

Cistern and planter box monitoring in Camden, NJ revisited

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The Camden County Municipal Utilities Authority installed green infrastructure Stormwater Control Measures at multiple locations around the city of Camden, NJ. The Stormwater Control Measures include raised downspout planter boxes and cisterns. EPA is monitoring a subset of the locations to document the performance of individual Stormwater Control Measures. The selected monitoring sites include two sets of raised downspout planter boxes and five cisterns. These Stormwater Control Measures are being monitored: to investigate their hydrologic performances, to document water consumption patterns of cisterns for a better understanding of the supply and demand relationship, and to analyze cistern water quality. The continuous electronic monitoring devices included time domain reflectometers, rain gauges and pressure transducers. EPA decided to monitor these Stormwater Control Measures for three years and second year monitoring is ongoing. Monitoring data present the internal water flow patterns and media saturation frequency of the raised planter boxes and the capture ratio, water use patterns and water quality analysis of cisterns. Second year monitoring shows larger capture ratio for cisterns compared to the first year data and higher metal concentration at one site. The high metal concentration was later resolved by flushing the cistern and resampling. The presentation will summarize the comparison between first and second year data, providing results from the monitoring of raised downspout planter boxes, water use, and water chemistry analyses.