

# SPUI Bioretention Basin

**Project Location:** Burlington Pike & North Bend Road Interchange

**Watershed:** Woolper Creek

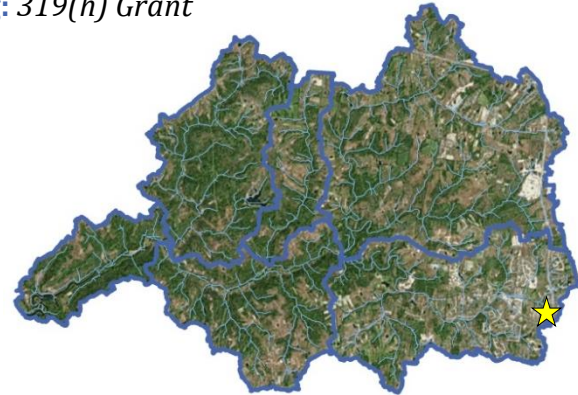
**Drainage Area:** ~2.7 acres

**Funding:** 319(h) Grant

**Description:** As one of the first implementation projects for the Woolper Creek Watershed Plan, this ~10,000-square foot bioretention basin provides channel protection and water quality to the headwaters of the Allen Fork subwatershed. The stormwater BMP manages runoff from a highly impervious SPUI (Single Point Urban Interchange).

## Project Highlights:

- The bioretention wetland cell includes a low flow channel with an armored spillway, three small riffles, and an armored outfall.
- Bioinfiltration filter cleanses the stormwater runoff and the underdrain includes a cleanout pipe for ease of maintenance.
- Spillway armoring protects the basin from erosive flows.
- Modeling indicates the 100-year storm will be released below the critical flow for bed material mobility ( $Q_{critical}$ ).

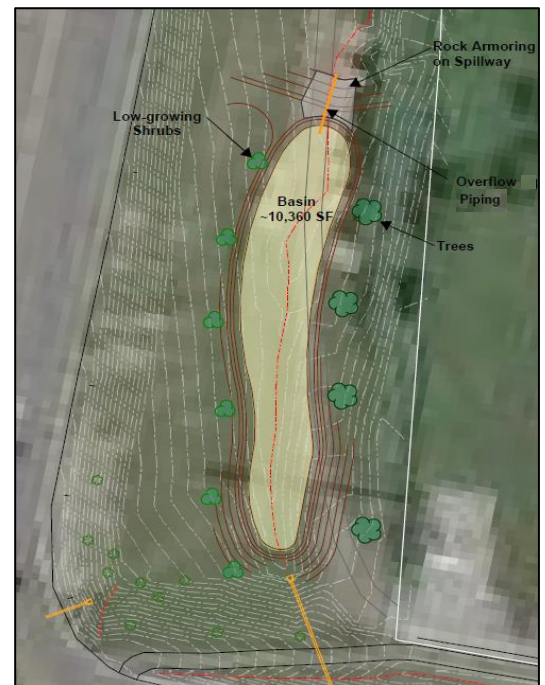


## Pre-project Conditions:

Two outfalls drain stormwater runoff from the SPUI to a conventional stormwater swale in this large, unused open area in the highway right-of-way.

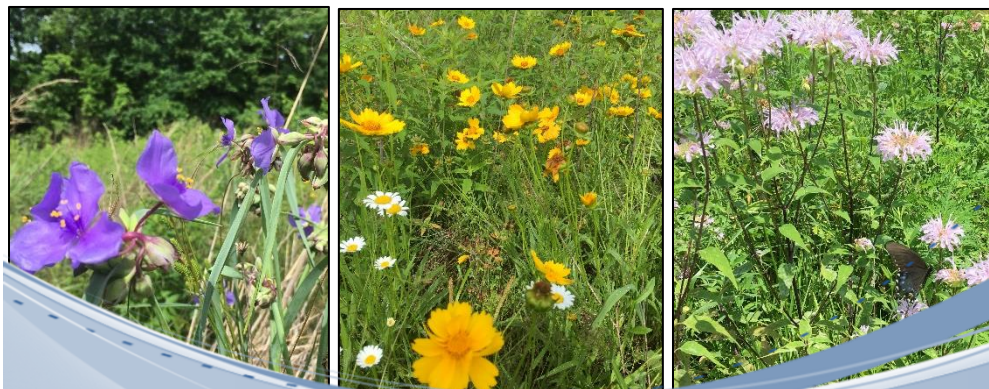
## Construction:

Construction completed in summer of 2017.



## Native Wetland Vegetation:

Proposed wetland vegetation will provide habitat while also beautifying the area surrounding the bioretention basin.



## Concept Plan:

The concept plan illustrates approximate size of the proposed bioretention basin.