

**From:** [CNRA COPC Public](#)  
**To:** [COPC Public Distro List](#)  
**Subject:** FW: OPC Mtg 2-16-2021: Public Comment on Item #4  
**Date:** Tuesday, February 16, 2021 11:57:50 AM

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**From:** Coffin, Scott@Waterboards  
**Sent:** Tuesday, February 16, 2021 11:57:44 AM (UTC-08:00) Pacific Time (US & Canada)  
**To:** CNRA COPC Public  
**Subject:** OPC Mtg 2-16-2021: Public Comment on Item #4

Dear Council Members,

My name is Dr. Scott Coffin, and I am a research scientist in the State Water Resources Control Board's Division of Drinking Water. As a scientist focus on impacts of microplastics to humans, and a regulator charged with protecting public health through providing clean and affordable drinking water to Californians, I believe that several of the priority actions in the staff report will complement the division of drinking water's work.

As required by Health and Safety Code 116376, the State Water Resources Control Board's Division of Drinking Water is investigating the occurrence and toxicity of microplastics in drinking water and will initiate a targeted statewide monitoring campaign beginning in July 2021. While direct human health impacts from exposure to microplastics from drinking water are uncertain, epidemiological studies suggest that continuous exposure through inhalation can cause lung cancer and other serious health concerns (Wright and Kelly 2017).

Available evidence suggests that occurrence of microplastics in surface water is ubiquitous, with synthetic fibers from clothing, fragmented particles from single-use packaging, cellulose acetate fibers from cigarette filters, and tire wear particles being the most common types of microplastics (Galafassi et al 2020). Even advanced drinking water treatment cannot remove the smallest microplastic particles - which are below 10 microns (Pivokonsky et al 2020). These smaller particles are expected to be the most toxic to humans due to their ability to enter the bloodstream and accumulate in human bodies (Wright and Kelly 2017).

When considering downstream mitigation efforts in water, it's important to recognize that there is no 'safe' place to put microplastics. For instance, wastewater treatment plants remove a considerable portion of microplastics (between 80-99%) into sludge (Hou et al 2020). When sludge is applied to crop fields as biosolids, microplastics accumulate in the topsoil, and are taken up by plants, resulting in decreased growth rates, nutrient uptake, and diminished food production yields, as well as irreversible damage to terrestrial ecosystems and soil health (Sun et al 2020; Kumar et al 2020). Further, microplastics exacerbate drought impacts to plants, which are anticipated to increase in California due to climate change (Lozano and Rillig 2020). Since plastic degrades on extremely long timescales, impacts to the environment, food security, and human health are likely irreversible (Chamas et al 2020).

Finally, a study published in in the journal Science estimates that plastic production will double by

2030 under the current trajectory (Lau et al 2020). Simply increasing efforts to properly collect and dispose plastic will not decrease inputs to the environment due to increased production. Only through a comprehensive, system change approach that implements all possible interventions, including: reduction and substitution at source; reuse; recycling; and waste management; will plastic pollution inputs into the environment decrease to pre-2016 levels by 2040 (Lau et al 2020).

#### References:

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Galafassi, Silvia, Luca Nizzetto, and Pietro Volta. 2019. "Plastic Sources: A Survey across Scientific and Grey Literature for Their Inventory and Relative Contribution to Microplastics Pollution in Natural Environments, with an Emphasis on Surface Water." *Science of The Total Environment* 693 (November): 133499. <https://doi.org/10.1016/j.scitotenv.2019.07.305>.

Hou, Liyuan, Deepak Kumar, Chang Geun Yoo, Ivan Gitsov, and Erica L.-W. Majumder. 2021. "Conversion and Removal Strategies for Microplastics in Wastewater Treatment Plants and Landfills." *Chemical Engineering Journal* 406 (February): 126715. <https://doi.org/10.1016/j.cej.2020.126715>.

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Lozano, Yudi M., and Matthias C. Rillig. 2020. "Effects of Microplastic Fibers and Drought on Plant Communities." *Environmental Science & Technology*, April, acs.est.0c01051. <https://doi.org/10.1021/acs.est.0c01051>.

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Sun, Xiao-Dong, Xian-Zheng Yuan, Yuebin Jia, Li-Juan Feng, Fan-Ping Zhu, Shang-Shang Dong, Jiajia Liu, et al. 2020. "Differentially Charged Nanoplastics Demonstrate Distinct Accumulation in *Arabidopsis Thaliana*." *Nature Nanotechnology*, June. <https://doi.org/10.1038/s41565-020-0707-4>.

Wright, Stephanie L., and Frank J. Kelly. 2017. "Plastic and Human Health: A Micro Issue?"  
Environmental Science & Technology 51 (12): 6634–47. <https://doi.org/10.1021/acs.est.7b00423>.

Thank you for consideration and attention,  
Scott Coffin, Ph.D.

## Wyer, Holly@CNRA

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**From:** Carl Nettleton <carl@openoceans.org>  
**Sent:** Tuesday, February 16, 2021 12:58 PM  
**To:** Wyer, Holly@CNRA; liz.whiteman@oceansciencetrust.org; Gold, Mark@CNRA; Crowfoot, Wade@CNRA; jdiamond@law.berkeley.edu; Assemblymember.Stone@assembly.ca.gov; eleni.kounalakis@lgt.ca.gov; BettyTYee@sco.ca.gov; msbrownsb@gmail.com; Blumenfeld, Jared@EPA  
**Cc:** nicole.winger@sen.ca.gov; nicole.hisatomi@asm.ca.gov; Sheldon, Brenna@EPA; Magee, Amanda@Waterboards  
**Subject:** Ocean plastic - three questions

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi all - regarding the ocean plastic issue discussed at OPC on February 16, 2021, I have the following questions:

- Was The Pew Charitable Trusts' July 2020 landmark report "[Breaking the Plastic Wave](#)" used as a reference for these priorities? The report has an extensive set of solutions and also projects that, under business as usual, plastic to the ocean will increase from 11 million metric tons annually to 29 million tons annually by 2040.
- Given that the amount of plastic reaching the ocean is increasing rapidly and the majority reaches the sea via rivers, in the short term, should we be identifying the pathways by which plastic reaches the ocean and try to stop those flows - even while we work on source control in the long term?
- Until the price of virgin plastic is significantly more than plastic that has been used, plastic will likely continue to be seen as trash and not as a resource. How can that be addressed?
- Of the estimated 11 million tons of plastic that reach the ocean each year, how much is contributed directly by California? How much is indirectly contributed by California via plastic shipped offshore?
- Has consideration been given to addressing the cost of goods manufactured overseas that directly and indirectly add plastic debris to the ocean. Californians and other buyers of these goods benefit from lower costs because the cost of properly managing trash in many of these countries is not accounted for. How might this be addressed?

Thank you for addressing the critical issue of ocean plastic!

With warm regards,

Carl



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## Wyer, Holly@CNRA

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**From:** Jared Voskuhl <JVoskuhl@casaweb.org>  
**Sent:** Tuesday, February 16, 2021 1:05 PM  
**To:** Wyer, Holly@CNRA  
**Cc:** Gold, Mark@CNRA  
**Subject:** Re: CASA Comments on Agenda Item #4

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

My hand was raised for this item, but somehow was passed over. No problem, but here are the remarks we were going to make, just FYI. JV

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Hi good afternoon Chair crowfoot and councilmembers, Jared Voskuhl on behalf of the California Association of Sanitation Agencies. I'll be brief. We want to commend Holly Wyre, Mark Gold, OPC staff, the OPC Councilmember for their bold vision and recommendations driving at the supply-side of the problem which is at the root of the other associated issues.

As you all know and Jenn Eckerle acknowledged, the impact of macroplastics cannot be overstated when considering their degradation and eventually becoming microplastics, so the recommendations' focus and emphasis on curtailing the introduction and use of plastic is spot on, and we look forward to California leading on this issue nationally and globally, in fact, we *need* California to lead on this.

I wanted to note that CASA is sponsoring legislation which would require wet-wipes made of plastic to be labeled "do not flush" so consumers don't improperly dispose of these products in the wastewater stream, and we look toward other opportunities where we can support colleagues or partner to work further on these issues.

Again we are grateful to the Council today for their leadership in recommending and endorsing these actions. Thank you.

Jared Voskuhl  
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**From:** [CNRA COPC Public](#)  
**To:** [COPC Public Distro List](#)  
**Subject:** FW: Comments from CPSC on the OPC Resolution to Address Plastic Pollution  
**Date:** Tuesday, February 16, 2021 6:01:02 PM

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**From:** Joanne Brasch  
**Sent:** Tuesday, February 16, 2021 6:00:54 PM (UTC-08:00) Pacific Time (US & Canada)  
**To:** CNRA COPC Public  
**Cc:** Doug Kobold; Wyer, Holly@CNRA  
**Subject:** Comments from CPSC on the OPC Resolution to Address Plastic Pollution

Hello OPC Team,

Thanks for the constructive meeting today and the passage of the Resolution to Address Plastic Pollution in California's Coastal and Marine Ecosystems. CPSC didn't get a chance to make the following testimony and wanted to submit via email:

My name is Dr. Joanne Brasch from the CA Product Stewardship Council, an NGO advocating for producer responsibility since 2007 and leading on 6 OLS action items, and supporting on another 6.

We want to share a big thank you to Holly and her team for this great list and leadership carrying out the ocean litter prevention strategy. CPSC supports the policy recommendations that engage producers in the complex end-of-life solutions. California's local government waste managers have been overwhelmed for years by the breadth and volume of plastic waste generated as they advocate for EPR and the measures described in the resolution. We really hope 2021 is the year to make transformative changes through producer responsibility and the adoption of this resolution shows we are on the right track.

We invite everyone to join an upcoming Ocean Litter Strategy workgroup meeting for the policy goals hosted by CPSC on Feb 23 from 10-12 to discuss strategy as a coalition to advocate for active and proposed legislation this session. To join the meeting, please email [joanne@calpsc.org](mailto:joanne@calpsc.org)

Thanks,  
Joanne

**Joanne Brasch, PhD | Special Projects Manager**



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