

# BMP Project Fact Sheet

## Bio-infiltration Islands

Princeton Hydro was contracted by Rowan University to provide design services for the construction of a stormwater retrofit in one of the University's main parking areas. The existing parking area was constructed prior to the implementation of current stormwater management requirements. Consequently, the original construction of the parking area did not contain any stormwater flow or water quality control measures. The uncontrolled runoff was creating impacts to existing infrastructure and severe streambank erosion on nearby Mantua Creek.

Under the previous conditions, the series of stormwater inlets created large areas of nuisance ponding due to significant portions of runoff which bypassed existing inlets.

The retrofit system was designed in a manner which did not require major infrastructure modifications. Runoff inflow to the bio-infiltration cells and overflow occurs via a series of curb cuts along each cell. The site's compacted soils were replaced to a depth of two feet. Princeton Hydro designed a custom planting plan which focused on native vegetation ideally suited for the unique hydrologic conditions expected in the bio-infiltration cells.

The system relies on a series of curb cuts along the side of the islands to provide inflow and overflow for each individual cell. Flows in excess of the storage capacity bypass each cell and move downstream to the next or into the existing stormwater collection system.

The maximum depth below the curb line does not exceed 18" and provides for a subtle cross slope. The maximum depth of ponding in any of the cells is limited to six inches.

The bio-infiltration cells are divided by earthen check dams to account for the natural slope of the parking area and the design provides dedicated locations for pedestrian crossing.



### Did you know...

*These islands required no major infrastructure modifications.*

### Contact Information

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