong>Leasing Option</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocket Composter</td>
<td>Rocket A500</td>
</tr>
<tr>
<td>$18,500</td>
<td>Monthly Payments</td>
</tr>
<tr>
<td>Shipping</td>
<td>5 Year Lease</td>
</tr>
<tr>
<td>$800</td>
<td>$488</td>
</tr>
<tr>
<td>Installation Costs</td>
<td>4 Year Lease</td>
</tr>
<tr>
<td>$500</td>
<td>$407</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
<tr>
<td><strong>$19,800</strong></td>
<td></td>
</tr>
</tbody>
</table>

Long Island University can lower food waste disposal costs, reduce its CO₂ footprint, and decrease pollution. L.I.U can close the loop of recycling by using compost to make a garden or use landscaping. In addition, the Rocket composter could be incorporated into Long Island University’s curriculum. The investment in the Rocket composter will save the L.I.U money while educating the students and the community. Long Island University, an institution committed to education, will be affording its students, faculty, and staff the opportunity to learn about composting.
Interview with Father Ted Brown
by Abrom Shepard

On March 3, 2010, I spoke to Father Ted at the Interfaith Chapel about the new compost machine they had just purchased from Nature Mill. Father Ted was more than happy to discuss with me the reasons on why he had purchased a compost machine for the chapel. The compost machine cost $250 and was the cheapest version that Nature Mill had to offer. The machine is also simple to work. Organic waste is kept from events held in the chapel and is properly stored so the smell doesn’t attract rodents and other pests. The waste is then placed into the machine from the top and then pellets are added to hide the smell. The machine is then heated up to a certain degree of temperature and within a week soil is produced. Father Ted then told me that the soil produced would be sold for $1 a bag as “Holy Ground.” If Father Ted is successful with his compost project, this might encourage the campus to invest in a larger compost machine for the dining areas in Hillwood Commons and the Winnick Student Center.
Management of Project
by Abrom Shepard

C.W. Post has initiated a new and innovative composting program! This year, the Interfaith Chapel purchased the $250 compost machine from Nature Mill® and they are producing compost soil from the organic waste produced at chapel events. The Interfaith Chapel’s goal is to sell the soil for $1 to fundraise. But they have larger ambitions too. They hope that this test program will inspire Aramark to purchase a large compost machine of its own – one that can handle a large capacity of waste. The Interfaith Chapel machine is small and not capable of handling a large capacity of waste.

If Aramark and C.W. Post purchase a compost machine for the dining facilities on campus, this will prove to be a valuable and smart move for our sustainability efforts. The compost machine will change the way the employees of Aramark dispose of organic waste made from food preparation in the kitchens of Hillwood and the Winnick Student Hall. C.W. Post can learn from the examples at other colleges and universities.

On April 22, 2009, St. John’s University’s Queens Campus became the first university in the United States to launch an A500 Rocket® model food composter. Their Earth and Environmental Science Club runs this project as a way “to demonstrate how all students can make a difference and impact their environment” said Ashley Brown, president of the Earth and Environmental Science Club (St. John’s, 2009).

Another program is run by the University of Virginia. One of their recent headlines was “University of Virginia Dining takes the lead in ARAMARK Higher Education's campus sustainability efforts.” A Green Dining task force at the University of Virginia implemented several changes including: “tray-less dining; composting; reduction of food waste by 25%; re-usable to-go containers; compostable commissary packaging; local food buying that increases by almost 5% per year; and a plan to increase sustainable purchasing even more over the next two years” (Education, 2010).

If C.W. Post moves forward with composting, the project could be maintained and managed by students in the Earth and Environmental Science department or work-study students. The compost machine would be kept in a safe and secure location so that the smell of waste doesn’t attract rodents to the campus and the community.
Compost: Solving Potential Problems
by Xavier Brown Jr.

Should C.W. Post composting our organic wastes? If not maintained properly, composting could cause the following six problems. In the following paragraphs, I discuss these problems and their solutions.

First, the materials need maintain a certain amount of moisture. If the materials are too dry, the enzymes that are needed to start the process of composting will not activate. If there is too much moisture, that will also stop the composting.

Second, when the composter is at its ideal moisture, materials may not compost if they are too large. To avoid this problem, the materials being placed into the composter need to be a cut or blended into the smallest pieces possible. Large pieces that are in the composter will slow down or stop the rate of materials being composted. For example, sometimes a lawn mower does not cut the grass trimmings to a small enough size to start the composting cycle. So to avoid this problem, it is sometimes needed to put the grass on the floor and try to cut it some more or go over it with the lawn mower again, to ensure that the grass trimmings are at ideal sizes.

One solution is to add brown materials like hay and dry leaves. The brown material will absorb a lot of the moisture to keep ideal moisture levels. Also, while adding the brown materials, the composter needs to be rotated to let in oxygen that activates the bacteria that breaks down the materials into compost.

A third problem is smell. Compost does give off a natural odor. But if the materials are too wet and they’re not getting enough oxygen that will make it worse. Again, the solution is to mix the compost with brown dry materials (hay or dry leaves). Also, rotating the composter a minimum of once or twice a week will help stop the bad smell. There are an abundance of anaerobic microbes that are eating the composting scrapes but to stop them from smelling you need to rotate the pile.

Fourth, if the pH levels are high, the compost could smell like ammonia. The solution is to add more carbon materials like sawdust or peanut shells to the pile and rotate. In a couple of days the smell should go away. If the compost smells like rotten eggs or vinegar this means that the oxygen levels are low. The compost needs to be rotated and you need to add more straw and hay. This will eliminate the smell in a day or two; the ammonia smell takes a couple a days more.

Fifth, if the smells aren’t eliminated fast enough, the compost can attract pests like rodents, flies, and raccoons. Typically these pests are attracted to fish, meat, and bones. To avoid pests getting to the composter, it is a good idea to keep the composter gated with a wire fence and to have a lid on the composter that can be locked in place.

The final problem can be worms. Since worms can contribute to the decomposing cycle, this isn’t really a problem to worry about.
If C.W. Post would like to also compost meats then there is a solution to that. The Bokashi composter specializes in composting fish, meats, and dairy. The Bokashi is an airtight bin that uses anerobic bacteria that can only live in areas with no oxygen (with no oxygen means no smell) and the bacteria breaks down the food scraps. The food that turns into compost is great fertilizers especially If the compost is place in areas where grass of plants are not grown easily, this compost performs as a super fertilizer, especially the liquid discharge. If the liquid is placed on plants or grass there will be a great increase in growth and health. The Bokashi is ideal for small family homes, and it is not expensive. The composter is a small unit and sells for about $80, but with the amount of fertilizer it produces it pays itself of tenfold in a matter of months. There are others new technologies that enable people to compost. Technologies like the worm composter, the compost tumbler, and even homemade bins.

Is composting worth the time and management? Yes it is. Composting being performed at C.W Post will definitely help out the university especially financially – as the units pay for themselves after a few years. All technologies have their problems. But with proper management, C.W. Post can develop an effective program that avoids the typical problems people associate with composting.
NATH: How to conduct a food waste audit

1. First, it is important to know which food waste we need to separate to feed the Rocket® for the composting process. These wastes are the following:
   • Vegetable and fruit: these can be cooked or uncooked and including peelings, full vegetables and fruits, off-cuts, also any vegetable or fruit waste off the plate.
   • Pastas and rice: these can be cooked or uncooked.
   • Meat and fish wastes: cooked or uncooked – including fish heads, small chicken bones, off cuts and waste off the plate.
   • Some dairy products: cheeses and eggshells.
   • Bread and cakes.
   • Food waste directly from the plate.
   • Mixed combinations of the above, e.g. lasagna, pies, sandwiches, fruit salads.

2. These are wastes that can not to go into the Rocket®:
   • High volumes of liquids: custards, gravies, yoghurts, large quantities of baked beans, etc.
   • Large bones: red meat bones, shoulder bones, rib bones, etc.
   • Plastics
   • Glass
   • Cutlery
   • Any other non-organic material.

3. Ideally, collect the waste everyday for a period of a week. Include weekends or your busiest period and make sure you collect it throughout the day, during and after every sitting.

4. It is important to collect the food waste in containers that you know the volume. It is also important to record the volume of waste that you collect. The capacity of the Rocket® is calculated in gallons or liters. If you do not know the volume, please provide us with the dimensions of the container and we can calculate the volume. Make sure that a record sheet is kept available (Use schedule “A”) , so that the kitchen staff can easily record every time they fill a container. You can dispose of the food waste once you have filled the container; but make sure it is recorded properly.

5. At the end of the day, record all the food waste generated, repeating the same process at the end of every other day (Use schedule “A”). Ideally, record as well, the number of meals prepared that day. This will help calculate the number of meals versus the waste generated and help in calculations for expected busier seasonal periods.

Print copies of the “Food Waste For Composting” sheet and distribute them among the kitchen staff or hang them in visible areas where the food waste is been process.

“FOOD NEEDS TO BE MEASURE DIRECTLY IN GALLONS NOT IN POUNDS”

“OBTAINING FIGURES IN POUNDS AND THEN CONVERTING THEM INTO GALLONS COULD RESULT IN SELECTING THE WRONG EQUIPMENT”
<table>
<thead>
<tr>
<th>Date</th>
<th>Food Waste Daily Total (Gallons)</th>
<th>Food Waste Cumulative Total (Gallons)</th>
<th>Meals per day Prepared</th>
<th>Meals (Gal/Meal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.-</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.-</td>
<td></td>
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<td>5.-</td>
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<tr>
<td>6.-</td>
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<tr>
<td>7.-</td>
<td></td>
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</table>

**Week 2**

<table>
<thead>
<tr>
<th>Date</th>
<th>Food Waste Daily Total (Gallons)</th>
<th>Food Waste Cumulative Total (Gallons)</th>
<th>Meals per day Prepared</th>
<th>Meals (Gal/Meal)</th>
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<tbody>
<tr>
<td>1.-</td>
<td></td>
<td></td>
<td></td>
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<td>2.-</td>
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<td>6.-</td>
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</tr>
<tr>
<td>7.-</td>
<td></td>
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</tr>
</tbody>
</table>

Source: Email Correspondence (2010).
Plan for Composting
by Jackie Rakib

Step One: Research composting programs at other colleges. How were these programs implemented? Who runs the programs? What compost machines do these campuses use? Which would work best for C.W. Post?

Step Two: Arrange to visit a composting system. We should learn more about how composting works. We need to evaluate the costs and benefits for creating an on campus compost program. To do that, we’ll need to gather information on how much food waste C.W. Post creates each week. And how much labor it takes to run a composting program.

Step Three: Narrow down the list of compost machines to two viable options. We can pick an industrial size compost machine or set up smaller composting machines or cans all around campus. I think that the Rocket, which composes food in fourteen days, would be the best machine for the C.W Post Campus.

Step Four: Devise a plan for long-term management and maintenance. With the money saved from garbage removal, maybe LIU can hire one manager to oversee the composting machine. In addition, students can volunteer or work there using work-study money. Since the Honors program requires students to volunteer on campus, perhaps composting can be an Honors requirement.

Step Five: Write a report on the effectiveness of a composting. We can write an article for the Pioneer to gain support from students and to educate them on how C.W. Post will benefit. The proposal should include:

- Research on composting.
- The (lease and purchase) cost of various composting machines.
- Data on how much money is spent on fertilizer, where compost is a viable alternative.
- A plan detailing who will be needed to maintain the machine.
- Grants that LIU can apply for to get money to fund this project.
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p. 1
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pp. 2 – 3

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pp. 6 - 7

Mission Statement: LED’s can Light Our Future

Annual investments in LED lighting will reduce the college’s lighting and maintenance costs, energy consumption, and carbon footprint. These investments will allow C.W. Post to become a regional leader in new energy efficient lighting technologies.

Introduction by Michael Celano

Our campus operates essentially like a mini city; we have our power generators, water supply, telephone system, and thousands of lights. Like all cities, our campus tries to manage these day-to-day tasks as efficiently as possible. So why bother mentioning something as minuscule as a light bulb? Well, LED light bulbs could save C.W. Post thousands of dollars a year in the future. LEDs have been used for decades in our building exit signs, but it is a new lighting technology for buildings. LED has a bright future, only some pun intended, because there are many benefits to using the LED lights throughout the C.W. Post campus.

LEDs, or Light Emitting Diodes, are semiconductors, just like a computer chip. When electricity is passed through them, they emit energy in the form of light. They are "doped" or injected with certain chemicals that determine their light color. LEDs convert the majority of energy passed through them to light, as opposed to incandescent bulbs that produce light as a by-product of being heated. LEDs can be up to 90% more efficient than traditional household filament bulbs.

LED’s already form the numbers on digital clocks, transmit information from remote controls, light up watches and tell you when your appliances are turned on. Collected together, they can form images on a jumbo television screen, illuminate a traffic light, or light up a classroom. Our goal is to show the administration that using LED lights for our classrooms and street lights can really do wonders for our campus and save us money.

Being green has become a practical business model that can help the planet as well as our wallets. People and businesses are becoming aware of global warming and looking for ways to cut their energy consumption. What easier way is there than simply changing a light bulb? Compact fluorescent light bulbs (also known as CFLs) and LED light bulbs are currently the best alternatives if you want to decrease your energy expenditure in regards to lighting. Right now, LED light bulbs can be more difficult to find and the initial cost can be many times more than a normal incandescent or even CFL. In the long run LEDs last the longest and save the most money (and energy).

LEDs use 80% less energy and last years longer than traditional light bulbs. Up until recently, LEDs were too expensive to use for most lighting applications. The price of semiconductor devices has plummeted over the past decade, however, making LEDs a more cost-effective lighting option for a wide range of situations. In the future, they will play an even bigger role in the world of technology.
LED Benefits by Erin Pecora

I think our campus could benefit from installing energy efficient LED lighting in all the buildings and dorms. Although it would be costly to replace all the light fixtures, they last up to ten times longer than fluorescents and incandescent lighting. Since LED’s do not emit the same amount of heat than regular bulbs, emitting 3.4 BTU’s per hour opposed to 85 BTU’s per hour, this could allow the campus to cut air conditioning costs significantly. These bulbs use 1/3rd to 1/30th of the electricity it takes to light a room with regular bulbs resulting in an 80% cut in the school’s electric bills. LED’s can last years longer than other bulbs which can reduce bulb replacement and maintenance in half. For many businesses today, the savings from reduced maintenance costs makes LEDs a preferable lighting choice.

Here are just some of the benefits of converting to these bulbs (Eartheasy, 2010):

- Long Life: 50,000 + hour lifespan exceeds even the highest quality fluorescents tubes
- Extreme Efficiency: Over 80% more efficient than traditional fluorescents tubes
- Flicker-Free Lighting: Eliminate eye strain and headaches associated with fluorescents lighting
- No buzzing/hum: the ballasts, which are used to stabilize the flow of electricity, on some fluorescent lights cause an irritating hum, but since the ballast is not needed with LED bulbs, you'll never hear that again.
- More Energy Savings: Direct-LED FL tubes require no ballast saving even more energy
- Shatter-Proof Design: Will not break even if dropped.
- No ballast required, saving you even more money on new installs.
- No Mercury Inside: Allows the use of tube lighting when mercury contamination is not an option
- Flexible Voltage: Use tube lighting in AC 110~277V
- No Interference: Perfect for settings where precise instruments can be disturbed by fluorescent tubes
- Instant Starting: Starts right away no matter the temperature or conditions
The following chart shows how our school can potentially save thousands of dollars:

### Cost Comparison between LEDs, CFLs and Incandescent light bulbs

<table>
<thead>
<tr>
<th>Light bulb projected lifespan</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>50,000</td>
<td>10,000</td>
<td>1,200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Watts per bulb (equiv. 60 watts)</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
<td>14</td>
<td>60</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost per bulb</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dollars</td>
<td>$35.95</td>
<td>$3.95</td>
<td>$1.25</td>
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<table>
<thead>
<tr>
<th>KWh of electricity used over 50,000 hours</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>KWh</td>
<td>300</td>
<td>700</td>
<td>3000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost of electricity (@ 0.20 per KWh)</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dollars</td>
<td>$60</td>
<td>$140</td>
<td>$600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bulbs needed for 50k hours of use</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulbs</td>
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<td>5</td>
<td>42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equivalent 50k hours bulb expense</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dollars</td>
<td>$35.95</td>
<td>$19.75</td>
<td>$52.50</td>
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</table>

<table>
<thead>
<tr>
<th>Total cost for 50k hours</th>
<th>LED</th>
<th>CFL</th>
<th>Incandescent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dollars</td>
<td>$95.95</td>
<td>$159.75</td>
<td>$652.50</td>
</tr>
</tbody>
</table>

Source: Eartheasy, 2010

Our University can take part in an initiative called the **LED University Initiative**. This is a community of universities and innovators committed to converting college campus’s to LED lighting technology by informing them on the savings and help it would result in including but not limited to:

- saving energy
- reduce maintenance costs
- save tax and donor money

The latest college to join was the Milwaukee Technical College (MTC). As of January 2010 the College officially announced they would be joining the LED University Initiative by installing more than 500 LED fixtures in a 900 vehicle parking garage. They have saved 55% on electricity usage and are expecting to recoup $25,000 annually and the fixtures are expected to last 12 years. By starting with the outdoor lighting we can validate how much money we can save while saving the environment as well. MTC vows they are committed to protecting environment, reducing maintenance costs and providing better lighting quality for improved visibility and safety.

I think our first step should be converting the outdoor night lighting first. Being that our campus is so large, includes dorms, and has night classes, there is a considerable amount of electricity being used on pathways, parking lots, etc. That may be the smartest way to “test the waters” of LED’s -- the benefits and cost reduction they will ultimately provide.

The LED University initiative is a community that C.W. Post can get involved in. We could add to the growing community of universities working to evaluate, promote, and launch LED lighting across their campuses to help save energy and the environment, lower maintenance costs, and provide better lighting quality. If C.W. Post gets on board with this program and publicizes it, our campus can provide an example of a Long Island University taking proactive step towards making our environment a better place.
The following chart illustrates how LED lighting is safer for our campus and how significant a cut in replacement would be:

<table>
<thead>
<tr>
<th></th>
<th>LEDs</th>
<th>CFLs</th>
<th>Incandescents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent On/Off Cycling</td>
<td>no effect</td>
<td>shortens lifespan</td>
<td>some effect</td>
</tr>
<tr>
<td>Turns on instantly</td>
<td>yes</td>
<td>slight delay</td>
<td>yes</td>
</tr>
<tr>
<td>Durability</td>
<td>durable</td>
<td>fragile</td>
<td>fragile</td>
</tr>
<tr>
<td>Heat Emitted</td>
<td>low (3 btu’s/hr)</td>
<td>medium (30 btu's/hr)</td>
<td>high (85 btu's/hr)</td>
</tr>
<tr>
<td>Sensitivity to temperature</td>
<td>no</td>
<td>yes</td>
<td>some</td>
</tr>
<tr>
<td>Sensitivity to humidity</td>
<td>no</td>
<td>yes</td>
<td>some</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>none</td>
<td>5 mg mercury/bulb</td>
<td>none</td>
</tr>
<tr>
<td>Replacement frequency</td>
<td>1</td>
<td>5</td>
<td>40+</td>
</tr>
<tr>
<td>(over 50k hours)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Eartheasy, 2010

Bibliography

EarthEasy is a great company which specializes in LED lighting. I spoke with one of the CEO’s, Ben Seaman, and he was very helpful in aiding me in my endeavors on researching energy efficiency by way of an LED conversion. They may be contacted by Email at info@eartheasy.com or their toll free number 1-888-451-6752 and they will be more than happy to help our campus.
LED's on College Campuses by Billy Karavasilis

Many cities, towns, and colleges have already begun their LED installations in various types of infrastructure. The proceeding items are a list of colleges and a brief summary of what that have achieved.

**Humber College – Over 4 years**

"It's a no-brainer, if you do the math on the payback, it's amazing."

- David Griffin, Operations and Maintenance Manager at Humber

- 1,050 LED lights installed in halls, boardrooms and reception areas
- Project cost: $77,700
- Project savings: $527,205
- Energy savings: 88%
- Bulbs diverted from landfills: 26,544

**North Carolina State University**

- Biggest LED test subject for LED technology in the nation.
- Installation of recessed lights in the Chancellor's office, a dormitory and student apartments.
- Installation of LED lights in campus parking garages.
- Campus officials estimate energy savings of 66%.

**University of Alaska at Anchorage**

- LED lights installed as specialty lighting, aisle lighting in lecture halls and theater stairway lighting.
- Recently completed a parking lot test subject with LED fixtures.
- The university officials estimate energy savings at 60% in the parking structure.

If C.W. Post embraces these new ideas, energy savings could then be allocated to other campus funds, including student scholarships, additional campus LED installations, and other green technologies on a larger scale. The program would bring positive attention to the campus and establish a precedent for other colleges around the region to pursue similar ideas. If C.W. Post puts these ideas into practice, perhaps the campus can get sponsorship from energy companies that will see the campus as a model for other institutions across the United States.

**Sources**


2. [http://www.nwf.org/campusecology/climateedu/articleView.cfm?idArticleID=81](http://www.nwf.org/campusecology/climateedu/articleView.cfm?idArticleID=81)
Student LED Survey By Michael Celano

1. Are you aware of the benefits of using LED light bulbs as opposed to regular wattage bulbs? If not would you be open to learning about the benefits?

   a. Yes and Yes………………………………………………..15
   b. No and No………………………………………………..14
   c. Yes and No………………………………………………..9
   d. No and Yes………………………………………………...22

2. Is saving money over a long period of time with an initial investment of a larger sum of money something you feel is beneficial?

   a. Yes…………………………………………………………15
   b. No………………………………………………………..17
   c. Depends on initial investment……………………………..28

3. How often do you think of your use of energy in your every day routine?

   a. Very often………………………………………………....27
   b. Somewhat often…………………………………………...19
   c. Never……………………………………………………....14

4. Did you know that LED Lights can save our university thousands of dollars?

   a. Yes…………………………………………………………39
   b. No……………………………………………………….…21

5. Using LED light bulbs is a very efficient way to reduce energy use and cost over a long period of time. Are these two factors important enough to you to bring this matter to the attention of those officials who are responsible for making such decisions?

   a. Yes………………………………………………………..27
   b. No……………………………………………………...…16
   c. Maybe…………………………………………………….17