



TECHNICAL MEMORANDUM #2

TO: Applicants and Designers for State and Federal Projects

FROM: Sediment and Stormwater Plan Review Division
Water and Science Administration

DATE: September 20, 2016

SUBJECT: Re-issuance of May 28, 2015 Memo on Alternative Surfaces and Artificial Turf

Alternative surfaces are essentially collection systems with management below them. For an alternative surface to be considered effective at emulating a pervious surface, it must provide infiltration or filtration with recharge volume (Rev) storage below the underdrain.

Artificial turf is considered an alternative surface when it is designed to meet the criteria for permeable pavement. This requires soils with a level of infiltration below the artificial turf. The amount of storage provided will determine the treated rainfall (P_E) and the RCN. The delay in conveying rainfall through the system tends to mitigate the peak discharge therefore working towards meeting quantity requirements. If there is insufficient infiltration below the field, alternative stormwater management will need to be provided. If a filtering system is used, a non-draining reservoir below the inverts of the collector pipes must be provided to satisfy groundwater recharge requirements.

Questions have been raised about whether to consider alternative surfaces as impervious or pervious area when calculating the impervious area requiring treatment (IART) and the environmental site design volume (ESDv). The Plan Review Division considers alternative surfaces to be impervious but, in turn, also considers the surface (i.e. footprint) as being treated. This provides a means of tracking the management as well as accounting for adjacent areas that are being treated via the alternative surface.

Quantity management requirements are based on the proposed development and site conditions. If an artificial turf installation is to include some amount of quantity management within the sub-base, conditions must be stable at all outfall discharges from the facility. In all cases, discharges shall be designed to be non-erosive.

Questions about this information or other items relating to sediment and stormwater plans can be directed to Amanda Malcolm amanda.malcolm@maryland.gov or Matthew Keenan matthew.keenan@maryland.gov.