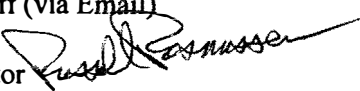


DATE: April 6, 2009

TO: Regional Water Leaders, Basin Leader
Storm Water Permit Staff (via Email)

FROM: Russ Rasmussen, Director 
Bureau of Watershed Management

SUBJECT: Guidance for Developed Urban Areas and the 20% and 40%
TSS Reductions Internally Drained Areas

This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

Issue

The Department of Natural Resources June 6, 2005 guidance memo, *Developed Urban Areas and the 20% and 40% TSS Reductions*, addresses areas prohibited from inclusion in the municipal modeling calculations including the following on page 3 of the guidance:

3. "Any internally drained area with natural infiltration. (This does not include engineered or constructed infiltration areas). However, an internally drained area that discharges to a karst feature is not likely to be receiving adequate treatment prior to contact with the groundwater. The municipality is encouraged to look at this area for possible treatment options."

Some municipal separate storm sewer systems (MS4s) contain areas that are internally drained, but drain to a constructed pond or quarry with no outlet under observed runoff event conditions. There are questions on how these areas could be included in the municipal analysis to demonstrate compliance with the developed urban area total suspended solids (TSS) performance standard of s. NR 151.13(2), Wis. Adm. Code.

Discussion

An internally drained area is an area where runoff from the MS4 does not enter a surface water of the state including wetlands. Determining if an area is internally drained may be made from aerial photos or historic data. If runoff from storm events up to a 10-year, 24-hour event does not leave the depression area, then this area is considered internally drained and shall not be included in the developed urban area analysis (i.e. not included in the base condition or any subsequent scenarios). If runoff leaves the depression area during lesser storm events, then this area is not internally drained and the drainage area to the depression area must be included in the developed urban area analysis.

DNR Guidance

Notwithstanding the discussion above, there are situations where an internally drained area may be included in the analysis. For this to happen, all of the following conditions must be met:

1. Consistent with s. NR 151.12(5)(c)8., Wis. Adm. Code, the discharge of runoff from the MS4 into an internally drained area must to the extent technically and economically feasible minimize the level of pollutants infiltrating to groundwater and shall maintain compliance with the preventive action limit at a point of standards application in accordance with ch. NR 140, Wis. Adm. Code. However, if site specific information indicates that compliance with a preventive action limit is not achievable, the infiltration practice may not be installed or shall be modified to prevent infiltration to the maximum extent practicable. The municipality must assess the usual or potential presence of any toxic pollutant, the degradability of the pollutant and the capacity of the soil to remove the pollutant. A discharge to groundwater must remain below the enforcement standard at the point of standards application.

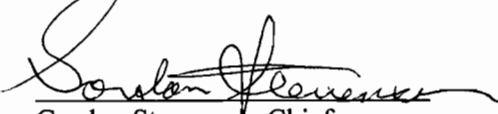
Note: Also consistent with s. NR 151.12(5)(c)5.i., Wis. Adm. Code, the following characteristics are believed to be protective of groundwater for the treatment of storm water: The soils between the bottom of an infiltration practice and the seasonal high groundwater or top of bedrock have at least a 3-foot soil layer with 20% fines or greater; or at least a 5-foot soil layer with 10% fines or greater or where the soil medium within the infiltration system provides an equivalent level of protection. "Percent fines" means the percentage of a given sample of soil, which passes through a # 200 sieve.

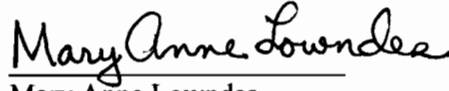
2. Any runoff from parking lots or roads in commercial, institutional or industrial areas directed into an internally drained area shall be pretreated to help prevent clogging of the internally drained area.
3. If the area is not owned by the municipality, then the municipality must have a long-term maintenance agreement in place with the property owner to ensure that the internally drained area will be maintained. If the municipality owns the area, then the municipality must include maintenance of the area in its storm water management program.

Where conditions 1-3 are met, internally drained areas can be included in the developed urban area analysis. Additional runoff may be directed to an internally drained area meeting conditions 1-3. One hundred percent credit for TSS removal may be taken for the runoff that stays within the internally drained area.

Department staff will assist in evaluating these determinations prior to allowing credit for TSS reduction from internally drained areas on a case by case basis. There may also need to be a determination regarding natural water features in the depression area prior to the Department's concurrence that these areas can be used toward the TSS removal credit.

Approved By:


Gordon Stevenson, Chief
Runoff Management Section


Mary Anne Lowndes
Storm Water Engineer