



APRIL 17, 2019 • 8:30 AM TO 4:45 PM
DEADLINE APRIL 10, 2019

Stormwater and the Multi-Sector Permit

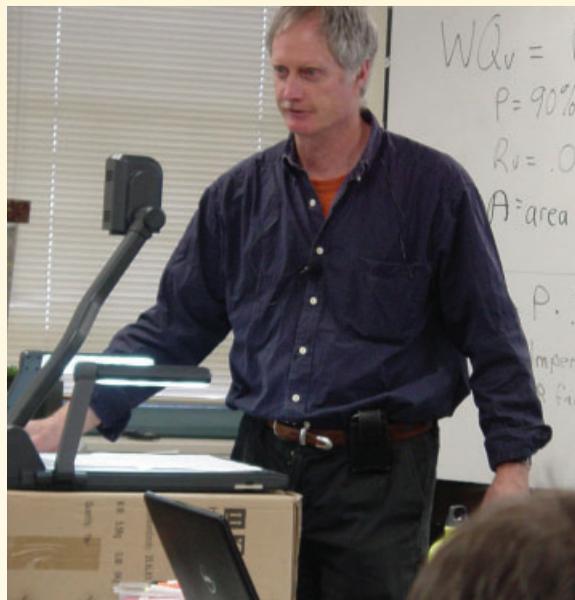
NYSDEC's Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities has just been recently updated. The first time offering of this course will cover all the basic requirements and regulations of the MSP, as well as the changes that have been made to the latest version of the permit. The class, which will be co-presented with NYSDEC and Andy Sansone of Monroe County, will review the specific MSP sectors, SWPPP preparation, and BMP's. The preparation of the necessary forms to obtain MSP permit coverage (NOI, ACR, Representative Outfall) will be presented, and the relationship between the MSP and the MS4 permit will be explained. Specific sector, site, and BMP design examples and problems will be provided.

Principal Instructor:

John Dunkle, P.E., CPESC, CPMSM

John is a graduate of SUNY ESF and Syracuse University, and has been practicing civil engineering since 1981. Working with both private developers and municipalities on site planning and development projects, John has prepared and reviewed SWPPPs, provided guidance for MS4s, participated with NYS-DEC in the development of the current stormwater regulations, and conducted stormwater trainings for contractors, developers, engineers, and municipal officials.

He is also a Visiting Instructor at SUNY ESF, teaching a graduate level stormwater management class. John conducted stormwater trainings across New York State with Don Lake for over 6 years. He is a Certified Professional in Erosion & Sediment Control (CPESC) Instructor. John is the Planning Board Chairman in the Town of Nelson, Madison County.



These trainings are offered through New York Regional Stormwater Training Centers

New York Regional Stormwater Training Centers is a Statewide Partnership between Cornell Cooperative Extension Orange and Saratoga Counties, the Central New York Regional Planning & Development Board, and Monroe County SWCD. Our goal is to provide the best technical training to all stormwater professionals working in New York State.

"Phase II" is part of the U.S. Federal Clean Water Act that regulates small municipalities and all construction sites of one acre or more through a national permit system to manage stormwater runoff from urbanized areas.

The Regional Training Centers are dedicated to providing stormwater professionals working in New York with the best possible information, education, and training to help better manage stormwater runoff and keep all of our waters clean.

Other Regional Training Centers

Saratoga County Intermunicipal Stormwater Management Program
www.saratogastormwater.org

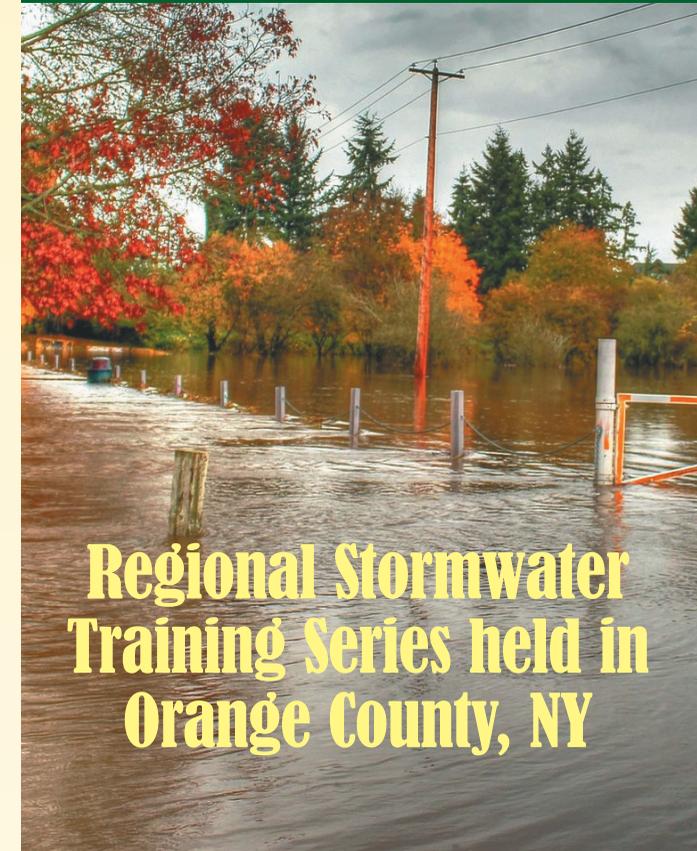
Central New York Regional Planning & Development Stormwater Training Program
www.cnyrpd.org/stormwater

Monroe County Soil & Water Conservation District
www.monroecountyswcd.org



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2019 Stormwater Management Training Series



Regional Stormwater Training Series held in Orange County, NY

Cornell Cooperative Extension
Orange County

845-344-1234 cceorangecounty.org

Stormwater Mgt. Training

Registration deadline: one week prior to class date.
 \$260/person per class. \$320/person per class after deadline.
 Please call for Municipal Rebate – \$75 per class*

Name _____

Business Name _____

Mailing Address _____

City _____ County _____

State _____ Zip _____

Daytime Phone Number _____

Email _____

Yes / No (Please circle one) Cornell Cooperative Extension is granted permission to use and/or publish my photograph or image (including audio, film, digital image or any other media) for educational programs, websites or promotion of Extension programs.

Please indicate number of people who will be attending each class:

- _____ SWPPP Preparation and Review
- _____ Wet Pond Design
- _____ Floodplains and Watershed Hydraulics
- _____ Stormwater and the Multi-Sector Permit

_____ Classes at \$ _____ per class = \$ _____

All 4 classes – save 10% if paid by January 12, 2019
 _____ at \$936.00 per person = \$ _____

NO REFUNDS – if you cannot attend, send someone in your place.
 Make checks payable to: Cornell Cooperative Extension OC

Return form and fee to:
 Cornell Cooperative Extension Orange County
 18 Seward Ave., Suite. 300, Middletown, NY 10940-1919
 Attn: Stormwater Mgt. Training

Register online for all classes at
www.cceorangecounty.org



2019 Stormwater Management Training Series

For those professionals involved in stormwater management, keeping up with the latest trends and standards can be a challenging task. New techniques, standards, and regulations are evolving as research, experience, policies and performance data change.

This series of stormwater trainings is designed to provide private and public sector engineers, architects, administrators, planners and consultants with up-to-date techniques for understanding, evaluating, designing and reviewing stormwater management plans and practices. The program emphasizes the standards in New York State, based on NYS-DEC's January 2015 *Stormwater Design Manual*, the NYS-DEC *Erosion and Sediment Control Manual*, FEMA flood standards, and related permits, and also examines national standards and future trends.

All trainings emphasize applications to real-world conditions, and involve hands-on, group, and individual exercises. **NOTE:** Registration with payment is required. Deadline for registration is ONE WEEK prior to each course. Cost (which includes

lunch and materials) is \$260 per person, per course, if registered by the deadline; \$320 per person, per course after the deadline. **Discount of 10% when registering with payment for all four training courses by January 12, 2019!**

*Municipal Rebate – \$75 per class. Four (4) enrollments/seats per class will be reserved for municipal employees (not contractors) for \$75 per class per attendee. No credits (PDH's, CEU's, LU's) will be awarded to these attendees. This is a first-come, first-serve sign-up, but no singular municipality may sign up for all 10 seats. No discount for paying for all 4 before 1/12/19. Please call to register for these seats.

PDH's, LU's, and CEU's have been requested for each course. Code Enforcement Officer credits may be available for some courses. Questions? Contact Erik Schellenberg at jk2642@cornell.edu or 845-344-1234. Register online or contact Jill or Kat at 845-344-1234 or jd863@cornell.edu or kal64@cornell.edu. **No refunds - if you cannot attend send someone in your place.**

All classes are held 8:30 AM – 4:45 PM at Cornell Cooperative Extension Orange County
 18 Seward Ave., Third Floor, Middletown, NY 10940

Register online at www.cceorangecounty.org

JANUARY 24, 2019 • 8:30 AM TO 4:45 PM
 DEADLINE JANUARY 14, 2019

SWPPP Preparation and Review

Preparing, reviewing and implementing a Stormwater Pollution Prevention Plan is an essential part of consecution projects, MS4 minimum measures 4, 5, and 6, and of the MSP. This class will review all of the required elements of partial and full SWPPP's, including site planning, E & S, hydrology, good housekeeping, post construction management and maintenance. Preparation and review checklists will be provided, and class examples of residential, commercial, MS4, and MSP SWPPP's will be provided. Representatives from NYSDEC Central Office will also participate in the class, providing an opportunity for participants to interact directly with the regulatory agency on issues relating to the Construction Permit and Design Manual.

FEBRUARY 21, 2019 • 8:30 AM TO 4:45 PM
 DEADLINE FEBRUARY 14, 2019

Wet Pond Design

Stormwater Ponds have proven to be one of the most popular stormwater management practices employed by designers. And with good reason: ponds are one of the few practices that provide both water quality and quantity treatment. This class will examine the various components of a wet pond system, and review the numerous design elements needed for proper operation of ponds.

Working with a specific pond site, we will begin by establishing the tributary drainage areas and its associated hydrology. We will then determine the various pond storage volumes and finally complete the design of an outlet structure to manage the flows. The pond design will follow the uniform sizing criteria in the NYS Stormwater Management Design Manual. Hydrology will be computed using TR-55 methods.

MARCH 21, 2019 • 8:30 AM TO 4:45 PM
 DEADLINE MARCH 14, 2019

Floodplains and Watershed Hydraulics

As climate change continues to influence flooding conditions, it is important to be able to adequately model and predict flood plains and floodways. The HEC-RAS computer program is a powerful tool developed by the USACE to model river, stream and reservoir hydraulics, and is used by FEMA to create the regulatory FIRM's for each community. This workshop will provide a hands-on introduction to using the HEC-RAS modeling techniques to generate hydraulic profiles and to analyze and map flood plains and floodways, using actual site conditions.

Specific discussion and exercise topics will include:

- Floodplain and hydraulics terminology
- Intro to the HEC-RAS model
- HEC-RAS input and output data
- Generation of a hydraulic profile of a simple stream
- Modeling bridges and culverts
- Establishing floodplains and floodways