

Muhlenberg College

Sustainable Building Operations and Maintenance Policy

Purpose

Muhlenberg College is committed to providing leadership in sustainable operations and maintenance of its campus, land, buildings and equipment that will align with the goals of the Campus Master Plan and strategic initiative.

Policy Statement

It is the policy of Muhlenberg College to:

- Develop new and undertake major renovations of occupied facilities that would meet or exceed the Certified Rating of the LEED® (Leadership in Energy and Environmental Design) Rating System, when feasible.
- Implement sustainable building principles in all new and existing buildings to achieve measurable life cycle cost savings.
- Support and promote sustainable building principles and operational initiatives, including energy reduction, water conservation and improved air quality.



Initiatives

- **Indoor Air Quality**- The members of the Muhlenberg College community live, work and learn in buildings with a high standard of indoor environmental quality. Paint and finish products used on campus are in compliance with the [College Coatings policy](#). Cleaning chemicals used on campus are in compliance with the College [Green Cleaning standard](#). Reported air quality issues are investigated thoroughly to determine if air and surface sample testing are necessary in accordance with College [Healthy Environment policy](#). The College continues to incorporate the use of carbon dioxide level monitoring in high capacity occupied spaces and monitors for carbon monoxide in all living spaces on campus.
- **Reduce energy** -Building air ventilation systems have methods to reduce unnecessary airflow in times of low occupancy by the use of occupancy sensors, set-back controls, CO2 monitoring and scheduling of VAV airflows through the Building automation systems. All new boiler system installations are installed utilizing the most efficient design criteria by reducing excessive temperatures in the buildings and lowering heating system operating temperatures; They also have the capability to shut down systems completely when not necessary. Existing systems are retrofitted under these same guidelines. Lighting systems include the installation of sensors and controls to detect occupancy and reduce output during

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unoccupied times. Newly purchased campus appliances are Energy Star rated and laundry equipment is CEE Tier 3 or better.



- **Cleaner energy sources-** All heating oil fuel sources are converted to Natural gas as system replacement is imminent or sooner when feasible. The College continues to evaluate the use of renewable energy sources on campus.
- **Protect the Environment-** Muhlenberg College is committed to maintaining its status as a tree and a pending arboretum campus classification. Campus grounds are maintained in compliance with the [Muhlenberg Landscape Design Guidelines](#) by regular maintenance and upkeep of the rain gardens, water retention systems and green roofing. Integrated pest management strategies are followed in compliance with the [Muhlenberg Landscape Design Guidelines](#) and the [Muhlenberg integrated pest management plan](#).
- **Waste Reduction-** The amount of waste materials are reduced by re-using products that are repurposed. Products that cannot be repurposed are recycled in a manner that is most beneficial and conducive for the environment. The College continues to recycle, computers, electronics, batteries, ink cartridges, fluorescent light bulbs, hazardous materials and materials from new construction and internal [Renovation/Maintenance projects](#).
- **Energy Performance-** Building sub-metering is used on electric, steam, natural gas and domestic water, improving building efficiencies and system operations by Benchmarking, Energy audits and retro-commissioning are performed to identify energy-related improvements. A comprehensive [Equipment Maintenance plan](#) is followed to maintain equipment at peak performance.

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- **Water reduction-** All campus buildings are required to have low flow/water saving fixtures to meet or exceed USGBC guidelines. Cooling towers are equipped with automatic chemical and bleed off controls to reduce waste and protect the life of the equipment. The College maintains the use of rain barrel harvesting for its community garden and uses native plantings throughout the campus to reduce the need for irrigation.



Graver Arboretum

- **Outdoor Air Quality-** The outdoor air quality surrounding the College will continue to be improved by the reduction of harmful emissions by converting campus equipment to cleaner fuel sources and by reducing equipment operating times utilizing schedules, temperature set-backs controls and energy recovery systems. Reduction of emissions from vendor and the College owned vehicles is accomplished by compliance and enforcement of the [Muhlenberg College vehicle policy](#) and the [PA Diesel Powered Motor Vehicle Idling Act 124](#).