

Pillar I: Reduce Environmental Impact and Costs
Nominee: The School District of Palm Beach County, Florida



The Palm Beach County School District is committed to reducing environmental impact and costs through numerous programs including the District's 2009 directive to meet LEED Silver-certification level (minimum) for all new construction and modernization projects.

On May 6, 2009 the School Board formally adopted the Energy and Water Use Conservation Policy # 7.196 (<http://www.schoolboardpolicies.com/p/7.196>) that mandated LEED compliant construction and other cost savings measures such as the use of U.S. Environmental Protection Agency's (EPA) – Energy Star rated mechanical, electrical equipment and appliances. Portions of EPA's EnergySmart Schools program were implemented and thermostat and HVAC temperature settings were standardized using the District's web-based Energy Management System (EMS). Resource Conservation Coordinator positions were created to conduct un-announced nighttime visits of District facilities for assessment of energy usage and compliance with energy-savings initiatives.

Since the LEED construction initiative was adopted by the District, seven LEED-certified schools and one Florida Green Building Coalition-certified school have been constructed. In 2008, Pine Jog Elementary (the 1st K-12 LEED Gold-certified school in the state of Florida) was constructed on the site of Pine Jog Environmental Education Center, on a 150 acre nature preserve and has since been recognized as a showcase environmental construction project. Galaxy Elementary, currently under construction, is projected to become Florida's 1st Platinum-certified public school.

Recent analysis by the utility manager has documented a 31% reduction in energy use when comparing the District's LEED vs. non-LEED schools. District construction-cost analysis comparing a LEED vs. a non-LEED school that were both constructed during the same time period indicate essentially equivalent total costs (LEED = \$179 cost/SF vs. non-LEED = \$180 cost/SF).

The District is also currently piloting LEED - Existing Building Operations and Maintenance (EBOM) certification at Heritage Elementary. As an existing school, the EBOM process will identify energy-savings opportunities and has already resulted in immediate improvements by the addition of water-savings devices. The school's mechanical system is currently being evaluated and optimized by maintenance staff and a certified test and balancing contractor. Once proven successful, the District plans to expand LEED-EBOM to other existing schools.

Other cost-savings measures employed by the District include an Energy Incentive Program which returns a percentage of yearly energy savings back to schools that earn the distinction of

energy-conservation “Top Performers” or meet energy-reduction targets. For the past two years, schools have received thousands of dollars in cash energy awards which they can use to reward conservation program participants and further enhance the sustainability of their campuses.

The Palm Beach County School District was one of the first in the nation to employ a full-time Sustainability Coordinator charged with developing and overseeing conservation initiatives such as the District’s robust recycling program which minimizes waste generation and reduces disposal costs and fees. The Waste Reduction, Materials Reuse, and Recycling Policy # 7.197 (<http://www.schoolboardpolicies.com/p/7.197>) set a target rate of 25% and the District’s efforts currently stand at 22%. Recycling program savings have reached \$600,000 per year in direct and in-direct savings by using fewer and smaller trash dumpsters among other measures. Additional improvements include:

- The District has completed a number of re-lamping projects that have replaced older, less-efficient bulbs with new, energy-efficient models that not only reduce District energy costs, but improve classroom lighting.
- A new “green-cleaning” program was established that utilizes fewer cleaning chemicals thereby reducing procurement and equipment costs with the added environmental benefits of less-toxic cleaners.
- The District has implemented an Integrated Pest Management (IPM) program to reduce the use of harmful chemicals which are put into our classrooms and the environment.
- Nighttime custodial practices were also altered by instituting “team cleaning” concept. Under this approach, only 20% of the campus buildings are cleaned at a time while the remaining sections remain de-energized. All EMS-controlled exterior school lighting is shut down at night.
- The District’s Information Technology Division instituted an after-hours forced shut-down of computer equipment including monitors in many cases.
- The School Board - Energy and Water Use Conservation Policy # 7.196 (<http://www.schoolboardpolicies.com/p/7.196>) also requires the purchase of the most fuel efficient vehicles available to save fuel costs and reduce the District’s carbon footprint. The Transportation department has a robust recycling program that collects used-oil, used-oil filters, antifreeze and scrap metal from obsolete or damaged vehicle parts.
- The District has adopted the School Bus and Heavy-Duty Diesel Vehicle Idling Reduction Policy # 2.24 (<http://www.schoolboardpolicies.com/p/2.24>) to reduce vehicle idling in order to minimize the production of carbon monoxide and protect our clean air.
- The District has adopted the use of waterless urinals as both a water and cost savings measures.
- The District modified lease agreements to reduce HVAC costs by restricting after-school and summer break activities to smaller school-center buildings with appropriately-sized HVAC equipment.
- The District has over twenty (20) LEED-accredited professionals currently on staff.
- Establishment of a District-wide “Green Team” and “Green” website to create and monitor environmental and conservation initiatives. A green newsletter, *Recycling Matters* is also regularly published.
- Control and monitor real-time temperature, relative humidity and exterior lighting using the District’s web-based Energy Management System (EMS).
- Fluorescent light-bulb and other mercury-containing electrical device recycling program.
- District in-house commissioning team that audits mechanical, electrical and technology systems for new and existing facilities.
- Partnership with Florida Atlantic University for creation and participation in the Green Schools Recognition Program.

Since 2008, **the District has reduced overall electrical expenses by \$11 million** even as new buildings and square-footage has increased. The School District of Palm Beach is continually seeking new products or developing innovative programs to both reduce both energy costs and the environmental impact of operations. District leadership has shown a deep commitment to being environmental stewards and conducting District operations to the benefit of all stakeholders including students, parents, staff and the community-at-large.