

Wednesday, March 28, 2012

7:30 a.m. - 4:00 p.m.

.75 CEUs NC Water & Wastewater

(Pending Approval)

***Space is limited to 25 attendees**

NC Cooperative Extension - Currituck County Center

120 Community Way, Barco, NC 27917

From Virginia or the Outer Banks: Take NC Hwy 168 to Currituck County. Turn onto US Hwy 158 (Shortcut Road). After 2.0 miles, turn right onto Community Way.

From Eastern NC: Take US Hwy 17 to Elizabeth City. Turn onto US Hwy 158. After 3.8 miles, take a slight right to stay on US Hwy 158. After 3.6 miles, turn Left onto Community Way.

Southeast Desalting Association

Hotels in the area:

Best Western Ocean Reef Suites

107 S. Virginia Dare Trail
Kill Devil Hills, NC Ph: 252-441-1611

Hilton Garden Inn

5353 Virginia Dare Trail N
Kitty Hawk, NC Ph: 252-261-1290

Holiday Inn Express Kitty Hawk

3919 N. Croaton Hwy (Hwy 158)
Kitty Hawk, NC Ph: 252-261-4888

Membrane Theory and Operations Workshop

The Workshop will focus on membrane technology and the membrane elements that are used for WTP facilities. Discussions will focus on how membrane plants are operated, influences of factors such as temperature, pressure, TDS and what to look for in day to day operations. There will be a discussion on how membrane elements are made and examined during troubleshooting efforts. Finally, a brief review of water chemistry in membrane operations and some of the mathematics related to membrane plants will be presented. This Workshop would be useful to operators new to membrane operations as well as a refresher course for experienced operators.

7:30 - 8:00 Registration/Check-In

8:00 - 8:15 Introductions & Welcome

8:15 - 10:00 Membrane Technology and Operations:

Speaker: Harold Fravel, Jr., Dow Water & Process Solutions

There will be a discussion of Reverse Osmosis systems and the influence of pressure, temperature, etc. In addition, the influence of water quality on operations, what can impact productivity and permeate quality will be reviewed.

10:00 - 10:15 Break

10:15 - 11:30 Membrane Construction & Membrane Autopsy:

Speaker: Coley Ali, Professional Water Technologies

How elements are made will be discussed and a video on membrane construction will be shown along with an examination of some membrane elements as part of a membrane autopsy and testing routine.

11:30 - 12:00 Discussion on Fouling of Membrane Elements:

Speaker: Coley Ali, Professional Water Technologies

What can foul membrane elements, how can they be cleaned and what the result of the fouling with respect to performance and life cycle of the membrane elements will be discussed.

12:00 - 12:30 Lunch (included)

12:30 - 1:00 Discussion on Fouling of Membrane Elements (Continued)

1:00 - 2:00 Water Chemistry for Membrane Operations & Membrane Math:

Speaker: Harold Fravel, Jr., Dow Water & Process Solutions

A brief review of water chemistry and how it relates to membrane operations will be given as well as a short refresher on some membrane math equations and relationships.

2:00 - 2:15 Break

2:15 - 3:00 Water Chemistry & Membrane Math (Continued)

3:00 - 4:00 Drive to Currituck County Mainland WTP

Facility Tour & Overview of Operations:

Tour by: Pat Irwin and William Nash, Currituck County Water Department



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**TO REGISTER - CALL SEDA, FAX
OR VISIT OUR WEBSITE AT
WWW.SOUTHEASTDESALTING.COM
Ph: 772-781-7698 Fax: 772-463-0860**

2409 SE Dixie Hwy.
Stuart, FL 34996

MARCH 28, 2012

MEMBRANE THEORY & OPERATIONS WORKSHOP REGISTRATION FORM

**Southeast Desalting Association (SEDA) ♦ 2409 SE Dixie Hwy. ♦ Stuart, FL 34996
PH: 772-781-7698 ♦ FAX: 772-463-0860 ♦ admin@southeastdesalting.com ♦ www.southeastdesalting.com**

Name: _____ Title: _____
 Company: _____
 Mailing Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Fax: _____
 E-mail: _____ Website: _____

Special Needs:
 Wheelchair Access
 Visually Impaired
 Hearing Impaired
 Vegetarian Meals
 Other: _____

Member of (check all that apply): SEDA AMTA
 License Type: _____ Level (i.e., A, B, or C): _____ Lic.#: _____

SEDA - Membrane Theory & Operations Workshop:

	<u>Amount</u>
*Registration and Payment must be received by event date:	
Members/Affiliates (must be from the list above)	\$100 _____
Non-Members - Certified Ops (includes 1 year Div.1B SEDA membership)	\$125 _____
Non-Members - Non Certified Ops (includes 1 year Div. 3 SEDA membership)	\$150 _____
*Limited space - available to the first 25 paid registrants	
Need .75 NC CEU Certification:	\$ 25 _____

Total Registration Fee \$ _____

METHOD OF PAYMENT: Payable to: Southeast Desalting Association, 2409 Dixie Hwy., Stuart, FL 34996

Check Enclosed for \$ _____ Please Invoice PO# _____
 Visa M/C Amex Card # _____ + _____
 (16 #'s + 3 #'s listed in the signature area on back of Visa/MC or + 4 #'s on front of AX)
 Name on CC: _____ Expiration Date: _____
 CC Mailing Address: _____ CC Mailing Zip: _____

Cancellations/Refunds...

Written cancellation requests received by the Southeast Desalting Association (SEDA) at least 5 days before a scheduled event will receive a refund, less a \$50 administrative processing fee. Full payment is required if the request is received less than 5 days of the scheduled event and no refund will be available. A credit may be issued less a \$25 recordkeeping fee towards a future event provided that it is redeemed within 12 months of the credited scheduled event. The credit will be forfeited if not used within the 12 months timeframe. A substitution of the registrant may be made any time without cost up to the date of the event. The requested amount of a refund or credit must exceed their respective administrative processing fees as described above in order to be considered. SEDA reserves the right to make changes to the scheduled event including but not limited to changing the event location, scheduled date(s), program and speakers, or to cancel the event in its entirety when conditions beyond its control prevail. If the event is cancelled, SEDA's liability is limited to providing a full refund of the fees paid toward the scheduled event.