



Chester County Stormwater BMP Tour Guide

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BMP: Warm Season Meadows

Site Name: Williams Transco
Not a Self-Guided Tour Site -- see Tour Guidelines below

Location: East Whiteland Township, ADC Map 22 (obtain location from owner)

Watershed: Valley Creek

Land Use: Utility Company Office and Utility Right-of-Way

Description: Warm season meadows at this site consist of grasses well-suited to the local climate, including switch grass and native blue stem, planted on about 25 acres of land that had previously been fields of turf grass. Prior to planting meadow grasses, herbicide was carefully applied to kill existing vegetation including undesirable invasive plants; application was timed so that it wouldn't harm an existing stand of native blue stem. The grasses were planted using no till planting practices to prevent excessive earth disturbance. These grasses grow during the middle of the growing season and are dormant in the spring and fall. They are best harvested after the spring nesting season. What were previously fields of turf grass at this site that required regular mowing during the growing season are now over 25 acres of warm season grasses that require no mowing. The site is largely unpaved land consisting of fields interspersed with an office building, employee parking area and utility structures. Utility line areas consist primarily of poles, towers, and guide lines that disturb minimum earth once in place, as such maintaining utility right-of-way lands as natural open space meadows is beneficial from an environmental standpoint.

Function: Establishing warm season meadow of native grasses is a best management practice since the overall environmental benefits of unmowed native grassy meadows are greater than mowed turf grass fields. Meadows promote stormwater infiltration into the ground and the native grasses have a greater potential to uptake any pollutants present in stormwater runoff compared to turf grass. Planted warm season grassy meadows provide natural open space and are especially attractive to wildlife including birds.

There is no data on the pollutant removal efficiencies specifically for warm season grass meadows. We can expect, however, that sediment and grit, oil and grease, as well as nutrients present in stormwater runoff will be filtering natural biological and physical filtration processes prior to discharging into open waters or percolating deeper into the ground.

Operation and Maintenance: The Chester County Conservation District considers planted meadows to be low maintenance BMP. Ideally warm season grasses would be burned every 3 to 4 years to invigorate stem growth, remove thatch and eliminate growth of invasive plants. At this site, burning is not an acceptable management option due to the nature of current site activities and proximity to residential areas; however, as an alternative the site owner could do a harvest cut 3-4 year cycle. The grasses do not require fertilizing since soil is sufficiently nutritious and warm season grasses have low nutrient requirement. Keep grass cut around guide wires, structures, buildings to permit inspection and maintenance of structures. To ensure lands are

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maintained properly, procedures and specifications for meadow maintenance should be documented and maintained on site.

Cost Factors: The cost of establishing meadows is low relative to many other types of stormwater management practices. At this site, the warm season meadow offers the site owner cost-savings of \$350/acre per year in avoided mowing costs. Additionally, the meadow grasses can be harvested annually and sold at current market value. Other factors that may affect cost of establishing a warm season grass meadow include site conditions, such as the cost of land, local topography, rocky or highly permeable soil, and bedrock.

For More Information

Tour Guidelines: **Not a self-guided location.** Tours must be pre-arranged through facility management with at least 48 hours notice. A site employee must accompany all tours. All tours will be limited to no longer than 1 hour per visit. Certain areas will be off limits for photos.

Design Assistance: Tim Smail, Chester County Natural Resource Conservation Service

Owner: Williams Transco, (610) 644-7373 (Robert Hill, Assistant District Manager)

References

Center for Watershed Protection. *A Review of Stormwater Treatment Practices* (published presentation).

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

Site 8 - Williams Gas Pipeline Transco - Warm Season Native Grassy Meadows



Warm season native grassy meadows established at this site provide greater stormwater infiltration opportunities than maintained turf grass fields. Low maintenance meadows enhance wildlife habitat.

