

From: [Doris Cellarius](#)
To: [Barden, Michele \(she/her/hers\)](#)
Cc: kpecci@just-zero.org
Subject: Comments on Draft NPDES Permit for the Deer Island WWTP
Date: Wednesday, November 8, 2023 7:02:49 PM

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To: Michele Barden, US EPA Reion 1.

From: Doris Cellarius, Citizen

Regarding the Draft NPDES Permit for the Deer Island WWTP I urge you to withdraw your proposal to discontinue the work of Deer Island's Outfall Monitoring Science Advisory Panel (OMSAP).

<https://www.wbur.org/news/2023/08/21/deer-island-outfall-monitoring-scientific-advisory-panel-omsap-epa>

“Nearly 23 years of ambient post-discharge monitoring has found that Massachusetts Bay water quality standards for the waters around the discharge are being met, and the discharge has not had an adverse effect on Massachusetts Bay,” said Michelle Barden of EPA New England in a July 12 public hearing. “EPA is dropping the outfall monitoring Science Advisory panel, or OMSAP, as a permit requirement.”

It is hard to believe that monitoring by many distinguished scientists could conclude that “the discharge has not had an adverse effect on no harm to Massachusetts Bay.” Disbanding a group of scientists whose expertise is needed now more than ever for protecting public and environmental health is dangerous and irresponsible.

Many chemicals of concern (CECs) such as the forever chemicals PFAS are found in domestic sewage and are not removed by sewage treatment. “The Deer Island Sewage Treatment Plant has tested its biosolids for 16 PFAS compounds. For two - PFOS and PFOA, its monitors find an average of 15 parts per billion combined.” <https://www.nhpr.org/2023-04-10/our-sewage-often-becomes-fertilizer-problem-is-its-tainted-with-pfas>. Sewage treatment has been found to convert some PFAS into more dangerous forms.

The harm to marine life from CECs and microplastics (which often carry toxics chemicals adsorbed onto their surfaces) has been reported. Here is a collection of reports that document that wastewater treatment plants are major sources of CECs in aquatic environments that can negatively impact [aquatic ecosystems](#).

“Are Forever Chemicals Harming Ocean Life?” <https://therevelator.org/pfas-ocean-wildlife/>.

“To the best of our knowledge PFAAs don’t degrade at all under natural environmental conditions,” says Robuck. Rather than diluting PFAS to infinitely low concentrations, oceans carry them to remote areas, like the [Arctic](#) and [Antarctic](#).

Other pollutants that reach the ocean, like [DDT and PCBs](#), will stick to algae and sediment that eventually fall to the ocean floor. “That is a really important removal process,” Wagner says. “For PFAS, that process is minor.” Plants, algae and sediment only remove a small fraction of PFAS from the water column. That leaves more to accumulate in animals, reaching concentrations thousands of times higher than surrounding waters.

And those chemicals could travel right back to humans. Eating a lot of seafood,

especially fish high on the food chain like tuna, would be concerning, she says.

But it's not just fish — and humans eating them — that are at risk. A study last year reported PFAS in seawater and [plankton](#) dozens of miles off the Mid-Atlantic coast. Other research has revealed PFAS compounds — even some that have been previously phased out of production — in [manatees](#), [loggerhead turtles](#), [alligators](#), [seabirds](#), [polar bears](#), [dolphins](#) and [whales](#).”

Occurrence and removal of chemicals of emerging concern in wastewater treatment plants and their impact on receiving water systems. (2020)

<https://www.sciencedirect.com/science/article/pii/S0048969720356515?via%3Dihub>

Abstract - [Wastewater treatment plants](#) (WWTPs) are considered the main sources of chemicals of emerging concern (CECs) in aquatic environments, and can negatively impact [aquatic ecosystems](#).constant release of potentially persistent and bioaccumulative chemicals from WWTPs warrants attention in terms of effects on aquatic organisms. Future studies should therefore focus on long-term investigations of life-long effects of low-dose exposure to pollutants, which is a more likely situation for aquatic organisms in recipient waters.

Ecotoxicological risk assessment of micropollutants from treated urban wastewater effluents for watercourses at a territorial scale (2020):

<https://doi.org/10.1016/j.ijheh.2019.113437>

“In most cases, urban Wastewater [Treatment](#) Plants (WWTP) only partially abate pollutants occurring in the influent. Treated effluents can thus contain a complex mixture of ecotoxic pollutants, such as heavy metals, detergents, [disinfectants](#), [plasticizers](#), [pharmaceuticals residues](#) or pesticides.”

Micropollutants in treated wastewater <https://pubmed.ncbi.nlm.nih.gov/31292910/>

“Compounds such as pharmaceuticals, or personal care products are only partially removed in wastewater treatment processes. Large number of these compounds and their degradation products is out of any control.”

Microplastics in wastewater treatment plants: Detection, occurrence and removal. Water Research. 2019; <https://europepmc.org/article/MED/30660095>

“Microplastics have aroused increasing concern as they pose threats to aquatic species as well as human beings. They do not only contribute to accumulation of plastics in the environment, but due to absorption they can also contribute to spreading of micropollutants in the environment. Studies indicated that wastewater treatment plants (WWTPs) play an important role in releasing microplastics to the environment.”

Global Perspectives on Microplastics

<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2018JC014719>

Please restore the authority of the Deer Island's Outfall Monitoring Science Advisory Panel so they

can do the additional studies and would protect marine and human health.

Thank you,
Doris Cellarius