

POLICY NOTE

Two regulatory case studies reveal the best way to implement Washington's new toxic chemical law

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Key Findings

1. The Legislature imposed new rules to ban “chemicals of concern” that benefit consumers, but assessing the true level of risk to health is not always straightforward.
2. Banning certain compounds sometimes leads to banned products being replaced with alternatives that are more toxic.
3. The Legislature gave the Department of Ecology sweeping power to ban products, but the Department itself is subject to lobbying pressure from activists and special interests.
4. Environmentalists pushed for banning an important flame retardant, with the result that the ban increased, rather than reduced, risk to the public.
5. Environmentalists want Washington state to ban substances based on policy decisions made by European regulators, without reviewing the underlying science.
6. Instead, Washington officials should set rules based on science and the true risk to the public, with proper oversight by the people's elected representatives.

Newspaper headlines routinely warn of chemicals that may be harming our health. Some stories claim chemicals in the environment are contributing in the declining population of Southern Resident orca in Puget Sound. To address these concerns, the Legislature passed new regulation on “chemicals of concern,” giving the Department of Ecology broad new authority to restrict or even ban chemicals they determine may have health impacts, despite the benefits these products provide to the public.

Some activists celebrated its passage, calling it the “nation’s strongest policy for regulating toxic chemicals in consumer products.”¹ However, implementing the legislation, [SB 5135](#), could prove challenging.

Despite a patina of scientific analysis, regulating so-called “chemicals of concern” is not always straightforward. Determining the true level of risk to human health can be difficult. Often there is little information (especially about new compounds) for regulators to use when imposing new restrictions. Even when there is information, regulators must also determine whether banning certain compounds will make public risks worse when the banned products are replaced with alternatives that are more toxic.

We have witnessed these tradeoffs here in Washington state, and past efforts to ban certain supposedly toxic flame-retardants led manufacturers to substitute chemicals rated as even more toxic. How the Department of Ecology chooses to implement the new legislation will make all the difference in how effective the new law is in truly protecting the public.

Examining two recent case studies provides guidance on how the department can manage chemicals of concern without inadvertently making the situation worse and to ensure that proven science takes priority over activist politics in these determinations.

¹ ChemicalWatch, “Washington state passes US’s ‘strongest legislation’ on chemicals in products,” April 24, 2019, <https://chemicalwatch.com/76791/washington-state-passes-uss-strongest-legislation-on-chemicals-in-products>

The Department of Ecology's broad new authority to impose bans

Rather than having the legislature restrict or ban chemicals on a case-by-case basis, the lawmakers gave the Department of Ecology the ability to analyze chemicals they identify and to try to determine the best course of action. After analyzing the potential risk from a chemical, the legislation gives the Department the ability to “determine no action is required; require a manufacturer to provide notice of the use of the priority chemical; or restrict or prohibit the manufacture, wholesale, distribution, retail sale, or use of a priority chemical in a consumer product.”²

If regulators determine some action is necessary, Ecology officials do not need to wait for the legislature and may impose their own action. The sweeping legislation provides them with the authority to “adopt rules to implement this act and must adopt rules to implement regulatory determinations.”³

The Legislature did offer some guidelines on how Ecology officials are to undertake their analysis. For example, the Legislature instructed Ecology to consider, “If another state or nation has identified or taken regulatory action to restrict or otherwise regulate the priority chemical in the consumer product.”⁴

Looking at how other jurisdictions treat chemicals is not about scientific analysis but may merely repeat the mistakes of foreign regulators. Imitating the foreign practice simply substitutes the typical risk tolerance of other countries for American standards which tend to rely on evidence of harm before banning a substance. Europe may decide to ban something, like genetically modified organisms, that has been widely recognized to have many benefits and no health risk at all.⁵

The regulatory decisions of other countries are based on a “precautionary” approach that weighs theoretical concerns more heavily than scientific evidence. By using the decisions of other countries as a guide, the Legislature is injecting politics into what it claims is a science-based process.

Additionally, like all public agencies, the Department of Ecology is subject to outside political pressure. The Environmental Priorities Coalition, a group of political environmental organizations, has chosen to lobby on issues related to banning chemicals. Further, individual organizations lobby the Department of Ecology to ban particular chemicals they identify. No matter what scientific process is followed, organizations and industry will lobby the agency because decisions about chemical risk are rarely straightforward.

Finally, the legislation requires the Department to consider the “availability and feasibility of safer alternatives.” This is important because banning one chemical of

2 Washington State Legislature, “Final Bill Report SSB 5135,” <http://lawfilesexternal.leg.wa.gov/biennium/2019-20/Pdf/Bill%20Reports/Senate/5135-S%20SBR%20FBR%202019.pdf>

3 Ibid.

4 Washington State Legislature, “Substitute Senate Bill 5135,” <http://lawfilesexternal.leg.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Passed%20Legislature/5135-S.PL.pdf>

5 Tagliabue, Giovanni, “Why the concept of GMOs is meaningless,” January 11, 2016, Genetic Literacy Project, <https://geneticliteracyproject.org/2016/01/11/concept-gmos-meaningless/>

limited public risk may result in it being replaced by a chemical that is either more toxic or whose risks are not understood.

These principles appear sound, but how they are applied will make a significant difference in how the legislation addresses problems in the real world. This is an important question because the Department has been granted broad authority to make decisions about chemical compounds and must ensure that its decisions are based in science, not political pressure. Two recent decisions on chemicals of concern illustrate the range of approaches the Department has used in recent years.

Banning flame retardants backfired

A decade ago, the Washington State Legislature banned a flame-retardant chemical called PBDE or deca-BDE that some political advocates said was toxic. Before the ban took effect, however, the law required the Department of Ecology to certify that “an effective flame retardant that is safer than commercial deca-BDE and technically feasible” was available.⁶ During legislative hearings, Department officials testified that while there were no known alternatives at the time, there were good options on the horizon.⁷ That turned out not to be the case.

PBDEs were being used to make fabric and computer housings more flame-retardant and to meet safety regulations requiring flame resistance. Recognizing that PBDEs would soon be banned, companies that had to comply with the flame resistance regulations began switching to fire-resistant alternatives that were more toxic.

The Department of Ecology itself admitted years later that this had occurred. In its report on “Flame Retardants” to the Legislature in 2015, the Department of Ecology noted:

“Manufacturers appear to have largely moved away from PBDEs and products are compliant with the Washington and other states and countries PBDE bans. Manufacturers are using alternative flame retardants to PBDEs, some of which are chemicals that are of equal or greater toxicity concern, known as regrettable substitutions.”⁸

In other words, the banning action of the legislation increased, rather than reduced, health risks to the public.

In some cases, the chemical replacing PBDEs had itself been banned elsewhere years before. In its report, Ecology cited:

“...evidence that other halogenated flame retardants now being used are examples of regrettable substitutes for PBDEs, which were banned or significantly restricted in the 2000s. One study found that TBB and TBPH

6 Myers, Todd, “Banning flame-retardant materials: weighing science and precaution,” January 2007, <https://www.washingtonpolicy.org/library/docLib/legismemopbdeban.pdf>

7 Sturdevant, Ted, Washington State Department of Health, Testimony before the Health Select Committee on Environmental Health, January 9, 2007. <http://www.tvw.org/MediaPlayer/Archived/WME.cfm?EYNum=2007011009&TYPE=A>

8 Washington State Department of Ecology, “Flame retardants: a report to the legislature,” June 2015, p. 62, <https://fortress.wa.gov/ecy/publications/documents/1404047.pdf>

concentrations in dust collected from California homes between 2006 and 2011 increased.”⁹

After recognizing that the ban might actually have increased the public’s exposure to toxic chemicals, regulators at the Department of Ecology and Department of Health decided to remove the requirement for the chemicals in some circumstances. After looking at alternatives, the two departments decided that “chemical flame retardants are not necessary in these products.”¹⁰

This story of regulatory failure is instructive because considering alternatives is an important part of addressing chemicals of concern. If chemicals that meet regulatory obligations are banned, companies have little choice but to look for alternatives. By signaling their intent to ban PBDEs at some point in the future, but before they knew of potential alternatives, Ecology officials functionally banned them in advance. The unintended consequences and increased risk to the public of the PBDE ban offer a lesson on what to avoid when addressing the chemicals of concern covered by Ecology’s expanded authority.

Adding D4 to the list of Chemicals of High Concern

A counter example is the approach Ecology regulators used to assess the public risk of a chemical called D4 which is used in the production of silicone polymers. The compound was included on the list of Chemicals of High Concern for Children (CHCC) but was being considered for removal from the list by the state Department of Ecology. Activists seeking to keep it on the list made several arguments about the supposed risk of the chemical. Most notable was the fact that it was listed as dangerous by regulators in the European Union.

In its letter to the Department of Ecology, the activist group Toxic Free Future wrote, “Washington’s Department of Ecology confirmed the use of the European Union’s priority list of chemicals identified as suspected endocrine disruptors, specifically those designated as Category 1, for this current CSPA rule update (Ecology, 2016a).”¹¹ They argued that D4 should be listed because, in their words, “D4 has consistently been reported to be a reproductive toxicant, causing fetal loss in pregnant rats.”¹²

Department of Ecology officials wisely rejected that claim, and their comment is instructive about the danger of relying on other jurisdictions for guidance on assessing the toxicity of chemicals. In their response, they noted that “D4 is present on the European Commission (EC) Category 1 list, based on a single study.”¹³ Instead, the department noted that more recent research “shows no effect on uterine weight by D4.”¹⁴

9 Ibid., p. 4

10 Ibid., p 4

11 Department of Ecology, “Concise Explanatory Statement Chapter 173-334 WAC Children’s Safe Products Reporting Rule,” September 2017, p. 18, <https://fortress.wa.gov/ecy/publications/documents/1704034.pdf>

12 Ibid. p. 20

13 Ibid. p. 20

14 Ibid. p. 20



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As a result, the Department decided to remove D4 from the CHCC list. Ecology officials made it clear that the presence on a list in another county was not compelling, even saying, "The European Union Harmonized Classification and Labeling listing is not an authoritative source for CHCC listing. D4 is not listed by any of the other CSPA authoritative sources."¹⁵

As noted above, one difference in determining whether to list a chemical is how different jurisdictions assess public risk. Some, like the European Union, err on the side of banning chemicals even if the result is that more toxic chemicals take their place or other safety problems, such as risk of injury by fire, are increased. Rather than accept the judgement of another government and the level of risk-tolerance implicit in that decision, the Department of Ecology looked at the evidence, applied the standard and came to a sound policy decision based on science.

The case of D4 is an example of how public risk assessment should be done and the promise of making decisions about chemical risk using science. Ironically, even though many of the groups who pushed the new legislation would disagree with Ecology's decision on D4, the agency's approach in that decision actually provides a good argument in favor of the bill.

Conclusion – the need for a transparent and science-based process

Ceding excessive regulatory authority to state agencies is a problem, and too often consequential policy is made without sufficient oversight by the people's elected representatives.

That is a concern with regard to the new chemical policy. There is a reason political groups that consistently push to ban chemicals of all kinds – no matter their level of toxicity – were supportive of the legislation. They believe delegating political authority away from the Legislature to state agencies is more likely to achieve their agenda than through the legislative process.

Ecology's successful approach in the case of D4, however, is an example of the way such decisions can be made using good science. We should continue to watch how Ecology officials assess designated chemicals of concern, to ensure that model becomes an instructive case study rather than a single exception.

Additionally, Ecology officials would be wise to continue to look at the scientific basis for a decision rather than a chemical's presence on a list in another jurisdiction. Following those guidelines will help reduce the chance that we repeat the mistake made with PBDEs and focus on chemicals that truly present a risk to human health, without sacrificing standards of public safety.

¹⁵ Ibid. p. 20