

# Southwest Membrane Operator Association (SWMOA)

## Fall Newsletter

As of November 1, 2008 we are 296 members strong – welcome to all the new members!

### Upcoming Workshop & Symposium:

Our last workshop for the year will be held on **December 3, 2008** at the Beverly Hills Water District in Beverly Hills, CA – this is also Hands on Reverse Osmosis Plant Operator Training. The program details and registration form are available on the SWMOA website.

All SWMOA workshops have CEU credit – check our website at [www.swmoa.org](http://www.swmoa.org) for details or call SWMOA at 888-463-0830.

**Mark Your Calendar for the 2<sup>nd</sup> Annual Symposium** “How Low Can You Go? – Low Pressure Membrane Systems” scheduled for February 23-26, 2009 at the Hilton Hotel in Costa Mesa, CA.

### Recent Activities:

SWMOA held its second workshop this August at the Olivenhain Water District in Olivenhain, CA. This was a hands-on Reverse Osmosis Plant Operator Training. We had a full house with 44 people in attendance.

Our third 2008 Reverse Osmosis Operator workshop was held at the Yucaipa Valley Water District in Yucaipa in mid October with 22 attendees.

We want to thank Olivenhain and Yucaipa for making their facilities available and hosting these workshops. The feedback we are getting from the attendees has been very good. We also want to thank all of the speakers who have provided invaluable information to our members. Last, but not least, we thank all of the sponsors who help fund the workshops.

### Election Results:

A special thank you goes out to all of the 2008 candidates on behalf of the SWMOA Board.

The Nominations/Election Committee is pleased to announce the results of the 2008 Election and that the membership for voting online.

#### Division 1:

Mehul Patel, Orange County Water District	Re-Elected
Carl Spangenberg, Irvine Ranch Water District	Re-Elected

#### Division 2:

Jim Elliott, Layne Christensen Company	Re-Elected
Imad Feghali, CH2M Hill, Inc.	Elected

#### Division 3:

Eric Owens, Separation Processes, Inc.	Elected
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If you are interested in running for the SWMOA Board of Directors, please email SWMOA at [admin@swmoa.org](mailto:admin@swmoa.org)

### Award Nominations:

The Awards Committee would like to announce that members can submit nominations for yourself or others for our two annual awards: “Operator of the Year” and “Plant of the

Year". Please send your nominations to the Awards Chair, Mehul Patel at [mpatel@ocwd.com](mailto:mpatel@ocwd.com). Please provide a brief summary on why the Operator or Plant should be considered for the Award.

**Tips & Tools for Membrane Operators:**

The Publications Committee has prepared a Glossary, Definitions and Information resource guide that was developed specifically for the Membrane Industry. This Glossary has been added to the home page of the SWMOA website for your reference and use. If you have any other useful items to include, please email Jim Elliott, Publications Chair at [jdelliott@laynechristensen.com](mailto:jdelliott@laynechristensen.com).

**Operator Tip: Prevent RO Draining.**

**RO systems are often plumbed with their concentrate/reject outlet located below the top RO membrane vessel. If not protected by isolation valves on these lines, this often results in siphoning when the RO shuts down, which leads to other problems. Teeing in an inverted check valve at the highest point in the concentrate line will allow air to displace the water in the line to break the vacuum.**

*Operator tip provided by Wes Byrne, Company for Educational Advancement (CEA)*

**Definition of the Day: Flux or Water Flux (Reverse Osmosis)**

Typically expressed as volume per area per unit of time, **flux** is used to express the rate at which water permeates a membrane. Typical units are gallons per square foot per day (i.e. GFD or GSFD) or liters per square meter per hour (l/m<sup>2</sup>/hr). The flux of a membrane is directly proportional to temperature and pressure. As a rule of thumb, flux decreases 1.5% per 1°F. Salt flux is the amount of TDS passed through a given area of membrane per unit of time. It is important to remember that Salt flux is a function of concentration gradient and not driving pressure. Therefore with increasing driving pressure, the concentration of salts in the permeate decreases due to constant salt leakage (e.g., milligrams) and increased water flux (e.g., liters). The net effect of increased drive pressure is to dilute a constant amount of salt with more pure water.

*Note: 1 GFD = 1.66 l/m<sup>2</sup>/hr*

**Let your friends at other water districts know about SWMOA** - we are dedicated to providing a forum for membrane system operators to exchange information, experience and knowledge. As important, we provide educational credits through our workshops and hands-on training necessary for Operator Certification. Our goal is to make our vital industry stronger and the technology more reliable. Prospective members can find application information online on our website at [www.swmoa.org](http://www.swmoa.org).

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SWMOA was formed in 2006 as an affiliate of the American Membrane Technology Association (AMTA). It is dedicated to the improvement of the quality of water supplies through desalting,

reuse and other water sciences. The Corporation's members are concerned with design, research and development, equipment manufacture, operation and maintenance, environmental regulations and legislation.

The Corporation's objectives include promotion, both to the public and to elected officials, of available technologies that improve water quality; education, training and certification of plant operation personnel; communication within the membership; development of meaningful interface with regulatory agencies; technology transfer; and protection of the environment.

The Corporation is committed to the advancement of its objectives throughout the Southwest United States region including but not limited to Arizona, California, Hawaii, and Nevada within the limits of its resources.

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