

NCWRA FORUM, WEBINAR & LUNCHEON

11:30 AM - 1:30 PM,
Monday, December 3, 2018
 Jane S. McKimmon Center
 NC State University, Raleigh, NC

Hydraulics Unit 2.0

Stephen Morgan, PE
 &
Andy McDaniel, PE
 NCDOT Hydraulics Unit

Over the past few years, NCDOT has been transforming itself into a leaner, more decentralized organization with the goal of improving the efficiency of transportation project delivery. These changes offer the opportunity for the Hydraulics Unit to reimagine the roles and services it provides in support of project delivery with environmental sensitivity. This presentation will provide an overview of some of the exciting recent initiatives the Hydraulics Unit is undertaking, including:

- 2-D hydraulic modeling
- nutrient management using a OneWater approach
- Bentley Open Roads Designer
- resilient design and flood prediction & warning system
- spray pipe liner evaluation
- new class of stormwater BMP
- bioswale design tool
- improved bioretention media mix specification
- assessing the impacts of highway runoff using the USGS SELDM model
- alternatives to TMDLs
- BMP construction inspection field guide
- stormwater dissolved metals sampling methodology and many others.

ONLINE REGISTRATION AVAILABLE!
 Visit www.ncwra.org/events
 to register by credit card for this event.

Continuing Education Credits: This forum will provide 1 PDH (professional development hour) for professional engineers and surveyors, contingent upon board approval.

NCWRA Forum & Luncheon Registration Form For Dec. 3, 2018

Make all checks payable to NCWRA - Send check and form to: Water Resources Research Institute, NCSU Box 7912, Raleigh, NC 27695-7912 or **FAX: (919) 515-7095**

LUNCHEON		WEBINAR
Early Rate (Postmarked by 11/19/18)	Late Rate (after 11/19/18)	Register by 11/30/18
<input type="radio"/> \$20 NCWRA Member*	<input type="radio"/> \$30 NCWRA Member*	<input type="radio"/> \$20 NCWRA Member*
<input type="radio"/> \$30 Non-Member	<input type="radio"/> \$40 Non-Member	<input type="radio"/> \$30 Non-Member
<input type="radio"/> \$15 NCWRA Student Member*	<input type="radio"/> \$30 NCWRA Student Member*	<input type="radio"/> \$15 NCWRA Student Member*
No changes to registration category after 11/26/18. Payments at the door will add \$5 to the late rate above (\$35 and \$45). *Enter your NCWRA member number below. **See ncwra.org/webinars for rules regarding group webinar viewing policy.		<input type="radio"/> \$100 Group Viewing**

NOTE: You must provide a valid email address below to register for the webinar. An access link will be emailed to you.

No cancellations or registration changes accepted after Nov. 26, 2018

NCWRA will refund forum fees up to seven days prior to the event. After this, only substitutions will be accepted. NCWRA **CANNOT** give credit for future forums, as the funds are used to cover current forum expenses. Faxed registrations paid by check will not be registered until the check is received.

Name _____ NCWRA Member # _____
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 Full Address _____
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Would you like to receive updates about future events (four forums/year) by joining the NCWRA listserv?

Yes No

Questions? Call WRRRI at (919) 515-2815 or email water_resources@ncsu.edu

NCWRA 2019 MEMBERSHIP APPLICATION

Membership is valid January through December and is renewable annually

\$20 Regular membership \$5 Student membership

Name _____ Phone _____
 Agency _____ Email _____
 Address _____
 City/State/Zip _____
 If new, name of referring member _____
 Forum topic suggestions _____

UPCOMING EVENTS

Join NCWRA at the next
Upcoming Forum/Webinar:

February 4, 2019
Raleigh, NC

Be sure to check the website for
more details about this event!

<http://www.ncwra.org>

Discounted registration rates
available for NCWRA Members

<http://www.ncwra.org>

Questions?

Contact WRRRI at (919) 515-2815 or
water_resources@ncsu.edu

Past NCWRA presentations

<http://www.ncwra.org/events>

Adverse Weather Policy

Call WRRRI at (919) 515-2815 for
meeting information in case of
inclement weather.



**Water Resources Research Institute
of The University of North Carolina
North Carolina State University
Box 7912
Raleigh, NC 27695-7912**



**Forum, Webinar
& Luncheon**

Hydraulics Unit 2.0



With Speakers:

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