Science Panel Closed Session
for *Ceriodaphnia dubia* Quality Assurance Study

Meeting Summary
Held remotely on Tuesday December 14, 2021

The Expert Science Panel (Panel) had their first closed session meeting December 14, 2021, from 10:00-12:00 Pacific Time. The primary goal of this meeting was to review the exploratory data analysis they requested and assess the need for, and design of, a split sample intercalibration study amongst California accredited laboratories.

SCCWRP prepared the Panel's list of exploratory data analysis including: 1) an updated inventory of historical data after appending the database with additional data requested by the Panel at their last meeting; 2) distributions of biotic response variables by laboratory in the historical database; 3) distributions of water quality data in the historical database by laboratory; 4) reference toxicant results in the historical database by toxicant and by laboratory, and; 5) correlations among biotic and water quality variables.

Overall, more than 550 test control results and 450 reference toxicant results were compiled across the 17 California accredited laboratories in the historical database. There was substantial variability observed in both biotic and water quality variables across laboratories and sometimes within a laboratory.

The Panel concluded at the end of their meeting that it is premature to recommend whether to conduct a split sample intercalibration study largely because the questions to address (and resulting study design) are not yet known.

The Panel did recommend a three-step process before reaching a recommendation on a split sample intercalibration study: 1) SCCWRP should initiate lab communication to gather additional information not provided in the historical database and to assess potential factors the labs felt were important, particularly for tests that were extraordinarily variable (or extraordinarily consistent), to help define what variables may deserve attention during the next phase of data analysis; 2) conduct probability modeling of "testing failure rates" (not necessarily a test failing test acceptability criteria, but exceeding a specified range of variability), and 3) conduct statistical modeling of variability including multi-variate approaches such as random forest or generalized linear models.

The Panel will reconvene in late January after these tasks have been accomplished.