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Stormwater Management and Residents Perceptions

College of Sciences and Health Professions

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Abstract

Stormwater runoff is a major problem in many residential municipalities. Rain water washes pollutants and chemicals off of streets, driveways and lawns. Stormwater management practices help filter out harmful particles before they enter into our water ways. The goal of this project was to assess green infrastructure stormwater practices throughout Cuyahoga County. We assessed 165 sites in over 10 cities in Cuyahoga County. We examined bioswales, bioretention basins, and rain gardens. Sites were visited in late May through early June and revisited in mid-July to early August. We compared spring condition of plants and gardens and recorded resident's perceptions whether positive or negative. We found residents are often unfamiliar with the purpose of rain gardens and bioswales, and why certain plants were planted. Improper care and maintenance results in loss of beneficial plants and provides an avenue for invasive species. Aesthetics are also issue for some residents who view them as weedy and unkempt. We created a project survey to study resident perception of stormwater management. One positive finding was that many cities, companies, and institutions are using green infrastructure in stormwater management. These practices can work if properly maintained, however resident input and education is important for local acceptance.