July 12-14, 2016
Technology Transfer Workshop
“Membranes Impact the Pacific Northwest: Water, Wastewater and Reuse Technologies and Applications”

Credit Hours/PDHs: Water/Wastewater
WA, OR, ID, MT, UT- Approved
WHAT YOU WILL LEARN

This AMTA/NWMOA/WEF Technology Transfer Workshop will focus on applying membranes to drinking water, wastewater, and reuse applications. There will be tours of two full-scale facilities that use membranes – the North Clackamas Water Treatment Plant and the La Center Wastewater Treatment Plant. The workshop will also cover topics such as Membranes in Reuse Applications, MBR Case Studies, MF/UF uses in Drinking Water, New Technology and Trends, and an Operator Roundtable.

Tuesday, July 12, 2016

3:00 - 5:00  Exhibitor Set-Up
3:00 - 5:00  Early Registration
5:30 - 6:30  NWMOA Board Meeting

Wednesday, July 13, 2016

7:30 - 8:15  Registration and Continental Breakfast
7:30 - 8:15  Membrane Basics (for those new to Membranes or wanting a refresher)
             Harold Fravel, Ph.D., AMTA Executive Director
8:15 - 8:30  Introductions and Opening Remarks
             Harold Fravel, Ph.D., AMTA Executive Director
             Jill Miller, NWMOA President
             Linda Kelly, WEF Rep.
8:30 - 12:00 SESSION 1: Commonalities, Reuse
               Moderator: Jill Miller, NWMOA President
8:30 - 9:00  GWRS-The World’s Largest Indirect Potable Reuse Facility
             Mehul Patel, P.E., Orange County Water District
9:00 - 9:30  Dealing with the Past, Managing the Present and Planning for the Future
             Eric Owens, P.E., West Basin Municipal Water District
9:30 - 10:00 Checking in on the Chino Concentrate Reduction Facility
             Eric Cherasia, P.E., Carollo Engineers
10:00 - 10:30 Refreshment Break
10:30 - 11:00 Tractor Paint Factory Wastewater Recycle Stream with Kubota MBR
               Hiro Kuge, Kubota
11:00 - 11:30 Integrating Membrane Filtration with Existing Slow Sand Filters
               Alan Schacht, North Clackamas County Water Commission
11:30 - 12:00 La Center Wastewater Plant Overview
               Sue Lawrence, City of La Center
12:00 - 1:00  Lunch (included)

1:00 - 4:30  SESSION 2: Plant Tours
              Moderator: Bob Oreskovich, H2O Innovation
1:00 - 1:30  On Bus In Route North Clackamas Water Plant
1:30 - 2:30  Facility Tour - North Clackamas Water Plant
2:30 - 3:15  On Bus In Route La Center Wastewater Plant
3:15 - 4:15  Facility Tour - La Center Wastewater Plant
4:15 - 4:30  On Bus In Route to Hotel
5:00 - 7:00  Networking Reception
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter/Company</th>
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<tbody>
<tr>
<td>8:00 - 8:30</td>
<td>Continental Breakfast</td>
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<tr>
<td>8:30 - 10:00</td>
<td>SESSION 3A: MBR: Case Studies, Open Platform</td>
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<tr>
<td>8:30 - 9:00</td>
<td>Operating an MBR Plant Parallel to an Activated Sludge Plant</td>
<td>Blake Raines, Water Environment Services</td>
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<td>9:00 - 9:30</td>
<td>Hermiston Oregon: MBR Start-Up Through the 1st Year of Operation</td>
<td>Anthony Zamarro, Evoqua Water Technologies</td>
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<td>9:30 - 10:00</td>
<td>Startup/Testing and Operational Challenges of JBLM’s Low Pressure Membrane System</td>
<td>Judy Nishimoto, CDM Smith</td>
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<td>10:00 - 10:30</td>
<td>Refreshment Break</td>
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<tr>
<td>10:30 - 11:00</td>
<td>MBR and the 3 R’s</td>
<td>Dennis Livingston, Ovivo USA, LLC</td>
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<tr>
<td>11:00- 11:30</td>
<td>The Use of Flat Plate PVDF MBR Modules to Sludge Thickening</td>
<td>Michael Stefanic, Toray Membrane USA, Inc.</td>
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<td>11:30 - 12:00</td>
<td>Improving Organic Reduction and Overcoming Challenges at an MBR Plant Treating Wastewater From a Plastics Production Process</td>
<td>David Holland, Aqua-Aerobics Systems</td>
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<td>8:30 - 10:00</td>
<td>SESSION 3B: MF/UF: Case Studies, Open Platform</td>
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<td>8:30 - 9:00</td>
<td>Failure Testing as a Startup Tool</td>
<td>John Koch, P.E., BCEE, HDR Engineering, Inc.</td>
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<td>9:00 - 9:30</td>
<td>Membrane Operations Monitoring with a Universal HMI</td>
<td>Jay MacPherson, Ph.D., P.E., Oregon Health Authority, Drinking Water Services</td>
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<td>9:30 - 10:00</td>
<td>On-Demand Gravity Powered Ceramic Filtration Facility: A New Philosophy in Montana</td>
<td>Nathan Kutil, P.E., HDR Engineering, Inc.</td>
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<td>10:00 - 10:30</td>
<td>Refreshment Break</td>
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<tr>
<td>10:30 - 11:00</td>
<td>Phasing &amp; Pretreatment Considerations for Clifton Water District’s Media Filter to Membrane Filter Conversion</td>
<td>Dan Hugaboom, P.E., Carollo Engineers, Inc.</td>
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<td>11:00- 11:30</td>
<td>Hybrid Membrane Process: Shaping the Future of Drinking Water Treatment</td>
<td>Benoit Barbeau, Ecole Polytechnique De Montreal</td>
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<td>11:30 - 12:00</td>
<td>Keeping Membrane at It’s Optimum Operating Conditions</td>
<td>YuJung Chang, AECOM Water</td>
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<td>12:00 - 1:00</td>
<td>Lunch (included)</td>
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<td>1:00- 3:30</td>
<td>SESSION 4: New Technologies/Trends &amp; Roundtable</td>
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<tr>
<td>1:00 - 1:30</td>
<td>MBR Technologies &amp; Trends</td>
<td>Dennis Livingston, Ovivo USA, LLC</td>
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<td>Hiro Kuge, Kubota</td>
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<td>Jason Diamond, GE Water &amp; Process Technologies</td>
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<td>1:30 - 2:00</td>
<td>UF/MF Technologies &amp; Trends</td>
<td>Peter O’Connell, Pall Corporation</td>
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<td>Russ Swerdfeger, Evoqua</td>
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<td>Joe Tardio, Scinor</td>
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Thursday, July 14, 2016

1:00 - 3:30  SESSION 4:  (Continued)
Moderator: Nathan Kutil, P.E., HDR Engineering, Inc.

2:00 - 2:15  Refreshment Break

2:15 - 3:15  Membrane Operations - Operator Roundtable Discussion
Chad Busch, Park City Municipal Corporation; Sue Lawrence, City of La Center; Ray Pardee, City of Cottage Grove; and Howard Burton, City of St. Helens

3:15 - 3:30  Workshop Wrap-Up
Jill Miller, Workshop Co-Chair

3:30 - 9:30  AMTA Board Meeting

TABLE TOP EXHIBITS (Table Top Backdrops Only)
Each Table Top Booth will cost $750 for Members
(must be a Division 1 or 2 member to exhibit)

ALL EXHIBIT SPACES WILL BE SELECTED ON-SITE ON A FIRST COME/FIRST SERVED BASIS

All Table Top Exhibitors will receive:
- One 6’ Table (Chairs are available upon request)
- One full attendee registration to the Workshop
- List of attendees sent via e-mail two weeks prior and a final list once available
- Acknowledgement in the attendee materials
  - 100 word company description
  - please e-mail: planning@amtaorg.com
- Sign recognition during the program
- Electricity is available from the Hotel for an additional fee

SPONSORSHIP OPPORTUNITIES
Our objective is to provide education for our members and others based on current and evolving water treatment issues and technologies. Sponsorship of this AMTA/NWMOA/WEF program makes it possible for the industry to deliver its experienced perspective on the nation’s water supply in a concerted manner. Please consider sponsoring this workshop.

All Sponsors will receive:
- One full attendee registration to the Workshop
- List of attendees sent via e-mail two weeks prior and a final list once available
- Acknowledgement in the attendee materials - 100 word company description
  - please e-mail: planning@amtaorg.com
- Company promotional item giveaway
- Please submit your giveaway item to be given to attendees during sign-in
- Sign recognition during the program

Platinum Sponsors:

Gold:
Carollo Engineers, Inc.
PWT

Silver:
Aqua-Aerobics Systems, Inc.
Hydranautics Nitto Group Company
Toray Membrane USA, Inc.
WesTech Engineering, Inc.

Bronze:
Fluid Equipment Development Company (FEDCO)
Polymem

Creating Chemistry. Smart Solutions.
Hilton Vancouver Washington
301 W. 6th Street, Vancouver, WA 98660

A group rate of **$145 for guest rooms (single/double)** has been negotiated for this program for reservations made by **Monday, June 20, 2016** (subject to availability). Make hotel arrangements directly with the Hilton: 800-445-8667 and refer to AMTA for discounted rate. Self-Parking -$10.00 Valet Parking - $22.00. All rooms feature complimentary Wi-Fi and 37” flat-panel televisions.

From Portland International Airport (PDX):
Take I-205 North over Glen Jackson Bridge into Washington, the first exit onto Hwy. 14 W., towards Vancouver, stay on Hwy. 14 approx. 7 mi., follow signs into City Ctr, go left, follow signs to 6th St., hotel corner of 6th and Columbia.

**Transportation**

*Avis Rent-A-Car* discounted rates are available. To participate, call Avis at 800-331-1600. Reference **Account No. AWD# Z441010**.

**Each Participant Receives**

Conference materials, facility tour, networking reception, refreshment breaks, lunch each day, and certificate of attendance. Tuition does not include lodging or other meals. **All registration fees must be paid prior to the program.** On-site registration will be accepted with payment.

**Cancellations and Refunds**

Written cancellation requests received by AMTA/NWMOA/WEF on or before June 20, 2016 will receive a refund, less a $50 processing fee. Full payment is required if cancellation is received on or after June 21, 2016 - no refunds and no credits for future events will be granted. However, substitutions may be made at any time. AMTA/NWMOA/WEF reserves the right to make changes in programs and speakers, or to cancel programs when conditions beyond its control prevail. Every effort will be made to contact each enrollee if a program is cancelled. If a program is not held, AMTA/NWMOA/WEF's liability is limited to the refund of the program fee only.

**REGISTER EARLY AND SAVE**

How to Register:

**PHONE:** 772-463-0820 **FAX:** 772-463-0860
**EMAIL:** regassist@amtaorg.com **WEB:** www.amtaorg.com
American Membrane Technology Association (AMTA)
2409 SE Dixie Hwy. • Stuart, FL 34996 • www.amta.org

Name: ____________________________ Title: ______________________
Company: ___________________________________________________
Mailing Address: _______________________________________________
City: ____________________________ State: __________ Zip: __________
Ph: __________________ Cell: ________________ Fax: ______________
E-mail:________________________ Website: _______________________

I would like to receive email messages from AMTA or SCMA about Events or Activities:

☐ YES ☐ NO

Member (check all that apply):
☐ AMTA  ☐ IDA  ☐ SEDA  ☐ SCMA  ☐ SWMOA  ☐ NWMOA  ☐ WEF

2-Day Workshop: (See Program Information Page)

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<tr>
<th>Function</th>
<th>Amount</th>
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<tr>
<td>Members/Affiliates (must be from the list above)</td>
<td>$300</td>
<td>$400</td>
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<tr>
<td>Member Div. 1 or 3C (Affiliate equivalent)</td>
<td>$175</td>
<td>$275</td>
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<tr>
<td>Non-Member - Operator</td>
<td>$200</td>
<td>$300</td>
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<tr>
<td>Non-Member - All Other</td>
<td>$400</td>
<td>$500</td>
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<tr>
<td>Regulators/Full-Time Student</td>
<td>$75</td>
<td>$100</td>
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<tr>
<td>Speakers/Moderators - Members/Affiliates</td>
<td>$200</td>
<td>$300</td>
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<tr>
<td>Speakers/Moderators - Non-Members/Affiliates</td>
<td>$300</td>
<td>$400</td>
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<tr>
<td>Guest/Spouse Wed. Networking Reception</td>
<td>$10</td>
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<td>Cannot Attend - Purchase Materials</td>
<td>$30</td>
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<td>Need Credit Hours Certification</td>
<td>$25</td>
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License Type:_________ License Class (i.e., 1, 2, 3, or 4):_________
State:_______ License #:____________

Exhibit-Table Top: ☐ $750 (must be a div. 1 or 2 member to exhibit)

Sponsor: ☐ Platinum: $1,250 ☐ Fun Event: $1-6,000 ☐ Gold: $1,000 ☐ Silver: $750 ☐ Bronze: $600

Total Registration Fee $ __________