

**Delaware Sediment & Stormwater Regulatory Advisory Committee**  
**Technical Subcommittee Meeting Notes**  
**August 5, 2009**  
**9 AM – 12 PM**  
**DeIDOT Smyrna-Clayton Room**

1. Introductions – Bruce Jones
2. Overview of computation sheet addition to Stormwater Assessment Report – Randy
  - It was pointed out that some of the rating criteria require interpretation in making final assessment ratings. For example, a “Very Limited” rating for pond reservoirs due to seepage would be a positive indicator if infiltration and recharge practices are being proposed.
  - It was suggested and agreed that blocking out unused cells would make the sheet easier to fill in and avoid errors.
  - Staff will be making changes to the Water Quality criteria to clarify the rating values.
3. Presentation on Preliminary Sediment & Stormwater Plan process & issues – Randy
  - Preliminary S&S Plan consists of preliminary site development plan, schematic erosion & sediment control plan and Hydrologic & Hydraulic report; does not include detailed construction plans.
  - Resource Protection Event (1-YR storm)
    - Combination of water quality and stream protection

- Green Technology BMPs will be primary practices used for compliance
- Compliance goal is 100% reduction of runoff volume; max. allowable discharge for partial reduction equivalent to 24-hr detention of total runoff volume
- Staff still working on a “runoff reduction” methodology that would link annual runoff approaches with traditional event-based methodologies
- Conveyance Event (10-YR storm) & Flooding Event (100-YR storm)
  - Option 1: Unit Discharge (n/a for “sump” conditions)
  - Option 2: Performance-based; requires H&H analysis
- H&H Analysis
  - Based on a “No Adverse Impact” approach
  - Watershed Master Plan takes precedence
  - Level 1: Hydrologic analysis of upstream area and site; compliance met if inflection point of site hydrograph precedes peak of upstream watershed hydrograph (staff waiting to hear back from NRCS regarding inflection point for the Delmarva Unit Hydrograph).
  - Level 2: Hydrologic analysis of upstream, site & downstream areas + steady flow hydraulic analysis; compliance met if <0.05’ rise in water surface elevation and no additional encroachment on building structures.
  - Level 3: Hydrologic analysis of upstream, site & downstream areas + unsteady flow hydraulic analysis; compliance met if <0.05’ rise in water surface elevation and no additional encroachment on building structures.

- If compliance can't be met, a remedy must be provided
  - Option 1: Improve downstream conveyance
  - Option 2: Modify on-site management until "no adverse impact" criteria are met; possible lower limit of equivalent unit discharge or "*de minimus*" discharge
- The USACE HEC-HMS and HEC-RAS computer programs would be used by the Department as the standard for making final decisions regarding hydrologic & hydraulic analyses, though it would not be a requirement to use these programs exclusively.

#### 4. Discussion – Group

- It was clarified that all POAs for the Unit Discharge approach are to be located at the site boundary; on-site areas that drain off-site but will be redirected to another POA in the post-developed condition may not be counted in the allowable unit discharge for that POA; off-site areas draining onto the site may be given an equivalent unit discharge based on existing conditions, a weighted average between off-site areas and on-site areas would then be used to determine the final allowable unit discharge.
- A question was raised regarding cross-section data for hydraulic analysis; it is anticipated that Level 2 H&H analysis could make use of LiDAR data for creating cross-sections along with some field reconnaissance to better define the channel itself; Level 3 analysis would probably require at least some field survey data.
- The group suggested there be some sort of "fee-in-lieu" option for sites that cannot comply with stormwater management criteria.
- The group suggested there be special consideration for "small projects"; options discussed included expansion of the Standard Plan to include some minimal stormwater management, fee-in-lieu process and/or "*de*

*minus*” discharge; it was suggested to look at the small site criteria that PA developed.

- A question was raised about the rationale to use <0.05’ rise in water surface elevation as the compliance criteria for the Level 2 and Level 3 H&H analysis; it was explained that most local ordinances use a “zero increase” criteria; after rounding, <0.05’ would equate to “zero increase” at a level of precision of 0.1’.
- It was mentioned that the watershed-based approach to stormwater management could alter the land value market; staff pointed out that though this may be one of the unintended consequences, the merits of a watershed-based approach rather than the current “one size fits all” approach cannot be denied at the technical level; it was suggested that further discussion on this might fall under the purview of the Economic Impacts Subcommittee.
- While the group generally concurred with the proposed technical criteria, there was considerable discussion on the plan approval process, particularly regarding coordination with local planning agencies and DeIDOT. Staff mentioned a meeting had already been scheduled for August 12th with State Planning to discuss this topic and that a similar meeting was being set up with DeIDOT in the near future. However, staff also pointed out that the Department can only do so much within its own authority, so expectations must be realistic. As a minimum, the group would like some sort of “road map” for the plan approval process in each of the three counties and how the proposed revisions to the Sediment & Stormwater Regulations would fit into that process. It was also recommended that those who want to be more actively involved in this subject should consider joining the Planning and Land Use Subcommittee.

## 5. Next Meeting

- Date: October 7, 2009

- It was agreed to skip the scheduled Sept. meeting to allow staff more time to prepare
- Topic: ~~Preliminary Sediment & Stormwater Plan~~ submittal requirements  
Runoff Reduction Methodology
  - It was agreed that a full meeting would be required to discuss the proposed runoff reduction methodology