



الجمعية العربية السعودية للبيئة المائية
Saudi Arabian Water Environment Association

Innovative & Reliable Water and Wastewater Technologies for Sustainable **Water Quality**



الجمعية العربية السعودية للبيئة المائية
Saudi Arabian Water Environment Association

www.sawea.org info@sawea.org

Under the Patronage of His Excellency
Engineer Abdullah Al-Hussayen
The Minister of Water and Electricity



تحت رعاية معالي المهندس
عبدالله بن عبدالرحمن الحصين
وزير المياه والكهرباء

Water Arabia 2015

Conference & Exhibition

**Innovative & Reliable Water and Wastewater
Technologies for Sustainable Water Quality**

مؤتمر و معرض

المياه العربي ٢٠١٥

الابتكارات التقنية في مجال المياه وإعادة استخدام
مياه الصرف الصحي لبيئة مستدامة



17 to 19 February, 2015
Le Meridien | Khobar, Saudi Arabia

١٧-١٩ فبراير ٢٠١٥ - فندق مريديان
الخبر، المملكة العربية السعودية

Supported by:



Water Arabia at Glance

The Saudi Arabian Water Environment Association (SAWEA) organized Water Arabia 2015, a three day Conference and Exhibition dedicated to water conservation.

The conference was held at the Le-Meridien, Khobar, Saudi Arabia on February 17 to 19, 2015. The theme of Water Arabia 2015 was “Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality”.

The topics of Water Arabia 2015 were:

- Sustainable wastewater treatment and reuse options
- Innovative water treatment and desalination membrane technology for water treatment
- Non-conventional and renewable desalination technology
- Innovative sanitary & industrial waste water treatment options



Overall Attendance	
Online registration	812 Professionals
On-site registration	416 Professionals
Total	1228 Professionals

Participation Breakdown	
1 st day Design workshop	450 Professionals
Basic sanitary wastewater treatment design workshop	164 Professionals
Basic desalination design workshop	152 Professionals
Industrial wastewater treatment workshop	113 Professionals
2 nd day Opening ceremonies, Technical Program and Exhibition	710 Professionals
3 rd day Technical Program and Exhibition	450 Professionals





Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality



Design Workshops

Tuesday, 17 February 2015

Basic Sanitary Wastewater Treatment



Nick Cooper, AECOM

Mr. Cooper is a Vice President and AECOM's Technical Practice Leader for wastewater treatment. He organizes and manages the AECOM Wastewater Treatment Course, a year-long course on treatment plant design.

This 6 hour technical training course was on basic sanitary wastewater treatment that included the following topics: preliminary, primary and biological treatment, clarification, filtration and disinfection, odor control and sludge handling.



Basic Industrial Wastewater Treatment

Thomas E. Schultz

Siemens Energy Inc. – Water Solution

Thomas (Tom) E. Schultz is Siemens Water Technologies Vice President of Sales and Marketing for the petroleum and chemical industries. During the past 27 of his 32 years with Siemens he has dealt exclusively with water and wastewater compliance and sustainability

issues and challenges that face the petroleum and chemical industries. Most recently, he has worked with Saudi Aramco to develop and commercialize the EcoRight™ MBR technology which is targeted toward difficult to treat wastewaters and the economical reuse of wastewater for various applications including irrigation water, cooling water, and boiler feed water.

This 6 hour technical training course was on basic industrial wastewater treatment and included the following topics: produced water, water/steam injection, biological and shale gas treatment, oil and water separation and wastewater recycle/reuse.



Basic Desalination Process and Plant Design

Dr. Corrado Sommariva

International Desalination Association (IDA)

Dr. Sommariva is a consultant of international reputation. He is presently the Managing Director of ILF Consulting Engineers Middle East and the head of the company's worldwide desalination activities.

This 6 hour technical training course was on basic desalination process & design and included the following topics: mass balance, energy planning and thermal desalination technologies.

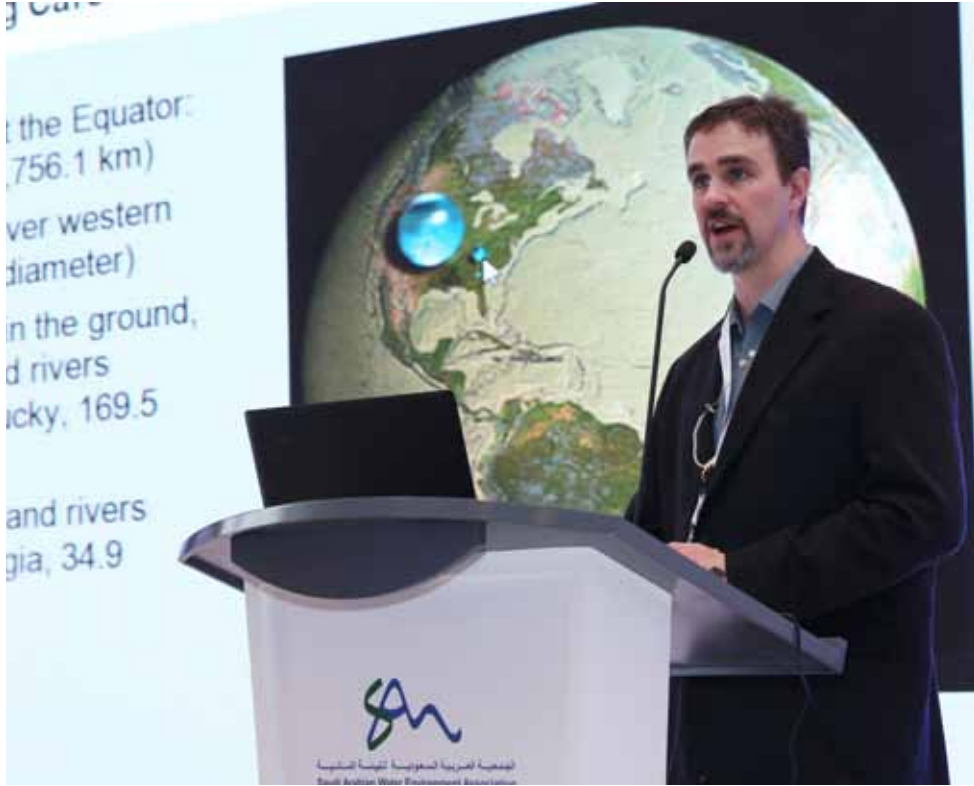








Basic Industrial Wastewater Treatment









Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality



Opening Ceremony

Wednesday, 18 February 2015

Water Arabia, a conference that brought Saudi government representatives and industry water professionals together, was held Feb 17-19 in the Kingdom. The conference was organized under the patronage of HE Abdullah Al-Hussayen, the Minister of Water and Electricity, with the theme “Innovative Water and Wastewater Technologies in a Suitable Environment”. Saudi Aramco, represented by the Utilities and Technical Support and the Environmental Protection departments, was a diamond sponsor for the event.

“When it comes to water management and conservation, we’ve come a very long way in a very short time,” Hani Abu Khadra, Vice President of Community Services, said in the opening remarks. He added that the Kingdom of Saudi Arabia has implemented a multi-billion Riyal comprehensive strategy with an additional 6 Billion SR for water projects recently added by the His Royal Highness, King Salman bin Abdulaziz.

Engineer Mohammad Ahmad Baghdadi, Deputy Minister of Water and Electricity, said, “Preserving water resources and rationalizing its uses, require

integrated efforts at all national, regional and international levels. Boosting positive and constructive cooperation horizons among Arab countries is also needed for maintaining the available water sources and ensuring its sustainability. Such an objective may not be achieved without the exchange of scientific and practical expertise by way of conferences and international seminars, such as our present conference.”

“Water, as a reliable abundant resource, is facing huge and immediate challenges. The problem is not limited to this region alone, but it can be



considered a bigger more immediate problem; a strategic threat to the regions' growth and stability," said Dr. Abdullah Al- Alshaikh, President of the International Desalination Association (IDA).

Mohamed Dahab, former president of the Water Environment Federation, spoke about the close connection between energy and water and the way to get the most efficient use out of both.

Finally, a special presentation was given by H.E. Dr. Loay Bin Ahmad Al-Musallam CEO, National Water Company (NWC) exploring NWC efforts in improving the water sector in Kingdom of Saudi Arabia.











Water Arabia 2015

Conference & Exhibition









Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality

VIP Dinner Keynote address

Wednesday, 18 February 2015

Education / Industry Cooperation

Dr. Alaa A. Bukhari

Director, Center for Environment and Water (KFUPM)

ارامكو السعودية
Saudi Aramco



SIEMENS



Water Arabia 2015

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Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality

VIP Dinner Keynote address

Wednesday, 18 February 2015

Addressing Water Scarcity in Saudi Arabia

Jon Freedman

VP & Executive Counsel - Government Affairs & Policy

GE

أرامكو السعودية
Saudi Aramco



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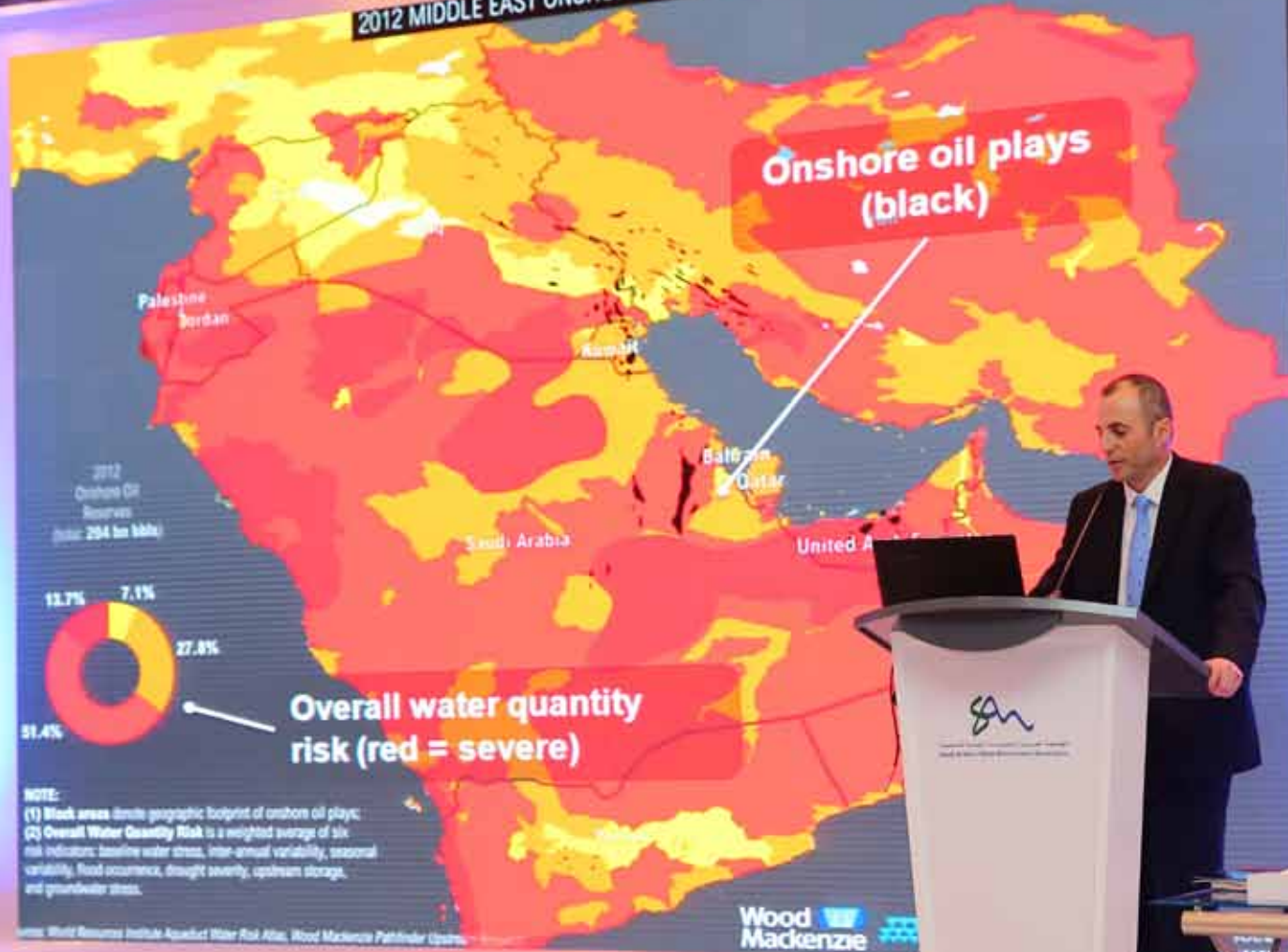


Water Arabia 2015

Conference & Exhibition



2012 MIDDLE EAST ONSHORE OIL RESERVES VS OVERALL WATER QUANTITY RISK



Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality

VIP Dinner

Sponsor Recognition Ceremony
Wednesday, 18 February 2015

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وزير المياه والكهرباء

مؤتمر ومعرض المياه العربية ٢٠١٥

الابتكارات التقنية في مجال
مياه الصرف الصحي وإعادة استخدام
مياه الصرف الصحي في
19 فبراير - فندق... مدينة



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مؤتمر ومعرض المياه العربية ٢٠١٥

الابتكارات التقنية في مجال المياه
إعادة استخدام المياه الصالحة للشرب
٢٠١٥ - ١٧-١٩ فنديّة عمان العربية للهندسة والبناء
عمان



Water Arabia 2015

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مؤتمر و معرض

المياه العربية ٢٠١٥

الابتكارات التقنية في مجال المياه وإعادة استخدام
مياه الصرف الصحي لبيئة مستدامة

١٧-١٩ ابريل ٢٠١٥، مركز مريديا للفكر، المؤتمر العربي للمياه



Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality



Technical Program

Wednesday, 18 & 19 February 2015

Technical Program

Wednesday, 18 February 2015

Session	Water	Wastewater	Special Topics
Chairman	Dr. Ahmed Al-Arifi	Jubran Al Qahtani	Dr. Abdulrahman Hariri
	Mohammed Hajjy	William Conner	Thamer Mutairi
13:30 - 13:55	Water Network Design Principles Technologies Presenter: Ahsan Ansari (Saudi Aramco)	Selected Processes for Wastewater Treatment Presenter: Ali Motlag (MOWE)	Use of Non-Metallic Pipe in Water and Wastewater Applications Presenter: Adel Badghaish (Saudi Aramco)
14:00 - 14:25	Desalinated Water Transmission in the Kingdom of Saudi Arabia Presenter: Khalid Al-Jandal (SWCC)	Reuse and Recycling Wastewater effluents Presenter: Umopathy Dharmaraj (Saudi Aramco)	Application of Modern Plastic Piping Systems for Sustainable Water Quality Presenter: Mark Jarrett (Georg Fischer)
14:30 - 14:55	Working with High Recovery Water Treatment Plants Presenter: Mohammad Sammour (Veolia)	Development and Performance of Hybrid Depth Filtration Presenter: Omar Gadalla (Parkson)	Environmental and Economic Impact of Using Natural Fiber in Landscaping Presenter: Mousa Hamdan (MDH)
15:00 - 15:30	BREAK		
15:30 - 15:55	Membrane Technologies to Protect Membranes Presenter: Peter Cartwright (Cartwright Consulting)	Treated Effluent (TSE) Reuse Applications and Challenges Presenter: Mohammad Sammour (Veolia)	Humidification Dehumidification (HDH): From Theory to Plant Presenter: Dr. Mohamed Antar (KFUPM)
16:00 - 16:25	Water Desalination Using Membrane Distillation Presenter: Dr. Atia Khalifa (KFUPM)	Successful MBR Performances Test and Operation in an Oil Refinery Presenter: Boris Ginzburg (GE)	Nanotechnology, an Emerging and Promising Technology for Wastewater Treatment Presenter: Dr. Fahim Hussain (University of Dammam)
16:30-16:55	Overview of Water Safety Plans Presenter: Zubair Azizkhan (Saudi Aramco)	Saudi Aramco Wastewater Treatment Equipment Presenter: Subhi AL-Aama and Hadi Daghman (Saudi Aramco)	On-Site Sodium Hypochlorite Generation for Water & Wastewater Disinfection Presenter: Randy Otts Parkson Corporation



Technical Program

Wednesday, 19 February 2015

Session	Water	Wastewater	Special Topics
Chairman	Dr. Ahmed Al-Arifi	Ali Motlaq	Michael Kennedy
	Mohammed Hajji	Bruno Villegas Lira	Ahsan Ansari
08:30 - 08:55	Innovations in Seawater Desalination that result in Energy Savings Presenter: Dr. Ibrahim Al-Tisan (SWCC)	Saudi Aramco Efforts in Oily Wastewater Treatment and Reuse Presenter: Thamer Al-Mutairi (Saudi Aramco)	Wastewater Odor Control: A Presentation and Evaluation of Technologies Presenter: Georgios Ioannou (Integrity Municipal Services)
09:00 - 09:25	Future Water Demands in Saudi Arabia and SWCC's Strategy Presenter: Abdullah Al-Rubaian (SWCC)	Advancements in Media Filtration for Oil Removal from Produced Water Presenter: Chad Felch (Siemens)	Treatment of MTBE Contaminated Water using UV/Chlorine Advanced Oxidation Process Presenter: Amana Jamal Kedir / Bassam Tawabini (KFUPM)
09:30 - 09:55	Behavioral, Administrative, and Engineering Controls to Water Conservation Presenter: David Good (Saudi Aramco)	Innovation for Waste Water Treatment Presenter: Christian Tougaard (Alfa Laval)	Accomplishing Zero Liquid Discharge in Petrochemical Facilities Presenter: Dr. Vikrant Sarin (Aquatech)
10:00 - 10:25	Development of RO Units for Treatment of High Sulfur Ground Water Presenter: Dr. Habis Al-Zoubi (University of Dammam)	Wet Air Oxidation Pre-Treatment of Spent Caustic for Discharge to Biological Wastewater Treatment Presenter: Bryan Kumfer (Siemens)	Evolution of Cooling Tower Technology Presenter: Randy Russell (Tower Technology Inc)
10:30 - 11:00	BREAK		
11:00 - 11:25	Improvements to Brackish Water RO Plants Presenter: Peter Szappanos (Veolia)	Technology for the Treatment/Reuse of Refinery Wastewater Presenter: Joseph Sebastian (Siemens)	Reduction of Soil Salinity Levels Through the Use of Ero-Control Polymer Presenter: Domingo Serpa (Agroworx)
11:30 - 11:55	Removal of Dichloromethane from Ground-water Samples Using Photo-Degradation Presenter: Salawu Adio Omobayo / Bassam Tawabini (KFUPM)	Advances in Diamond Applications in Electrochemistry: Industrial Wastewater Treatment Scenario Presenter: Dr. Nuhu Muaz, Dr. Nabeel Jarrah (University of Dammam)	Sky Water: Making Water from Air Presenter: Howard Ullman (Atmospheric Water Solutions)
12:00 - 12:25	Evolution of Water Treatment Technology Presenter: Syed Parvez Wali (Radian)	Use of Biotrickling Filter Technology to Solve Odour and Safety Concerns at Dubai Sports City Sewage Treatment Plant Presenter: Dr. Louis D. le Roux (BioAir Solutions)	The Effect Volatile Organic Compounds on GAC Adsorbers Presenter: Zeyad Ahmed (Saudi Aramco)



















Water Arabia 2015

Conference & Exhibition

معرض
العربي ٢٠١٥

Supported by:



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ابتكارات التقنية في مجال المياه وإعادة استخدام
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Innovative & Reliable Water and Wastewater
Technologies for Sustainable Water Quality









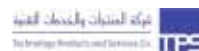
Innovative & Reliable Water and Wastewater Technologies for Sustainable Water Quality



Exhibition

Wednesday, 18 & 19 February 2015

Water Arabia 2015 Exhibition featured a large exhibition of water and wastewater equipment and service providers. Exhibitors demonstrated their new innovative technologies and answered participants questions. The exhibition was officially opened on February 18, 2015 and continued through February 19, 2015.























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مؤتمرات و معارض

المياه العربية 2014

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مياه الصرف الصحي لبيئة مستدامة

١٧-١٩ فبراير 2014 فندق ماريوت الحبيب المملكة العربية السعودية

Water 2014





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Saudi Arabian Water Environment Association

About SAWEA

The Saudi Arabian Water Environment Association (SAWEA) is a non-profit organization founded on January 1, 2002 by a group of professionals working in Saudi Arabia in water and wastewater treatment. SAWEA is a professional self-directed group, predominantly within Saudi ARAMCO. The main sponsors of the association are the Saudi ARAMCO Utilities and Environmental Protection Departments. In addition SAWEA is the official local chapter of the International Water Environment Federation (WEF), which is the largest Water Association in the world. Since January 1, 2002, SAWEA has held several successful conferences and exhibitions focusing on water and wastewater environmental issues.

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