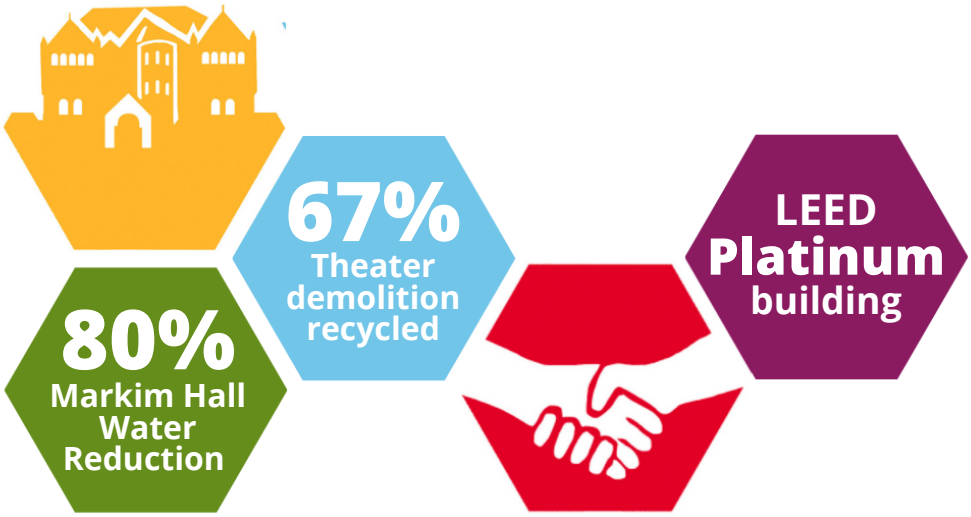
Macalester Sustainability Office

BUILDINGS



Buildings

Buildings in residential and commercial sectors accounted for 40% of the United State's energy usage in 2018. In the 2009 Macalester College Sustainability Plan, the college adopted a goal of incorporating sustainability principles and practices into all construction and renovation projects, thereby reducing Macalester's carbon footprint and demonstrating the college's environmental commitment. As part of the Sustainability Plan, a green building policy was adopted: "All new construction or major renovation must meet the Minnesota B3 guidelines or be designed to at least a LEED silver standard." The plan also outlines mandatory input from community members during large infrastructure changes. The Macalester GIS Sustainability Tour Map includes a "Green Buildings" tab showing where these features are located on campus, and providing more specific information for students and the broader community.

By the Numbers

- Markim Hall reduced water usage by **80%** using **60%** less energy than average buildings built to code.
- **67%** of the 2018 Theater building demolition was recycled and a 130kW solar array was installed over the entire roof of the building.
- The Sustainable Landscaping Master Plan has a goal of reducing turf grass by 60%.

Awards

City of St Paul

2008 – Excellence in Energy Efficiency

LEED

2009 – Platinum – Markim Hall – 1st LEED Platinum building in Minnesota Higher Education

TRANE ENergy Efficiency Award

2010 – Energy Efficient Leader in Education Award Winner

US Department of Energy

2019 – Smart Energy Analytics Award for Innovation Using EIS for a Portfolio

Programs

- **Markim Hall** was the first building in Minnesota higher education to achieve the **LEED Platinum** standard. The building optimizes **daylight**, and utilizes **permeable pavers** and underground **perforated pipes** to help control stormwater runoff. All electrical and on-site combustion footprint emissions are **offset** through Renewable Choice Energy.
- **Leonard Center** rebuild in 2008 sent 93.3% of the 15,171 tons of **demolition waste to reuse or recycle**. Bleachers, lockers, plumbing fixtures, and saunas were reused by local residents and businesses. The Maple Hills Stable Company re-purposed the field house as a horse barn. Sustainability consultants ensured the new building significantly reduced energy usage.
- **Janet Wallace Fine Arts Center** sustainable renovations were completed in 2019. A **daylight sensor** adjusts the building's heat based on solar radiation; two **stormwater-holding areas** filter building and parking lot runoff; large **bird-safe windows** let in natural light; and, roof and window **insulation** improves energy performance.
- The **EcoHouse** is **green-living lifestyle student housing** where residents **test** the effectiveness of new **green technologies**. The 1950's era Ranch-style house has a solar hot water system, a recyclable steel roof, a worm compost bin, and high energy efficiency appliances. Residents also **host events**, skill-shares, and workshops, and develop new ideas for the house. Projects are catalogued on the EcoHouse website.