
SACRAMENTO ENVIRONMENTAL COMMISSION

Mark White, Chair
Richard Hunn, Vice Chair
Thomas Malson
Laura Nickerson
Eric Rivero-Montes
Stephanie Holstege
Dr. Anthony DeRiggi
Kayla Rabey

A JOINT COMMISSION APPOINTED BY:
County of Sacramento
City of Sacramento
City of Isleton
City of Folsom
City of Galt
City of Elk Grove

MINUTES

Monday, August 15, 2022 6 p.m.

Meeting held via Zoom only.

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ITEM

- 1 Call to Order – Chair White
Meeting called to order at 6:00 pm.
- 2 Roll Call – Staff Secretary
Commissioners present: Mark White, Richard Hunn, Tom Malson, Laura Nickerson, Eric Rivero-Montes, Stephanie Holstege, Dr. Anthony DeRiggi
- 3 Introduction of Commissioners
- 4 Public Comment
*Members of the public have three minutes to comment on each separate item including any matter not on the posted agenda.
- 5 Microplastics- Scott Coffin, Ph.D, Research Scientist, Microplastics Monitoring Subcommittee
Co-Chair, Division of Drinking Water, California State Water Resources Control Board

Plastics are now found in almost every environment, from mountains to oceans. Plastics break down from UV and other degradation pathways to form micro and nano plastics. These

particles are carried by wind, rain, and sea spray, deposited on fields and carried by storm water to drinking water and other water bodies.

CA Legislature passed SB 1263 which requires the CA Water Board and the Ocean Protection Council to initiate the following: a statewide plastics strategy, methods for monitoring, and, by 2026, develop a risk assessment framework, baseline data, and investigate sources and pathways of Microplastics, including a source reduction strategy recommendation.

In 2017, plastic fibers were found in 94% of statewide tap water samples. SB 1422 was then passed which required the Water Board to define Microplastics and focus studies on drinking water, using consistent methodology and testing, developing guidance levels and accrediting labs to test for Microplastics. Defining Microplastics is a complicated undertaking. There are thousands of polymers and sizes of particles that make up plastic waste. The definition of Microplastics adopted June 6, 2020 is: *Solid polymer materials to which chemical additives or other substances may have been added, which are particles which have at least 3 dimensions that are greater than 1 nanometer and less than 5,000 micrometers. Polymers that are derived in nature that have not been chemically modified (other than by hydrolysis) are excluded.*

In order to assess risk, which is the combination of hazard plus exposure, it was necessary to answer 4 questions:

1. Dose metrics important for toxicity
2. Particle Characteristics
3. Adverse Effects
4. Threshold Framework

Microplastics particles are hazardous because they contain chemicals but also because the particles themselves are harmful. Plastic contains up to 10,000 known additives, 2,400 substances of concern that affect reproductive and endocrine systems, and unregulated toxic substances.

Ecological studies included a species sensitivity distribution chart, and a 4 tier Aquatic Toxicity Threshold. Quantitative sampling performed in the San Francisco bay show levels of Microplastics in much of the geographical area in amounts that exceed the most conservative thresholds. San Francisco Bay Microplastics movement modeling shows how tides affect the flow of microplastics in the bay and that the plastics tend to accumulate at the mouth of the bay. It has not been studied how much of the Microplastics might be coming from upstream in the Delta.

One Microplastics study exposed mice to drinking water containing specific size particles and measured reproductive harm. The results conclusively determined resulting harm in sperm deformity, body weight, sperm count, hormones and 13 other endpoints. Researchers are now confident that polystyrene spheres below a certain size cause mammalian harm. This could correlate to the 60% reduction in male sperm in the Western region. Microplastics is also being found in breast milk. All studies chosen by the Water Board to be used in their research were peer reviewed.

The Water Board cannot regulate Microplastics at this time due to an inadequate effects database, uncertain effect mechanisms and incomplete exposure data in regards to food. The Water Board will continue researching and monitoring. Lab costs in analyzing samples for Microplastics and characterizing the particles is time consuming and costly. The Water Board has published a method that will be used to give accreditation to labs for Microplastics analysis in the Fall of 2022.

There are many techniques that already removed plastics from water but particles that are too small will get through the filtration. The Water Board does not recommend drinking water out of plastic water bottles as they shed Microplastics and have a 3 times higher level than typical tap water. Tire wear particles and their rubber derived chemicals are another current major threat to the Coho Salmon population in the Bay, which is at the LC 50 for Quinone concentrations. Rain gardens capture 84% of Microplastics and is an excellent intervention strategy.

Particles greater than 10 microns tend to pass right through the body so are not as harmful to humans. Less than 10 microns can get lodged in tissue and can cause gene damage. There are some polymers that are more problematic than others due to chemical makeup but the primary cause of harm is the actual size of the plastic particle. One can assume that plastics currently in the environmental will become nanoparticles in the future.

The European Commission has allocated 30 million dollars for phase 1 of the human health research that needs to happen on a global level.

6 Sacramento County Sustainability Update- John Lundgren, Sustainability Manager

The 13 Task Forces members are now approved and seated. First meeting will be in September. Citrus Heights has voted not to join the MOU on climate change that exists between the County, the City of Sacramento and SMUD.

7 Consider Approving And Sending Draft Comment Letter on the City of Sacramento Preliminary Draft Climate Action Plan

Changes to make: 2nd paragraph, add "and "funding"

Motion to approve made by Laura Nickerson, seconded by Tom Malson.

Ayes: Mark White, Richard Hunn, Tom Malson, Laura Nickerson, Eric Rivero-Montes, Stephanie Holstege, Dr. Anthony DeRiggi

Noes: None

Abstentions: None

8 Approve Sending Letter of Invitation To Add Member Seats To The Sacramento Environmental Commission To The Cities of Rancho Cordova and Citrus Heights

Motion to send letters made by Antony De Riggi, seconded by Eric Rivero Montes.

Ayes: Mark White, Richard Hunn, Tom Malson, Laura Nickerson, Eric Rivero-Montes, Stephanie Holstege, Dr. Anthony DeRiggi

Noes: None
Abstentions: None

9 Approve July 18, 2022 Meeting Minutes

Motion to approve minutes made by Tom Malson, seconded by Richard Hunn.

Ayes: Richard Hunn, Tom Malson, Laura Nickerson, Eric Rivero-Montes, Stephanie Holstege, Dr. Anthony DeRiggi

Noes: None

Abstentions: Mark White

10 EMD Director's Report- Jennea Monasterio, Director of Sacramento County Environmental Management Department

Boats catching on fire in the Delta are responded to by EMD Incident Response. AB 1065 to remove derelict boats in the Delta may involve EMD.

11 Report Back on SEC Commissioner Monitoring of Environmental Issues and Agencies

Dr. DeRiggi: The Water Forum is offering tours of improved Salmon habitat at Salmon Bar

Laura Nickerson: Approval of ordinances to remove illegal campers along American River Parkway.

Richard Hunn: Noted the County took a position against the Delta Tunnel Project.

Commissioner Hunn is researching the use of large amount of surfactants, a detergent, in digging the tunnels and what the impact is on zooplankton and the environment in the long term.

12 Commissioner Comments

Chair White: Possible speaker on polio and other viruses in wastewater. Does the wastewater treatment plant monitor for these diseases?

13 Next Meeting- September 19, 2022 6:00 p.m. via Zoom

This meeting is being recorded in its entirety and will be available the following day. Agendas are posted in the offices of the City of Sacramento, Folsom, Galt, Isleton, Elk Grove, and the County of Sacramento and also on the EMD Website at: emd.saccounty.gov. Agendas are also forwarded to interested parties upon request.