

## Clayton Mulch Project

City of Clayton, Missouri



The City of Clayton wanted to treat the stormwater runoff from the City mulch pile using stormwater best management practices. The objective was to reduce the effluent tannins and acidity, while reducing odors caused by the effluent in receiving streams. The City retained Intuition & Logic to design a stormwater treatment facility to improve the water quality of the site runoff.

Based on laboratory results, treatment from a bioretention cell with an amended soil media was determined to be the most cost effective solution to treat the mulch pile effluent with regard to the pH, tannins and nutrients (nitrogen and phosphorus). Based on the existing drainage areas, three bioretention cells were sized and located to capture and treat the water quality volume. Each cell was designed with a 3-inch layer of mulch, 2.5 feet of amended soil and a gravel layer with underdrains. Flood flows and treated effluent is then routed from the cells to the City's existing stormwater infrastructure. A planting palette of native grasses and wildflowers, selected for their hardiness and pollutant removal abilities, will integrate the bioretention cells into the surrounding landscape.

