

Computational Methods and Strategies in Stormwater Management Using Storm QC Design Software

hosted by: Land Design Technologies, LLC

www.landdesigntechnologies.com

Attendees will be awarded four Professional Development Hours (PDHs).

This is a half-day short course that will engage attendees with a variety of hands-on hydrologic analysis and stormwater management exercises using the Storm QC design software. These comprehensive exercises will span a wide range of topics, among which include: rainfall distribution and hydrograph creation; hydrograph routing through channels, basins and media-based BMPs; and using Storm QC to assist with Virginia Department of Environmental Quality regulatory requirements including the Runoff Reduction Method and Energy-Balance calculation.

Technical Staff:

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Who Should Attend

This course is intended for land development and transportation engineers, and others performing stormwater calculations and designing stormwater management facilities. Attendees should be familiar with common hydrologic and urban runoff calculations, including NRCS (and other) runoff methods, and channel and reservoir routing principles. Attendees should also be acquainted with Virginia's Runoff Reduction Method and Energy-Balance requirement, as the case studies will include demonstrations of how to use *Storm QC* to assist with the calculations related to these regulations. Attendees will receive course handout materials including presentation notes, relevant excerpts from Virginia DEQ and other publications, and the *Storm QC* users' guide. Attendees will also be given a fully-functional two-week trial of *Storm QC* v. 2.1 and be awarded four PDH credits.

Richmond, VA
May 17, 2019, 8am-noon

Description

This short course will present a wide array of hydrologic and hydraulic methods for performing hydrologic analysis, stormwater management design, and detention facility/BMP design. The *Storm QC* v. 2.1 software will be used to illustrate these various computational techniques, and special emphasis will be placed on using the software to assist, simplify, and expedite the design of stormwater management facilities and meeting regulatory compliance in the Commonwealth of Virginia.

Example analysis and design scenarios will be presented and completed using *Storm QC*, and upon completion of the course, attendees will be well-acquainted with the software and able to begin using it in their own professional applications.



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Computer Requirements

PARTICIPANTS MUST BRING A LAPTOP OR TABLET COMPUTER TO THIS SHORT COURSE. The user must have administrative privileges on that computer so that the *Storm QC* software can be installed. Only MS Windows-based laptop computers will be supported. Minimum computer requirements are 8 MB of RAM, Windows 7 or 10 (preferred) and a minimum screen resolution of 1024x768. Apple computers, iPads and similar devices will not be supported. Laptops can be shared with a colleague if so desired. Upon registering and paying for the course, attendees will be provided with instructions for downloading and installing the software in advance of the course.

The Computer Model

Storm QC performs the necessary computations for quantitative stormwater design in land development and transportation engineering. The software has been rigorously tested in both professional and academic settings for engineering accuracy, using the latest time tested and widely recognized hydrologic and hydraulic methods. *Storm QC* was developed for both land development and transportation professionals needing stand-alone, integrated toolsets to model rainfall and runoff, create storage/elevation and rating curves, and perform both channel and reservoir routing using multiple methods. With an intuitive, easy-to-use, professional user interface, *Storm QC* was designed, programmed, and tested by engineers who have years of experience both designing stormwater infrastructure and educating others in the latest hydrologic practices.

Notable Storm QC Features Include

- Rainfall: NRCS Type I, IA, II, III; NRCS NEH Synthetic; NOAA A, B, C, D; user-defined methods
- Peak Methods: Rational, NRCS TR55, USGS rural and urban regression, Anderson, Snyder
- Hydrographs: NRCS Curvilinear UH, Rational, Modified Rational, NRCS TR-55, Deconvolution
- Travel Time: NRCS segmental, Seelye, Overland, Kirpich, Kinematic Wave
- Channel Routing: Muskingum, Muskingum/Cunge, Modified Att-Kin, NRCS Convex
- Storage Elevation: Contour area, pipe storage, manhole storage, media-based BMPs
- Outlet Structures, Reservoir and BMP Routing
- Multiple hydraulic calculation utilities



Registration Fee

The fee to attend this short course is \$200 per person. This registration fee includes course notes and professional instruction, as well as:

- Attendees will be provided with a fully-functional, two-week trial version of *Storm QC* v. 2.1.
 - Attendees will be provided with a discount code that can be applied to the purchase price of a fully-licensed version of *Storm QC*.
 - Attendees will be awarded with four Professional Development Hours (PDHs) that can be used toward meeting professional license renewal requirements.
- **How to register:** Attendees pay by credit card or check made payable to “Land Design Technologies, LLC”. Please click [HERE](#) to begin the registration process.
 - **Deadline:** The deadline to register for this short course is Friday, May 10, 2019 at 5pm EST. If you wish to register after this deadline has passed, please [EMAIL](#) to confirm that space is still available.
 - **Refunds:** If your request to withdraw is received by May 13, 2019 LDT, Inc. will issue a full refund of your registration fee.
 - **Location/Time:** The short course will be held at the Draper Aden Associates office located at 1030 Wilmer Avenue, Suite 100, Richmond, VA 23227. Signs directing you to the meeting room will greet attendees upon arrival. The course will run from 8a until noon.
 - **Questions:** Questions regarding this short course may be sent to [EMAIL](#).