

MURPHY WAREHOUSE COMPANY

GREEN PRACTICES

For more than two decades, Murphy Warehouse Company has made environmental sustainability a cornerstone of its long-term business strategy. Through a comprehensive environmental management system, the company has made significant investments to upgrade Murphy campuses in a sustainable manner including energy savings and power generation, carbon sequestration, pollution abatement, recycling and resource management.

Green Certifications – LEED Gold, LEED Silver, ISO 14001:2004 and ENERGY STAR

Murphy has two LEED Gold campuses and one LEED Silver campus (all are existing buildings) and ENERGY STAR scores of 87, 98 and 99 among them. A perfect score is 100, so Murphy's facilities are ranked among the top two percent. Two more company facilities are currently in the process of earning these certifications. One is targeted for LEED Platinum in 2013 on an existing 350,000-square-foot facility that has been extensively upgraded with this certification in mind. Murphy also has attained ISO 14001:2004 certification, which recognizes organizations that implement and manage an effective environmental management system (EMS).

Murphy's drive toward environmental suitability has effectively made some of its sites carbon neutral at 12.8 percent that of a normal warehouse building – 497 metric ton equivalent CO₂ (MtCO₂e) per year vs. 3,873 MtCO₂e/yr. for an average 460,000 sq. ft. warehouse (average determined with U.S. EPA/DOE ENERGY STAR program calculations for a facility with a score of 50).

Native Prairie Plantings and Carbon Sequestration

In 1994, Murphy installed a native prairie on one of its logistics campuses. Today Murphy has several logistics campuses that feature native prairies, providing both aesthetics and environmental benefits. All together, the company's 14 acres of native prairie have led to carbon sequestration of 24.93 MtCO₂e per year, with its 732 tree plantings sequestering an additional 117.1 MtCO₂e per year – in other words, 5.1 million pounds of carbon have been captured and recycled by the company's landscaping over the last 16 years.

In addition to the environmental benefit, native prairies provide a strong ROI, considering that lawn maintenance can cost more than seven times that of native prairie maintenance. At one Murphy campus, it costs \$4,240 per year to maintain 6 acres of prairie versus \$21,650 per year to maintain 4.2 acres of lawn. The ROI is a striking 1.28 years. All told, Murphy has saved nearly \$1 million over the past 16 years.

Stormwater Management

The \$580,000 stormwater management system on the Murphy Minneapolis headquarters campus is so efficient that 97 percent of stormwater is now retained onsite (vs. 95 percent or more running off-site before the project), leading the company to no longer pay the city's \$68,000 stormwater fee. This system includes the installation of holding ponds, retention basins, rain gardens and native prairies. These systems improve water quality and recharge ground water. The system is regarded as a model by the Minnesota Pollution Control Agency and is regularly visited by engineers and university environmental classes. The system will meet a seven-year ROI.

While the stormwater management systems' rain gardens and retention basins capture and improve water quality, the campus' prairie and tree plantings increase the system's efficiency and help purify and return water to the ground. One mature deciduous tree alone can hold nearly one inch of rain in 24 hours; considering that 90 percent of Minneapolis storms generate just over one inch of rain, one tree can make a huge impact in stormwater management.

Solar

Murphy has installed a 320 kilowatt system consisting of Minnesota-made solar panels and power systems at five of its logistics campuses. Today, Murphy is the fifth largest generator of solar energy in Minnesota and just one of two in the top ten that are private companies (the rest are public facilities). This is enough energy to meet the annual power needs of 42 homes in Minnesota, and from a carbon standpoint, it keeps an additional 320 MtCO_{2e} annually out of the environment that would be generated by a traditional power plant.

The solar arrays on two warehouse buildings take up less than two percent of roof area in square feet, yet generate more than 50 percent of power used. Through a series of federal, state and local energy company incentives, the company's investment in solar energy will be recouped in just four years.

LED Lighting

Murphy has upgraded lighting systems at its logistics campuses in favor of more energy efficient technology, including LED lighting. Known for its unparalleled energy efficiency and versatility, LED technology is ideal for use both inside and outside the warehouse.

Murphy's 350,000-sq.-ft. Eagan, Minn. logistics campus is fully lit with LEDs, making it the largest building in the Midwest equipped with LED lighting. The exterior lighting also is unique, as the exterior LEDs are designed to operate at 20 to 25 percent luminosity at night. In the event of a driver arriving for a nighttime pick-up or delivery, or an intrusion at the site, the motion sensors bring the lights up to 100 percent.

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