

Environmental contamination from fluorinated ski wax use

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Fluorinated ski wax creates hydrophobic layer on bottom of ski to repel water and increase speed



Ski wax use contributes to environmental contamination by per- and polyfluoroalkyl substances

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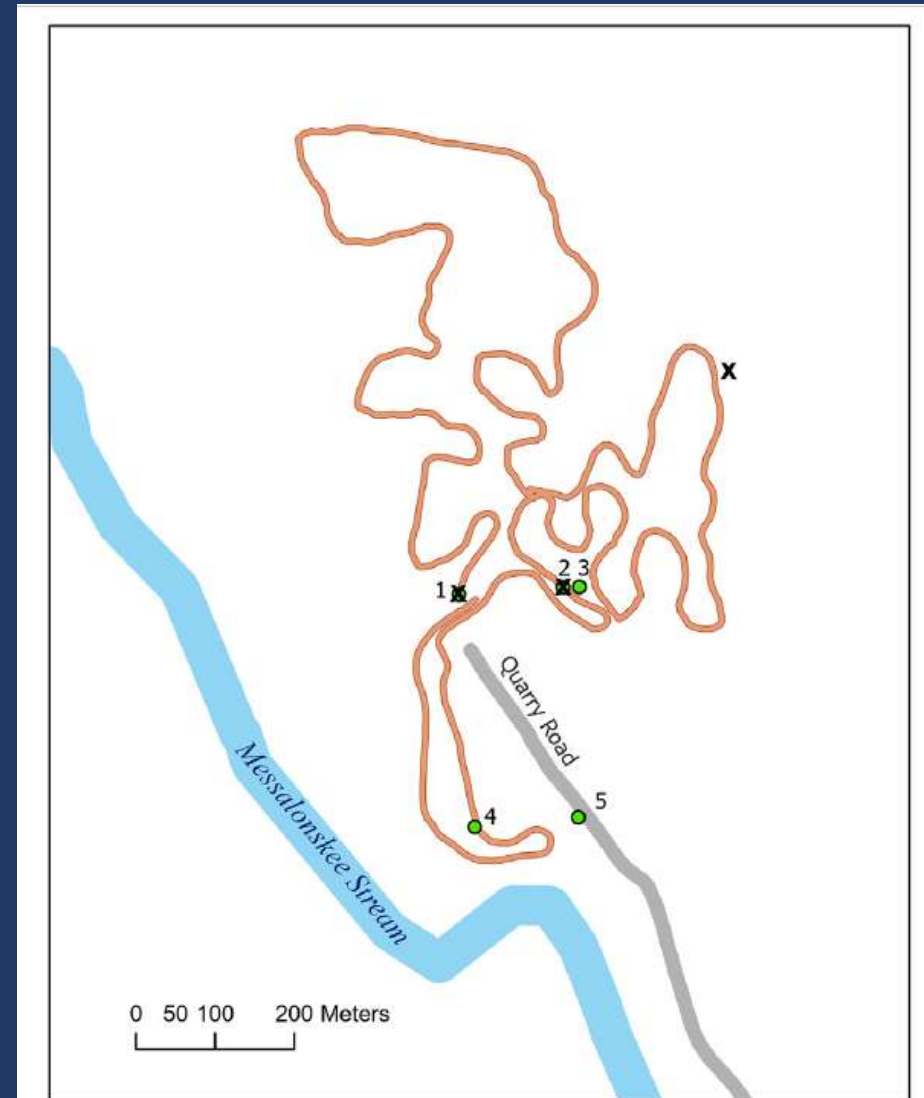


Fig. 1. Map of Quarry Road Trails in Waterville, Maine, showing the sampling sites, entrance road, ski race course, and nearby stream. (o) Melted snow or water sample site; (x) Soil sample site. 1, Start line of ski race course; 2, "Hero's Hill" on the ski trail; 3, "Hero's Hill" off the ski trail; 4, Run-off water site; 5, Shallow groundwater well.

After a collegiate
race where F-waxes
allowed (Jan 2020):

Start line snow
10,712 ng/L (ppt)

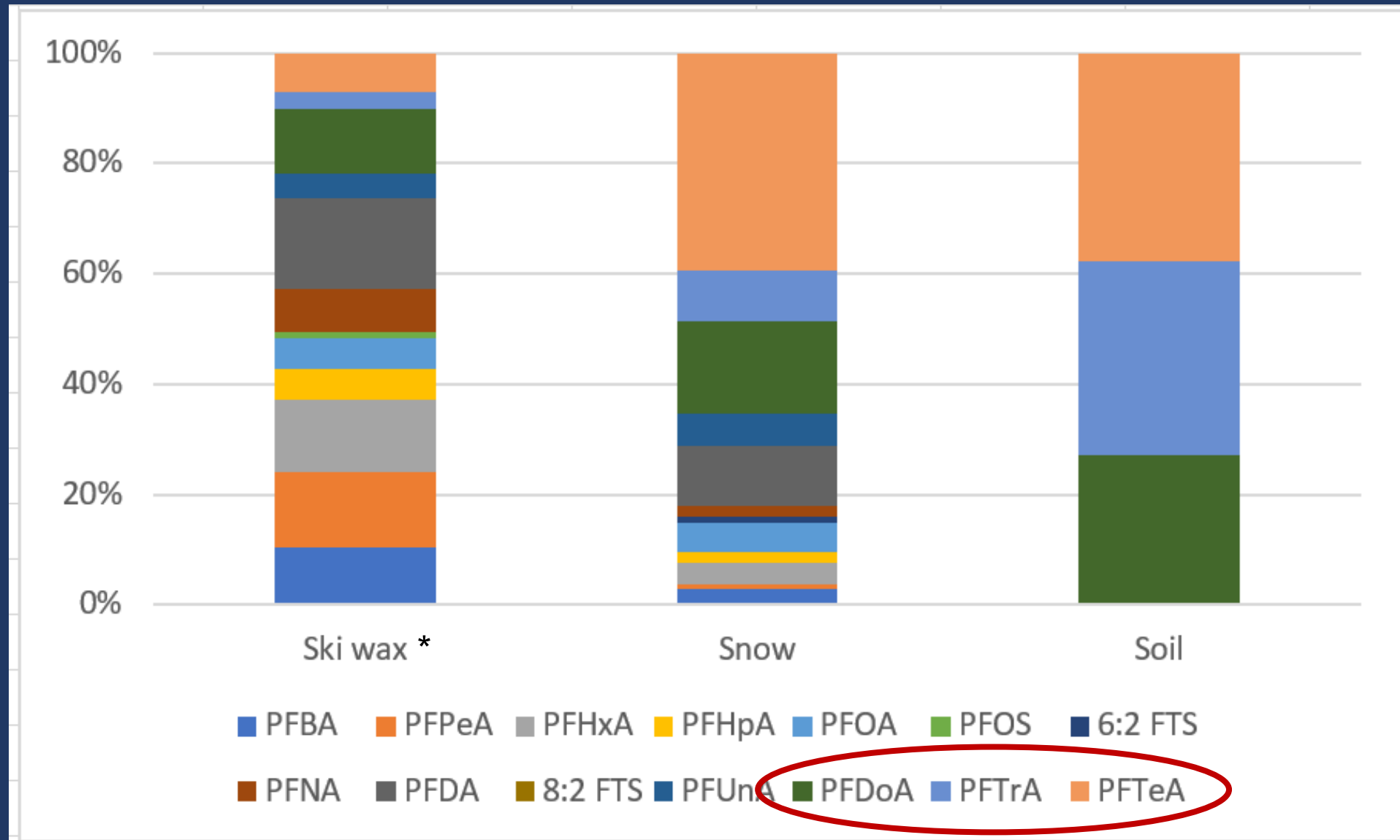
Course snow @ 3.9 km
20.9 ng/L

Off-course snow
14.5 ng/L

Soil at start line
10.3 ng/g (ppb)



PFAS from ski wax contaminates snow and underlying soil



<https://doi.org/10.1016/j.chemosphere.2020.128078>

*Kotthoff et al. 2015. Perfluoroalkyl and polyfluoroalkyl substances in consumer products. *Environ Sci Pollut Res Int.* 22(19): 14546–14559



“Recognizing that POPs possess **toxic** properties, **resist degradation**, **bioaccumulate** and are transported across international boundaries and deposited far from their place of release”

“Aware of **health concerns**, especially in developing countries, resulting from local exposure to POPs, in particular impacts upon women and, through them, upon future generations”

“Acknowledging that Arctic ecosystems and **indigenous communities** are particularly at risk because of **biomagnification** of POPs and contamination of their traditional foods”

Annex A (Elimination) → PFOA (2019), PFHxS (2022)
Currently reviewing long-chain perfluorocarboxylic acids (C9-21)

Annex B (Restriction) → PFOS (2009), PFOSF (2019)



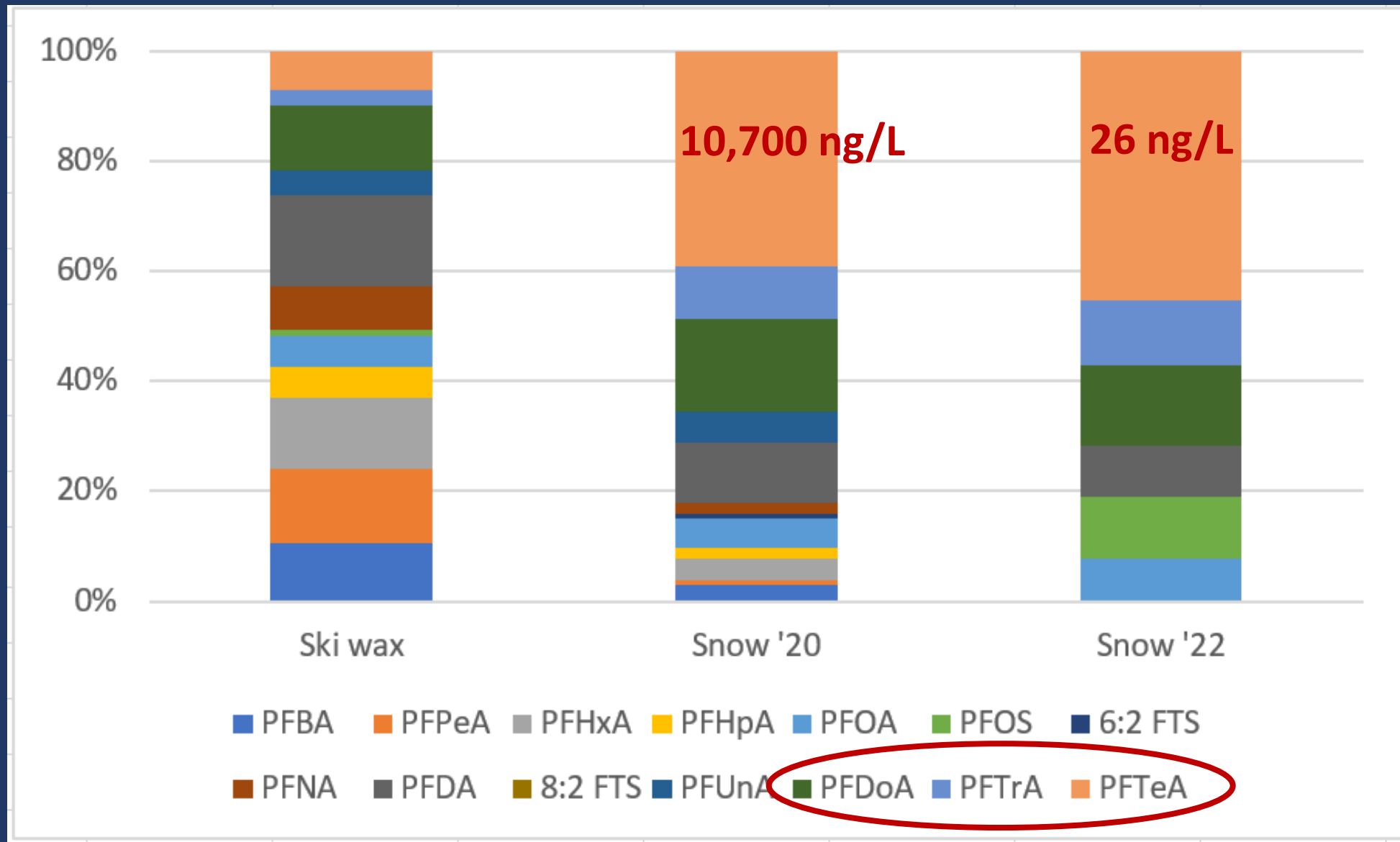
Update on FIS Fluorinated Ski Wax Ban

“FIS has prohibited any products containing C8 fluorocarbons/PFOA at all FIS events from season 2021/2022 onwards”

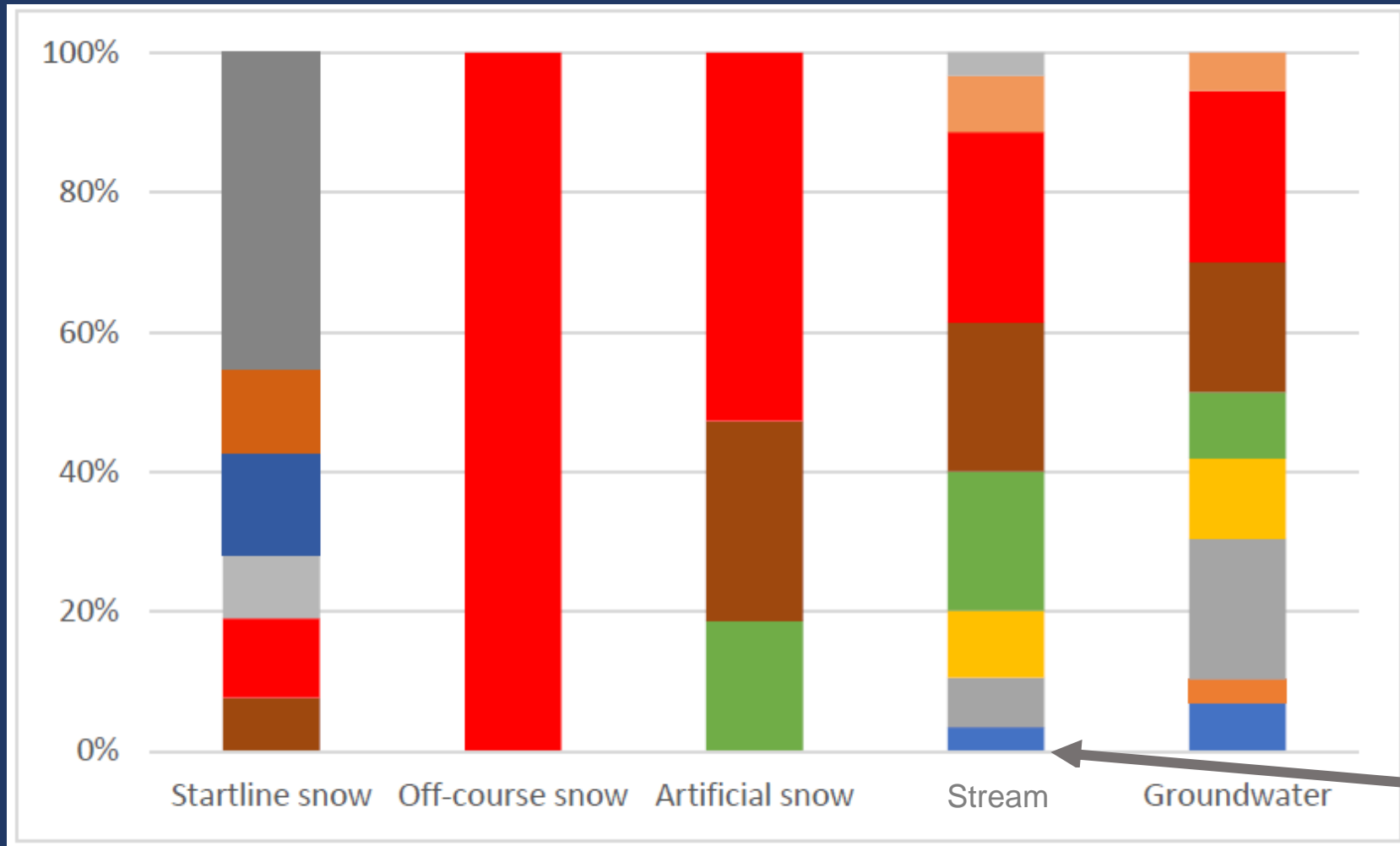


Poll question

After F-wax ban, 400-times less PFAS in snow



Snow-making may also contribute to PFAS contamination if source water contains PFAS



The Salt Lake Tribune

Ski wax contaminated Park City's aquifers with 'forever chemicals.' It could cost millions to clean up.

By Julie Jag
April 15, 2024



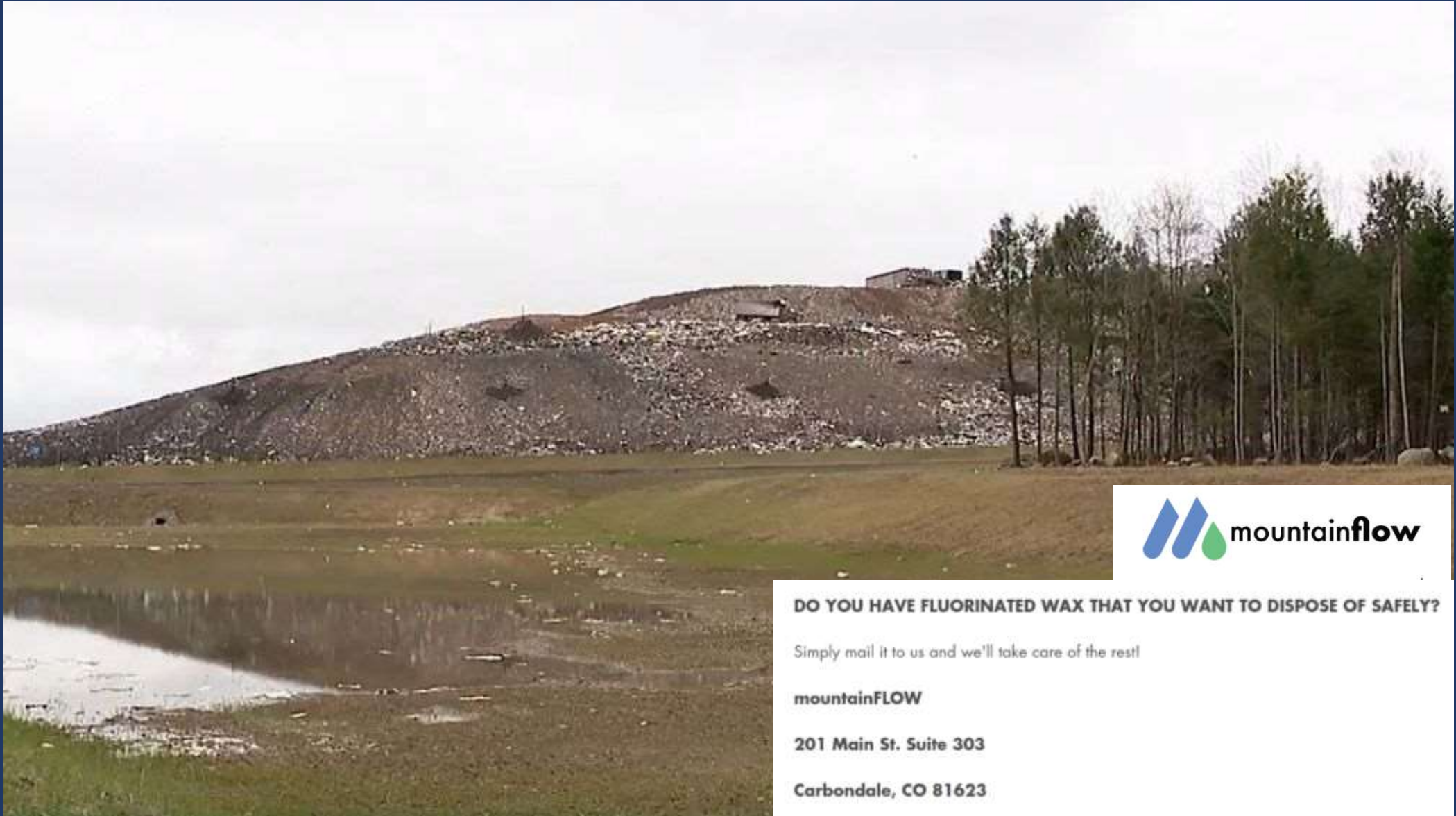
<https://www.sltrib.com/news/environment/2024/04/15/skis-snow-forever-chemicals-water/>



Selected PFAS regulations in Maine

- 2021 *First-in-the-world* ban on nonessential uses of PFAS in products sold in Maine
- 2022 Ban on land spreading of waste biosolids
- 2024 Products ban *amended* to include a ban on PFAS in **ski wax** and other products (e.g., textiles, cookware, cleaning products, cosmetics, menstrual products, dental floss, juvenile products) effective Jan 1, 2026

Where do all the unused F-waxes go?



DO YOU HAVE FLUORINATED WAX THAT YOU WANT TO DISPOSE OF SAFELY?

Simply mail it to us and we'll take care of the rest!

mountainFLOW

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