

# Governor's Water Augmentation Council

## Desalination Committee

November 9, 2016 Meeting Summary

**Time: 10:00am – 12:00pm**

**Location: Arizona Department of Water Resources**

### *Welcome and Introductions*

Chairman Robert Lotts called the meeting to order and welcomed those in attendance. All participants in the meeting introduced themselves individually. The following members of the Governor's Water Augmentation Council (GWAC) were present, Wade Noble, John Kmiec, and Glenn Hamer. Bruce Hallin and Chuck Cullom attended on behalf of Council Members Dave Roberts and Ted Cooke.

### *Top Ten Desalination Disasters and Challenges*

Zacary Richards of ADWR provided a presentation on the top ten most challenged desalination projects in history. This list was compiled by Christopher Gasson, a publisher for Global Water Intel, and was based on the lack of foresight and risk management in the development of each example. Mr. Richards shared his research on the projects, and the difficulties they experienced throughout the length of their implementation. This presentation is available on the ADWR website [here](#).

### *Desalination Status in Southwestern U.S. and Mexico*

Following Richards' presentation, Chuck Cullom, the Colorado River Programs Manager for the Central Arizona Project, presented on the current status of desalination plants in the Southwest U.S. and northern Mexico. Mr. Cullom provided detailed information on the costs and processes involved with several existing or soon-be-operating desalination plants including the Carlsbad seawater, the El Paso brackish, and Rosarito seawater desalination plants. This presentation is available on the ADWR website [here](#).

### *Desalination in Israel*

Sharon Megdal, Director of the Water Resources Research Center (WRRC), shared her knowledge of Israel's long-term, large scale Sea Water Reverse Osmosis (SWRO) desalination program. Ms. Megdal discussed the core issues involved in Israel's water and wastewater plans, and revealed annual production data for each of the major desalination plants in Israel: Ashkelon, Palmachim, Hadera, Sorek, and Ashdod. This presentation is available on the ADWR website [here](#).

### *Brine Disposal Methods and Regulations*

Trevor Baggio, the Water Quality Division Director at the Arizona Department of Environmental Quality (ADEQ), gave a brief lecture on the three major brine disposal methods available and the regulations involved with each of them.

In evaporation ponds, for example, the pollutant of greatest concern is the salinity. This option is not regulated under the Clean Water Act if it is a retention pond. If it does not inject anything into the ground, these ponds are not subject to the Underground Protection and Control Act (UIC), but will be subject to the Aquifer Protection Permit (APP). An APP may require a plastic liner, clay liner, or some sort of liner that would not allow the brine to negatively impact the aquifer. This option is a bit more expensive than other opportunities due to the size of the ponds.

Wetlands are typically considered a better approach as the brine can be reused in some way. Wetlands are regulated under the Clean Water Act. They are also subject to an Arizona Pollutant Discharge Elimination System Permit Program (AZPDES), dependent on the body of water that the brine is being discharged to. Wetlands themselves are regulated under the APP as there is no liner involved in its design. They are subject to a narrative water standard – a generalized standard reviewed on a case by case basis. General permits apply to wetlands as well.

To Mr. Baggione's knowledge, there are no current deep well injection sites in Arizona. ADEQ has maintained an unstated prohibition of brine disposal via deep well injection. Currently, all aquifers in Arizona are considered drinking water sources. However, this option has not been ruled out entirely. There is a statute for reclassifying aquifers which may be utilized in the future.

### *Schedule the Following Meeting and Closing Remarks*

The next GWAC Desalination Subcommittee meeting will be held at the Bureau of Reclamation Office in Yuma at 7301 Calle Agua Salada, where a tour of the Yuma Desalination Plant will be given. The meeting is scheduled for Thursday, January 19, 2016.