

Green Improvements at Stone Lab

As part of an overall commitment to a healthier environment, Ohio Sea Grant and Ohio State's Stone Lab are implementing green energy and water-saving measures at their facilities on Gibraltar and South Bass Islands. In addition to reducing energy consumption and associated costs for the facilities, these green technologies will create excellent opportunities for research, education and outreach programs at Stone Lab.

Solar Electricity

Ninety photovoltaic panels have been installed on Gibraltar Island, providing for 10-25 percent of the lab's electricity needs and demonstrating eight different solar set-ups. Some of the panels around the solar pavilion are adjustable to demonstrate how the angle of sunlight on the solar cells can impact energy production.

The solar pavilion is also a stop on Gibraltar Island tours, and because the panels face downtown Put-in-Bay on South Bass Island, 800,000 summer tourists a year can see the solar power set-up.

A solar technology curriculum was created in 2017 to bring solar energy knowledge to middle and high school classrooms via hands-on activities and Nearpod presentations. The lessons are available as free downloads at ohioseagrant.osu.edu/education/resources.



Solar Thermal

Three panels of solar thermal tubes were added to the dining hall roof and now heat all of the water needed for the cafeteria. The dining hall not only uses the most hot water, especially when classes are in session, but the building also turned out to be the location with the best light for a solar thermal project.

Water Conservation

Ohio Sea Grant updated buildings on Gibraltar and South Bass Islands with low-flow toilets, showerheads and faucets, saving thousands of gallons of water each year.

Recycling and Composting

Stone Lab recycles 40 cubic yards of cardboard, plastic, glass and metal per year, and composts food waste from the dining hall for onsite landscaping. This not only keeps valuable materials out of landfills, but also lowers waste removal costs.

Small Improvements Add Up

- Incandescent light bulbs were replaced with compact-fluorescent bulbs.
- Building insulation was added or improved to save on heating and cooling costs.
- The roofs of eleven buildings were replaced with lighter-colored materials, which helps keep buildings cooler in the summer and reduces the need for air conditioning.
- The lab's small boats were upgraded with EPA 3-star rated, cleaner-burning engines.
- Windows in several buildings were replaced to improve energy efficiency.