

Date of Hearing: April 19, 2023

ASSEMBLY COMMITTEE ON APPROPRIATIONS

Chris Holden, Chair

AB 1628 (McKinnor) – As Amended March 22, 2023

Policy Committee: Environmental Safety and Toxic Materials Vote: 7 - 2

Urgency: No State Mandated Local Program: No Reimbursable: No

SUMMARY:

This bill requires, on and after January 1, 2029, a new washing machine offered for sale in the state for residential, commercial, or state use to contain a microfiber filtration system with a mesh size not greater than 100 micrometers (µm) and that meets specified requirements.

FISCAL EFFECT:

To the extent that washing machines offered for sale in the state after January 1, 2029, cost more than those that state entities would otherwise purchase, this bill may increase state procurement costs by an unknown amount, but likely in excess of \$150,000 in the aggregate. Examples of state entities that have washing machines in their facilities include the California Department of Corrections and Rehabilitation (with 150 to 200 standard washing machines), the California Prison Industry Authority (with approximately 65 commercial washing machines), the Department of General Services (with approximately 55 to 60 commercial washing machines), and the University of California and California State University systems (with laundry facilities located in residence halls and other university housing at the 10 UC and 23 CSU campuses across the state).

COMMENTS:

1) **Purpose.** According to the author:

AB 1628 is an important step in helping to reduce the amount of microfibers from ending up in our freshwater systems, oceans, and agricultural lands. California has always led in reducing plastic pollution and must continue to lead by requiring microfiber filters on all new washing machines by 2029.

2) **Microfiber Pollution.** According to the United States Environmental Protection Agency (US EPA), clothes made from synthetic material constitute a major source of plastic pollution. US EPA maintains that the majority of clothing on the planet is made from plastic-based materials like polyester, rayon, nylon, and acrylic and that, when washed, synthetic clothing sheds tiny plastic fragments known as microfibers. US EPA states, as do multiple peer-reviewed research studies, that microfibers are the most prevalent type of microplastic found in the environment. According to The Nature Conservancy, Ocean Conservancy, and 5 Gyres Institute, the co-sponsors of the bill, microfibers are nearly impossible to clean up once they are in the environment and pose significant risks to wildlife. On land, microplastics may

provide a vector for toxin uptake in plants and can harm crop growth and production. Microplastics have been found in drinking water, processed foods, meats, produce, and the human body.

- 2) **Statewide Microplastics Strategy (Strategy).** The Strategy, released by the Ocean Protection Council (OPC) in February 2022, provides a multi-year roadmap to reduce microplastic pollution in California. The approach proposed in this bill – using washing machine filtration systems, with a mesh size no larger than 100 μm , to capture microfibers before they enter wastewater effluent and the environment – is aligned with one of the Strategy's suggested early actions, which recommends that California:

...promote, or otherwise require, the sale and use of ENERGY STAR condenser dryers and washing machines with filtration rates of 100 microns or smaller and develop a program to incentivize post-market retrofits or purchases through rebates and other mechanisms by 2024.

- 3) **Microfibers and Washing Machines.** With a lack of filtration on most existing washing machines, there have been multiple first-to-market products offered to consumers. There are three different types of filters that can be used during laundering to capture microfibers:
 - a) In-drum filters: these filters are separate devices that consumers can use in the wash drum with each load of laundry. Some garment manufacturers, such as Patagonia and Reformation, sell their products with a washing bag developed to capture microfiber fragments during each load.
 - b) In-line filters: these filters are separate devices from the machine, typically sold after-market and affixed to the drain line. Several in-line filtration systems are currently available for purchase, including the Filtrol and LUV-R.
 - c) Built-in filters: these filters are built into the washing machine during manufacturing. These are not yet widely available in the U.S.
- 4) **Support and Opposition.** According to the co-sponsors of the bill:

Filters have already proven to be an effective solution. A number of studies have evaluated the efficacy of in-line filter solutions, which vary in effectiveness from nearly 70 to almost 90%...Asia and Europe are already farther ahead of the U.S. in implementing filtration solutions to tackle post-consumer microfiber pollution. Microfiber filtration technology is currently built into washing machines from major brands like Panasonic, Hitachi, Sharp, and Toshiba. And in 2020, France passed 2020-105- Article 79 to require built-in washing machine filters by 2025. AB 1628 follows a similar approach, providing manufacturers five years to scale already-existing filtration technologies across their new product lines sold into the state.

According to the Association of Home Appliance Manufacturers, writing in opposition to the bill:

Filters that capture particles of this size (100 microns) will inevitably clog, creating the need for bypass that will render them useless...

AHAM commissioned a study by NSF, an independent technical organization, on filtration products for clothes washers...NSF found that the filters captured, at best, less than 25% of all material shed during a wash and microfibers are just a small subset of what was captured...Some models in the NSF test used almost twice the energy and water when washing with the filter installed... [In-line filters] are ineffective and require an unrealistic level of maintenance from the consumer, including regular cleaning and possibly replacement...The NSF tests showed that it would take longer (more than 13 years) than the useful life of the clothes washer to capture more plastic than the plastic in the filter and this does not even take into account the plastic in all the replacement filters needed throughout the 13 years.

- 5) **Prior Legislation.** AB 622 (Friedman), of the 2021-2022 Legislative Session, would have required, on or before January 1, 2024, all washing machines sold as new in California to contain a microfiber filtration system with a mesh size of 100 µm or smaller. AB 622 was held in the Assembly Environmental Safety and Toxic Materials (ESTM) Committee.

AB 802 (Bloom), of the 2021-2022 Legislative Session, would have required the State Water Board to identify the best available control technology for filtering microfibers from an industrial, institutional, or commercial laundry facility. AB 802 was held in the ESTM Committee.

AB 1724 (Stone), of the 2021-2022 Legislative Session, would have required all state-owned washing machines to contain a microfiber filtration system with a mesh size of 100 µm or smaller. AB 1724 was held on this committee's suspense file.

AB 129 (Bloom), of the 2019-2020 Legislative Session, would have required the State Water Board to take specified actions relating to microfiber pollution on or before July 1, 2020, and would have required the State Water Board to identify best practices for clothing manufacturers to reduce the amount of microfibers released into the environment. AB 129 was held in the ESTM Committee.

AB 1952 (Stone), of the 2019-2020 Legislative Session, would have required the Department of General Services, in coordination with the California Environmental Protection Agency, to implement a one-year pilot program to assess the efficacy of microfiber filtration systems for 10 state-owned laundry facilities and report the results to the Legislature on or before January 1, 2023. AB 1952 was held in the Assembly Accountability and Administrative Review Committee.

AB 2297 (Bloom), of the 2019-2020 Legislative Session, was substantially similar to AB 802 of the 2021-2022 Legislative Session. AB 2297 was held in the ESTM Committee.

AB 3232 (Friedman), of the 2019-2020 Legislative Session, would have required, on or before January 1, 2023, that all washing machines sold commercially in California contain a microfiber filtration system with a 90% or greater filtration rate. AB 3232 was held in the ESTM Committee.