

SITE 2

- Total Nitrogen 51 %
- Metals (copper and zinc) 99 %
- Bacteria No Data

Operation and Maintenance: The Chester County Conservation District considers infiltration trenches to have moderate maintenance requirements. Operation and maintenance requirements include the following:

- During construction, infiltration trenches should not be installed until disturbed areas are stabilized to avoid premature clogging by sediment.
- Initially, inspect frequently, including during and after storm events, to ensure the trench is draining the site as expected. Inspect regularly thereafter. (Check for pooling water, indicators of erosive activity, clogged rock filter (accumulated dirt.)
- Keep trench free of leaves, grass clippings, and debris.
- Clean or replace top six inches of stone above the geotextile fabric when clogged or dirty.
- Maintain designed trench grade.
- Avoid depositing plowed snow on the trench since when frozen, the frozen snow and ice would prohibit infiltration and contribute to local drainage back-up and flooding.
- Sources estimate a five-year life span for infiltration trenches that do not have pretreatment components (i.e., biofiltration swales, inlet filters).

Cost Factors: Infiltration structures are generally considered a costly BMP; their maintenance costs contribute to the cost of this structure. One factor that limits its cost is its low land requirements compared to surface storage structures that consume large tracts of land. Infiltration trench construction costs can be lessened by integrating their design to take advantage of existing or natural drainage ways, which can reduce excavation and grading requirements. Trenches can generally be integrated into site design in a more flexible manner than a typical basin, which again helps control their construction costs.

Other Site BMPs

Paver Blocks are used for a portion of the parking lot at this site. They were selected as a surfacing material for an expanded parking area because they permit stormwater infiltration in and around individual blocks. They create a semi-pervious surface in contrast to conventional concrete or asphalt surfacing. Their use allowed the owner to provide additional parking spaces for his business and at the same time save an old beech tree by permitting roots to get needed water. Cost of paver block installation was approximately \$10,000.

For More Information

Designer: Jeffrey T. Burrell Sr., P.E. & Associates, 610-273-7700 (Jeffrey Burrell)

Owner: Petro, Jim 610-384-5037

References

Center for Watershed Protection, Approaches to Stormwater Treatment, Copyright 2001.

Pennsylvania Handbook of Best Management Practices for Developing Areas, Prepared by CH2MHILL, Spring 1998.

Site 2 - Triple Fresh Grocery Store – Infiltration Trench and Paver Blocks



Infiltration trench captures stormwater runoff from the roof and parking lot. Beneath 6 inches of stone at the surface is an infiltration bed that temporarily stores stormwater prior to infiltration into ground below.



Brown colored paver blocks used to expand parking lot allow stormwater to seep into the ground and provide needed water for the roots of a large sycamore tree.