

**PRESIDENT'S COMMITTEE ON SUSTAINABILITY
MUHLENBERG COLLEGE
SUSTAINABILITY STRATEGIC PLAN
ADOPTED BY PRESIDENT JOHN WILLIAMS MAY 2018**

INTRODUCTION

Sustainability is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. A sustainable future requires us to use natural resources in ways that maximize renewal, encourage re-use, and minimize waste. This must include the minimization of pollution and the mitigation of climate change. Also, essential to a sustainable future is the elevation of the quality of human life through improved health, education, and the promotion of basic human rights for all. Finally, a sustainable future entails a model of global economic growth that is inclusionary and does not violate the above environmental and social conditions. There is considerable evidence that the global environment, human condition, and economic equity have been in decline and continue to be threatened. However, there is also much to be hopeful about. We have begun to understand that we as individuals, social groups, communities, and institutions can play a major role in the creation of a just and sustainable future for the health of our planet and the well-being of all people. The seeds of transformation in the way we teach, do business and act as individuals have been planted, and their growth is being amplified through the development of new technologies and fundamental changes in values.

The majority of institutions of higher education have come to recognize their important role in contributing to this transition towards a sustainable future. Increasingly colleges and universities have acknowledged the moral imperative of addressing their own impact on human and ecological health; and have accordingly integrated all of the elements of sustainability into their missions and operations. This is being accomplished through the development and implementation of strategic plans focused specifically on campus sustainability. Recently, President John Williams formed The President's Committee on Sustainability at Muhlenberg College to do just that. Through this strategic plan we provide an opportunity for Muhlenberg to not only join, but serve as a leader in what has become a sustainability movement in higher education.

Muhlenberg's mission statement and fundamental institutional values already embrace the principles of sustainability. We are committed to being good citizens of the Earth, and to making institutional decisions that are mindful of our complex relations with its ecosystems. We acknowledge our obligation to improve the lives of all who have less access to education and political power, fewer privileges and resources, and will bear the burden of discrimination. We recognize that it is our ethical responsibility to do everything we can to improve both the environmental and human condition of all people as we carry out the work of the College. This includes all aspects of how we operate as an institution. As well, it is our responsibility to prepare our students to contribute to the creation of a just and sustainable future through changes in their lifestyles and through their future professions. This strategic plan provides direction and

specific recommendations that will guide us as we work to live by these values and meet our own stated obligations.

The sustainability initiatives presented here will serve the College in other ways. They will support our current curricular foci on human difference and global engagement, integrative learning, and our commitments to community engagement and environmental literacy. Integrating sustainability into our daily operations and future planning creates unique learning opportunities by allowing curricular and co-curricular activities to seamlessly interface with the non-academic aspects of the College. This is a unique form of learning for which Muhlenberg already has a growing reputation. Sustainability initiatives also provide the potential for long-term cost savings for the College through their reduction in resource use and increases in efficiency. Prioritizing sustainability will offer increased advancement opportunities by the broadening our donor pool to include those with specific interests in sustainability. This is particularly true for Millennials, who by 2020, will comprise nearly half the working population. According to a study by Morgan Stanley, in what is referred to as *The Millennial Effect*, members of this demographic are twice as likely to support organizations that target sustainability related outcomes such as directly address climate change or reducing global poverty compared to the total pool of donors. There is also an increasing number of grant opportunities for projects that support sustainability initiatives. Our increased commitment to sustainability will allow us to broaden our application pool as campus sustainability has increasingly become an important criterion for diverse, prospective students in making their decision on where to pursue their higher education.

PROCESS

In 2016, President John Williams restructured the existing Campus Greening Committee as the President's Committee on Sustainability and tasked it to consider how Muhlenberg College might continue to further sustainability in its academics, co-curricular initiatives, operations and planning. He directed the creation of a sustainability plan to develop strategic and operational sustainability goals.

The President's Committee on Sustainability created five Sub-Committees highlighting target areas of sustainability integration. Academic and Co-Curricular, Buildings and Grounds, Dining, Energy and Climate, and Administration and Planning. Each Subcommittee consisted of students, faculty, staff, and alumni. Input was also gathered from College suppliers, advisors and partners. These Sub-Committees met numerous times to develop the goals and strategies. Throughout this process, the President's Committee on Sustainability met to comment on progress and provide feedback to the groups. This document is a synthesis of the ideas, goals, and strategies generated by the Sub-Committees. It is endorsed by the President's Committee on Sustainability.

OVERVIEW – CORE PLANNING AREAS AND GOALS

Our overall goal of this planning process is to develop strategic initiatives that will move sustainability education, operations, and administration forward at Muhlenberg College. We will educate our students and community in sustainable practices to allow all of us the opportunity to be better citizens of our local communities and our world; measure the difference our efforts make; operate the school according to a sustainability ethic; use fewer resources in all areas; and incorporate sustainable values into our administrative practices.

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MUHLENBERG COLLEGE SUSTAINABILITY STRATEGIC GOALS

Curriculum and Co-Curricular Integration

Goal #1: Recognize that equity and inclusion priorities share common goals with sustainability objectives.

- Create and support collaborative programs, projects and initiatives with social justice, community engagement and diversity groups on campus.

Goal #2: Increase and assess broader sustainability education to all students by integrating into existing and new co-curricular programming.

- Create new student orientation program and integrate into the annual orientation program for first year students.
 - Year 1 – Sustainability module incorporated into Housing and Residential Life’s Freshman year programming.
- Create an Eco-Reps sustainability peer training program whose goal is supporting Muhlenberg College’s Sustainability Action Plan through peer projects, outreach, and events.
- Create cross-curricular and co-curricular partnerships where students, faculty, staff, and Muhlenberg Dining Services improve food sustainability in Wood Dining Commons.
- Develop workshops and educational materials with campus organizations linking sustainable food practices with health, fitness, nutrition, culture, and ethics.¹
- Organize regular speakers, lectures and/or workshops on sustainability topics.
 - Year 1 – Center for Ethics Lecture Series focused on Ethics of the Anthropocene and ethical investigations of climate change.
- Assess sustainability learning at beginning of first year and end of senior year to determine knowledge, growth, behavior, and attitudes.

Goal #3: Support the integration of sustainability concepts and themes into existing courses across the entire curriculum and the development and promotion of new courses specifically focused on sustainability.

- Develop and offer a “Sustainability Across the Curriculum Workshop” based on the pioneering success of the Ponderosa Project at Northern Arizona University and the

¹ Partners could include Health Center, Counseling Services, Life Sports Center and Residential Life, Muhlenberg Dining Services, Multicultural Life, Office of Community Engagement, Religious Life, or Global Education.

Piedmont Project at Emory University² for all faculty.

- Incorporate food sustainability studies into courses and sustainability curriculum.
- Explore possibility of integrating sustainability into Fitness and Wellness or Intergroup dialogue course.
 - Year 1 - Curriculum module integrating sustainability into Foundation for Student Success Course developed and implemented. This course is required for every student.

Goal #4 - Create a sustainable living learning program in buildings that facilitates sustainable living, teaches a sustainability ethic, and integrates academic and student life.³

- Create a sustainability living learning program that considers integrating mixed use learning spaces, providing space for live-in staff, introducing staff/faculty office spaces, staffing the program and ensuring ongoing programming within the space in planning for Prosser Hall renovation, residential retail space and other upcoming capital projects.

Buildings and Grounds

Goal #1 – Decrease resources used campus-wide.

- Identify specific target reductions in energy, chemical usage, recycling, paper, water, greenhouse gases, and waste.
 - Year 1 -
 - Reduce electric consumption. Electric consumption reduced due to new chiller in Moyer Hall and new LED lighting in South Hall by 100KWh.
 - Increase recycling of scrap metal. Scrap metal amounting to 291,511 lbs. recycled.
 - Utilize eco-friendly tannin boiler treatment to reduce water waste. College utilized 150 gallons of tannins to reduce water waste.
 - Increase use of environmentally friendly, low-emissions refrigerant. The College used 300 lbs. of environmentally friendly refrigerants.

² This model has now been implemented successfully at dozens of institutions around the country, and has successfully achieved the goal of broadening sustainability education across entire curricula.
<https://www.aacu.org/publications-research/periodicals/curricular-innovation-sustainabilitythe-piedmont-ponderosa-model>

³ Harvard's recent House Zero project provides a good model of an ultra-efficient building that requires almost zero energy, relies on natural day lighting, and produces no carbon emissions.

- Convert tree-clippings to mulch on-site. The College converted 50 yards of tree chipping to mulch on-site.
 - Upgrade new boilers using low NOx burners utilizing natural gas. The College upgraded new boilers.
 - Convert Aerco.350 to non-ozone depletion. Aerco.350 converted.
 - Eliminate leaky pipes. Leaky pipes eliminated near boiler system due to boiler decentralization.
 - Replace old windows. Windows in 5 MILE houses were replaced.
- Decrease chemical use in housekeeping.
 - Year 1 –
 - The College purchased 55 gallons of Friendly Z Green products.
 - The College purchased 2 auto-scrubbers to clean hallway floors in the science buildings. They do not require cleaning products and use very little water.
- Implement a paperless Plant Operations work-order system.
- Replace and upgrade College-owned vehicles and equipment, when needed, to decrease use of fossil fuels.
 - Year 1 – Purchased 3 new electric vehicles. New electric mower purchased.
- Purchase in bulk to reduce packaging waste and work with suppliers to decrease packaging sent to the College.
 - Year 1 – Purchased bulk salt, mulch, pretreat for snow melt, and plant material.
- Improve data collection and reporting of waste, recycling, composting/yard waste, fuel and energy use.

Goal #2 – Establish and prioritize sustainability and sustainable practices in campus operations.

- Create sustainable policies and practices in campus operations including: purchasing, chemical application, fossil fuel use, building automation systems, energy use, integrated pest management, planting and grounds, water conservation, Life-cycle Cost Analysis, lighting, building envelopes, and campus construction.
 - Year 1 – Plant Operations developed internal policy to plant only native plants.
- Increase grounds initiatives of native drought-resistant plants, limit use of sprinklers,

create no-mow zones or meadows, replace trees, and reduce chemical applications.

- o Year 1 –
 - A new rain/ re-charge garden was planted in back of the New Science building.
 - Cardinal Flower, a native plant, was planted around campus per recommendation of Local Sustainability class.
- Follow national green building design standards in new construction and renovation. (Ex. LEED, Net-Zero, Living Building Challenge, BREEM etc.)
- Operate and maintain buildings consistent with LEED or similar green Operations and Maintenance policies.
- Renovate or replace retiring campus buildings with facilities that consider sustainable and biophilic architectural and landscape design, adhere to sustainable urban design/ Smart Growth principles, utilize sustainable construction practices, and incorporate other green building strategies.
- Expand the reuse and recycling of renovation byproducts. (Ex. metal, wood products, blocks, stone, etc.)

Goal #3 – Advance the presence of sustainability through education in building and grounds management, making it simple and visible to students, faculty, and staff.

- Educate staff on buildings and grounds sustainable practices during staff Professional Development Day.
 - o Year 1 – Plant Operations participated in Earth Day, film student interviews, providing data for the Center for Ethics lectures, providing tour for students of solar hot water systems.
- Publicize Plant Operations best practices through Plant Operations website, Sustainability website, social media, annual report, and STARS reporting.
- Provide students information on sustainable behavior and responsibilities in student housing agreements and MILE house-specific packets.
- Engage community in Allentown Recyclebank Program Incentives for Allentown residents and Recyclemania.
- Collaborate with Eco-Reps and classes on projects.

Food and Dining

Goal #1 – Educate and conduct outreach activities on sustainable food across campus.

- Engage in ongoing outreach to students and community about sustainable foods including regular workshops, supporting student projects, and enabling Farmer’s Markets and farm trips.
 - Year 1 –
 - Dining Services supported fall and spring Farmer’s Market, local farm tour during Staff Development Day, Student tour of Butter Valley Harvest, developed Berg Focus article and participated in student sustainability film project.
 - Dining Services engaged with the Center for Ethics Offset Projects on water conservation.
- Expand outreach efforts and marketing in the area of meatless alternatives including vegan options.
 - Year 1 – Dining Services began weekly meetings with Plant Based Advocates and conducted two samplings of sweet pea burgers and Aztec Burgers, vegan items made in house. Eliminated meat lasagna from menu for one meal in conjunction with Center for Ethics student project.
- Market Muhlenberg Dining Services programs to engage faculty, student, and staff in existing and new sustainability initiatives to increase participation.

Goal #2 - Reduce pre and post consumer food waste, packaging waste, and energy consumption.

- Develop and implement pre-consumer and post-consumer food waste reduction programs at all outlets including catering.
 - Year 1 –
 - Dining Services continued to support Weigh the Waste in the Wood Dining Commons with Enact providing volunteers. Waste data was categorized as liquid, protein, plant-based, and paper.
 - Dining Services supported Food Recovery Network program for leftover foods from Wood Dining Commons and Catering.
- Investigate replacing disposable containers at all dining outlets with reusable containers.
 - Year 1 – Reusable clamshells were expanded to Mule Express, General’s Quarters, Life Sports Center. Dining Services conducted two tabling events at

Mule Express.

- Monitor and reduce non-food waste throughout all Muhlenberg Dining Services operations including working in-house and with suppliers to reduce packaging waste and serving waste.
 - Year 1 - Consolidated purchasing from Edward Don and Office Depot to reduce shipping and packaging.

Goal #3 - Increase proportion of purchases that are sustainable and local.

- Conduct Muhlenberg Dining Services inventory to identify food and beverage purchases that are third party verified for sustainability standards or local and community based each semester.⁴
 - Year 1 – Baseline data has been collected.
- Develop time-based objectives for increasing the proportion of purchases that are sustainable and provide annual reporting for meeting objectives.
 - Year 1 – Baseline data has been collected.

Energy and Climate

Goal #1 - Reduce greenhouse gas emissions.

- Re-evaluate signing the President's Climate Commitment Challenge to limit Greenhouse Gas Emissions.
- Establish goals for reducing greenhouse gas emissions.
 - Year 1 –
 - In 5 years Muhlenberg College will no longer have oil-burning high emission on campus.
 - In 10 years Muhlenberg College will be converted to all LED lights.
- Replace 10% of low efficiency lighting with high efficiency lighting fixtures (LEDs) each year.
 - Year 1 - Taylor, Trumbower, Moyer basement, Ettinger hallways were converted to LED Lights. The Recital Hall, various office space, and Walson Hall were

⁴ See Stars 2.1(AASHE) technical manual for details.

additionally converted.

- Convert residential housing heating systems from oil to natural gas including annual targets.
 - Year 1 – The College converted 6 MILE Houses from oil to natural gas; 2604 Chew St. 2610 Chew; 2604 Chew; 411 23rd; 437 23rd; 439 23rd.
- Reduce energy inefficiencies in academic and administration buildings.
 - Year 1 –
 - Building automation system upgraded;
 - Decommissioned boiler system;
 - Installed Thermostats in MILE houses;
 - Installed high-efficiency burners on Seegers gas burner;
 - Windows replaced in 2216 Liberty, 2251 Liberty, 2315 & 2317 Liberty.
- Complete decommissioning of central steam plant.
 - Year 1 – Central steam plant decommissioned. Project completed.

Goal #2 - Reduce indirect carbon emissions and related impact on natural resources.

- Reduce hot water consumption in laundry facilities.
- Reduce overall student domestic water use.
- Install water meters to enable meaningful feedback on building water consumption.
- Promote reducing individual student car use, increasing efficiency of existing campus shuttle, and using City of Allentown bike share program.
 - Year 1 –
 - Bike share program in City of Allentown inaugurated in October 2018. Zagster bike share station installed. As of 5/28/19 there were 251 trips taken.
 - Students provided with free LANTA bus service and two buses re-routed to pass through campus
- Promote public and/or alternative transportation for campus employees.

- o Year 1 - Employees provided with free access to LANTA bus service as of January 2019.
- Create incentive program for employees who do not drive to work.
 - o Year 1 - Employees provided with free access to LANTA bus service as of January 2019.
- Mitigate greenhouse gas emissions by increasing and/or preserving greenspace and plantings.
 - o Year 1 - The Courts residences were removed and the area was returned to green space.

Planning and Administration

Goal #1 – Identify and incorporate sustainability as a core value, who we are as well as how we behave.

- Incorporate sustainability into foundational College documents such as Master Plan, Board of Trustees policies, Vision/ Mission/ Values statements, Diversity Strategic Plan, Muhlenberg branding, and key policies.
- Engage faculty and staff in programming and workshops to increase sustainability knowledge, engagement, and behavior.
 - o Year 1 – The Office of Sustainability and Plant Operations participated in Earth Day programming.
- Explore ways to invest endowment that are more consistent with sustainability objectives and the values of the College.
 - o Year 1 - The endowment has two investments in ESG funds with one of the funds fossil fuel free for a total in excess of \$10 million.
- Create a Green Office/ Green Residence Hall Certification.
- Include sustainability initiatives in new employee orientation.
- Develop signature behavior change campaigns.
 - o Year 1 - Promise to the Planet, a sustainable behavior pledge developed by the Office of Campus Sustainability. The campaign aims to ensure Muhlenberg community members change their behavior in even a small way, paving the way for larger commitments in the future.
- Convert part-time Sustainability Coordinator position to full-time position.

Goal #2 – Fund sustainability initiatives and projects.

- Create a Revolving Green Fund, using cost-savings from previously financed projects to invest in sustainability projects with a return on investment.
 - Year 1 - Fund of \$500,000 has been created and several investments have already been made.
- Develop funding streams to support class-related initiatives, faculty and student research, and co-curricular projects in startup and operational and maintenance phases.⁵
 - Year 1 - One fund agreement signed to provide support for student research in the area of sustainability.

Goal #3 – Publicize sustainability goals and achievements.

- Invest in marketing sustainability achievements as part of core Admissions information.
 - Year 1 –
 - Admissions team consistently highlights during presentations both on campus and off-campus: "Just Tap It" program, Green Team work during move-in, LEED certified facility, Community Garden, and dining services practices of reusable "to go" containers and tumblers.
 - Admissions team promotes new Sustainability Studies major and minor programs.
 - Admissions team promotes Costa Rica MILA course that has conservationist core.
 - Admissions print communications use Forest Stewardship Council paper.
 - Admissions consciously prints communications in quantities that are needed and guard against over-ordering and wastefulness.
 - Admissions increased digital communication which has minimized number of print brochures.
- Develop sustainability elements in prospective student campus tours.

⁵ See model of Campus Sustainability Incubator Fund.

<https://sustainability.mit.edu/campus-sustainability-incubator-fund>

- Place signs across campus identifying and highlighting sustainability commitments and features.
- Create maps of campus sustainability information.
- Maintain a website including Sustainability Action Plan materials and updates.
 - Year 1 - Sustainability Strategic Plan posted to the Muhlenberg College Sustainability website.
- Other Accomplishments
 - Year 1 – Sustainability publicity and awards
 - Muhlenberg College awarded Gold Rating from Association for the Advancement of Sustainability in Higher Education STARS evaluation.
 - Muhlenberg College received Environmental Innovation Award from the Lehigh Valley Chamber of Commerce in May 2019.
 - Three Articles in the General Press on Zagster Bike Share at Muhlenberg, Earth Day, and removal of straws at Muhlenberg.
 - Four Articles in Muhlenberg Press including Alumni Magazine, overview of Sustainability efforts, Bike Share at Muhlenberg, STARS Gold rating and new Sustainability Studies major.
 - Three articles in Muhlenberg weekly on Bike Share, sustainable fashion, and recycling.
 - Twenty social media posts and Instagram takeover during Earth Week.

Goal #4 – Develop methods and tools to measure progress towards stated goals.

- Collect building energy information to provide accurate and timely feedback into progress towards sustainability goals.
 - Building automation upgrade was initiated for \$70,000.
- Measure staff and faculty sustainability knowledge, engagement and behavior.
- Establish regular reporting on Sustainability Action Plan.