



A Local Technical Assistance Program - LTAP

ALABAMA TECHNOLOGY TRANSFER CENTER

AT AUBURN UNIVERSITY

Presents a Seminar on

Stormwater System Design with SWMM5

Huntsville
March 13, 2017

Pelham
March 14, 2017

Mobile
May 8, 2017

Montgomery
May 9, 2017

There is a perceived need for engineers and practitioners to use modern tools that enable accurate assessments of stormwater management in developed areas. Runoff management is an important challenge in the context of municipal separate storm sewer systems (MS4s), transportation infrastructure, and other types of land use. Without careful analysis, runoff from developed areas may create impacts to receiving water bodies both in terms of hydrology and water quality. A number of tools have been developed to aid in the design and analysis of stormwater systems, among which the Stormwater Management Model (SWMM 5). Sponsored by the US Environmental Protection Agency, SWMM development spans over 4 decades, and has been applied in thousands of systems across the world. Such applications include: 1) designing and sizing of drainage system components for flood control; 2) sizing detention facilities and their appurtenances for flood control and water quality protection; 3) mapping flood plains of natural channels; 4) applications related to water quality modeling/management in drainage systems, including runoff control using Low Impact Development (LID) practices.

Currently, many municipalities in the State of Alabama use alternatives such as the TR-55 or other rainfall-runoff calculation tools that are unable to characterize water quality changes and/or include LID explicitly in formulations. The primary goal of this seminar is to acquaint personnel with SWMM 5 model, and present its advantages and applications in the context of urban stormwater management. The specific objectives include: (1) introduce the SWMM model formulation; (2) calculate pre-development hydrological conditions in watersheds using SWMM; (3) use SWMM to assess the effects of land development to local hydrology; (4) use SWMM as a tool to design stormwater detention basins; (5) introduce the simulation of selected LID features using SWMM.

This seminar should be of interest to project engineers, designers, and inspectors and all those whose work involves stormwater system design and operations. **Participants should bring a laptop in which SWMM 5 is previously installed. SWMM 5 model can be freely downloaded at the EPA web address:**
<https://www.epa.gov/water-research/storm-water-management-model-swmm#downloads>.

Please complete and return the enclosed registration form. A fee of \$150.00 per person should be mailed with your registration. Payment may be made by phone or fax if paying with credit card or government agency purchase order. Registrants are reminded that registration is not complete until payment is made. The registration fee includes handout materials, break refreshments, lunch and a certificate of participation. Thank you for your continued support of the Alabama Technology Transfer Center. Rod Turochy, Larry Sellers, and Garry Havron look forward to your attendance at this seminar.

Seminar Topics and Schedule

- Hydrological cycles and changes created by urbanization
- SWMM hydrological conceptual model
- Components of a typical SWMM model
- Data input: Rainfall, Sub-catchments, Junction, Conduits, Detentions
- Workshop activity: Creating a SWMM project
 - Changing sub-catchment attributes
 - Running simulations
 - Calibration parameters
 - Running pre-development and post development scenarios
 - Mitigating impacts of land development
- Summary

8:00 a.m.	Registration & Check-In (Coffee)
8:30 a.m.	Call to Order, Welcome, Seminar Objectives
10:15 a.m.	BREAK
12:00 Noon	LUNCH
1:00 p.m.	Seminar Instruction Continues
2:15 p.m.	BREAK
4:00 p.m.	Seminar Evaluations, Certificates, Adjournment

Locations

Huntsville — March 13, 2017

Holiday Inn - Research Park
5903 University Drive
Huntsville, AL 35816
800.845.7275

Pelham — March 14, 2017

Pelham Civic Center
500 Amphitheater Road
Birmingham, AL 35124
205.620.6488

Mobile — May 8, 2017

Hampton Inn & Suites Providence Park
525 Providence Park Drive
Mobile, AL 36695
251.776.5866

Montgomery — May 9, 2017

Hilton Garden Inn Montgomery - East Chase
7665 East Chase Parkway
Montgomery, AL 36117
334.244.0101

Seminar Instructor

Jose G. Vasconcelos is an Associate Professor of Hydraulics and Hydrology at Auburn University in the Department of Civil Engineering. He earned a B.S. (1995), M.Sc. (2000) from the University of Brasilia, and a Ph.D. (2005) in Environmental Engineering from the University of Michigan, Ann Arbor. He currently teaches courses in the areas of Hydraulics, Fluid Mechanics and Urban Water Systems, and serves as associate editor to the ASCE Journal of Hydraulic Engineering and CHI Journal of Water Management Modeling. The focus of Dr. Vasconcelos' research program is in the areas of stormwater modeling, unsteady flows in systems, multi-phase flows and sediment-water flow simulation.

Continuing Education Units

Participants completing this seminar will receive 0.60 Continuing Education Units (CEUs). The CEU is a nationally accepted measure of continuing education credit and is awarded at the rate of one CEU for each ten contact hours of qualifying instruction. Auburn University makes every effort to ensure that the CEU granting programs conform to the requirements of the State of Alabama Board of Licensure for Professional Engineers and Land Surveyors for the award of Professional Development Hours to support the annual renewal of professional licensure.

Sponsorship

This seminar is one of the series of conferences and workshops being conducted as part of the Alabama Technology Transfer Center at Auburn University. This program is a part of the Local Technical Assistance Program (LTAP) supported by the Federal Highway Administration, the Alabama Department of Transportation and Auburn University.

This seminar is the 342nd offered, with more than 40,000 attendees, since the program's inception in 1983. In addition to conducting training seminars, the T² Center also publishes a quarterly newsletter, distributes publications and maintains a lending library of videotapes on technical subjects. The Alabama Technology Transfer Center is administered at Auburn University through the Engineering Continuing Education office and the Department of Civil Engineering. For further information and suggestions for future programs, contact Rod Turochy, Department of Civil Engineering, at (334)844-6271 or rodturochy@auburn.edu

Accommodation of Participants with Disabilities

It is the policy of Auburn University to provide accessibility to its programs and reasonable accommodation for persons defined as having disabilities under the Americans with Disabilities Act of 1990. Please contact us at least two weeks prior to the event so that proper consideration can be given to any special needs.

Cancellation Policy

We understand that circumstances may arise that could require you to cancel your registration, and we make every effort to accommodate your needs. Due to commitments to our instructors and facilities, the registration fee is not refundable if a registrant withdraws less than five working days before the seminar. You may substitute registrants; please notify us in advance if possible. Non-paid, no show registrants will be invoiced for the full cost of the seminar. Engineering Continuing Education reserves the right to cancel or modify any program offering, but will provide registrants the option of a full refund. Auburn University will not be responsible for expenses incurred by a registrant as the result of a cancelled or rescheduled program.

Registration

Your pre-paid registration guarantees you a seat in the seminar as well as information on any changes to the seminar. Registration on the day of the seminar will be accepted on a space available basis, but enrollment will close when the capacity of the seminar is reached. **Participants are reminded that registration is not complete until payment is received.**

ONLINE REGISTRATION AT: WWW.ENGCE.AUBURN.EDU

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Huntsville, March 13, 2017 Pelham, March 14, 2017 Mobile, May 8, 2017 Montgomery, May 9, 2017

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