CUYAHOGA SOIL & WATER CONSERVATION DISTRICT

Stormwater Retrofit Reconnaissance Support

Cuyahoga County, Ohio

above: Concept plan of one potential retrofit project; top right: Photo of initial conditions; bottom right: Simulation of conditions after construction

The first stormwater retrofit inventory of its kind in northeast Ohio led to the identification of over 200 potential projects to improve water quality and habitat.

With nearly 90% of its land area considered developed, Cuyahoga County is the most urbanized county in the state of Ohio. Because most of its development occurred before any state or local stormwater management regulations were in place, the County suffered widespread water quality and habitat degradation, especially in headwater stream systems.

Abram Creek, Baldwin Creek and Euclid Creek are archetypical northeast Ohio urban watersheds in that they exhibit degraded channels, poor water quality, and impacted biota, which may be largely attributed to unmanaged stormwater runoff. Under a grant from the National Fish and Wildlife Foundation, Cuyahoga Soil and Water Conservation District (SWCD) is collaborating with Biohabitats to advance restoration in these watersheds by identifying locations where stormwater Best Management Practices (BMPs) can be retrofitted into the built landscape.

To kick off the project, Biohabitats taught a full-day workshop on stormwater retrofitting basics, desktop analyses, and field investigations for local watershed coordinators, SWCD staff, and state and local government representatives. Biohabitats then developed a desktop analysis framework that was used by SWCD staff to identify potential stormwater retrofit locations on commercial, industrial, and institutional lands across the three subwatersheds.

A subset of the 200+ publicly and privately owned parcels were visited by Biohabitats and Cuyahoga SWCD staff to investigate the feasibility of retrofitting the existing landscapes and drainage systems with stormwater BMPs. After developing field concept designs, Biohabitats facilitated a work session with watershed stakeholders and municipal staff to develop a ranking and prioritization scheme for the stormwater retrofit opportunities. The project also includes the development of concept designs for four stormwater retrofits. Ultimately, comprehensive stormwater retrofit inventories will exist for the three watersheds and demonstration stormwater retrofit projects will be implemented.

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