

Lehigh Valley Greenways Conservation Landscape SUCCESS STORY

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Lafayette College Fisher Quad Bioretention Area (2016)

SUMMARY

The project replaced a 60-foot diameter compacted lawn with a multipurpose stormwater bioretention area on the Lafayette College campus. The project serves to (1) reduce runoff to Bushkill Creek from campus, (2) provide pollinator habitat through the use of native plants and shrubs, (3) incorporate signage to educate the college community about stormwater runoff and pollinator decline, and (4) provide a site for student research on green infrastructure and local ecology. Plant materials were provided by a grant from the Lehigh Gap Nature Center, Landscaping for Communities and Wildlife Program. Students and faculty installed the plants and maintain the site with assistance from Facilities Operations staff.



CHALLENGE

Most of Lafayette College's campus is situated on a steep hill adjacent to Bushkill Creek. Large volumes of runoff from campus are untreated and discharge directly to the creek. The chosen site at Fisher Quad is one of the best stormwater opportunity areas on campus and it is in a highly visible location. It will intercept some of the stormwater and sediment that current runs down Sullivan Road to the stream. Although most of Bushkill Creek is classified as a High Quality Cold Water Fishery, the section of the stream below campus is impacted by bacteria, erosion and sedimentation from urban runoff, and invasive plant species. The project will serve as a pilot site for how green infrastructure on our campus can provide both stormwater management and aesthetically-pleasing habitat improvement. Important factors in plant selection include seasonal aesthetics on a campus setting, moisture and sun conditions, salt tolerance, deer resistance, and rooting depth.

FUNDING

Grant Award:
\$2,300.00

Match:
\$9,518.00

Total Project Cost:
\$11,818.00

PARTNERSHIP IS KEY

This project was completed through the volunteer efforts of students, faculty, and staff of Lafayette College, and funding from the Lehigh Gap Nature Center, Landscaping for Communities and Wildlife Program. The project was undertaken in partnership with Bushkill Stream Conservancy in their efforts to improve the lower Bushkill Creek water quality.

LAFAYETTE
COLLEGE



SOLUTION

Students in the spring 2016 Water Quality course did site investigations and conceptual planning for the project, including determining the watershed contributing area and initial selection of plant materials. It was determined that the existing soil was highly compacted and poorly drained and would need to be excavated. In October 2016, with the assistance of Lafayette Facilities Operations the site was excavated and the soil was replaced with an organic soil mix, and seeded with a cover crop. Final plant material selection and planting design was completed in consultation with Kate Brandes of Lehigh Gap Nature Center and Jeff Weed, Head of Grounds Maintenance and Landscape. The site was planted by Environmental Studies students, faculty and staff in two phases in April and July 2017. Mulch was added by Facilities Operations staff.

RESULTS

The 2500 square foot site was planted with 50 plugs each of little bluestem, amsonia, alumroot, false indigo, green & gold, butterfly milkweed, wild bergamot, as well as shrubs such as winterberry holly, ninebark, and sweet pepperbush. Ongoing maintenance (weeding, watering, mulching, debris removal) will be shared by student EcoReps, faculty and staff associated with the office of Sustainability, and Facilities Operations. Temporary signs were installed at planting time by environmental studies students and permanent signs emphasizing green infrastructure stormwater management and ecology are currently under development.

Contact



www.LVgreenways.org

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Photos illustrate conditions before (1) and during construction and planting (2 – 4) at the site