



Memorandum

To: Brian Penttila, Darin Rice, and Ken Zarker, Washington State Department of Ecology
Catherine Rudisill, SRC, Inc.

From: Laurie Valeriano and Erika Schreder, Toxic-Free Future; Cheri Peele, Clean Production Action; Alicia Culver, Responsible Purchasing Network

Date: August 12, 2019

Re: Framing of Alternatives Assessment for Washington State's PFAS in Food Packaging Ban

Our organizations have worked together to identify a wide array of practical, cost-effective and readily available alternative products and materials that can immediately replace food service ware and packaging containing PFAS in response to the survey put out by SRC.

Based on the information we have gathered, the best approach is for all of the alternative materials to be identified for each product category where PFAS is used in paper food service ware and packaging and choose several alternatives to evaluate that will cover the most categories. In our assessment, which is based on our organization's collaborative research in this area over several years, we have identified overlapping alternatives for:

1. Plates
2. Bowls
3. Clamshells
4. Other types of take-out containers (e.g., boxes and other types of deli containers)
5. Food wrappers
6. Bakery items
7. Food trays
8. Pizza boxes
9. Microwave popcorn bags

The following alternatives should be evaluated using a narrative approach and a hazard screening where it makes sense:

- 1. Papers without coatings that use a mechanical method to obtain grease and water resistance.** For example, Domtar (<https://www.domtar.com/en/what-we-make/paper/specialty-and-technical-papers/food-packaging>), Acadia (<https://www.twinriverspaper.com/products/packaging-paper/acadia-oil-grease->



and palm leaf.

[resistant/](#)), and If You Care have PFAS-free products that can be used for a number of these applications. There are no specific chemicals to screen to compare to PFAS. Other naturally grease-resistant uncoated materials used to make food service ware and packaging include wood, bamboo,

- 2. PLA- or polyethylene-coated papers.** There are many alternative single-use food service products on the market (see attached chart) that contain PLA- or polyethylene-coated paper to achieve grease and water resistance. These materials are practical substitutes for many of the paper takeout products. For example, PLA-coated paper is commonly used to make compostable takeout boxes, soup containers and coffee bags – and can be used for both **hot** and cold foods.

Polyethylene-coated paper has long been used as a cost-effective material to impart grease and water resistance in paper plates, bowls, and trays.

In addition, there are a wide array of food service ware products on the market that contain PLA (without the paper). Most are certified compostable and are used to make takeout containers for cold food items such as salads, sandwiches and salad dressings. More recently, at least one company, [Earth Maize](#), has developed a line of **heat-tolerant** food service products (including plates, bowls, clamshells and trays) made of PLA foam. GreenScreen assessments have been performed on the primary chemicals, intermediate chemicals, and monomers for PLA, polyethylene and polypropylene. They all received scores of Benchmark 2 or 3.

https://www.bizngo.org/images/ee_images/uploads/plastics/appendix3.pdf

This means that these three plastic materials have a relatively low chemical footprint compared to polystyrene and PET, which are commonly used to manufacture food service ware and food packaging. (See chart below)

- 3. Wax.** Paraffin and Bio-Wax are alternatives that are – and can be – used widely in food wraps, bags and candy wrappers.
- 4. Clay Coated Papers.** Clay coated papers can be evaluated for several of the product categories. Kaolin clay is used in food packaging <https://www.sciencedirect.com/science/article/pii/S0169131791900152>.

5. **Reusable products.** There are many PFAS-free reusable products available for purchase by consumers for use in the home or office or in restaurants that that are PFAS-free. These products are made of a wide array of materials including, but not limited to ceramic, glass, polyethylene, polypropylene, PLA, stainless steel, etc. Reducing the use of single-use food service ware and packaging is an approach that can also reduce exposure. For plates, bowls, food trays and other items, there are readily available alternatives that can be used many times over, making them a cost-effective option over the life of the product.



6. **Alternative Coatings & Additives.** There are several promising coatings and additives that are on the market or soon to be on the market. These include *Flexshield*, a coating used by InnoPak and Fold-Pak; as well as *Vanguard*, an additive being introduced for molded fiber, by Eco-Products.

<https://www.prnewswire.com/news-releases/eco-products-announces-vanguard-a-new-line-of-sugarcane-compostable-plates-containers-300826001.html>



If Ecology is unable to obtain ingredient information on these coatings and additives, it should explore the option of obtaining negative declarations from these companies. Negative declarations are commonly used by third-party certifiers; in this case, Ecology would request a declaration that all ingredients have been assessed using GreenScreen and designated as Benchmark 2 or higher.

Finally, in response to Perspective 1 in the survey, the assessment should be focused on alternatives by food packaging function (e.g., bowls, plates, takeout containers, etc.), as described above, not on alternatives to PFAS within a specific material (e.g., PFAS in molded fiber). This would ensure that PFAS would not be allowed whenever there are alternative materials and products available that can reasonably replace the PFAS-containing products that are currently in use.

With regard to Perspective 3, it is not appropriate to frame the alternatives assessment by market sector because food packaging functions, as listed above, are consistent across sectors. For example, there are overlapping alternatives for wrappers, bags, and boxes for products that can be used by quick service restaurants, institutional food service operators, and individual consumers in their homes. In addition, the Legislature did not establish the ban for a particular sector.

We thank Ecology for your work as a leader to implement Washington’s ban on PFAS in food packaging. We believe strongly that using the framework outlined above, Ecology can successfully identify safer alternatives to all PFAS-containing food packaging and food service ware using existing resources.

https://www.bizngo.org/images/ee_images/uploads/plastics/chapter3_chemical_footprint.pdf

