

Focus on: How to Protect Stormwater from PCBs in Building Materials



What are PCBs?

Polychlorinated biphenyls (PCBs) are a class of synthetic chlorinated chemicals not found naturally in the environment. They're persistent, bioaccumulative, and toxic (PBT) chemicals and probable human carcinogens.

Even low concentrations of PCBs in water can impact aquatic life and human health; they're considered one of the most significant toxic chemicals in Puget Sound. PCBs impact salmon populations, Southern Resident Killer Whales, and sediments and organisms in Washington rivers, lakes, and estuaries.



The Department of Health issued advisories about eating PCB-contaminated fish from certain rivers including the Duwamish, Spokane, Columbia, Yakima, and Wenatchee Rivers.

How do PCBs enter water bodies?

Stormwater may carry PCB contamination from building materials directly into Washington's water bodies. PCBs enter stormwater when:

- PCB-containing materials degrade.
- Intact products leach or emit PCBs.
- Ground surfaces and surrounding air become contaminated; particles can travel and enter runoff.
- Rainwater and activities like pressure-washing release PCBs.
- Buildings with older materials are demolished or renovated. Vehicles or foot traffic can track PCB-contaminated particles from caulk and other materials out of the work area.

How can I protect stormwater from PCBs?

Understand, manage, and remove sources of PCBs in building materials to prevent PCBs from entering Washington's stormwater.

Note: Analytical testing is the only conclusive way to confirm there aren't PCBs in your building materials!

Identify if your building has PCBs

Your building may have PCBs if you answer **yes** to both these questions:

- **Age:** Was it built or renovated from 1950–1980?
- **Use and structure:** Is it commercial, industrial, or multi-story residential?


If you suspect PCBs in building materials, or if you are unsure:




- Take an inventory of the suspected PCB-containing materials.
- Prepare a sampling plan to characterize the suspect building materials.
- Contact the [EPA Region 10 PCB Coordinator](#)¹ to discuss your plan and ensure you're properly addressing requirements.
- You may wish to hire a consultant who's familiar with regulated building materials.




¹ <https://www.epa.gov/pcbs/region-10-pcb-program>

Follow best management practices

The most important way to protect stormwater from PCBs in exterior building materials is to identify the problem and implement a plan to manage and abate the PCBs. Stormwater best management practices (BMPs) won't provide a permanent solution; your building will continue to pollute the environment if you don't address the materials that are sources of PCBs on the building. If you suspect PCBs in your building, contact EPA as soon as possible to develop and begin a plan for a long-term, permanent solution.

-  **Provide training and awareness**
Make sure everyone involved in building and property maintenance are aware there are PCBs in exterior building materials.

Don't disturb these materials until you can begin proper removal.
-  **Coordinate with your municipality**
Contact your local city or county stormwater program about your PCB-containing materials. They may be able to prioritize street sweeping and/or storm drainpipe cleaning in the area to help reduce PCBs entering the municipal stormwater system.
-  **Plan for wet weather**
Remove or protect potential PCB sources before it rains. Follow source control BMPs in [Ecology's Stormwater Management Manuals for Eastern and Western Washington](#).²
-  **Inspect regularly**
Regularly check the PCB-containing building materials to see if they are still intact.

If weathering (such as flaking or peeling) becomes worse, consider additional BMPs and move up your timeline to remove and dispose of the building materials. Contact EPA for additional technical assistance.
-  **Collect eroded material**
Use a shop vacuum with a HEPA filter to collect paint chips or other building materials that might otherwise fall to the ground or blow away. Don't cross-contaminate the equipment you use for PCB materials with clean areas or equipment.
-  **Prevent PCB-contaminated particles from migrating**
Don't transfer PCB-containing particles from your property into other nearby areas.
 - Keep soils and particles from transporting to other properties; keep them out of the street, ditches, and rights-of-way.
 - Carefully collect all solids and prevent them from moving around by using a HEPA vacuum or other cleaning method below the exterior features that contain PCBs.
 - Contain collected debris for waste designation and proper disposal.³
 - Don't use water or other liquids to spray dirt off hard surfaces. Don't washdown or power wash the surfaces contaminated by PCBs.
 - Don't use leaf blowers or brooms.
-  **Cover materials**
Follow [EPA's guidance](#)⁴ to encapsulate (or contain) the PCBs in the building materials. You may use encapsulants to:
 - Cover exterior peeling paint to minimize paint degradation.
 - Cover exterior caulking and joint sealant seams to help reduce or prevent stormwater contact.
You may cover Galbestos roofing and siding with an impermeable barrier, like plastic sheeting.

Note: You may need EPA approval for long-term encapsulant control options.

² <https://ecology.wa.gov/stormwatermanuals>; <https://apps.ecology.wa.gov/publications/documents/2204024.pdf> (Table 3: PCB-related BMPs contained within current Washington State Stormwater Management Manuals)

³ <https://apps.ecology.wa.gov/publications/SummaryPages/2104034.html>

⁴ <https://www.epa.gov/sites/default/files/2015-08/documents/p100fa5l.pdf>



Protect the storm drain system

Prevent contaminants and solids from entering catch basins.

If you have catch basins on site, implement inlet protection BMPs where feasible.

If you don't have catch basins on site and the nearest catch basin is in the public right-of-way, contact your local city or county stormwater program to discuss ways to protect their catch basins.

Follow inlet protection BMPs in Ecology's [Stormwater Management Manuals](https://ecology.wa.gov/stormwatermanuals),⁵ construction BMP C220. For example:

- While construction activities are occurring, place filters (such as filter fabric) in stormwater inlets and catch basins near the building.
- Inspect and maintain the filters on a regular basis.
- Collect and securely store all replaced spent filters for waste designation and proper disposal.
- If your plans involve preventing stormwater from entering certain inlets:
 - Use containment berms to direct stormwater flow.
 - Install drain covers on top of applicable inlets.
- Clean on-site drainage system structures like catch basin sumps before solids accumulate to 60% or are within 6 inches of an outlet pipe. Make sure that any drain cleaning contractor you hire knows how to manage potentially regulated TSCA wastes.



Avoid washing

Don't pressure wash PCB-containing materials. Washing to prepare for painting should be done with low-pressure and only if:

- Stormwater Source Control BMPs are in place.
- All wash water is collected.



Reconsider landscaping

Minimize irrigation water use in areas near buildings that may contain PCBs. Overwatering may mobilize contaminated soils or particles into the street and/or storm drain system.

Consider using stormwater treatment technologies to reduce PCBs in stormwater runoff. These technologies require site-specific engineering design so:

- You can install an effective technology that will work with your site's flow rates and particle loading.
- You can properly operate and maintain it.

Contact your local city or county stormwater program to learn about local code requirements for installing stormwater treatment on your property.

Related Information

- [How to Find and Address PCBs in Building Materials](#)⁶



- [Focus on: Identifying PCBs in Building Materials](#)⁷



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⁵ <https://ecology.wa.gov/stormwatermanuals>

⁶ <https://apps.ecology.wa.gov/publications/SummaryPages/2204024.html>

⁷ <https://apps.ecology.wa.gov/publications/SummaryPages/2304027.html>