

80th Annual North Carolina Waterworks Operators School

September 23 - 27, 2019



Including Advanced Day

Wednesday, September 25, 2019

NCSU McKimmon Center - Raleigh, NC

Presented by the North Carolina Waterworks Operators Association with the cooperation and sponsorship of the North Carolina Department of Environmental Quality, Division of Water Resources, Public Water Supply Section

ATTENTION OPERATORS - Need help with math?

Special Class - Basic Math for Operators

(This class is designed for reviewing basic math skills for new operators in preparation to better understand the C-Surface & C-Well math classes.)

This class will be held from 10:00am - 12:00noon on Monday prior to Fall School registration. This class is open to all operators free of charge who are registered for Spring School in either C-Surface or C-Well. This class is NOT REQUIRED as part of the certification school but is limited to 45 participants.

Class Schedule for A, B & C Well and A, B & C Surface

Monday, September 23

10:00am – 12:00pm **NEW! Basic Math Class - C-Surface or C-Well**

1:00pm – 1:45pm Registration - McKimmon Center

1:45pm – 5:00pm Report to your assigned classroom for General Announcements & Classes

Tuesday, September 24

8:00am – 5:00pm Classes – Report to your assigned room – Lunch Provided

7:00pm – 9:00pm Review – Holiday Inn Express & Suites

(3741 Thistledown Dr. off of Gorman St.)

Wednesday, September 25

8:00am - 4:00pm Exhibit Hall Open during Lunch & Breaks

8:00am – 5:30pm Classes – Report to your assigned room – Lunch Provided

12:15pm – 1:30pm AWARDS BANQUET LUNCHEON - McKimmon Center

6:15pm – 7:45pm “Brain Break” - Buffet, fun & door prizes - Holiday Inn Express & Suites

(3741 Thistledown Dr. off of Gorman St.)

Thursday, September 26

8:00am – 5:00pm Classes – Report to your assigned room – Lunch Provided

Friday, September 27

8:00am – 1:00pm Classes – Report to your assigned room

1:00pm Certificates of Attendance Awarded

See page 4 for specific topics being **REVIEWED** in your class. Exact class agenda will be handed out at registration on Monday, Sept. 23, 2019 for A, B & C Well and A, B & C Surface.

School **REGISTRATION FORM** must be received on or before **September 13, 2019**. Applications accepted on a first-come, first-served basis. Class sizes are limited.

Host hotel will be the Holiday Inn Express & Suites

(3741 Thistledown Drive - 2.2 miles from McKimmon Center)



CHECKLIST

The following checklist is provided for your use to insure that you have taken the necessary actions to attend the School and be qualified to take the Exam.

→
Please note
NEW ADDRESS

- Send Class Registration Form (see page 6) and payment for the SCHOOL to:
Heather Cagle
NCWOA
PO Box 5466, High Point, NC 27262
Phone: 252-764-2094 ext 1
Fax: 252-764-2095
Email: heather@ncwoa.com

**Make check payable to: "NCWOA"
or "North Carolina Waterworks
Operators Association."**

**Registration must be received by
September 13, 2019.**

- Send EXAM APPLICATION and check for \$50.00 to the NCWTFO Certification Board: Visit the NCWTFO website for the electronic, apprentice or regular exam applications: <http://deq.nc.gov/about/divisions/water-resources/operator-certification/drinking-water-operator-certification/dw-operator-certification-exams>. Phone: 919-707-9040

If you wish to take the exam on October 31, 2019, your exam application must be postmarked no later than October 1, 2019. On application put "To Attend" dates of 9/23-9/27/2019.

- Make hotel reservations – **HOST HOTEL IS THE HOLIDAY INN EXPRESS & SUITES** To make reservations, call 919-854-0001 or 1-800-HOLIDAY. Guest should request group code WOA or group title NC Waterworks Operators Association. Deadline for special group rate is September 2, 2019. (See page 4). **Special Note: A hotel authorization form must be completed, and returned to the Holiday Inn Express for guests that will not be physically traveling with their company/organization credit card.**
- Information on books is listed on the next page. All exam questions are taken from the books listed on the next page.
- Read and study recommended materials. **Be sure to bring a calculator to ALL classes.**

REGISTRATION INSTRUCTIONS AND REQUIREMENTS

SCHOOL REGISTRATION FORM

To be completed by ALL students. Please complete one form per person. Please print or type. This form must be accompanied by a payment for the correct registration fee. Please make checks or money orders payable to **NCWOA or North Carolina Waterworks Operators Association**. We do not accept Purchase Orders. Please be sure to enter all information requested on the form. Incomplete forms will delay your registration or may be returned. All attendees must be pre-registered and paid in advance.

RECEIPT/CONFIRMATION OF REGISTRATION

All participants who pre-register will receive a receipt/confirmation in the mail. This acknowledgement will include specific information on the site.

CERTIFICATES OF ATTENDANCE OR COMPLETION

At the conclusion of the event all participants, who have attended at least 80% of their classes, will receive a **Certificate of Attendance**. These certificates will document attendance for professional growth contact hour requirements and/or successful class completion (31 drinking water hours/6 wastewater hours). Participants must pick up their own certificate at the conclusion of the event. No certificates will be given out early, to another individual, or mailed.

REFUNDS

Refunds will be issued (minus a \$25 administrative fee), if the refund is requested, in writing, by September 13, 2019. Substitutions may be made. Please inform us as soon as possible of substitutions so appropriate certificates of attendance may be generated.

MEMBER/NON-MEMBER STATUS

Only individuals who are current members of NCWOA are eligible for the member rate. Please refer to your membership card for your member #. We will verify registrations for eligibility and will return those who pay the incorrect amount. If you would like to become a member, please complete the membership application in this brochure and return with payment.

How to get books for school

Surface Water Treatment - Study Materials

Sacramento Manuals:

Website: <http://www.owp.csus.edu/> or

call: (916) 278-6142

Water Treatment Plant Operator Vol. 1 – 7th Edition

Water Treatment Plant Operator Vol. 2 – 6th Edition

Rules Governing Public Water Systems (Green Book) (1/8/16)

Call 919-707-9100 or available for download from NCWOA website

Surface Water “Needs To Know” – A Certification Study Guide for Surface Water Systems (2018)

available for download from NCWOA website

Rules Governing Water Treatment Facility Operators (Blue Book) (12/12)

available for download from NCWOA website

All books available for download from NCWOA website are listed under Training - Books www.ncwoa.com

Well Water Treatment - Study Materials

Sacramento Manuals:

Website: <http://www.owp.csus.edu/> or call:

(916) 278-6142

Small Water System Operation & Maintenance – 6th Edition

Water Treatment Plant Operator Vol. 2 – 6th Edition

Rules Governing Public Water Systems (Green Book) (1/8/16)

Call 919-707-9100 or available for download from NCWOA website

Ground Water “Needs To Know” – A Certification Study Guide for Groundwater Systems (2018.1)

available for download from NCWOA website

Rules Governing Water Treatment Facility Operators (Blue Book) (12/12)

available for download from NCWOA website

Well Construction Standards (Red Book) (10/2009)

available for download from NCWOA website

WANT TO BE BETTER PREPARED TO TAKE YOUR CERTIFICATION EXAM? *Online Supplement for Certification Exam Review*

All attendees of NCWOA Certification Schools will be eligible to enroll in an online course that will supplement and enhance the materials presented in the week-long class. The online supplement is an optional, web-based Moodle class that includes multiple practice tests, videos of worked math problems, copies of presentation materials for many of the topics presented in the week-long school, and additional materials that will help you prepare for the certification exam. The online supplement will be available by the first day of the week-long school and will be accessible until the day of the first traditional certification exam after the school.

If you wish to participate in this program, please be sure that YOUR email address is included on your registration form. Please note the online supplement is optional.

Individuals who register for the week-long school will receive an email with directions on how to log in and access the class.

Surface & Well Review Topics

WELL REVIEW CLASSES

A	B	C	Class Title
X			Administration
X	X	X	Bacteriology
X	X	X	Corrosion Control
X	X	X	Disinfection & Disinfection By-Products
X	X	X	Distribution Systems & Cross Connection
X	X	X	Drinking Water Regulations & Records
X	X		Fluoridation
X	X	X	Ground Water Hydrology
		X	Groundwater Treatment Processes
X	X		Handling & Disposal of Process Wastes
X	X		Instrumentation
X	X		Iron & Manganese Removal
X	X	X	Lab Procedures & Sample Collection
X	X	X	Maintenance
X	X	X	Math
X	X		Membrane Processes
		X	Operation of Small Water Systems
X	X	X	Pumps
X	X	X	Safety
X	X	X	Softening
X	X	X	Well Construction
X	X	X	Well-Water Chemistry

SURFACE REVIEW CLASSES

A	B	C	Class Title
X			Administration
X	X	X	Bacteriology
X	X	X	Coagulation & Flocculation
X	X	X	Corrosion Control
X	X	X	Disinfection & Disinfection By-Products
X	X	X	Distribution Systems & Cross Connection
X	X	X	Drinking Water Regulations & Records
X	X	X	Fluoridation
X	X		Handling & Disposal of Process Wastes
X	X		Instrumentation
		X	Iron & Manganese Removal
		X	Jar Test
X	X	X	Lab Procedures & Sample Collection
X	X	X	Maintenance
X	X	X	Math
X	X	X	Plant Operations
X	X	X	Pumps
X	X	X	Safety
X	X	X	Sedimentation & Filtration
X	X	X	Taste & Odor
X	X	X	WTP Operator & Reservoir Management



HOTEL ACCOMMODATIONS

SPECIAL NOTE: The host hotel will now be the Holiday Inn Express & Suites. A block of rooms has been reserved in the name

of the NC Waterworks Operators Association until **September 2, 2019**. When you make your reservations be sure to request group code **WOA** or group title **NC Waterworks Operators Association**. This facility is also the site for the Wednesday Night "Brain Break" with Door Prizes and the Tuesday night review session.

Holiday Inn Express & Suites
3741 Thistledown Drive
Raleigh, NC 27606
Phone: 919-854-0001

Limited Number of Rooms Blocked – Special Group Rates
 \$ 109.00 Single or Double Rate (Breakfast is included)
 + \$ 14.44 13.25% Room Tax
 \$ 123.44 Single or Double Rate / Night

MEETING SITES

Advanced Day, Well & Surface classes and their lunches will be held at the McKimmon Center, which is located near the main NCSU campus at the corner of Western Boulevard and Gorman Street in Raleigh (919-515-2277).

OVERFLOW HOTEL

Holiday Inn Hotel and Suites Raleigh/Cary
 5630 Dillard Drive
 Cary, NC 27518
 Phone: 919-851-1220 (mention NCWOA Group)

Limited Number of Rooms Blocked – Special Group Rates
 \$ 109.00 Single or Double Rate (will include up to 2 breakfast coupons per night of stay per room)
 + \$ 14.44 13.5% Room Tax
 \$ 123.44 Single or Double Rate / Night

Special Note: A hotel authorization form must be completed, and returned to the Holiday Inn Express for guests that will not be physically traveling with their company/organization credit card.



NORTH CAROLINA WATERWORKS OPERATORS ASSOCIATION

Advanced Day Agenda

Wednesday, September 25, 2019 in Raleigh, NC

Getting Ahead of Emerging Contaminants & Public Relations

EXHIBIT HALL OPEN FROM 8:00AM - 4:00PM

Session 1

8:30am – 8:40am Welcome and Opening Remarks - *NCWOA Representative*

8:45am – 9:30am Regulatory Update

9:30am – 10:15am The Science & History of Emerging Contaminants

Break: 10:15 - 10:45

Session 2

10:45am – 11:15am Treatment Techniques for Emerging Contaminants

11:15am – 12:15pm Emerging Contaminant, a Case Study

Awards Banquet Luncheon – Provided on Site 12:15 – 1:30

Session 3

1:30pm – 2:15pm Public Relations - Resources Available to Effectively Communicate with Customers, the Public and Media

2:15pm – 3:00pm Public Relations - Developing an Effective Crisis Communication Plan

Break: 3:00 – 3:20

Session 4

3:20pm – 4:05pm Public Relations - An Exercise in Crisis Communication

4:05pm – 4:50pm Public Relations - Communicating with Media and Public after a Negative Incident, a Case Study

This class has been pre-approved for 6 contact hours for drinking water and wastewater certification.

AWARDS BANQUET LUNCHEON

The Awards Banquet Luncheon and Business Meeting will be held on Wednesday, September 25, 2019. The festivities will begin at 12:15pm at the McKimmon Center. There will be door prizes given away. Please make plans to attend and congratulate your fellow operators for a job well done!



NORTH CAROLINA WATERWORKS OPERATORS ASSOCIATION

Annual Fall School Registration Form Must be RECEIVED BY September 13, 2019

Please Print or Type

NAME (First, MI, Last): _____

NICK NAME for TAG: _____ SOCIAL SECURITY #: XXX-XX-_____

EMPLOYER / ORGANIZATION: _____

ADDRESS FOR CONFIRMATION: _____

CITY: _____ STATE _____ ZIP _____ COUNTY: _____

WORK PHONE: _____ EXT: _____ FAX: _____

ATTENDEE'S EMAIL ADDRESS: _____

ATTENDEE'S INDIVIDUAL NCWOA MEMBER # (must be included to be eligible for member rate): _____

NC WATER TREATMENT CERTIFICATE TYPE PRESENTLY HELD:

- AS BS CS AW BW CW DW
- AD BD CD DD CC/BF NONE

NC WATER TREATMENT CERTIFICATE # (OPERATOR ID #): _____

NC WASTEWATER CERTIFICATE# _____

PLEASE **CHECK** WHICH CLASS YOU ARE REGISTERING FOR AND **CIRCLE** RATE:

<u>CLASS TITLE</u>	<u>NCWOA MEMBER RATE</u>	<u>NON-MEMBER RATE</u>
<input type="checkbox"/> A-Surface (M-F)	\$ 330.00	\$ 385.00
<input type="checkbox"/> B-Surface (M-F)	\$ 330.00	\$ 385.00
<input type="checkbox"/> C-Surface (M-F)	\$ 330.00	\$ 385.00
<input type="checkbox"/> A-Well (M-F)	\$ 330.00	\$ 385.00
<input type="checkbox"/> B-Well (M-F)	\$ 330.00	\$ 385.00
<input type="checkbox"/> C-Well (M-F)	\$ 330.00	\$ 385.00
<input type="checkbox"/> Advanced (Wednesday)	\$ 150.00	\$ 195.00

Will you be attending the Basic Math for Operators from 10am-12noon on Monday, September 23rd? _____ Yes _____ No

It is not required as part of the certification school. (limited to first 45 participants for C-Well and C-Surface ONLY)

CREDIT CARD PAYMENT

Credit Card Type: _____ Visa _____ MC _____ AmEx _____ Discover

Name on Credit Card: _____

Credit Card Number: _____

Exp Date: Month _____ Year _____ Security Code from back of Card _____

Cardholder's Signature: _____

If cardholder is other than attendee, what email address should the CC receipt be sent to? _____

To ensure that you receive the emailed receipt, please add cindy@ncwoa.com to your email address book.

PLEASE SEND APPLICATION AND PAYMENT TO:

Heather Cagle, NCWOA Administrator
 PO Box 5466, High Point, NC 27262
 Phone: 252-764-2094 ext 1
 Fax: 252-764-2095
 Email: heather@ncwoa.com

← Please note
NEW ADDRESS

.....
 Credit Card Payments CANNOT
 be processed over the phone.

NCWOA USE: Amount: _____ CK# _____ E S Processed: _____



NORTH CAROLINA WATERWORKS OPERATORS ASSOCIATION

Membership Application

MEMBERSHIP APPLICATION – 2019 ANNUAL DUES ARE \$40.00

First Name: _____ Middle Initial: _____ Last Name: _____

Nickname: _____ Social Security #: XXX-XX-_____ If Renewal, what is your NCWOA Member #: _____

YOUR Individual Operator Certification #: (Issued by NCWTFOCB) _____

Certificate(s) Held:

____ A-Surface ____ B-Surface ____ C-Surface ____ A-Well ____ B-Well ____ C-Well ____ D-Well

____ A-Dist ____ B-Dist ____ C-Dist ____ D-Dist ____ Cross-Connection

____ None Yet ____ You are not an Operator & do not plan to become Certified.

____, _____, _____ Wastewater #'s

PLEASE SELECT YOUR PREFERRED ADDRESS (This is where confirmations & membership info will be sent.)

____ Home Address: _____

City: _____ State _____ Zip _____ County: _____

____ Employer Name: _____

MAILING Address: _____

City: _____ State _____ Zip _____ County: _____

Work Phone : _____ Ext: _____ Fax: _____

Home Phone: _____ Cell Phone: _____

Email Address: _____

How would you like to receive your issues of Go With The Flow? Postal Delivery _____ OR Email _____

How would you like to receive your Section Meeting notices? Postal Delivery _____ OR Email _____

NOTE: Memberships are based upon a calendar year. Membership cards will be mailed with receipt. These cards will contain your name, membership number, and membership expiration date.

NOTE: Please make checks payable to: **North Carolina Waterworks Operators Association** or **NCWOA**. We do NOT accept Purchase Orders.

CREDIT CARD PAYMENT

Credit Card Type: ____ Visa ____ MC ____ AmEx ____ Discover

Name on Credit Card: _____

Credit Card Number: _____

Exp Date: Month _____ Year _____ Security Code from back of Card _____

Cardholder's Signature: _____

PLEASE SEND APPLICATION AND PAYMENT TO:

Heather Cagle, NCWOA Administrator

PO Box 5466, High Point, NC 27262

Phone: 252-764-2094 ext 1

Fax: 252-764-2095

Email: *heather@ncwoa.com*

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If cardholder is other than member, what email address should the CC receipt be sent to? _____

To ensure that you receive the emailed receipt, please add cindy@ncwoa.com to your email address book.

NCWOA USE: Amount: _____ CK# _____ E S Processed: _____

Heather Cagle
NC Waterworks Operators Association
PO Box 5466
High Point, NC 27262
www.ncwoa.com

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NORTH CAROLINA WATERWORKS OPERATORS ASSOCIATION

80th Annual North Carolina Waterworks Operators School
September 23-27, 2019

Advanced Day Wednesday, September 25, 2019

AWARDS BANQUET LUNCHEON and ANNUAL BUSINESS MEETING
Wednesday, September 25, 2019 from 12:15pm - 1:30pm at the McKimmon Center

We Appreciate Our Corporate Sponsors! Look to them first for all of your industry needs.

