

2013 MSSC Annual Salinity Summit
“Embracing Innovations & Overcoming Barriers”
February 14-15, 2013
Las Vegas, Nevada

Wednesday, February 13, 2013

- 4:00 p.m. – 7:00 p.m. Exhibitor and Poster Presentation Set Up** - Florentine C
- 4:00 p.m. – 5:00 p.m. MSSC Packet Stuffing and Planning Committee Reception**
- 5:00 p.m. – 7:00 p.m. MSSC Summit Conference Registration** – Florentine Foyer
- 5:00 p.m. – 7:00 p.m. MSSC Board Meeting** - Siena

Thursday, February 14, 2013

- 7:00 a.m. – 4:00 p.m. MSSC Summit Conference Registration** – Florentine Foyer
- 7:00 a.m. – 8:00 a.m. Continental Breakfast, Exhibit and Poster Presentation Area** – Florentine C
- 8:00 a.m. – 8:05 a.m. Opening Remarks** – Florentine AB
Ernesto A. Avila, P.E., Avila & Associates Consulting Engineers, Inc., 2013 Summit Chairman
- 8:05 a.m. – 8:30 a.m. Opening Keynote Presentation:** - Florentine AB
Michael Gabaldon, Director, Technical Resources, U.S. Department of the Interior, Bureau of Reclamation
- 8:30 a.m. – 10:00 a.m. Legislative/Funding** - Florentine AB
This session is the traditional Summit Kick-Off Session. Federal and legislative representatives will discuss the future prospects of desalination management and water and energy projects and their financing for the future.

Moderator/Speaker: **John O’Donnell, Senior Partner, Murray, Montgomery & O’Donnell**

- **Kris Polly, President, Water Strategies, LLC**
- **Eric Sapirstein, President, ENS Resources, Inc.**
- **Ken Kirk, Executive Director, National Association of Clean Water Agencies, (NACWA)**
- **Tom Curtis, Deputy Executive Director, American Water Works Association, (AWWA)**
- **Joshua Johnson, Minority Staffer, Senate Energy and Natural Resources Committee, (invited)**
- **Sara Tucker, Majority Staffer, Senate Energy and Natural Resources Committee, (invited)**

10:00 a.m. – 10:15 a.m. Break - Exhibit and Poster Presentation Area – Florentine C

10:15 a.m. – 11:45 a.m. From Research to the Field, Domestic and International -

Florentine AB

Innovations drive progress. Engineers and scientists were challenged by American President John F. Kennedy in April 1961 in his well known speech in which he said, "If we could ever competitively, at a cheap rate, get freshwater from salt water, that would be in the long-range interest of humanity and would dwarf any other scientific accomplishments." Panel of well recognized scientists will share results of the latest developments in addressing salinity management challenge. Salinity management is not a local issue and it has no borders. International experts will share best techniques and salinity management approaches successfully implemented in different parts of the world.

- Moderator: **Val Frenkel**, *Ph.D., P.E., D.WRE, Director Membrane Technologies, Malcolm Pirnie, the Water Division of ARCADIS*
- **Randy Shaw**, *Facility Manager, Bureau of Reclamation, " New Application research, International & Domestic Cooperation"*
- **Brent Alspach**, *Senior Environmental Engineer, Malcolm Pirnie, the Water Division of ARCADIS, "Notes from the Frontier: Desalination and Salinity Management in the Burgeoning US Oil & Gas Sector"*
- **Harry Seah**, *Director, Technology & Water Quality Office (TWQO) (invited)*

11:45 a.m. - 1:15 p.m. Luncheon & Keynote Speaker:

Effective Partnering: The Public End of Public-Private-Partnerships - Florentine C

A session to explore the opportunities for increasing private sector participation in the development of desalination water supplies; and, to consider the challenges P3 presents to the public sector and how these can be addressed.

Moderator/Speaker: **Jorge Arroyo**, *P.E., Director, Innovative Water Technologies, Texas Water Development Board*

- **Chris Rayburn**, *Director, Subscriber and Research Services, Water Research Foundation "Advancing the Science of Water"*
- **Douglas Herbst**, *DBIA, Vice President, Alternative Project Delivery, MWH Constructors, "Public-private-partnership 101, news regarding state/federal legislation impacting p³."*
- **Candace Chandra**, *Founder and President, Canary Strategies, LLC, "Synergies between private capital and the investments needed in the public water infrastructure sector."*
- **James Murphy**, *Executive Manager of Water Resources and Utility Operations, GBRA, "A public entity's decision making process"*
- **Thaddeus R. Wilson**, *Vice President, M3 Capital Partners LLC, "Private investor tools for public water infrastructure."*

1:30 p.m. – 2:45 p.m. Direct Potable Reuse, How Close To Reality? - Florentine AB

Increasing population and limited water supplies, especially in the drought-prone Southwest, have greatly increased the interest in direct potable reuse. Once thought of as something that wouldn't happen for many years in the United States, the future appears to be now with a

couple projects moving forward in Texas. This session will address the broader questions of direct potable reuse as well as present specifics on projects and policy in development.

Moderator: **Robert Mace, Ph.D., PG, Deputy Executive Administrator, Water Science & Conservation, Texas Water Development Board**

- **Alan Plummer, Founder, Alan Plummer & Associates, Inc. "TWDB Project"**
- **Rhodes Trussell, Founder/CEO, Trussell Technologies, Inc. "NRC Water Reuse"**
- **David Sloan, Senior Process Engineer, Freese and Nichols, "Big Spring Project"**
- **Richard Nagel, General Manager, West Basin Municipal Water District, "So You Think You Need More Water?!"**

2:45 p.m. – 3:00 p.m. Break - Exhibit and Poster Presentation Area –Florentine C

3:00 p.m. – 4:15 p.m. Development & Implementation of Salinity & Nitrate Management for California's Central Valley - Florentine AB

The development and implementation of a sustainable salinity and nitrate management plan is essential for California's Central Valley to be a viable and sustainable region in California's economy in the years ahead. The panel moderators and panel members are active participants in the ongoing process to develop and begin the implementation of effective salinity and nitrate management in this region encompassing about 42,000 square miles which is California's Central Valley.

Moderator/Speaker: **Karl Longley, ScD, P.E., Professor Emeritus, California Water Institute, California State University, Fresno**

- **Daniel Cozad, Principal Consultant and President, Integrated Planning and Management Inc., "Risks and Rewards – Collaboration at a Program Level"**
- **Tess Dunham, Somach Simmons & Dunn, "Regulatory Difficulties and Opportunities on the Road to Salinity Sustainability"**
- **Timothy Moore, Principal, Risk Sciences, "Critical Decisions in Policy for the Future of a Sustainable Central Valley"**
- **Pamela Creedon, Executive Officer, Central Valley Regional Water Quality Control Board, "Nitrate and Salt get International Attention, California's largest Salt and Nutrient Management Plan"**
- **Richard Meyerhoff, Vice President, CDM Smith, "Region Wide Implementation Projects as Salt Solutions"**

4:15 p.m. – 5:30 p.m. Alternative Energy for Desalination - Florentine AB

Issues with green house emissions and rising fuel prices associated with conventional energy sources are forcing many countries to develop and increase their renewable energy sources portfolio. As water and energy are deeply interconnected, innovative modifications to desalination processes and the use of renewable energy to power both seawater and inland desalination and management of concentrate are increasing rapidly worldwide. This session will highlight recent renewable energy technology innovations applicable to the area of desalination and salinity management.

Moderator: **Jose Faria, P.E.** *Chief Special Investigations and Regional Planning, California Department of Water Resources*

- **Rick Bond, P.E.** , *Process Engineer, Water Technologies Group, Black & Veatch, “Reducing Energy Requirements for Concentrate Management”*
- **Michael Pollock**, *Senior Director, Mechanical Engineering, Concurrent Technologies Corporation, “A Magnesium Powered Water Purification System”*
- **Jeff Mosher**, *Executive Director, Southern California Salinity Coalition, National Water Research Institute, “Salinity Management Accomplishments in Southern California”*
- **Roland Winston**, *Professor School of Engineering and School of Natural Sciences, University of California at Merced, “Advanced Solar Technology for Desalination”*

5:30 p.m. – 7:00 p.m. Reception, Exhibit and Poster Presentation Area – Florentine C

Friday, February 15, 2013

7:30 a.m. – 12:00 p.m. MSSC Summit Conference Registration – Florentine Foyer

7:30 a.m. – 8:30 a.m. Continental Breakfast, Exhibit and Poster Presentation Area – Florentine C

8:30 a.m. – 9:00 a.m. Opening Keynote Presentation: - Florentine AB
Richard Nagel, General Manager, West Basin Municipal Water District

9:00 a.m. – 10:15 a.m. Salinity Management in Oil, Gas and Mining Industries, Industrial Applications Session: - Florentine AB

While not realizing it to the large extent the oil, gas and mining industry already entered water market. Significant increase in exploration of oil, gas and other minerals lately requires enormous amounts of water which produces high salt concentration wastewater that needs to be managed properly. One of the most popular oil and gas exploration fracking method along produces salty wastewater with salinity concentration up to 200,000 mg/l and even higher depending on the field location. This panel of experts will provide information on the current challenges and solutions in this new area of water market.

Moderator: **Val Frenkel, Ph.D., P.E., D.WRE**, *Director Membrane Technologies, Malcolm Pirnie, the Water Division of ARCADIS*

- **Peter Sharry**, *Principal Scientist – Cairns Water Group, GHD “Water Management for Coal Seam Gas industry in Queensland, Australia”*
- **Paul Choules**, *Sr. VP, Commercial, Water Standard,*
- **Patrick Brady**, *Senior Scientist, Sandia National Laboratories,*

10:15 a.m. – 10:30 a.m. Break - Exhibit and Poster Presentation Area – Florentine C

10:30 a.m. – 12:00 p.m. National and Regional Research - Florentine AB

This session will include presentations on the research and other efforts being conducted by federal agencies related to technology and water treatment of interest to utilities. Although their activities are diverse, federal agencies are working to explore innovative approaches to address water scarcity and interdependencies in the United States. These discussions will include updates on activities by the US Environmental Protection Agency, the Department of Defense and the Department of Energy.

Moderator: **Claudio Ternieden**, *Director, Water Resources & Sustainability, Concurrent Technologies Corporation*

- **Sally Gutierrez**, *Director of Environmental Technology Innovation Clusters, U.S. Environmental Protection Agency, “Water Technology Innovation Clusters; Opportunity to Solve Water Problems and Promote Economic Development”*
- **Michael Fahy**, *Grant Manager, El Paso Water Utilities, “Describing the Barriers and Solutions to Concentrate Management for Inland Municipal Desalination”- Conclusions from an Interactive Workshop for Research Project funded by the WaterReuse and Water Research Foundations, CHIWWA and others.*
- **Ron Sullivan**, *Director, Eastern Municipal Water District,*
- **Thomas Davis, Ph.D.** *Director, Center for Inland Desalination Systems, Professor, Civil Engineering, The University of Texas at El Paso,*
- **Michael Hightower**, *Water for Energy Project Lead, Sandia National Laboratories, (invited)*

12:00 p.m. Closing Remarks & Adjourn – Florentine AB