



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
DIVISION OF WATERSHED STEWARDSHIP

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SEDIMENT & STORMWATER PROGRAM
REGULATORY GUIDANCE MEMORANDUM
RGM - 2

Date: March 11, 2020

Title: Procedure for Conducting a Downstream Analysis

Synopsis: The 2019 Delaware Sediment & Stormwater Regulations (DSSR) include provisions for complying with the "no adverse impact" requirements for the Cv (10-YR storm) and/or Fv (100-YR storm) by performing a downstream analysis. The Sediment & Stormwater Program has prepared a tutorial to outline the steps necessary to complete this analysis in accordance with the Department's guidelines.

Effective Date: Upon Successful Completion of Public Notice Process

Responsible Staff Member

A handwritten signature in blue ink that reads "Randall K Greer".

Randell K Greer, P.E.
Engineer VI

Background

Section 5.0 of the Delaware Sediment & Stormwater Regulations (DSSR) contains the compliance criteria for post-construction stormwater management for regulated activities. The primary goal for quantity management is the “no adverse impact” standard. Section 5.3.3.4 of the 2019 DSSR states that one of the options for compliance with the Cv (10-YR storm) requirements can be met through demonstration that the location of a project within a watershed would aggravate flooding or channel erosion by the imposition of peak control requirements, as evidenced by a downstream analysis that shows the inflection point of the site hydrograph occurs prior to and is less than the peak of the upstream hydrograph.

Section 5.4.3.4 of the 2019 DSSR contains similar language for compliance with the Fv (100-YR storm) requirements. The Sediment & Stormwater Program has developed a tutorial with step-by-step instructions on how to perform the necessary downstream analysis to meet the Cv and Fv compliance criteria in the referenced sections.

Accessing the Tutorial

The tutorial is built from a Microsoft PowerPoint presentation with notes added to explain the steps necessary to complete the downstream analysis using various Web resources. The PowerPoint presentation is saved as a PDF document with two (2) sections. The first section is a “Slide + Notes” view, while the second section contains all the slides in full size for better viewing. The tutorial can be downloaded from the Sediment & Stormwater Program Web site at the link below:

[Downstream Analysis Procedure](#)