RUTGERS UNIVERSITY

Rutgers University Cook/Douglass Stormwater & Landscape Management Master Plan

New Brunswick, New Jersey

Wetland assessment of campus

A holistic approach to campus master planning enhances a University's green infrastructure and protects its ecological resources for the future.

Biohabitats developed a Stormwater and Landscape Management Master Plan (SWLMMP) for the Cook/Douglass campus of Rutgers University, utilizing the same holistic, ecosystems-based approach that it employed to successfully develop SWLMMPs for two other Rutgers' campuses.

The Biohabitats team began by developing a sound understanding of the existing ecological conditions, which included GIS basemap analysis of existing topographic, geologic, soil, and watershed data. The team then conducted field assessments to gain an understanding of current green infrastructure resources and further opportunities for on-campus stormwater management.

To conduct a thorough watershed assessment, Biohabitats divided the Cook/Douglass campus into six major drainage basins or catchments, based on their unique discharge points. Various storm events were modeled for each catchment in order to understand how stormwater flow of different magnitudes occurs throughout the campus. In the field, the Biohabitats team examined existing conditions and identified opportunities for the implementation of stormwater management techniques, such as constructed wetlands, bioretention, and biofiltration swales.

Following the field assessments, the Biohabitats team was able to explore opportunities to enhance and integrate these assets throughout the campus while providing the highest level of water quality and quantity controls. Biohabitats worked closely with a separate team of planners looking at campus wide facilities improvements to ensure that landscape and stormwater opportunities and needs were recognized and incorporated into the facilities master plan update.

Inherent in Biohabitats' master planning approach for the Cook/Douglass campus is the focus on green infrastructure and the need to protect, enhance, or create functional or "working" landscapes that demonstrate and embrace the manner in which water serves as a resource. For this reason, the overall planning approach for this project focused on conservation, restoration, and retrofitting that results in sustainable landscape and stormwater management for future development. Biohabitats identified principles and techniques that could be applied throughout various University settings, yet were specific enough to reflect the unique ecological characteristics and opportunities on the Cook/Douglass campus.

SERVICES

Inventory & Assessments
Planning
Design
Green Infrastructure
Policy

conservation planning
ecological restoration
regenerative design

Physiographic Province
Piedmont

Bioregion
Hudson River

Watershed
Raritan

Biohabitats
HUDSON RIVER BIOREGION

800.220.0919
www.biohabitats.com