

Bryn Mawr College Climate Action Plan:

The Sustainability Leadership Group (SLG) was formed to direct the implementation of the Climate Action Plan and organize college-wide sustainability programs. The Climate Action Plan aims to reduce the carbon footprint of the College by 10 percent over the span of ten years.



The group consists of students, faculty, and staff from the Alumnae Association, the Admissions Office, the Development Office, and the Communications Office. With so many people collaborating, this group aims to bring about sustainable changes in each and every aspect of the College. The SLG strongly believes in implanting seedlings of sustainable practices in the minds of prospective Bryn Mawr students so they can deepen their roots when they are here and leave the College as an alumna strongly rooted in green beliefs and practices.

The SLG has developed a draft mission statement:

- The College will be a responsible environmental steward and will include issues of environmental sustainability in its decision-making processes.
- We aim to educate all members of the College community (students, staff, faculty) to become knowledgeable about, and empower them to make meaningful contributions to, environmental sustainability.

Since the inception of Climate Action Plan in 2010, the SLG, with the support of the administration, encourages green activities in every aspect of College life including academics, resource management, energy, transportation, and grounds. Below is the update of the sustainable activities at the College.

Recent Sustainability Efforts in Bryn Mawr:

1) Energy Consumption

A) Reducing Energy Consumption:

i) Administrative and Residential buildings Conservation Hours



Rhoads, one of the dorms practicing conservation hours

Students have been continuing efforts to reduce energy usage throughout the College. In the 2012-2013 academic year, students worked together with Facilities Services staff to create heat conservation hours in the dorms. After doing a survey and obtaining student approval, the heat in the dorms was turned down from 70 to 67 degrees between 11 a.m. and 3 p.m. in all dorms, saving a significant amount of energy.

Conservation hours were implemented in administrative buildings, as well. Implementation of conservation hours reduced the usage of natural gas by 5 percent and is expected to reduce the carbon footprint of the College by 1.25 percent.

In addition to the dorms, the administrative buildings instituted conservation hours for six to 12 hours at night, beginning in the spring of 2012.

Below is a chart of the conservation hours for the dorms and administrative buildings:

4-6 Hours Conservation Commitment	7 – 10 Hour Conservation Commitment	11 – 12 Hour Conservation Commitment
Benham Gateway (12 a.m. – 4 a.m.)	Carpenter Library (12 a.m. – 7 a.m.)	Cartref Hall (8 p.m. – 7 a.m.)
Schwartz Gym (12 a.m. – 5 a.m.)	Health Center (10 a.m. – 6 a.m.)	Dolwen (8 p.m. – 8 a.m.)
Taylor Hall (12 a.m. – 6 a.m.)		Guild Hall (8 p.m. – 7 a.m.)
Wyndham (12 a.m. – 4 a.m.)		Human Resources (8 p.m. – 7 a.m.)
		Ward Building (6 p.m. – 6 a.m.)

ii) Reduction in temperature set points:

In order to conserve energy Bryn Mawr reduced the heating set points range in all the buildings from 70-72 degrees to 68-70 degrees. During warm seasons the College increased its cooling point from 70-73 degrees to 73-75 degrees.

iii) Refurbishment of Air Handlers in Chemistry Building

Recently, Bryn Mawr College refurbished air handlers in the Chemistry Department building (Park) by replacing the heating coils and installing VFDS on the motors. The coils installed are approximately 12 feet tall and 18 feet long. By replacing the coils, the College was able to reduce natural gas consumption for this machinery by 20 percent and the campus carbon footprint by 5 percent.

iv) Overlay Project:

This project is based upon a set of commands which overrides the fixed set of HVAC commands depending on the weather conditions outside the building. During the peak-use times of summer and winter, the system automatically increases or decreases the temperature inside the building. The average time for the temperature changes is about 45 minutes and the process usually takes place in intervals of an hour or more, strictly depending upon the weather conditions. This initiative has helped in reducing energy use and the carbon footprint of the College.

B) Renewable Energy:

Bryn Mawr currently uses two forms of renewable energy; solar energy and wind energy. There are solar panels and a wind mill on campus; however they serve to fulfill educational and research purposes rather than providing a significant source of energy.

i) Solar Energy:

In 2012, Bryn Mawr College installed its first solar panels on the southern slopes of Cambrian Row. Of the two solar panels, the large 12-panel set has a maximum power of 2820 watts and a smaller two-panel set has the potential power of 570 watts. The solar energy is currently being used to light the safety lights of the SGA house on Cambrian Row. The payback time of the solar



Solar Panels at Bryn Mawr

panels for the initial investment is 20 years. However, since these solar panels last for 30 years this solar project is profitable and sustainable.

In the summer of 2012, a Bryn Mawr student researched solar power and analyzed the cost and benefits of installing solar panels prior to the actual installation.

Moreover, the staff, faculty, and students can track the energy production of the solar panels online.

ii) Wind Energy:

Beginning June 1 2013, the College has agreed to a contract such that 50 percent of the total electrical energy purchased is produced from wind energy. In doing so, the College will reduce its overall carbon footprint by a 25 percent. Although wind energy is not produced on campus, by choosing to invest in wind energy, Bryn Mawr has taken a large, green step towards sustainability.

C) Usage of LED bulbs

Realizing the importance of LED bulbs for both sustainability and energy efficiency, Bryn Mawr College replaced most of the compact florescent bulbs with LED bulbs in the past two years. The College chose to replace first the bulbs with the most burn time. The most noticeable change was the installment of LED bulbs in the Thomas Great Hall chandelier. Although LED bulbs are more expensive than florescent bulbs, their longer lifetime makes their purchase financially sustainable.

In 2013 Brecon Hall became the first 100 percent LED residence hall at Bryn Mawr. Along with Brecon Hall, LED bulbs are also used in the common rooms or hallways of Denbigh, Radnor, and Pembroke East and West. Apart from these residence halls, LED bulbs are used in the Campus Center, Health Center, second floor of Taylor Hall, and Wyndham. In the Gateway building, 98 percent of all the bulbs are LED bulbs.

Doing so, the College has replaced approximately 7 percent of all the light bulbs across the campus. This has nullified the growth of electric consumption. Bryn Mawr will continue this green initiative.

2) Resource Management:

A) Composting:

i) Food Composting:



Bryn Mawr has composting agreement with Philly Compost

The idea of composting was initiated by the Environmental Studies Senior Seminar in spring 2011 and implemented by the Sustainable Food Committee. Beginning in academic year 2012 both dining halls, Haffner and Erdman, began composting waste products.

Bryn Mawr has an agreement with Philly Compost, a local compost business, for composting food waste. In fall 2012, a team of students from the senior conference math course on Math Modeling and Sustainability worked with dining hall staff on a project concerning the feasibility of composting. The students compared the data of carbon emissions and financial cost of trash pickup before and after composting. After carefully analyzing the data they concluded that, although the carbon dioxide emission increases due to increased transportation, composting helps to decrease CO₂ emissions by 19.65 tons per month in total.

Composting waste has led to a decrease in the amount of trash to be incinerated. Thus, the trash pickup has been reduced from five times a week to just three times. Although composting has increased cost by a small amount annually, the resulting decrease in CO₂ emissions justifies the cost.

Bryn Mawr not only composts waste but also utilizes the final compost product in the turf grass areas as well as in the Student Garden.

ii) Leaf Composting:

About four years ago, the Bryn Mawr College Grounds Department started a leaf composting program. Instead of exporting leaves that fall on the ground during the fall season to outside

compost facilities, the lawn mowers grind the leaves to produce compost for our campus gardens.

B) Electronic Billing and Document Management System

Beginning in the academic year 2012-2013, Bryn Mawr College fully adopted an electronic tuition billing and payment system, completely eliminating paper bills. In fall 2012, a group of students worked on a project concerning the cost and benefits of an electronic document management system in the Admissions Office for their senior conference course in Math Modeling and Sustainability. By analyzing the data collected, they concluded that going paperless would save 11 tons of wood which is equivalent to 69 trees and approximately 65,000 gallons of water. Moreover, adopting an electronic document management system would decrease carbon emission by 16,009 lbs. per year due to the decomposition of paper and energy usage by 93 million BTUs. Along with the environmental benefits, the financial benefits of this paperless system translated to \$1,992 saved on the cost of paper for the admission of the Class of 2016. Although the initial technological investment to adopt an electronic document management system is high, the students estimated the project would be cost neutral by year two due to material and labor savings. The document management system is currently being implemented in the Admissions Office and will be used in the admission of the class entering in the fall of 2014.

C) Reducing Take-out:

The increase in trash from plastic foam containers provided to students each day for dining take-out was a growing problem. In the 2012-2013 academic year, the College permanently removed take-out cups. In the fall of 2012 plastic foam containers for take-out food, previously unlimited, were limited to five per week per student. This reduction in take-out will decrease food waste and reduce carbon footprint by producing less trash.



D) Recycling and Reuse:

Bryn Mawr has had a single-stream recycling program for more than two years. Encouraging recycling throughout the school has reduced the trash amount significantly. During summer 2012, new educational signage about the single-stream program was created and displayed across campus.

Bryn Mawr recycles fluorescent bulbs. The bulbs are sent to a recycling facility where the mercury vapor present in the bulb is liquefied and re-used.

The College actively supports reusing campus material. The Student Garden was created re-using many materials. The College Staff Association collects items left in the dorm rooms at the end of each year and organizes a sale of these items. Without this program, all of the items collected would become College trash.

3) Teaching and Learning:

A) Environmental Studies as Minor

In June 2011 Bryn Mawr changed Environmental Studies from a concentration to a minor. The Environmental Studies minor brings together natural and social sciences along with humanities “to explore the interactions among earth systems, human societies, and local and global environments.” This interdisciplinary minor is a Tri-College program in that it is jointly offered by Bryn Mawr, Haverford and Swarthmore Colleges and utilizes the resources from all three institutions.

Faculty involved with the Steering Committee of the Johanna Alderfer Harris Environmental Studies Program of Bryn Mawr for 2011-2013 included:

- Ellen Stroud: Associate Professor of Urban Environmental Policy and Problems/
Director of Bryn Mawr Environmental Studies Program
- Don Barber, Geology, Alderfer Chair in Environmental Studies
- Peter Briggs, English
- Joshua Caplan, Biology, Bucher-Jackson Fellow
- Rick Davis, Anthropology
- Victor Donnay: Mathematics and Chair of Sustainability Leadership Group
- Jonas Goldsmith- Assistant Professor of Chemistry- developed new course on
Science of Renewable Energy
- Karen Greif, Biology
- Carol Hager, Political Science
- Megan Heckert, Growth and Structure of Cities and Environmental Studies, Tri-Co
GIS
- Thomas Mozdzer, Biology
- Michael Rock, Economics
- David Ross, Economics

- Bethany Schneider, English
- Nathan Wright, Sociology

B) 360 Course Clusters :

360° course clusters are interdisciplinary experiences that engage several aspects of the same topic, giving students an opportunity to investigate thoroughly and thoughtfully a range of perspectives.

In Academic Year 2011-2012, a 360° course cluster titled “Perspectives on Sustainability” was offered. Courses under the title were:

- Growth and Structure of Cities 241: Building Green: Sustainable Design Past and Present: Taught by Carolina Hein, Growth and Structure of Cities.
- Education 268: Educating for Ecological Literacy: Taught by Jody Cohen, Education Program.
- Mathematics 295: Introduction to Math and Sustainability: Taught by Victor Donnay, Mathematics.

Under the guidance of their professors, the students involved in this 360° course cluster were divided into four groups, with each group focusing on a different environmental issue. The four projects completed by the students were:

- a) Preparing a presentation for College staff members of past, present, and future sustainability efforts on campus.
- b) Working with Haverford Township and the Kimmel-Bogrette Architect Company to develop signage describing green features of the new Haverford Recreation and Environmental Education Center, a LEE building.
- c) Working with Parkway West High School to turn an abandoned lot into a garden. Along with starting a garden, the students also developed curriculum regarding the importance of environmental sustainability in the high school.

- d) Working with FACTS Charter School. Since the school already had a garden, the students focused on developing curriculum regarding environmental issues of the garden.

Moreover, six students from this 360° course cluster received summer stipends to work on projects concerning environmental sustainability.

In fall 2012, there was a 360° cluster on Renewable Energy consisting of two courses:

- Chemistry 206: Science of Renewable Energy, Jonas Goldsmith, Chemistry
- Geology 298: Applied Environmental Science Seminar with focus on Renewable Energy, Don Barber, Geology.

In academic year 2013-2014, 360°: “Perspectives on Sustainability: Disasters and Rebuilding in Japan” is being offered to students. It includes the following courses:

- Japanese 035: Narratives of Disaster and Rebuilding in Japan ,
- Cities 305: Disaster, War, and Rebuilding in the Japanese City
- Art History 035: Pictured Environments: Japanese Landscapes and Cityscapes

C) Other Academic Sustainability Courses:

i) As sustainability is a topic of increasing interest to students, many courses at Bryn Mawr College have a sustainability component. Here are some of the departments that offer courses linked to sustainability and in some cases we highlight specific courses:

a) Biology:

BIOL 210: Biology and Public Policy

b) Chemistry:

CHEM 206: Chemistry of Renewable Energy

c) Geology

GEO 103: Earth Systems and Environment

GEO 206: Energy Resources and Sustainability

GEO 298: Applied Environmental Science

d) Mathematics:

MATH 210: Differential Equations with Applications

MATH 295: Topics in Mathematics: Mathematical Modeling

e) Anthropology

f) Archaeology

g) Growth and Structure of Cities

CITY 241: Building Green

CITY 279 Global Environmental Change

h) Economics

ECON 234 Environmental Economics

ECON 242 Economics of Local Environmental Programs

i) Education

j) English

k) History

l) Philosophy

m) Political Science

POLS 222 Introduction to Environmental Issues

n) Sociology

SOCL 247 Environmental Social Problems

Since the students can take classes at Haverford and Swarthmore as well, the range of courses with sustainability topics is greatly increased. For a further list of courses in all three colleges one can access this website: <http://www.brynmawr.edu/es/approvedelectives.html>

ii) Some of these courses have a Praxis component which allows students to get involved in fieldwork and apply their theoretical knowledge. Some of the noteworthy student projects that linked to the goals of the Bryn Mawr Climate Action Plan were:

- In spring 2010, students in the math senior conference class on Mathematical Modeling on Environment did several Praxis projects. One group examined the costs, benefits and environmental sustainability of “Trayless Dining Halls”. Their project concluded that, by going trayless, the College would save around \$37,665 in tray washing and drying costs and 35,317 gallons of water per academic year. Another group focused on energy efficiency in Bryn Mawr buildings, with the support from Facilities Services staff. By

analyzing energy usage in Dalton, Gateway, and Cambrian Row, which have 24-hour energy usage, the students concluded that if Dalton and Gateway were put into conservation mode for three hours each night, the College could reduce its energy costs and carbon footprint by a significant amount. This initial study was the impetus for the later campus-wide initiative of putting buildings into conservation mode (see Section 1.A.i above).

- In fall 2012, students in the math senior conference used mathematical modeling to carry out Praxis projects concerning sustainability. The three different projects conducted by students involved composting on campus (see 2.C. above), paperless admission system (see 2.B above), and the safety of streets in the town for biking.

iii) Currently 21 faculty members of Bryn Mawr are involved in sustainability research including:

- Don Barber, Geology, studies the sources, transport, and depositional patterns of Quaternary sediments in coastal and deep marine environments which in coastal and shelf settings has implications for regional relative sea-level change.
- Selby Cull, Geology, studies the mineralogy and geochemistry of the Martian surface and served on the science teams for the Mars Phoenix lander and the Compact Reconnaissance Imaging Spectrometer and who developed and taught a new course in 2012-13 on the environmental impacts of abandoned mines in Pennsylvania.
- Victor Donnay, Mathematics, was Chair of the national planning committee for Mathematics Awareness Month 2013 which focused on the Mathematics of Sustainability (see www.mathaware.org).
- Tom Mozdzer, Biology, whose latest research looked at the effect of climate change on invasive plants. See <http://news.brynmawr.edu/2013/01/17/the-year-in-review-2012/#sthash.N2MP1Wbp.dpuf>
- Jonas Goldsmith, Chemistry, uses electrochemical and spectroscopic techniques to probe the interactions of transition metal complexes with surfaces and to develop applications including solar energy conversion. His research student, Anna Melker '12, received a

Fulbright award for 2012-13 to conduct research at Sweden's Uppsala University on photocatalytic hydrogen-fuel production .

- David Ross, Economics, testified before Philadelphia City Council in support of the Clean Air Act. - See more at: <http://news.brynmawr.edu/2013/01/17/the-year-in-review-2012/#sthash.N2MP1Wbp.dpuf>
- Ellen Stroud, Growth and Structure of Cities, was the recipient of a Frederick Burkhardt Residential Fellowship from the American Council of Learned Societies (ACLS) in 2013. Stroud's book *Nature Next Door: Cities and Trees in the American Northeast*, has been named one of the top five history books of 2012 by the History News Network.

D) Summer Programs:

Bryn Mawr has been supporting and encouraging summer research and programs regarding sustainability.

i) In the summer of 2012, six Bryn Mawr students, involved in 360° course clusters in academic year 2011-2012, were engaged in summer internships and programs regarding environmental sustainability. Their projects were as follows:

- One of the students worked with two high school students from Parkway West High School to create an urban garden in West Philadelphia. Along with creating the garden, she was involved in making a documentary regarding the perspectives of community members on the garden.
- Another student was involved in a two-week Tree House project at the University of the Neighborhoods, part of HafenCity University in Germany. This green project, which involved making new tree houses from recyclable materials for children in an already existing park, was a prototype of how buildings can be made sustainable. This project involved university students, teachers, community members, and children.
- One of the students worked with NSL Oil Chem in order to explore how the company provides “cost-effective and environmentally friendly” solutions to other companies producing hazardous wastes.
- One of the students worked in Community Supported Agriculture as a project manager developing liaison between local communities in Wayanad and Heal the Soil, a local NGO of organic farming experts and community leaders in Tamil Nadu, India.

- One of the students worked with the Smarter Cities team at IBM.
- For her internship, one student was involved in research focusing on the rise of urban agriculture.
 - ii) Along with summer internships, Bryn Mawr also provides summer funding to support student research. The undergraduate research is funded by many sources including the Office of Undergraduate Dean and a grant from the Howard Hughes Medical Institute. Some of these student research projects are focused on sustainability issues. Students doing summer research with mathematics Professor Victor Donnay have studied: Solar energy using mathematical modeling and worked on a cost-benefit analysis to determine the best solar panel to install on school grounds
 - Climate modeling which used software that simplified **the factors contributing to climate change**
 - Topics of applied mathematics in environmental issues, particularly focusing on LED light bulb replacement at Bryn Mawr College.

iii) Two of these summer students served as TAs for a two-week institute on Math and Sustainability that Professor Donnay ran for Philadelphia area math and science teachers, titled “Helping to make Green Ribbon Schools”. Eighteen teachers, including two from Haiti, took part in this institute funded by the Bryn Mawr College Howard Hughes Medical Institute grant. The aim of this summer institute was to educate teachers in sustainability so that they could create sustainable change in their respective schools, in physical features or by teaching their students. Encouraged by the summer institute, one of the Haitian teachers started a garden with students at his school.

E) Teaching and Learning Initiative:

The Teaching and Learning Initiative, which was created in 2006, engages students, staff, and faculty in dialogue and exchange of ideas. Students have an opportunity to work with faculty inside the classroom as consultants through the Students as Learners and Teachers (SaLT) program based on their interest and scheduling compatibility. One of the students worked as a student consultant in the 360° course cluster Perspective on Sustainability. The student consultant worked with faculty on the effectiveness of their teaching methods.

Students also work outside the classroom with staff and faculty on various projects. In 2012, three students worked with faculty and staff on TLI projects about sustainability. While doing so, they developed a close study partnership, each sharing their own perspective. One of the students worked with her professor co-investigating sustainability practices and buildings and grounds. The other two worked with Housekeeping and Facilities Services.

F) Praxis

Praxis is a unique, community-based program which integrates both practical and theoretical aspects of education by engaging students in relevant field work. There are three levels of Praxis; with each level, the hours of field work increase. Previous Praxis programs have included topics regarding sustainability, including:

- Fall 2011: Intro to Environmental Studies
- Spring 2012: Math and Sustainability and Environmental Social Problems
- Fall 2012: Intro to Environmental Studies; Senior Seminar Environmental studies
- Spring 2013: Economics of Local Environmental Programs

Other Praxis Courses:

- Advanced Topics in Geology-Energy Sustainability

G) Student-run Environmental Groups:

Along with research and internships, student-run environmental groups play an instrumental role in developing and implementing sustainability programs on campus. The environmental groups are:

- BMC Greens
- Earth Justice League
- Batten House
- Bryn Mawr Beekeeping
- Sustainable Food Committee
- Green Ambassadors
- Real Food Challenge
- Bike Share
- Community Garden Initiatives
- Sustainability Leadership Group

Together these groups have organized Earth Day every year and raised awareness among the College community about environmental issues.

4) Transportation

- i) Three years ago Bryn Mawr College started using 10 percent biodiesel fuel in eight of its vehicles.
- ii) Bryn Mawr started the Compressed Natural Gas (CNG) Program in 2004 by purchasing a small CNG fuel unit and one CNG fuel bus. The CNG fuel bus is used to transport students between Haverford and Bryn Mawr. The CNG fueling station can fill up to two buses and two cars. Currently there are three CNG vehicles at Bryn Mawr, with one of them being a CNG car which is rented to the students.
- iii) In 2010, Bryn Mawr applied for a grant to expand the CNG station and to purchase more CNG vehicles through the Pennsylvania Alternative Fuels Incentive Grant Program. By working together with a consultant Bryn Mawr was successful in acquiring the grant which covered \$88,682 out of a total cost of \$282,576, representing 31 percent of the total cost. The remaining 69 percent, or \$193,893, was financed by the College.

This project of expanding the CNG fuel station and the number of CNG vehicles resulted in decreased petroleum dependence, with estimated displacement of 44,964 gallons of diesel and 4,176 gallons of gasoline. Although CNG vehicles are more expensive than regular diesel- and gasoline-run vehicles, the cost of natural gas itself is cheaper than either diesel or gasoline. Replacing diesel with CNG resulted in a 16 percent cost savings and replacing gasoline with CNG a 24 percent cost savings. Also using natural gas instead of diesel or gasoline produces carbon dioxide emissions savings of 2,982 pounds per year.

- iv) Beginning in 2012, vans used to transport students from Bryn Mawr to Swarthmore use clean diesel fuel. Also, the school purchased a bus that uses clean diesel fuel.
- v) In the spring of 2013 bike sharing was started and the program includes seven bikes for student use. The bike sharing program is also operating in the summer of 2013.

- vi) In order to reduce the amount of individual cars at the school, Bryn Mawr has a car sharing program. Moreover, students are discouraged from keeping cars at the College and residential student parking is limited and well-regulated.



CNG Fuelling Station



CNG run bus in Bryn Mawr

5) Greening:

A) Planation of trees:

i) For third time, The Arbor Day Foundation has named Bryn Mawr as a “Tree Campus USA” in 2013. With 3,609 trees on campus, Bryn Mawr has been honored by the Foundation for its effort in “community forestry management”.



View of Senior Row planted with Elm trees

present on campus.

iii) Bryn Mawr also fully supports the Campus Tree Program which helps with the maintenance of trees. In December 2012, 42 were labeled with aluminum plaques consisting of QR codes. By scanning the QR codes through smart phones one can get the full history of the tree, researched and written by students in Environmental Studies courses at Bryn Mawr.

iv) Many areas on campus such as the area behind Wyndham, the area next to Haffner and the slopes of Arnecliffe have wildflower gardens. Planting wildflowers has lowered the maintenance cost for the grounds department and increased color throughout the campus.

ii) All trees planted at Bryn Mawr are GPS marked. Using a software system, the Grounds Department monitors and maintains the trees. During academic year 2012-2013, 27 trees were planted which took the tree canopy coverage of campus to 43 percent. The school wants to increase the canopy coverage by 50 percent in ten years.

Along with adding trees, Bryn Mawr is diversifying the types of trees

B) Reduction of Pesticides and Herbicides:

In order to promote the proper exchange of nutrients in the soil, aeration has been conducted throughout the grounds of Bryn Mawr. Although aeration of school grounds has been conducted for a long time now, the past four years have seen an increase in the process. The number of times aeration is done is dependent upon the strain the ground has to face. Athletic fields require aeration six times per year while Merion Green requires only four times. This aeration process has led to a decrease in use of pesticides and herbicides.

C) Bryn Mawr Student Garden:

The Bryn Mawr student-run garden was started four years ago with the support of the Bryn Mawr Grounds Department. With students running the garden throughout the academic year, it is full of perennial as well as seasonal fruits and vegetables. The vegetables and fruits grown here are used by the dining halls. The garden utilizes compost rather than chemical pesticides and reuses wooden chips and fences. Bryn Mawr was also presented with a Community Greening Award from the Pennsylvania Horticultural Society for the successful



Expansion of the Student Garden



initiation and continuation of the student-run garden.

In February 2013, the garden was expanded. A small green house made from re-used plastic and wood was installed.

The student garden is also active for

the summer of 2013 with students who are participating in the summer of service program working there.

6) Raising Awareness

Bryn Mawr has been involved in raising awareness about sustainability and environmental issues throughout the campus in various ways.

- i) During fall 2012, a Tri-College environmental mixer was organized at Bryn Mawr where faculty and students of the Tri-College Environmental Studies Program came together and discussed the courses and issues pertaining to this interdisciplinary minor. This event was organized by students in the Bryn Mawr Environmental Studies senior seminar course.
- ii) Students in the fall 2012 Bryn Mawr Environmental Studies senior seminar course also developed a campus sustainability tour, which informs visitors about the green practices and infrastructures throughout the campus. This tour is now offered by the Admissions Office to prospective students and plants seeds of sustainability into the minds of students even before their journey as a Bryn Mawr student begins.
- iii) Recognizing the importance of our 3,600 trees on the Bryn Mawr campus, a campus “tree tour” was organized. This tree tour presented an opportunity for people to learn about the history of the trees on campus and to view numerous state champion trees. This tour was developed by students in the Bryn Mawr Environmental Studies senior seminar course. The online format of the brochure can be found here:
<http://www.brynmawr.edu/facilities/documents/FinalBMCTreesMap.pdf>.
- iv) In order to manage various tasks the Sustainability Leadership Group created a new student intern position. The intern works closely with the members of the SLG and helps to organize and communicate sustainability initiatives at the College.
- v) Bryn Mawr increased its web presence about green activities through sustainability blogs managed by the student intern. The website of Bryn Mawr sustainability blog is: <http://sustainability.blogs.brynmawr.edu/>

- vi) In order to involve alumnae with ongoing sustainability activities at the College, an article about green activities was included in the alumnae magazine. See <http://bulletin.brynmawr.edu/features/hp-primary-feature/greening-together/>.

Conclusion:

Bryn Mawr has been making solid progress towards achieving the goals outlined in its Climate Action Plan (see http://rs.acupcc.org/site_media/uploads/cap/357-cap.pdf) of reducing its carbon footprint, making climate neutrality and sustainability a part of the curricular and co-curricular offerings for its students as well as for its faculty and staff and expanding research related to the achievement of climate neutrality.

Halfway through its ten-year Climate Plan initiative (2008-2018), Bryn Mawr has initiated and continued various green activities not only in academics but also in infrastructures and grounds. There is no doubt that the sustainable practices will continue in future years with the collaboration of all the members of the College.

Through the purchase of 50 percent of its electricity from wind power, which will reduce the overall College carbon footprint by roughly 25 percent, the College is poised to surpass its goal of a 10 percent carbon footprint reduction and will now work to reduce its carbon footprint yet further.

Submitted by Sustainability Leadership Group with the assistance of following people:

- Jerry Berenson, Chief Administrative Officer
- Victor Donnay, Chair, Mathematics Professor
- Jim McGaffin, Energy and Project Management
- Ed Harman, Grounds
- Steve Green, Transportation
- Don Abramowitz, Environmental Health and Safety

- Alice Lesnick, Teaching and Learning Initiative
- Alyssa Banotai, Communications
- Nell Anderson, Praxis
- Michaela Olson, Greens
- Rebecca Thayil, Bike share
- Alisha Park, Green Ambassadors