Millbrook Marsh Nature Center, State College, Center County

Site Context

Millbrook Marsh Nature Center, operated by the Centre Region Parks & Recreation Authority (CRPR), is a 62-acre site consisting of a 12-acre farmstead plus an adjacent 50-acre wetland area. The Nature Center was established in 1997 through cooperative efforts of CRPR, Centre Region Council of Governments (COG) and Penn State University (PSU).

Project Overview

PSU and CRPR jointly refurbished the 1850’s bank barn and several outbuildings which help to maintain the history of the site. These spaces are now used to host programs, rentals, and also house staff offices. Marsh and fen habitats form the 50-acre wetland which is held in a Conservation Easement between PSU and ClearWater Conservancy of Central PA (CWC). Located adjacent to the PSU campus, faculty and students use the site as an educational and research tool to study wildlife, stream restoration, riparian buffers, water quality, and other environmental and ecological related sciences.

Sustainable Practices

Water - Bathgate Springs, Thompson Run, and Slab Cabin Run are three high quality streams that converge on the 62-acre property. Upstream of the Spring Creek confluence, the Marsh has a large buffering influence on water quality and runoff rates seen downstream. In addition to buffering, the natural wetland ecosystem prevents flooding of the surrounding residential areas and businesses during storm events. Crossvanes were constructed in Slab Cabin Run to further improve fish habitat and reconnect the floodplain with the stream. Areas of the marshland, including riparian buffers, have been restored and enhanced to protect the water resources and reduce effects of erosion from local urban runoff sources. These riparian areas are in compliance with the College Township Stream Buffer Ordinance to protect the high quality streams. The Centre Region MS4 storm water monitoring group, including the local municipalities and PSU, monitor storm water that enters the site. Rain gardens, swales, permeable trails and permeable parking surfaces are found on the farmstead to promote infiltration. Water collected in rain barrels attached to the barn downspout is used to water native landscaping on the farmstead section of the nature center.

Natural Landscaping - All vegetation management at Millbrook Marsh focuses on conserving and restoring the entire parcel, including management of invasive species. The farmstead has a native pollinator garden and several small native gardens. In addition, the Nature Center offers a Remembrance Tree Program, where community members donate funds for a tree they select from an approved list to be planted at the nature center. A network of boardwalk pathways were constructed through the Marsh to minimize the impact of visitors by guiding their experience to remain on designated walkways. The boardwalk project took place from 2002-2009.

Materials Selection and Construction - The Spring Creek Education Building was opened in 2011 and is a four-season facility that provides year-round space for visitors and educational programming. Local fundraising efforts and grants from PA DCNR raised over $1 million for the Phase 1 construction of the building. LEED Silver Certification was awarded to the building for following sustainable construction practices and including sustainable features. The facility is located on a pre-disturbed area of land. Almost 100% of the construction materials was diverted from a landfill by utilizing recycled and repurposed materials. Additional features include a geothermal heating and cooling unit and a bio-retention area which collects rainwater that is diverted from the roof. The site also includes the newly-constructed, crushed stone parking area,
Sustainable Practices Cont.

supported in part by funding from PA DCNR. Green design in the parking area includes permeable surfaces, rain gardens and swales to assist with potential runoff during storm events.

Connect People to Nature - The Nature Center is open year-round and has thousands of visitors every year. Nearly 13,000 visitors attending organized programs in 2015. The wildlife observation areas along the trails and boardwalk provide visitors with a view of nature without disturbances. Pathways through the native pollinator garden allow an up-close look at the native plants and numerous species of pollinators. The garden was designed, planted and is maintained by volunteers and a local Girls Scout troop. In 1999 Millbrook Marsh was awarded funding from US EPA for wetland program development which now involves students from six different school districts, plus community groups, private schools and charter schools. Since 2000, ClearWater Conservancy’s Connections Grant Program has provided schools the opportunity for hands-on outdoor wetland and watershed education. The Connections Program has funded a total of 23,000 students to attend educational programs at the Nature Center. Additional community offerings include nature-based programs for preschoolers, scouts and school age children; guided nature walks and educational workshops for adults, specialty summer camps and community events.

Operations and Maintenance - Maintenance of the property takes a minimalistic approach. CRPR staff follow a regular maintenance plan. Mowing is limited only to certain pathways that lead to the boardwalk and to small gathering fields around the farmstead. On-site composting is used for landscaping and also decreases waste disposal. Rainwater collection systems reduce the need for irrigation. In addition to the geothermal unit used for heating and cooling the Education Building, motion sensors, dimmer switches and timers for lighting are energy-saving measures that result in cost-savings for the Nature Center.

Environmental Stewardship Messaging - Thanks to the long-term cooperation of five municipalities, CWC and PSU, Millbrook Marsh Nature Center has been serving its mission and growing since 1997: To educate and inspire people about the natural world, and to instill a passion for the environment through science, history, culture and art. Eleven interpretive signs placed along the boardwalk and trails provide visitors with a self-guided educational tour about native flora and fauna found in the marsh, environmental stewardship and natural processes. A special brochure is available for visitors to explore the LEED-Certified education building on a self-guided walk. Stewardship messaging is also incorporated into group programs that meet the PA Dept. of Education Academic Standards, including afterschool lessons designed for the Eco-Explorers program that reach approximately 300 students a year. The CRPR Spring Spruce-up Day and the United Way Day of Caring volunteer work day events are held annually where community groups assist with management projects such as litter pickup in the marsh and streams, trail maintenance using hand tools, invasive species removal and native plantings.

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For more information

Centre Region Parks & Recreation Authority
http://www.crpr.org/

Millbrook Marsh Nature
http://www.crpr.org/Millbrook/MMN C-Menu.html