

Excelsa Health Frick Hospital – Water Quality Basin

Design Features: Retention basin, water quality forebay, circuitry berm, water quality micropool, structural energy dissipaters.

Date of Installation: 2013

Location: Excelsa Health Frick Hospital, Mount Pleasant Borough, Westmoreland County PA

Client: Excelsa Health Frick Hospital, Mount Pleasant Borough

Installation cost: \$140,000 from PA DEP Growing Greener / EPA 319 funds

Partners: Westmoreland Conservation District, McCormick Taylor Engineers, Excelsa Health Frick Hospital, Mount Pleasant Borough, Custom Contracting Inc.

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Project Description

This project is a stormwater management retrofit to capture and treat stormwater from a 14 acre hospital campus. Pollutants and runoff were being discharged directly into adjacent unnamed tributaries of Jacobs Creek. An undeveloped 1-1/2 acre area on the hospital property was used to install a water quality detention basin including a forebay, circuitry berm, and micropool. The system captures and retains stormwater runoff from the hospital parking lots and building, reducing the volume of runoff and providing water quality improvements. Additional green space and landscaping was provided along the perimeter of the basin project.

Benefits/Performance Measures

Impervious area managed: 12 acres

Stormwater reduction performance analysis: Runoff from a 2" storm event on the 14 acre site is fully managed by a retention basin which captures and treats 72,000 cu/ft total runoff.



The water quality retention basin includes a forebay with an underdrain outlet to the main basin, a circuitry berm to extend the flow path and a micropool at the outlet riser.

Community and economic benefits that have resulted from the project: The water quality basin provides catchment for stormwater runoff and pollutants, provides cooling for heated runoff, and provides volume reduction and water quality improvements to the Jacobs Creek Watershed in an area where little currently exists.

Related information: The project costs included clearing, temporary stormwater bypass pipe, erosion controls, basin construction, access road, stabilization.

Recommended Maintenance

Link to maintenance guidelines for similar projects

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Additional Information



Water quality basin micropool at outlet riser allows pollutants to drop out before leaving the basin



Water quality basin forebay captures the first flush of stormwater runoff and allows the 2 year storm to infiltrate. A 'T-outlet' energy dissipater removes erosive velocity before it enters the forebay.