

## Wastewater Peer Review Team

### **Purpose**

The Peer Review Team was assembled by the Peer Review Committee Chair, Gordon Culp. Culp was responsible for recruitment, which was based on area expertise. Each of the team members has 35 or more years of experience in the fields of wastewater treatment, water reuse and energy/resource recovery. Their purpose will be to objectively review questions that CALWMC has about the wastewater project as a whole. The team is made up of three experts from the US and three from Canada. Their credentials are briefly summarized below.

### **Gordon Culp, P.E. – Smith Culp Consulting, Las Vegas Nevada**

46 years experience in the study, evaluation, design, operation and value engineering and peer review of water and wastewater facilities; one of four experts retained by the State of Massachusetts to conduct a technical review of the \$3.1 billion Boston Harbour Pollution Control Project; technical consultant on a study for a \$700 million regional wastewater treatment program for Pima County, Arizona; has co-authored three reports on value engineering for the US EPA; he was the project manager of a \$200 million wastewater treatment project for the City of Las Vegas; he was a consultant to the State of Washington for water reuse regulations and guidelines and was on the California Blue Ribbon Panel on water reuse; provided engineering consulting services for numerous WWTP projects including; Edmonds, Wa; Bremerton, Wa; Hillsboro, Or; Charlotte, NC; and Northern Virginia; he was one of six internationally recognized engineers retained by the US EPA to conduct an engineering assessment of wetland systems for wastewater treatment; he has conducted numerous reviews of operations and maintenance including WWTP in Orange County, Ca; Lafayette, La; Honolulu, Ha; Portland, Or; Clackamas County, Or; Watsonville, Ca; Sacramento, Ca; Trinity River Authority, Tx; he has authored 9 textbooks and 70 technical papers and he has a graduate degree in applied psychology.

### **Dr. William Oldham, P.Eng – Professor Emeritus, University of British Columbia and independent consultant**

Prior to his academic positions worked as a consulting engineer; has expertise in biological wastewater treatment, biological removal of nitrogen and phosphorous, biosolids digestion, and use of reclaimed effluent for irrigation using resource management techniques; extensive international experience and has been involved in wastewater projects on several continents; has authored or co-authored more than 50 published papers including several on anaerobic digestion of Biosolids; a registered professional engineer.

### **Dr. Perry McCarty, P.E. - Professor Emeritus, Stanford University; independent consultant**

Recipient of the Stockholm Water Prize in 2007 and numerous other honours; conducted research on aerobic and anaerobic processes for biofuel production, and served on review panels for water reuse projects; has been a member of the State of California Innovative and Alternative Technology Committee and the National Academy of Engineering Committee for Strengthening Sciencebased Decision Making; author or co-author of over 350 publications.

**Dr. Norbert Schmidtke, P.Eng – Independent consultant based in Ontario**

Extensive international experience having completed assignments in 32 countries on 5 continents; honoured by the Canadian Society for Civil Engineering with Canada’s most prestigious environmental engineering award, the Albert E. Berry Medal; among the many training courses he has conducted is “New Developments, Directions and Challenges in Wastewater Technology”, including decentralized treatment, heat recovery, water reclamation, energy conservation, waste heat recovery, greenhouse gas emissions, and carbon footprint; has authored or co-authored over 300 technical papers, reports, and books; a registered professional engineer.

**Dr. David Stensel, P.E. – Professor at the University of Washington and independent consultant**

Two time recipient of the Water Environment Federation’s Harrison Prescott Eddy Research Medal as well as numerous other honours; has specialized expertise in onsite and decentralized wastewater treatment, sustainable environmental engineering technology, biological wastewater treatment processes, wastewater reuse, and co-digestion of solid waste and wastewater Biosolids to enhance methane production; has authored or co-authored over 120 technical publications and textbooks; prior to his academic positions spent ten years in consulting practice, applying wastewater treatment processes; is a registered professional engineer.

**Dr. Warren Wilson, P.Eng – Independent consultant based in Calgary**

International experience gained from his involvement in wastewater projects in North America, Europe, Australia, and the Far East; recently involved in the master plan for Calgary’s wastewater treatment system including analysis of multiple treatment plants, review of new technologies, water reuse and the application of triple bottom line criteria; has participated in peer reviews for communities as diverse as New York City, and Brisbane, Australia; experienced with the recovery of magnesium ammonium phosphate from wastewater as a slow release fertilizer; a registered professional engineer.

**Dr. George Tchobanoglous, P.E. - Professor Emeritus, University of California, Davis, and independent consultant**

Recipient of the Waste-to-Energy Research and Technology Council Distinguished Service Award for Research and Education in Integrated Waste Management, and numerous other honours; consultant to San Francisco on the co-digestion of solid waste and wastewater bio-solids; experience in small and decentralized wastewater management systems and solid waste management; author or co-author of over 375 articles, book, and reports including Metcalf and Eddy Wastewater Engineering book; a registered professional engineer.

Gordon Culp and the peer review team members are committed to applying their considerable expertise towards a thorough evaluation of the questions raised by the CALWMC.