

A high-speed photograph of a water droplet hitting a surface, creating a series of concentric ripples. The droplet is captured in mid-air, just above the point of impact, with its reflection visible below. The water surface is dark blue, and the ripples are lighter blue and white.

PFAS: Overview of U.S. State Level Activities + Insights Into Asia Pacific

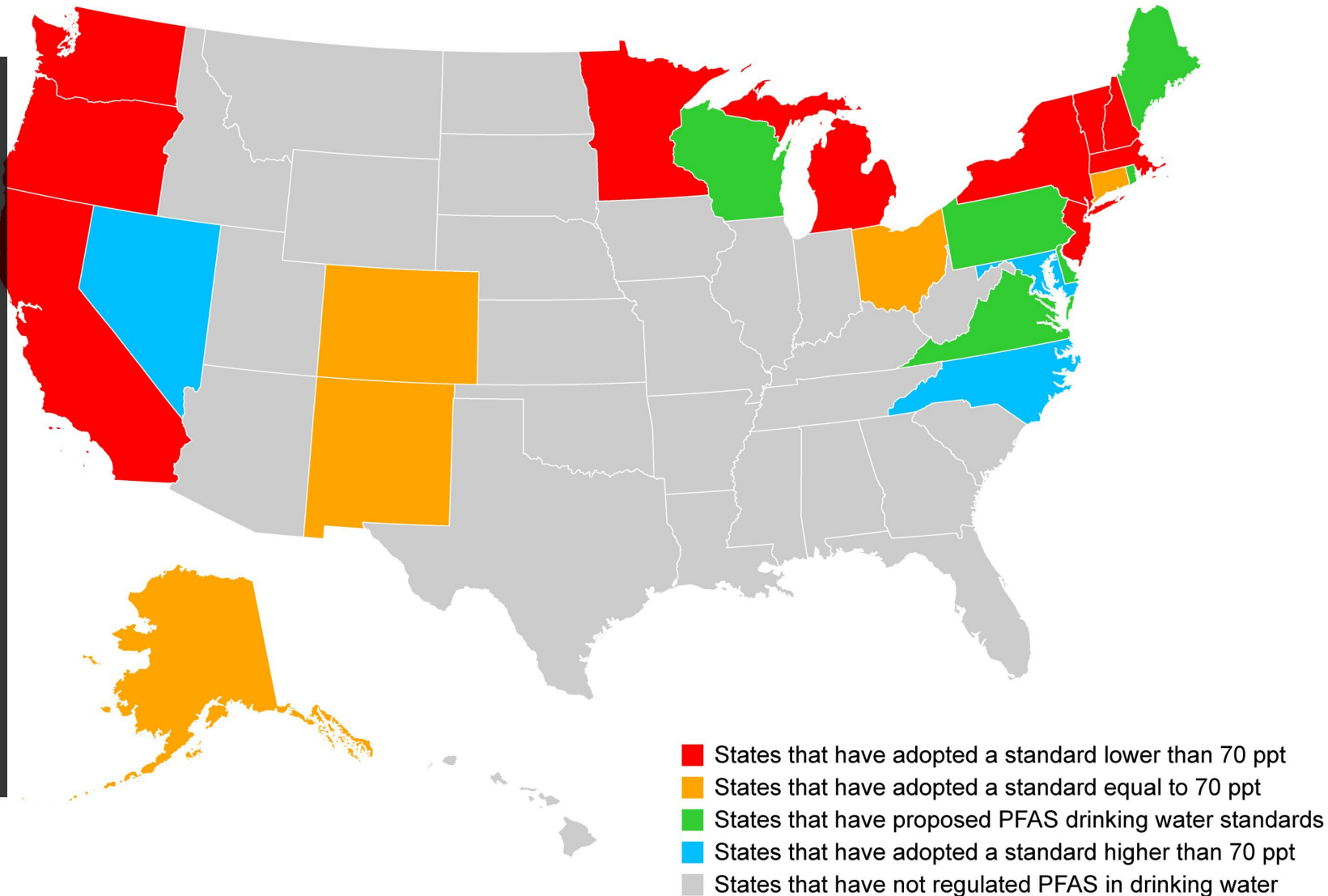


States and Drinking Water Regulations



PFAS Regulations – Current Climate

- 20 states have enacted PFAS drinking water standards as of 3/1/22
- 6 states have pending legislation for PFAS drinking water standards
- No state has taken approach of regulating all PFAS for drinking water



PFAS Regulations – Current Climate

- Limits vary widely
 - 5.1 ppt (California – PFOA)
 - 667,000 ppt (Nevada – PFOA + PFOS)
- Piecemeal approach:
 - PFOA
 - PFOS
 - PFOA + PFOS
 - PFNA
 - PFHxS
 - Various combinations

REGULATIONS

Impact On Companies

- 42% increase in PFAS enforcement actions in states with PFAS drinking water standards
- Increase in Requests for Information from regulatory agencies concerning PFAS pollution potential
- Impact felt most by downstream commerce industries / businesses
- Wide spectrum of companies being pursued at state level for PFAS drinking water concerns



Environmental Justice and PFAS



What Is Environmental Justice?

“Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. This goal will be achieved when everyone enjoys:

- The same degree of protection from environmental and health hazards, and
- Equal access to the decision-making process to have a healthy environment in which to live, learn, and work”

EPA, January 2022



EPA's Draft EJ Action Plan January 5, 2022

- (1) Strengthen compliance with environmental regulations, with deliberate eye towards civil rights laws
- (2) Incorporate environmental justice considerations into regulatory development process, including impacts on pollution-burdened underprivileged / underserved communities
- (3) Improve community engagement in rulemaking, permitting decisions, and policies
- (4) Support goals of Justice 40 Initiative



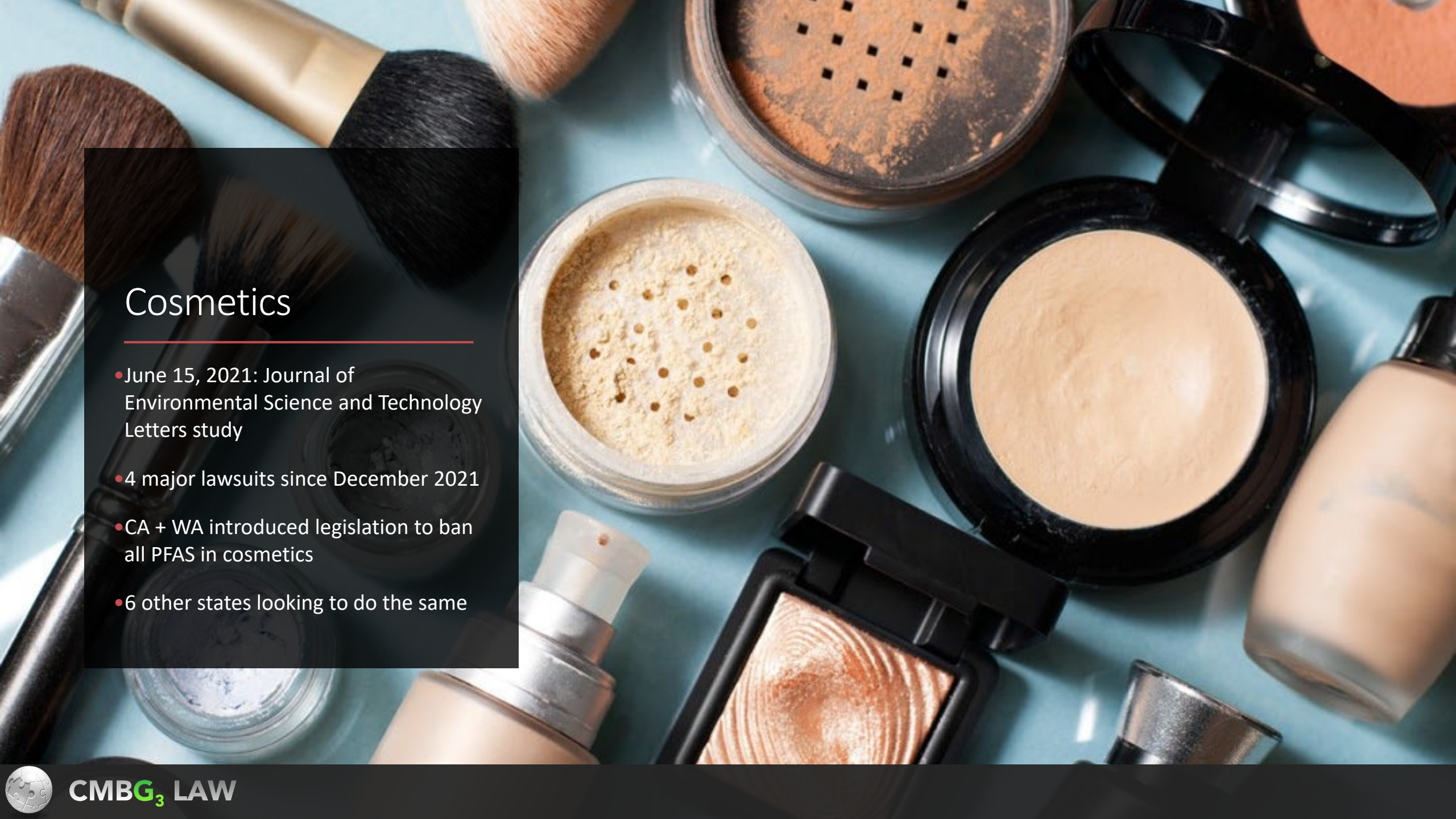
EJ Impacts On PFAS

- Influencing creation of federal and state PFAS drinking water standards
- PFAS lawsuit settlements are directly referencing and allocating money for environmental justice issues stemming from PFAS
 - Delaware 2021: creation of “environmental justice grants” for communities impacted by PFAS
- Influence on EPA decisions for Superfund remediations + potential designation of PFOA / PFOS as “hazards substances” under CERCLA or state laws



PFAS + Consumer Goods – Beyond AFFF





Cosmetics

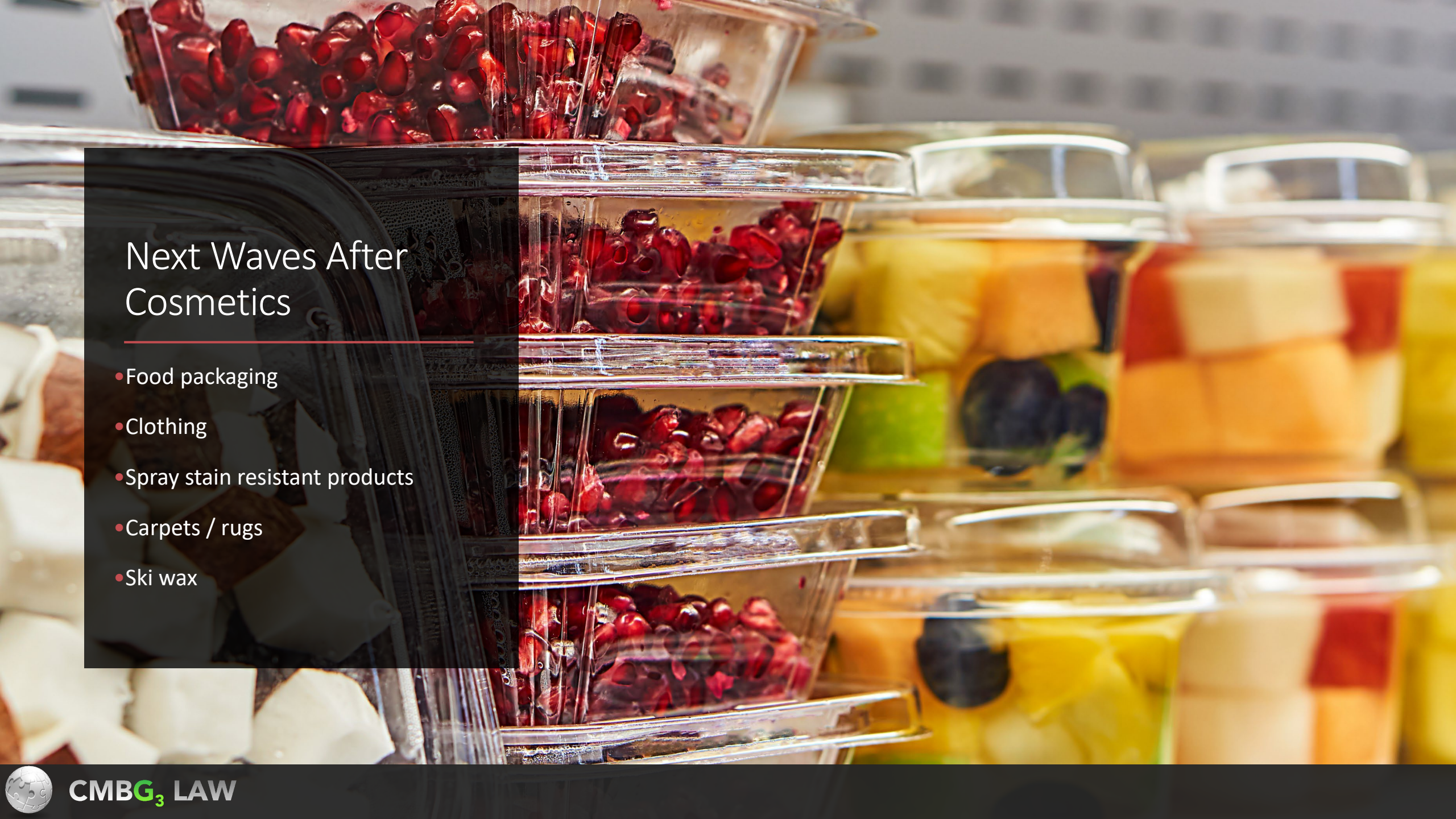
- June 15, 2021: Journal of Environmental Science and Technology Letters study
- 4 major lawsuits since December 2021
- CA + WA introduced legislation to ban all PFAS in cosmetics
- 6 other states looking to do the same



Cosmetics

- Phase 1: “safe” and “environmentally friendly” statements are consumer fraud
- Phase 2: personal injury





Next Waves After Cosmetics

- Food packaging
- Clothing
- Spray stain resistant products
- Carpets / rugs
- Ski wax



PFAS +
Greenwashing:
Federal and State
Approaches

Greenwashing



New York Anti-Greenwashing Regulation

- Oct 2021: Fashion Sustainability and Social Accountability Act
- Detailed disclosure requirements for environmental due diligence, including use of toxic or potentially toxic chemicals (PFAS)



California's AB 1201

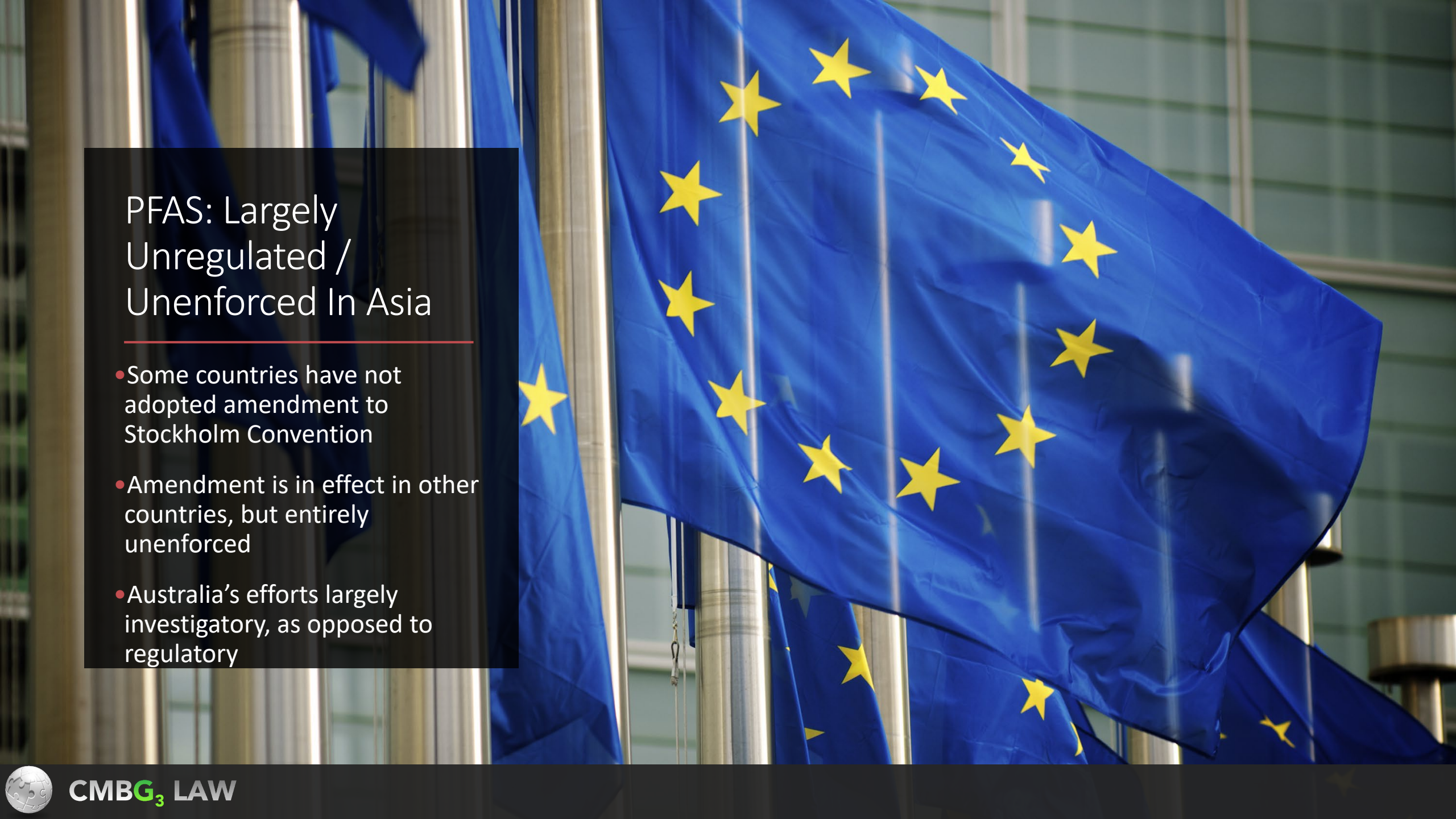
- Oct 2021: enacted restrictions on environmental marketing claims
- “Biodegradable” or “compostable” claims not allowed if products contain PFAS
- Aims are consumer awareness and shifting business practices

100 %
BIODEGRADABLE
RECYCLABLE



PFAS Updates From Asia Pacific





PFAS: Largely Unregulated / Unenforced In Asia

- Some countries have not adopted amendment to Stockholm Convention
- Amendment is in effect in other countries, but entirely unenforced
- Australia's efforts largely investigatory, as opposed to regulatory



PFAS: China and Japan

- China: Oct. 2021 – draft New Pollutant Management Action Plan
- Japan: May 2021 – PFOA + PFOS listed on Chemical Substances Control Law