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RELEASE OF EXPERT PANEL'S DRAFT FINAL REPORT "MONITORING STRATEGIES FOR CECS IN RECYCLED WATER"

Dear Dr. Maruya,

Thank you for the opportunity to submit written comments on the CEC Expert Panel's (Panel) Draft Final Report on "Monitoring Strategies for CECS in Recycled Water". The Department of Toxic Substances Control's Safer Consumer Products Program (SCP) is strongly supportive of the importance of this work. SCP is constantly striving to protect the citizens and environments of California through the reduction and elimination of the use of toxic chemicals, and are invested in ensuring that California's efforts to efficiently manage its water resources are not hampered by the presence of chemicals of concern. In addition, reports like this can help inform the future work of our program.

In that vein, we have provided comments below that we would ask the Panel to consider in finalizing the report. These comments are focused around three main topics: under-studied chemicals, discovery of, and responding to, new CECS, and thinking beyond the report. We feel that considering these recommendations will result in a document that can more fully serve the needs of the California's State Water Resources Control Board (SWRCB) and the State of California (the State).

Under-Studied Chemicals

SCP is well acquainted with the numerous data gaps that exist for many CECS, such as availability of hazard traits that relate to aquatic organisms and monitoring data from and near important point sources. To that end, SCP would ask that the Panel consider highlighting specific data needs for chemicals that it thinks may be of concern but lack sufficient data to include them in the final prioritized list. Publicly tracking these chemicals would ensure that they are not overlooked or forgotten as research progresses. This would also have the added

benefit of highlighting these needs to researchers who might be able to generate or provide the needed data. It would also be beneficial to the SWRCB for the Panel to recommend ways in which they might use predictive approaches, which have seen considerable advances in recent years, to fill some of the toxicological data gaps.

Section 5.3.1 discusses the consideration of non-California MEC data and, despite being a short paragraph late in the document, brings up an extremely important point about data sources for this evaluation. The Panel's findings that including environmental monitoring data from outside of California results in 5 additional CECs with a MEC/MTL greater than 1 is significant. While the Panel indicates that these results suggests this exercise to be a "helpful approach to guide proactive identification of new CECs," these results appear to underscore the immediate need for the Panel to consider data sources beyond those of California. Relying only on California data is sufficient to understand local trends in known CECs, but runs the risk of missing important chemicals of concern with available data. SCP recommends that non-California data be included in the prioritization as those data can be surrogates for potential exposure in California.

Discovery of, and Responding to, New CECs

SCP urges the Panel to include a mix of short and long term approaches for identifying new CECs in the CEC selection framework. The current framework relies exclusively on bioanalytical screening for this purpose. The report does not fully address concerns raised by stakeholders at the December 15, 2017 Public Meeting that these tools are not sufficiently developed for widespread use. In addition, as the Panel highlights in Table 7.2, currently available bioanalytical tools cover a limited number of endpoints. While this coverage will most certainly be expanded in coming years, SCP would recommend a multi-faceted screening approach for new chemicals. We believe this technology shows great promise and will undoubtedly serve as an important tool in screening for new CECs in the future. Additional screening tools for immediate as well as long-term use would help ensure that the largest breadth of endpoints are considered when screening for new CECs and that the SWRCB can immediately begin this important work.

One facet of this multi-faceted approach could be through the consideration of a chemical's functional use. One of the most efficient ways to anticipate new chemicals that may be of concern is by understanding which chemicals are being replaced in or being added to industrial and consumer product applications. Comparing these use trends to available monitoring data for existing CECs can help identify other chemicals that may need screening for relevance to the safety and use of recycled water. An example of this is triclosan, which this report indicates no longer needed to be monitored due to decreases in measured concentrations.

Understanding which biocides are replacing triclosan for antibacterial applications may highlight new chemicals that should be evaluated. In addition, SCP supports the Panel's recommendation to utilize lists like the U.S. EPA's list of high-production volume chemicals to help prioritize new CECs and would also recommend consideration of the findings from the California Air Resources Board's Consumer Product Survey.

As noted above, the last few years have seen significant improvements for predictive tools based on chemical structures and physicochemical properties. SCP would recommend that the Panel use their significant expertise to highlight some of these attributes that may signify

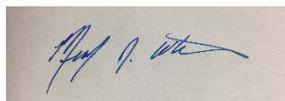
chemicals most likely to be present in recycled water products and of concern for human health. This information would be helpful not only to the SWRCB to screen potential chemicals of concern, but could also be used by chemical and product manufacturers looking to create chemicals and products that are safe for humans and the environment.

Thinking Beyond the Report

SCP would urge the Panel to consider the potential benefits that this report may have on CECs in a larger context beyond recycled water. In particular, keep in mind some of the more recent options at the State's disposal to mitigate chemicals of concern in recycled water and source water, including our Safer Consumer Products program. There is a potential to leverage these opportunities to reduce CECs at the source and help improve the quality of recycled water and increase the opportunities for beneficial reuse.

Thank you for the opportunity to comment on the Draft Final Report of the Monitoring Strategies for Chemicals of Emerging Concern (CECs) in Recycled Water. Please contact Anne-Cooper Doherty at 916-324-1688 or anne.doherty@dtsc.ca.gov if you have any questions or if we may be of any help in the finalization of the report.

Sincerely,

A rectangular box containing a handwritten signature in blue ink, which appears to read "Meredith Williams".

Meredith Williams, Ph.D.
Deputy Director, Safer Products and Workplaces Program

cc: Dr. Anne Cooper Doherty
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