



STORMWATER MANAGEMENT COMMISSION

MEMORANDUM

January 26, 2007

TO: Enforcement Officers and Professional Engineers

FROM: Tony Wolff, PE, CFM
Chief Engineer

RE: Depressional Compensatory Storage

The following information is intended to provide additional guidance on addressing the compensatory storage provisions of the WDO.

- 1) Depressional storage lost due to modification of outlet conditions (besides maintenance or replacement of existing drain tile) must be compensated (e.g., a pipe is installed to drain down a depression). However artificially created storage lost due to modification of outlet conditions may not need to be compensated for, subject to WDO Art. IV, Sec. C.4.c.
- 2) Depressional storage lost only due to development activities within upstream tributary area (e.g. inclusion of proposed detention facilities in model) does not need to be compensated.
- 3) Hydraulically equivalent depressional storage.
 - a) Depression located entirely on-site.
 - i) Storage can typically be provided on-site at any elevation (hydraulically equivalency not necessary).
 - ii) Storage should be provided within the same sub-basin (to benefit the same downstream receiving system.).
 - b) Depression located partially on-site
 - i) Storage must be provided in a hydraulically equivalent and accessible manner.
 - ii) Hydraulic equivalency should ensure that off-site HWL are not increased for events up to and including 100-yr event. This can be demonstrated by one of the following:
 - (1) Excavation within depression. Supporting cut-fill calculations demonstrating hydraulically equivalent storage is provided.
 - (2) Oversizing a proposed on-site detention facility. A proposed conditions hydrology model should be created that demonstrates that the proposed HWL of the existing depression is not increased for events up to and including the 100-yr event. This model should also demonstrate that the required storage volume (detention plus compensatory storage) is accessed. See “c” below.

- c) Depressional storage provided in detention facility.
 - i) Required detention volume must be accessed during 100-yr, 24-hr event.
 - ii) Total required storage (detention plus depressional) must be accessed during the proposed 100-yr, critical duration event.
 - iii) SMC approves with-project BFE of detention facility because SMC approved existing BFE no longer valid. SMC can accept certified community's determination of required detention volume. Alternatively, certified community can request SMC review/approve both detention and compensatory storage volume. SMC cannot complete review until certified community approves required detention volume and possibly drainage area, CN, and Tc (depending on agreement with certified community). The review coordination should be discussed with certified community early in the process.