

On March 10 and 11, 2021, the Washington State Departments of Ecology and Health hosted webinars to outline our criteria for identifying whether alternatives to priority chemicals are safer than what they would replace, feasible to use in the product, and available on the market.

Attendees heard presentations from the certification and labeling programs we are leveraging to build our process for Phase 3. Kat Compton of EPA Region 10 discussed the [EPA's Safer Choice program](#)¹ and Safer Chemical Ingredients List. Susan Klosterhaus of Cradle to Cradle™ Products Innovation Institute discussed the [Cradle to Cradle Material Health Certification](#).² Finally, Shari Franjevic of Clean Production Action discussed [GreenScreen® for Safer Chemicals](#).³

This document outlines the questions attendees asked during the webinar as well as the answers the Safer Products for WA team provided.

If you have questions, contact us at SaferProductsWA@ecy.wa.gov.

Webinar questions and answers

Q: Could a restriction be dealt with using limits?

A: We are not yet discussing the scope of restrictions. The law says restrict or prohibit, so we would assume that a limit or ban would need to be feasible for the specific product-chemical combination. Please join our product webinars in the spring and summer—that's where we'll get into these types of questions in detail.

Q: On page 12, the priority product for flame retardants is electronics and electronic equipment. What is the meaning of the covered product? And what is the definition of this covered product?

A: Right now, we are looking at hard plastic enclosures, so the plastic used on the outside to house the electric or electronic product, not the flame retardants that may be used internally.

Q: On page 10, flame retardants stand for organohalogen flame retardants and flame retardants identified under RCW 70.240.025; (1) TDCPP; (2) TCEP; (3) Decabromodiphenyl ether; (4) HBCD; or (5) Additive TBBPA. Is there any specific information on each OFR such as CAS no. that Ecology would consider?

A: The priority chemical class focuses on organohalogen flame retardants (OFRs), but the law also specifies a few flame retardants from the Children's Safe Products Act. The OFRs are considered as a class under this law. If you are interested in the types of OFRs that we or others have found in electric and electronic equipment, you can find that information in our [priority products report](#).⁴ Please feel free to reach out if you have more questions after reviewing that.

¹ <https://www.epa.gov/saferchoice>

² <https://www.c2ccertified.org/>

³ <https://www.greenscreenchemicals.org/>

⁴ <https://apps.ecology.wa.gov/publications/summarypages/2004019.html>

Q: All the chemicals of concern listed (PFAS, etc.) are in compost and fertilizer containing sewage wastes. Will you be reviewing these products?

A: Right now, we are focused more upstream, so we're looking at products that would contribute to PFAS being released into sewage waste. We're trying to get PFAS out of products before they get to the sewage phase.

Q: So you can monitor two or more chemicals at one time and report on the synergicity, is this correct?

A: We are looking at chemicals as a class so that we can take action that would prevent synergistic impacts of chemicals with related mechanisms of action.

Q: GreenScreen® certified is a nicely defined program, however it also worries me. As the speaker said there are thousands of chemicals in use and no one person, non-governmental organization or body can claim to be an expert or be knowledgeable of them all. Publicly available information is usually very limited and cannot be used or should not be used to make a complete assessment. And the GreenScreen® expert pool cannot be large enough to give a specific chemical a thorough and fair assessment. This is a concern of mine.

A: Thank you for sharing that concern, we appreciate your feedback. GreenScreen® isn't the only way we can assess chemicals, we have a lot of methods we can use. It is one method we have been leveraging and will continue to leverage. We agree we face limitations in terms of publicly available information. That's why we have a confidential business information (CBI) process set up so if any of our stakeholders are willing to give us information that's not publicly available, we encourage them to send us a request for CBI and we can work on including that information in our analyses.

Q: How are GreenScreen® and Cradle to Cradle™ the same and how do they differ?

A (Marissa Smith, Ecology): There are a number of reasons we use both GreenScreen® and Cradle to Cradle™. They're both hazard-based programs. They both have transparent criteria so we know what they're evaluating and how they are evaluating it. They both assess chemicals and breakdown products. They were both are based on the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS) and the Design for the Environment program. In terms of differences, Cradle to Cradle™ evaluates many elements of product sustainability, including material health, whereas GreenScreen® focuses on chemical hazards.

A (Susan Klosterhaus): It's complicated. The types of endpoints our programs look at are similar. Both are based on GHS, but we have a few endpoints that we assess that GreenScreen® does not. At a high level, they're very similar.

A (Shari Franjevic): Yes, Marissa captured the main difference. Cradle to Cradle™ is multi-attribute, whereas GreenScreen® focuses on hazard.

Q: Has a GreenScreen® hazard assessment ever been used as input to a Cradle to Cradle™ material health assessment?

A (Susan Klosterhaus): Yes, we do encourage any work that's been done, including GreenScreen® assessments, to be included as part of the Cradle to Cradle™ certification process.

Q: What independent accreditations does GreenScreen® and Cradle to Cradle™ hold?

A (Shari Franjevic): GreenScreen® and GreenScreen Certified®, as part of Clean Production Action, are independent 501(c)3s. We haven't gone through any other specific external processes, but do follow guidelines in some of them.

A (Susan Klosterhaus): Our certification process aligns with ISO 17065, and we're just finishing that accreditation process. We've also started the ISEAL Alliance membership compliance process.

Q: What sort of alignment is to be expected with current product standards and "safer"/Cradle to Cradle™/Clean Production Action? One example that comes to mind is NSF 61/NSF 600 that set industry standards for drinking water safety and defined exposure limits. I could see where conflicting requirements could be created that pose issues for manufactures that can be difficult to work through.

A: As our presenters addressed, there are a lot of similarities between these programs and that's one of the reasons why we decided to set a basic criteria—then we can determine whether existing methods meet that criteria. That's one of the ways we're managing alignment, because there are similarities and differences. We will look into that NSF standard so thank you for sharing that.

Q: Does "available" include any consideration of volume of the chemical that's for sale? Does there have to be enough chemical to meet the demand? (For example, in CA we are looking at restricting the amount of 1,4-dioxane in some surfactants and manufacturers have complained that there's not enough low dioxane surfactants.)

A: As it is defined by the Interstate Chemicals Clearinghouse (IC2) guide, which we follow, that is not a consideration as part of our process. But if you have information that's relevant to that, we would certainly consider it in our analysis.

Q: For electronic enclosure, I believe it covers electronics such as TVs and PC monitors. Does it cover plastics enclosure in the appliance as well?

A: Yes, as currently written, the definition includes any sort of plastic enclosure that is encasing an electronic or electric component. We wrote definitions broadly in Phase 2 in order to avoid constraining ourselves too early. We're going to be narrowing the definitions of product categories going forward. We will discuss that during the product specific webinars we have coming up. Manufacturer and industry input will be crucial during those discussions.

Q: Are pigment producers dealing with end-of-life problems of hazardous chemicals?

A: If we were looking at pigments (which we are not, pigments are not our priority product), end-of-life considerations would be included in how we assess hazard. There are some stewardship programs around paints, and those are great programs, but our focus is on source reduction.

Q: So for flame retardants in electronic products, it is not based on specific CAS, but the whole class. So, how is regulatory action to do nothing, require disclosure, or restrict to be implemented?

A: We are focused on Phase 3, and we're not yet to the implementation portion, because we don't know what regulatory actions we will or could be taking. We encourage you to join our product specific webinars when we discuss flame retardants and those potential regulations.

Q: You are looking at just one chemical at a time and the class of the chemical, but not a mix? Just want to be clear, as I would like to contact someone evaluating two or more at one time.

A: We're not doing a risk assessment. We're looking at whether there are safer alternatives to the priority chemical class. Are there chemicals that are safer than PFAS to use for water and soil resistance in carpets, for example? We're not looking at the synergistic impacts of two chemicals on health. The mixture is considered because we know more than one chemical in the class are frequently being used in the product, but we're not looking at synergistic impacts or doing a cumulative risk assessment. We're trying to move away from the class if there are safer alternatives.

Q: Has Ecology ever looked at the results of the assessment of the same chemical between GreenScreen® and Cradle to Cradle™ to see if the results are the same?

A: Our goal is not to compare GreenScreen® with Cradle to Cradle™. Our goal is to compare our criteria to GreenScreen® assessments, and our criteria to Cradle to Cradle™ assessments. That's why we set a clear and transparent bar, so we can compare existing methods and labeling programs to that bar. When we identify safer alternatives, if we do leverage these existing methods, we'll have a document showing that the analysis meets the criteria.

Q: Is GreenScreen® or Cradle to Cradle™ ever used by EPA to make regulatory decisions such as those issued under the Toxic Substances Control Act (TSCA)?

A (Kat Compton): I don't have a specific example to point to, but the TSCA program and the process for chemical evaluation under TSCA does include several points where there is a robust stakeholder process and request for comment. I wouldn't be surprised if they used data from other programs like GreenScreen® and Cradle to Cradle™. The new TSCA requires EPA to identify high priority chemicals, and also requests that EPA identify low priority chemicals for assessment. Right now, the low priority chemicals are coming from the Safer Chemical Ingredients List (SCIL).

A (Marissa Smith): It's also important to mention that GreenScreen® and Cradle to Cradle™ have been referenced in some guidance documents for alternatives assessments. GreenScreen® and SCIL are in the National Academy of Sciences guide for alternatives assessments. The California Department of Toxic Substances Control guidance also mentions SCIL, GreenScreen® and Cradle to Cradle™. There are many reasons these programs makes sense for our process.

Q: Do any assessments address PCBs that are created inadvertently during the manufacturing process?

A: Inadvertently created contaminants don't fall into the definition of safer, but we do address them in our process for assessing feasibility and availability. We would aim to find alternatives that do not have, or have lower levels of, the inadvertent contaminant. Our analysis does account for that.

Q: What happens in the future if new hazard information on a safer alternative drops it out of the definition for "safer"?

A: We will have to continue to evolve our criteria as we move toward safer chemicals. Right now, we make our determination and that feeds into our regulatory process. We're not certain how we will address this yet, but it's certainly something we would want to consider during the next phase of implementation.

Q: It would really help to have an explanation in the future directed to the interested public, who purchase these products.

A: It's really common for us when working with community or the public to get questions about what people can do in the meantime to purchase safer products and protect themselves while we figure out potential regulations. We're developing materials with information for how people can protect themselves. See our [blog post on purchasing safer cleaning products](#)⁵ for an example.

Q: Is quality of data taken into consideration when Ecology defines "data rich"?

A: Some are well defined, and some are less well defined. But we know there are authoritative reports and sources as well as panel reviews for a lot of the priority chemicals. Those would be our primary sources, and many of them have already been pulled into existing hazard analyses that we can use. So we definitely do consider the quality of data, but with these first five chemical classes, we're in a good place for finding lots of data rich chemicals.

Q: How do you define carcinogenic? Are you using animal, fish or human research to develop your criteria? Are you relying on standard acute and chronic toxicity tests?

A: To define carcinogenic, we rely on the language from the Globally Harmonized System for the Classification and Labelling of Chemicals, or GHS, and the International Agency for Research on Cancer (IARC). That language addresses known or presumed carcinogens, and those are chemicals that would fail to meet our minimum criteria. Suspected carcinogens could meet our minimum criteria, but wouldn't meet our additional criteria. Our determination is based on the GreenScreen[®] scoring system, which includes instructions that help us think about how much data we need. That could include data from animals and human research. Carcinogenicity may not be so relevant to fish, but we do have data from fish studies from our aquatic toxicity assessments. Standard acute and chronic toxicity tests are definitely considered, but we don't require them. We can also look to the peer-reviewed literature for other types of evidence. We will consider Organisation for Economic Cooperation and Development (OECD) standardized tests when they're available, and that type of data does increase our confidence.

Q: Do data come from industry or a third party?

A: All of the above. We have a confidential business information (CBI) process if anyone from industry wants to submit data to us and have us hold it confidential. We also assess peer-reviewed literature. We rely often on European Chemicals Agency (ECHA) reports from the European Union. We'll consider all the information available to us.

⁵ <https://ecology.wa.gov/Blog/Posts/June-2020/Safer-Choice-Because-you-shouldn%E2%80%99t-need-a-PhD-to-k>