

# NATIONAL WATER RESEARCH INSTITUTE EXPERT PANEL

## Development of Water Recycling Criteria for Indirect Potable Reuse through Surface Water Augmentation and the Feasibility of Developing Criteria for Direct Potable Reuse



**Established For:** State Water Resources Control Board’s Division of Drinking Water (DDW)

**Panel Description:** In 2013, the National Water Research Institute (NWRI) – a 501c3 nonprofit based in Southern California – appointed state and national water industry experts to an independent, third-party Expert Panel to provide expert advice to the State of California on developing Water Recycling Criteria for indirect potable reuse (IPR) through surface water augmentation and determining the feasibility of developing criteria for direct potable reuse (DPR).

The Panel has been formed on behalf of the State Water Resources Control Board's Division of Drinking Water (DDW) (formerly known as the California Department of Public Health's Division of Drinking Water and Environmental Management) and is administered by NWRI. The Panel is required by state legislation in the California Water Code Section 13560-13569 (Water Code).



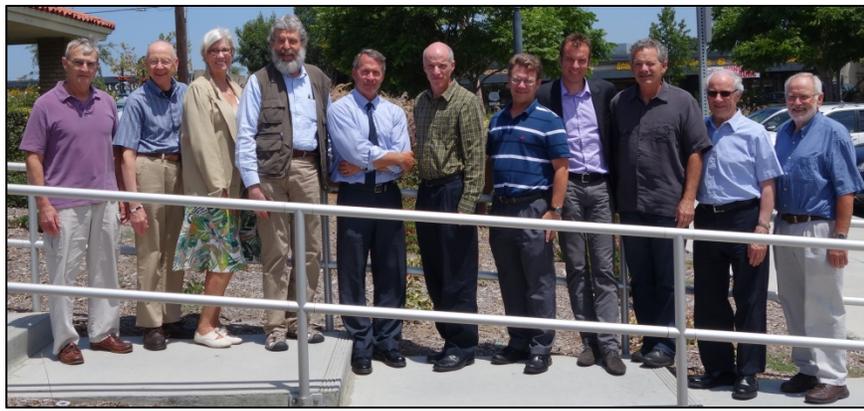
*Brian Bernados of DDW and Panel Member Jörg Drewes at the July 2014 meeting.*

**Panel Charge:**

- Advise DDW on public health issues and scientific and technical matters regarding the development of surface water augmentation (IPR) criteria.
- Advise DDW on public health issues and scientific and technical matters regarding the feasibility of developing criteria for DPR.
- Assess what, if any, additional areas of research are needed for establishing criteria for DPR.



**Panel Members:** The Panel consists of 12 experts in the fields of toxicology, wastewater treatment, drinking water supplies treatment, drinking water standards, epidemiology, limnology, microbiology, and chemistry.



- *Panel Co-Chair:* Adam Olivieri, Dr.P.H., P.E., EOA, Inc. (Oakland, CA)
- *Panel Co-Chair:* James Crook, Ph.D., P.E., Water Reuse and Environmental Engineering Consultant (Boston, MA)
- Michael Anderson, Ph.D., University of California, Riverside (Riverside, CA)
- Richard Bull, Ph.D., MoBull Consulting (Richland, WA)
- Dr.-Ing. Jörg E. Drewes, Technische Universität München (Munich, Germany)
- Charles Haas, Ph.D., Drexel University (Philadelphia, PA)
- Walter Jakubowski, M.S., WaltJay Consulting (Spokane, WA)
- Perry McCarty, Sc.D., Stanford University (Stanford, CA)
- Kara Nelson, Ph.D., University of California, Berkeley (Berkeley, CA)
- Joan B. Rose, Ph.D., Michigan State University (East Lansing, MI)
- David Sedlak, Ph.D., University of California, Berkeley (Berkeley, CA)
- Tim Wade, Ph.D., United States Environmental Protection Agency (Durham, NC)

## Panel Meetings

### *First Meeting – Conference Call on March 5, 2014*

The Panel first met using web-enabled conference call services. The specific focus of the meeting was to learn about DDW's mandate, review the current version of the California Direct Potable Reuse Initiative Research Plan, and comment upon what, if any, additional areas of research are needed for establishing criteria for DPR. A Panel report was submitted to DDW.

### *Second Meeting – Panel Meeting on July 24-25, 2014, in Fountain Valley, California*

A two-day meeting of the Panel was held to provide DDW staff with an opportunity to brief the Panel on their initial draft Surface Water Augmentation Criteria, and initiate discussions on an approach for assessing the feasibility of DPR criteria. As of October 2014, a Panel report is in development and will be released soon.

### *Third Meeting – Panel Meeting Scheduled for December 11-12, 2014, in San Diego, California*

### *Fourth Meeting – Panel Meeting Scheduled for March 11-12, 2015, in Richmond, California*

**More Information:** For more information, please contact the following:

#### *NWRI Panel Administrator:*

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#### *DDW Representative:*

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