Product Replacement Program Update: 2021





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2021 Update

This report is an update to the <u>2019–2020 Product</u> <u>Replacement Program (PRP) Progress Report.</u>¹

This report provides a progress update on the PRP projects including PERC replacement, PFAS/AFFF, PCBs, Degreasers, and Flame Retardants. The PRP's efforts over the past year reduced the threat posed by these chemicals to Washington's environment and public health.

PRP Biennium Report 2019–2021

PRP is a cutting edge preventative program that addresses the "worst of the worst" product/chemical combinations.

Since our last progress report, we:

- Transitioned more dry cleaners from perchloroethylene (PERC) to safer technologies.
- Provided fire departments with equipment to store their firefighting foam safely until it can be collected for disposal.
- Provided airports with options for safer firefighting equipment.
- Made plans to remove light ballasts containing polychlorinated biphenyls (PCBs) from Washington's schools.
- Provided auto body shops with safer solvents for cleaning their equipment and tools.
- Contacted gyms and recreation centers about the health and environmental impacts of flame retardants in foam pits.

In the next biennium, we plan to expand on these projects, provide our pollution prevention partners with new tools to reduce dangerous waste generation, and investigate new product/chemical combinations to address.







PERC

PERC is a solvent used in dry cleaning to remove stains. If spilled or leaked, it can negatively impact the environment and public health. It's also extremely expensive to clean up once in the ground or water—a single PERC spill can cost an average of \$120,000 to clean up.²

Our PERC replacement program made significant progress replacing toxic PERC dry cleaning machines with safer alternatives such as professional wet cleaning (PWC) or highflash hydrocarbon (HFH) machines.

In the last year, we helped 16 more dry cleaners ditch PERC. That makes a total of 53 Washington dry cleaners who have switched to a safer alternative thanks to the efforts of the PRP. Our PERC replacement program offered cash reimbursements to dry cleaners who moved away from PERC: up to \$40,000 for switching to PWC and up to \$10,000 for switching to HFH. Thanks to these reimbursement amounts, over the last year most dry cleaners (81%) chose to switch to PWC machines. The remaining dry cleaners (19%) chose HFH machines.

Our replacement program emphasizes serving disadvantaged communities or ones facing significant health or environmental disparities. We use tools like the Department of Health's <u>Washington Tracking Network Environment and Health</u> <u>Disparities Map³ to guide reimbursement prioritization.</u>

For PERC replacement we chose to offer larger reimbursements for switching to PWC, so more dry cleaners would switch to the safest option for the environment and public health. Out of all the businesses we helped with PERC replacement, 44% were in communities with significant scores (7 or higher) on

² https://americandrycleaner.com/articles/drycleaning-contaminationcleanup-conclusion

³ https://fortress.wa.gov/doh/wtn/WTNIBL/

the Disparities Map. Nearly 83% of the dry cleaners who chose the safer PWC technology were in disadvantaged communities.

We know that moving away from PERC is a major investment in time, energy, and capital for these businesses. This is why we moved applications quickly through the process. The average time between issuing a voucher and receiving reimbursement was 125 days, with the quickest turnaround being 29 days.

PFAS/AFFF

Aqueous film forming foam—or AFFF as it is more commonly known—is a fire suppressant used to put out hydrocarbon- and liquid-fueled fires. AFFF contains per- and polyfluoroalkyl substances (PFAS), which are highly effective in helping the foam resist heat, spread over the fuel, starve the fire of oxygen, and prevent burn back. Unfortunately, those properties that make PFAS an excellent firefighting agent—mainly its heat resistance, water solubility, durability, and mobility—mean that once the fire is out, the chemical remains in the environment for centuries. PFAS is highly toxic at very low levels (in the parts per trillion). For example, a single drop of PFAS can contaminate the drinking water in an Olympic size pool.

In 2018, the Washington State Legislature passed laws placing restrictions on the manufacture, purchase, and use of AFFF. In response to this new law, the PRP launched two AFFF programs to reduce PFAS contamination.

Fire department support

The first is an AFFF collection, transport, and disposal program for the state's municipal fire departments. Ecology contacted the fire departments asking them to fill out a survey if interested in participating in the disposal program. Nearly 90 fire departments from across the state submitted survey responses indicating their wish to participate. These fire departments have identified close to 30,000 gallons of AFFF in need of disposal. Additional AFFF stockpiles are known to exist at the state's airports, chemical plants, aviation manufacturing facilities, and refineries. These stockpiles likely represent an equivalent amount of foam. During this phase of the AFFF replacement program, we are not planning on collecting and disposing of AFFF from these additional stockpiles or facilities, but we may return to them in the next phase of the project.

In November 2021, we launched a review of the environmental and health impacts associated with the collection, transport, and disposal of the remaining foam stockpiles. The review will take between 12 and 18 months to complete and will investigate potential disposal options including incineration, landfill, deep well injection, long-term storage, and new technologies. To ensure safe storage of this foam, we provided fire departments with new containers, totes, and secondary containment if needed. Most of the fire departments reported that their foam is stored in the original containers, and are in good enough condition to contain the AFFF. We're working with the remaining fire departments to make sure the foam is transferred into new drums or totes.

Airport support

In addition to fire department support, our second AFFF program provides Washington's commercial airports with equipment to test their firefighting capabilities without putting foam on the ground. Every year, commercial airports must test their foam capabilities. During these tests, a single fire engine will dump up to 240 gallons of PFAS onto the ground. Airports typically have between two and six fire trucks-this leads to thousands of gallons of PFAS going into the environment. To prevent this, we are reimbursing up to 90% of the total cost of the equipment and training expenses for fire departments, so they don't have to put foam on the ground anymore. To date, four out of 11 Washington airports have either purchased the needed equipment or indicated their desire to participate. We expect more airports to take part in the program in the next biennium.

PCBs

In 2021, we partnered with the Department of Health to develop a project to identify, remove, and replace fluorescent light fixtures in Washington schools that may still contain polychlorinated biphenyls (PCBs). Before 1980, PCBs were widely used in lamp ballasts for fluorescent lights. Buildings that were constructed or last renovated during the time when PCBs were still allowed for use in manufacturing electrical products should



be surveyed for PCB-containing lights. While many light ballasts have been replaced during lighting upgrades over the years, our program aims to find and remove any that still remain in schools. PCB-containing ballasts are long past their expected lifespan and can fail and leak at any time, resulting in potential environmental contamination and human exposure. PCBs are known to cause cancer, and they can harm the immune, nervous, and reproductive systems. Remaining PCB-containing light ballasts are overdue for removal, safe disposal, and replacement with newer more energy efficient lighting.

Our light ballast replacement program will:

- Provide a webpage with resources for schools, school districts, associated partners, and the public. The webpage will provide information about legacy PCBs and tell school districts how we can help them replace old fluorescent light ballasts.
- Survey schools to learn how many buildings still have PCB-containing ballasts and identify schools and districts that are interested in participating in our removal and replacement project.
- Connect interested school districts with financial assistance and technical experts as needed. Specialists can help evaluate schools for PCB-containing ballasts, perform removal and replacement, and ensure collection and proper disposal of old ballasts.
- Target our support and available resources to schools and districts with the greatest need.

At the start of the FY21–23 biennium, initial project information will be distributed to school districts and partners, and the survey of schools will be underway by the end of 2021. Survey results will clarify the project scope and enable Ecology to contract with lighting and hazardous waste management companies to provide necessary services to the schools we identify as having the greatest need. Product replacement work is planned for the 2022 summer recess period to take advantage of a period when students are not present in classrooms.



Degreasers

Over the last year, our automotive degreaser replacement program ramped up from development to implementation. We:

- Developed reimbursement criteria for safer alternatives.
- Started outreach across the state.
- Began taking applications and issuing vouchers.

Reimbursement Criteria

The automotive degreasing replacement program doesn't have one target chemical or even one target chemical class. Since there are so many degreasing products with different makeups, we decided on three chemical groups we wanted to remove from use.

- Halogenated organic compounds (HOCs), which are both persistent and toxic.
- Hazardous air pollutants (HAPs), which are chemicals known to cause cancer, other serious health effects, or environmental harm.
- Carcinogens, mutagens, and reproductive toxins (CMRs), which have serious long-term health effects.

It's good to avoid the worst chemicals, but it's better to only use chemicals we know are safe. That's why we're also using third-party certifications, like EPA's Safer Choice, to help identify preferred alternatives. We have four reimbursement tiers:

Bronze tier, up to \$1,000

Solvent-based degreasers without HOCs, HAPs, or CMRs

Silver tier, up to \$2,500

Solvent-based degreasers independently certified as safer

Gold tier, up to \$5,000

Water-based degreasers without HOCs, HAPs, or CMRs

Platinum tier, up to \$10,000

Water-based degreasers independently certified as safer







Outreach

We're working with our Pollution Prevention Assistance (PPA) partners to make sure auto shops across the state have a chance to participate. In May 2021, we mailed fliers to more than 4,750 auto shops, and PPA specialists and Ecology staff have been following up with phone calls, emails, or site visits since.

Next biennium we will increase our outreach by running a radio ad campaign from November 2021 to January 2022. The radio ads will be on almost every station in the state, including Spanish stations, reaching auto shops we haven't visited and the auto shops we don't know about.

Applications and Vouchers

We anticipate that more auto shops will apply than we can fund, so we developed a scoring system. Our applications prioritize auto shops based on environmental justice (EJ) and equity, and toxics reduction (TR) potential. For EJ and equity, auto shops in areas with high environmental health disparities, women- or minority-owned businesses, and smaller shops get higher rankings. For TR, we're focusing on auto shops that are using the most hazardous products or the largest amount of product.

We plan to start taking applications and issuing vouchers in fall 2021.

Flame Retardants

We're developing a program that will provide financial incentives to businesses who replace foam pit blocks that contain flame retardants with foam blocks without flame retardants.

The flame retardants used in these foam blocks are known to be harmful to human health, especially in developing organs. In addition to being an exposure risk for kids, employees, and the public, flame retardant foam also designates as an extremely hazardous waste in Washington.

Outreach

We started by determining which types of businesses we wanted to reach out to about foam blocks. We decided to contact gymnasiums, trampoline parks, aerial parks, and schools with gymnastics programs.

Due to uncertainty around costs and the amount of reimbursement we could provide, we determined that a pilot project would be the best way to proceed.

In the 2021-2023 biennium, we will be reaching out to facilities to start

getting pilot project volunteers. We will work with the participants to make the swap, document the processes and costs, and gather information about the issues or hurdles faced by businesses. This initial data will help businesses attempting to make the swap in the future and may serve as the basis for an expanded flame retardant foam pit replacement program.

