

Dakota County Burnhaven Library Retrofit



Project: Two 1,000 square foot bioretention cells provide water quality treatment for the first ½ inch of runoff from approximately 1.89 acres of parking lot. The grass turf areas surrounding the cells provide for snow storage and pretreatment for snowmelt and stormwater runoff .



Before



After



After

Funding:

Total Project Cost	\$ 74,844
Clean Water Fund	\$ 46,194
Landowner	\$ 28,650

Location:

Burnsville
Minnesota



Practice:

Stormwater Retrofit
(Bioretention)

Project Benefits:

Runoff volume reduction
Reduction in Sediment and Phosphorus

Partners:

Minnesota Board of Water and Soil Resources
Dakota County

Watershed:

Minnesota River

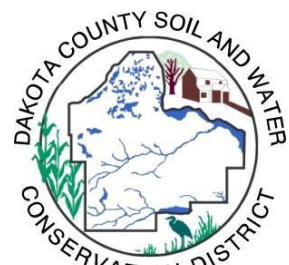
Construction:

2011

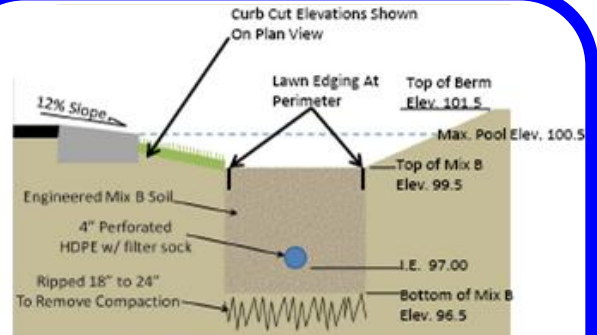


*Clean Water Fund:
Protecting and restoring
Minnesota's waters
for generations to come.*

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Unused parking was removed to reduce impervious area and provide bioretention cell locations.



The insitu soil was replaced with 70% coarse washed sand and 30% leaf litter compost mixture



All equipment operated from outside of the cell to avoid construction compaction. A 4" gate valve allows for management of the flow rate and volume of treated stormwater discharged through the subdrain system into an existing catch basin.



The permeability of the underlying soil within the cell was improved by loosening with a toothed bucket and mixing with Mix B soil.



Turf sod was installed to minimize erosion and potential sediment contamination of the Mix B while inslopes were final graded. The boulders will prevent snow storage within the cell.



Curb cut elevations limit pool depth to 12 inches and provide gutter flow bypass high flow events. Native Dwarf-bush Honeysuckle, Black Chokeberry and Redosier Dogwood shrubs, lawn edging, a 3 inch layer of shredded wood mulch complete the cell.