



CLEAN ENERGY REVOLVING FUND

37 Macalester St - Water Efficiency

Project Overview

The water fixtures in student residence 37 Macalester St. were upgraded to more efficient fixtures in both bathrooms. The toilets were upgraded from 3 gpf to 1.6 gpf; showerheads from 4 gpm to 1.5 gpm and the sink aerators were upgraded from 3 gpm to 1 gpm.

Project Goals

Save water and reduce building operational costs.

Pre-Project Considerations

The Macalester heating Plant has experimented with low-flow fixtures in the past with poor results. Research showed that the fixtures themselves has improved in the last 5 years and that the quality issues were most likely not going to be a problem again. The plumbing system in the building is very old and the plumbers were concerned that if the volume of water moving through the pipes was reduced they would be more prone to clogging.

The Project Process

Students researched low-flow fixtures and had a water usage analysis done by an outside company. Based on the results a financial analysis was done on the cost of the project and the anticipated savings.

Lessons Learned

- The agreement was to install dual flush toilets with an average 1.0 gpf, however there was a miscommunication and the Heating plant installed single flush 1.6 gpf toilets instead.
- A formal memorandum of understanding for the work to be performed needs to be signed between CERF and Facilities Services.

<p>Project Snapshot</p> <p><i>Economics:</i></p> <p>Total Project Cost: \$1,508 Annual Cost Savings: \$1,476 Payback: 1.2 Years</p> <p><i>Environment:</i></p> <p>Annual Water Savings: 260,000 gallons</p> <p><i>Equity:</i></p> <p>No obvious impact</p>	<p>Project Contact</p> <p>Curt Stainbrook, Mechanical Systems Manager (651) 696-6918 stainbrook@macalester.edu</p> <p>Project Participants</p> <p>Justin Lee - student David Schmidt - student Mike O'Connor – Chief Engineer Dave Sheele - Plumber</p>
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