

NEW DEVELOPMENT STORMWATER REQUIREMENTS

Q *Is an erosion control plan required?*

A If the site disturbance exceeds 20,000 square feet, a plan with Universal Soil Loss Equations (USLE) is required.

Q *When are stormwater management practices required on a new development site?*

A New development requires stormwater management practices in accordance with City of Madison General Ordinance Chapter 37, if the disturbed area exceeds 20,000 square feet. Further, if the disturbed area exceeds one (1) acre the requirements of WDNR standard NR-151 must be met. The City's requirements are as stringent or more stringent in all areas. However, when a new development site area exceeds one (1) acre the WDNR permit must be obtained before the City may issue a permit.

Q *If stormwater management is required what components are required and when?*

A New development has five (5) stormwater management requirements: **sediment control** (80% average annual load or 5-micron particle), **thermal control**, **stormwater detention, infiltration (possibly recharge depending on CARPC resolution and whether Infiltration is met)** and **oil & grease control**.

Q *When are those specific requirements triggered?*

Sediment control applies under all circumstances. New development must provide for 80% (5 micron) control of post development sediment compared to no controls. This can be met at the plat level (regional pond), on the lot level, or as a combination of the two. If a combination is used, the method of measuring the sediment reduction must incorporate a way to track the particle sizes being treated by each device. For example, catch basins and sweeping both treat approximately 25%, but because they treat the same size particles, the "additive" treatment value of them is probably only 30%.

Oil & grease control applies if the exposed parking area has forty (40) or more parking spaces, or if there is a drive-thru facility on the property. This can only be addressed on the site and not at the plat level.

Thermal control applies if the development is in the Sugar River Watershed. Infiltration can be completed at the plat or lot level.

Normally, requirements for residential properties will be addressed at the plat level, and commercial lots will install practices on individual sites.

Stormwater detention is required if, as part of redevelopment, 20,000 sf of impervious area is being added as part of the project, or if the development is in an area with flooding problems. The City Engineer defines the areas upstream of University Avenue from Midvale Boulevard to Highland Avenue and East Washington Avenue from Blair Street to the Yahara River as being at risk for flooding. The required detention shall be pro-rated between the impervious area of the redevelopment and the total impervious area of the watershed in which the redevelopment is located.

It is preferred that stormwater detention is addressed at the plat level, but it can be addressed at the lot level if large commercial lots are planned.

Infiltration is required if the disturbed site area exceeds 20,000 sf. Infiltration requirements can be met at the plat level, at the lot level, or through a combination of the two.

Recharge – recharge can be required by CARPC as a condition of sanitary sewer extension or if the infiltration requirement is not met. City Engineering should be contacted to discuss this requirement as it varies by project.

NOTE: While rain gardens on individual lots can be used to meet the thermal and infiltration requirements, they shall not be used to reduce the required detention. If rain gardens are used on individual lots to meet these criteria, a deed restriction & maintenance agreement must be recorded against each lot.

Q ***When these practices are mandated, what are the goals that must be met?***

A **Sediment control** – An 80% control of sediment leaving the site post-construction is required. In Dane County this effectively means that the 5-micron particle must be controlled, post-construction, during a 1-year rain event.

Oil & Grease control – Using the best available technology, oil and grease must be trapped from the first ½” of runoff from the paved areas. The best available technology must be approved by the Dane County Land Conservation Department.

Thermal control –The applicant must show that an effort is being made to reduce the temperature of the storm water discharging from the site. This is typically done with rock cribs, rain gardens, or other infiltration devices.

If infiltration and thermal control are required, meeting the infiltration requirement will meet the thermal requirement

Stormwater detention – The post-development peak flows from the 2-year and 10-year storm events must match peak flows from the area in the pre-developed state.

Detention of the 100-year event is required in the Upper and Lower Badger Mill Creek Watershed.

Infiltration – 90% of the predevelopment infiltration must be met as part of the postdevelopment design. This is a stay-on requirement and does not mean the water must be “infiltrated”. If this requirement is not met a secondary standard of “recharge” can be met.

Recharge – if the infiltration requirement is not met then a specific recharge requirement of 7.6” per area over the entire plat can be met. This requirement may be higher if CARPC has a specific condition in their resolution allowing extension of the sanitary sewer.

Q *When is infiltration required?*

A Infiltration required by County/City code on new development and on redevelopment exceeding 5 acres. There are multiple exemptions based on physical conditions on the site (groundwater, karst, wells, contamination, soil condition) City Engineering can be contacted for details.