

THE ENVIRONMENTAL EAGLE

The Sustainability Newsletter of Boston College

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FEATURED

EcoPledge Tours Connell Recreation Center Construction

Students Celebrate the Fall During the Week of Harvest Fest

Real Food Expands Garden Programs, Adds New Steward

Former EPA Secretary Gina McCarthy Talks To Student Body

Shared Studios Portal Connects EcoPledge to Rwanda

OUR TEAM

This newsletter is a monthly publication by EcoPledge of Boston College.

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New Plex Construction Shows Promising Sustainable Design

By Alex Capozziello

On Friday, October 26, six members of EcoPledge were given an exclusive tour of the new 244,000 square-foot Connell Recreation Center, which is set to completed and available for student use in the 2019-2020 academic year. Glenn Hand, the Clerk of the Works for BC's Capital Projects Management Department, revealed some of the features of the building which make it much more efficient and sustainable compared to the Flynn Recreation Complex.

According to Hand, the goal for the new recreation center is to achieve a silver LEED-certification, which means that the building must comply to certain efficiency standards and meet energy and building material standards in order to maintain its status as a silver stamped, energy star building. Along with the new Connell facility, other new campus developments are silver stamp LEED-certified, including the Thomas More Apartments.

Bruce Dixon, director of the Office of Sustainability, said the most impressive environmental feature of the building is its vertical space integration. Each floor will contain multiple athletic courts and facilities, including intramural courts, basketball courts, tennis courts, pools, and a custom running track which includes an incline at the same exact angle as Heartbreak Hill, which will allow students to prepare more effectively for The Boston Marathon and experience a part of Boston's culture while working out. The building, while having a larger square footage and incorporating larger, more advanced training facilities than the Flynn Recreation Complex, will have a much KALLIK

EcoPledge toured the Connell Recreation Center construction site last month.

more efficient ecological footprint. In comparison to Flynn's facility, which is widely spread out and takes up a large portion of Lower Campus, the new Connell Recreation Center's ability to utilize vertical space effectively to include many athletic facilities within one area of Lower Campus is much more space efficient, according to Dixon.

"It's incredible to think we would have a larger sports facility with a smaller footprint," Dixon said. "It's a marvel of modern construction and design."

Dixon also said that the Connell Recreation Center's most useful update will be its incorporation of windows, something which Flynn lacked. The building's enormous spanse of windows will provide more natural light into the building than artificial light. The innovation of thermal pane windows will provide heat insulation, UV ray protection, and will allow

students to receive natural sunlight while they work out, which increases their endorphin levels and provides a more satisfying workout, Dixon said. According to Hand, the windows will also

provide a stunning view of the new Pine Tree Preserve, which is scheduled to be complete sometime in the spring.

One of the energy efficiency systems being implemented in the new facility is a cogeneration system, in which a heat exchanger extracts heat from the exhaust of motors used in the building and then transfers that heat to various areas of the facility. One use of the cogeneration system will be to provide electricity and hot water for the pool and heat it efficiently.

According to Dixon, these cogeneration systems are common in Europe, and are now starting to be utilized by American businesses and corporations. These systems are more efficient than burning other forms of fuel for heat energy, and they also include clean air filters which allow the machines to work at peak production during busier times of the day.

Another energy efficient technology being utilized in the new facility is a state of the art building automation system, which keeps track of the building's

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internal climate. The system will keep the building at a constant 68 to 72 degree Fahrenheit temperature, regardless of the temperature outside, as well as distribute energy to different sections of the building depending on the peak hours of student recreation.

Other technologies incorporated in the new facility include more efficient heat insulation and 92 percent efficiency water boilers. The large stone external walls of the facility are designed to protect

the insulation behind them, and a vapor barrier has been incorporated to keep the building dry and prevent water from seeping in. These vapor barriers protect the insulation from deterioration and will prevent pipes from freezing as well as keeping the building's internal temperature from escaping outside. Additionally, the facility will contain highly efficient boilers, which take in outside air into their combustion chambers in order to heat and circulate water more swiftly and effectively throughout the building.

UPCOMING EVENTS

January 3 Speech on Climate Change

January 11 Cleanup through Volunteering

January 27 Demonstration against salt storage

January 29 Real Food Dinner

Harvest Fest Brings Pumpkins, Local Foods, and Sustainable Perspectives to Campus

By Alinda Dersjant and Christine Liu

A musical performance from the Commontones kicked off Harvest Fest on Monday, October 15, in the Vanderslice Cabaret Room, as part of a collaboration with Real Food BC. Later, Michael Leviton, a teaching chef in Boston University's Certificate Program in the Culinary Arts, delivered a speech and engaged students in a conversation about sustainable food sourcing and the ways people can motivate others to care about sustainability.

On Wednesday night, Eco-Pledge, BC Dining, and several campus cultural clubs held Night Market, an event in Corcoran Commons in which students were able to sample foods from the student groups cooked by BC Dining. The event gave students the opportunity to taste the richness of locally harvested foods and inspired students to cook similar locally-sourced dishes on their own.

The largest event of the week was Friday's Harvest Festival on the Academic Quad, where hundreds of students participated in activities, locally-sourced food tasting, and pumpkin painting. These events were organized by environmentally-minded on-campus organizations and sustainable groups looking to share their work and spread awareness about sustainability with the BC community.

Students were able to paint pumpkins at the EcoPledge table as

well as have their own photo-op with the EcoPledge mascot, Maisy the Eco-Pup. Maisy, the two-year old Havanese, made a two hour appearance at the event.

BC Dining offered samples of locally grown Asian pears, Honeycrisp apples, and warm apple cider. Local sourcing of foods is one of the focus points of BC Dining's FRESH initiative as it facilitates healthy, fresh, and fairly-traded products while minimizing agricultural and transportation-derived waste and carbon emissions.

Harvest Fest also provided students with the opportunity to make change in the community by signing a petition to prevent the University from locating a road-salt storage on its property in the Webster Woods Conservation area. If the project proceeds, the salt storage would potentially salinate the soil and affect local wildlife, including salamanders which live in vernal pools within the Webster Woods.

Other tables at the event included sustainable corporations and nonprofits that showcased their sustainable initiatives, including organizations like Honest Tea, which explained how corporate social responsibility can contribute greatly to global sustainability through trade with small-scale organic farms. BC Charity Water helped to raise awareness of the lack of access to clean drinking water in many thirdworld countries and encouraged students to get involved in spreading







Real Food Garden Sees Growth With New Programs and Steward Position

By Elizabeth Allen

Real Food Boston College has expanded its on-campus garden, added a new garden steward position, and introduced new programs including an educational gardening program for preschoolers.

Founded in 2008, the Real Food garden has since expanded in both size and impact. Originally located on Brighton campus, the garden was moved a year ago to its new location behind the Connolly House on Hammond Street. The garden currently has twenty-four beds in operation, nine of which are used by Tara Pisani Gareau, acting director of the Environmental Studies Program. These nine beds are being used for experimentation in several environmental studies and environmental science classes.

In the remaining 15 beds, Real Food planted arugula, spring mix, kale, carrots, radishes, and leeks. Members of the club and volunteers come together to work on the garden. Food that is grown is available for those who worked in the garden to take home.



Preschoolers learned how their food is grown while exploring the Real Food garden.

A new garden steward position was created this year for the garden. The garden steward works with Real Food to help maintain the garden year round. The current garden steward is Anas Behir, MCAS '21, who has already begun important cultivation work in this year's harvest.

Real Food is currently working with the Montserrat Office to establish a connection between the garden and BC students facing food insecurity. The garden will provide free food for students and allow more students to have a closer relationship with how their food is grown.

All of the food that is not used by students or volunteers is composted in one of the garden's composters. These composters will soon be open to the public. Spearheaded by Veronika

Lin, MCAS '21, Real Food is in the final weeks of starting a compost-

ing initiative for students living off campus or students on campus who have kitchens. Students who are interested will be required to attend a compost training session, will receive small composting bins, and can dump their organic material in one of three larger composting bins that will be placed around campus within the next few months. From there, the compost will be taken and used in the Real Food garden.

Real Food hopes to collaborate with faculty members in the Lynch School of Education who are working with hydroponics in the greenhouse. The goal is to be able to start growing herbs and greens using this technology and to allow students to familiarize themselves with new and different methods of food cultivation.

On September 14, Real Food teamed up with the Boston College Children's Center and spent time planting with the preschoolers, teaching them how food is grown and cultivated.

"It's very important to show little kids where their food comes from and where it

Global Engagement Portal Brings News From Rwanda on Climate Change

By Alex Capozziello

United from across the globe, three members of EcoPledge had the opportunity to speak to two Rwandan students, Eloi Mugabe and Elie Sinayitutse, through the Shared Studios Portal located outside of O'Neill Library on Monday, October 22. The portal, equipped with immersive audiovisual technology, allowed the two groups to discuss how sustainability and climate change are perceived in their countries.

According to Mugabe, climate change is a serious threat for Rwanda, causing effects such as droughts due to fluctuations in seasonal temperatures, which affect agriculture, livestock, and human health. In response, the Rwandan government encourages citizens to aid in conservation efforts during Umuganda, a national day of service which occurs on the last Saturday



The two men from Rwanda spoke about pollution, wildlife, and the outdoors.

of every month. During Umuganda, citizens work together with the goal of contributing to overall national development for the betterment of Rwanda. By participating in national conservation during Umuganda, the citizens of Rwanda are reminded of their responsibility to be respectful of the earth and reduce pollution however they can. Pollution from microplastics has grown worse in recent years, and in response, several new recycling startups have been founded in Rwanda to help curb the issue.

Mugabe works in the field of conservation, doing research on the behavioral patterns of gorillas. By exploring the nests of Silverback

gorillas in Volcanoes National Park, Mugabe is able collect and examine fecal deposits left by the gorillas to observe changes in their dietary patterns and behaviors. Mugabe's passion behind his work is his appreciation for nature and the beauty of Volcanoes National Park and its many species. According to Mugabe, the mountainous terrain of Volcanoes National Park provides a unique habitat for the species which live in the park, and the magma deposits in the soil from past volcanic activity enrich the soil, making the park's overall ecosystem highly productive.

Sinayitutse mentioned that rhinos are also an important species in Rwanda, as they provide attraction for large influxes of tourism. The money earned through tourism is filtered back into the government and aids in furthering future efforts toward conservation.

"We use the resources we

Former EPA Head McCarthy Stresses Urgency of Climate Change and Action

By Eva Laxo

Gina McCarthy, former head of the Environmental Protection Agency (EPA) issued a stirring call to action for climate change and social justice at a lecture at Boston College on Tuesday, October 23. McCarthy, who was the head of the EPA under the Obama Administration, addressed a broad scope of issues facing the world today, including the wide-ranging consequences of global climate change and the impacts of the politicization of science.

"Make no mistake, climate change is the biggest threat to our public health, to our economic security, to our national security, that we face today," McCarthy said.

As administrator, McCarthy functioned as the face for America's initiative on climate change policy. Under McCarthy's leadership, the EPA moved to reduce air pollution, cut national carbon emissions, and strengthen protections for drinking water resources.

McCarthy addressed the Intergovernmental Panel on Climate Change's October report that found climate change's severity has returned to the forefront of global attention. The article reported that the previously accepted 2 °C limit on global temperature increase will result in larger than acceptable impacts and called for an immediate and drastic decrease in global fossil fuel use.

McCarthy suggested a "start low, push up" approach, which begins with individuals initiating grassroots movements and pushing toward eventual federal change, in hopes of the United States

reaching the goals outlined by the IPCC's report. According to Mc-Carthy, the actions and voices of young individuals and grassroots organizations are needed to help encourage aggressive changes to be made in a short amount of time.

"The most important thing that you can do today is to protect the science and the scientists, because that is what is at risk," McCarthy said. According to McCarthy, it

is important to protect the facts in a world where accepted scientific knowledge has become contentious partisan issue. а McCarthy also discussed how the issue of climate change is first and foremost a human health issue. Advocating for social justice and human health, McCa-

"The most important thing that you can do today is to protect the science and the scientists. because that is what is at risk." Gina McCarthy,

rthy cited a report by The Lancet Commission on Pollution and Health which studied global health

effects linked to pollution. Philip Landrigan, the director of BC's Global Public Health Program, worked on this study. McCarthy used the report to further explain how the impacts of climate change will be far from equal globally and how these topics of social justice overlap strongly with advocating for climate justice.

"The vast majority of that damage is in low and middle income countries, and the vast majority of people dying are women and children," McCarthy said. "That is not social justice."

Despite the daunting task ahead of the environmental move-



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Students from sustainability groups had a chance to meet McCarthy before the event and have a one hour roundtable discussion.

Decked Out in Costumes, EcoPledge Promotes Sustainability at Newton's Green Expo

By Chris Joseph

On Sunday, October 14, several EcoPledge members attended Green Newton's Green Expo in Newton Center. The Expo, which Green Newton has held for 15 years, is a gathering of community groups, conservation societies, and sustainable businesses that takes place within the annual Newton Center Harvest Fair. The fairgrounds also featured food, amusement rides, and live music.

EcoPledge had its own table at the event and was able to meet Newton residents and discuss environmentalism with community members. The Expo was a welcome opportunity for EcoPledge to connect with larger environmental groups and share the club's vision of student sustainability.

"We received an overwhelmingly positive response from Newton families and residents," said Kelsey Koston, EcoPledge volunteer committee co-director and MCAS '19.

Green Newton board member Karen Bray invited EcoPledge to present beside her group, Newton CALM, during the fair. Newton CALM is a community group that advocates for sustainable lawn care. Bray also provided the Eco-Pledge team with green mascot suits to direct attention toward the Expo.

EcoPledge wasn't the only group at the fair with a Boston College connection. The Expo also featured Best Bees, the Boston-based beekeeping company that maintains the beehive on top of Fulton Hall. Best Bees' mission is to restore bee populations and assist bee owners by delivering and maintaining hives across the country. The company's honeycomb of busy bees captivated fairgoers all afternoon.

Other groups at the Expo included Pure Haven, a Rhode Island company that produces toxin-free USDA Certified Organic personal care products, and Auburndale Builders, a construction company that specializes in building solar-powered homes. Solar Five and Sunlight Solar were also in attendance, promoting solar power and advertising Massachusetts' solar incentives.

"Many festival attendees were interested in learning more about EcoPledge's goals and accomplishments," Kosten said. "This was EcoPledge's second time



EcoPledge members proudly wore their green costumes at Newton's Green Expo.

Copenhagen Makes Strides Toward Sustainability with New Infrastructure

By Mira Begovic

Copenhagen is the capital of Denmark and its most populous city. Recently, it has been recognized for its incredible initiatives toward sustainable urban planning and has made strides to develop sustainable urban living. The city has a population of 775,000 and yet has made a goal to be CO2 neutral by 2025. According to the Cycling Embassy of Denmark, 41 percent of all trips to work and to study to and from Copenhagen in 2017 were by bicycle and 62 percent of Copenhageners chose to cycle to work and study in Copenhagen. Copenhagen is now targeting half of all its residents to start using bicycles.

Copenhagen has also made large investments in infrastructure and transport inter-connectivity. The city has made sure to create expansive cycling lanes that span a total of 411 km. It has also taken advantage of its canals and has built bridges that allow access to Harbor Buses. By 2020, Copenhagen plans to have all its harbor buses be electric-powered and CO2 neutral. It is currently investing about \$1.54 million to electrify the entire fleet and to put in place a sufficient charging infrastructure. The municipality has also set a target to switching all of the city's public buses to electric power by 2030.

While paving the road for cyclists, Copenhagen has been reducing car parking spaces in the inner city district at a rate of two to three percent per year and future closures for cars are planned. The Danish government also announced, in early October, that it will ban the sale of new vehicles with internal combustion engines by 2030 with hopes of having one million electric and hybrid cars on the road by then.

The Danish government works with all levels, national and municipal, to champion the needs of the population to spearhead sustainability in urban planning. In addition to implementing more sustainable infrastructure, Denmark



Alinda Dersjant

has implemented the Climate Adaptation Plan in order to improve the city's defenses against extreme weather events. This was as a result of a cloudburst that produced over 135 millimeters of rain in less than three hours in July 2011. It caused floods in basements, streets, and major roads all throughout the city.

As a result of climate change, these sorts of events will become more and more frequent, which is why Copenhagen has decided to implement its adaptation plan. Among the actions being taken are the building of dikes and better management of stormwater. Many of these changes will take decades to implement, however, the initiative that this city is putting is inspiring to cities all over the world. It is crucial to observe what cities around the world are doing in response to climate change in hopes of learning how other cities can improve and what initiatives individuals