

Fund innovative approach to get PCBs out of the Spokane River

The problem

The Spokane River contains elevated levels of polychlorinated biphenyls (PCBs). PCBs are human-made, chlorinated chemical compounds. They are used in a variety of applications, such as in insulating fluids for electric transformers and capacitors, paint additives, adhesives, caulks, inks, carbonless paper, lubricants, and hydraulic fluids. They are also “inadvertent contaminants” in certain industrial processes. For example, inadvertently produced PCBs are in some pigments, inks and paints.

PCBs are persistent bio-accumulative pollutants, meaning they build up in the food chain and remain in the environment long after they are first introduced. People become exposed to PCBs by eating fish or other animals that have also eaten PCB-containing food. Very low levels of PCBs are found nearly everywhere in the environment.

PCBs can cause adverse health effects in humans and wildlife, including cancer and harm to immune, nervous, and reproductive systems. PCBs disrupt thyroid hormone levels in animals and humans, hindering growth and development.

The traditional approach to achieving clean water in our state is to develop a water cleanup plan, called a Total Maximum Daily Load (TMDL) report. We then implement actions that will reduce pollutants. The TMDL process establishes a “pollution budget,” or how much pollution a water body can receive and still meet water quality goals. For pollutants such as PCBs, which have strict water quality standards, the TMDL process can be contentious and take more than a decade to complete, often at considerable agency, ratepayer and industry expense.

Rather than become stalled in gridlock, interest groups and governments in the Spokane River basin collaborated on an innovative approach to reduce PCBs in the river.

The solution

The Spokane River Regional Toxics Task Force (Task Force) wants to use a new approach for improving water quality and achieving water quality goals. Private industries, environmental organizations, municipalities, the U.S. Environmental Protection Agency, and



WHY IT MATTERS

Concerns about the toxicity of PCBs have led to fish consumption advisories for the Spokane River, and similar advisories for more than 1,200 water bodies in the United States.

HOW IT BENEFITS WASHINGTON

The Spokane River approach to improving water quality is a new model for success that can be used in other watersheds faced with the same challenges.

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governments in Washington and Idaho are working together. The new approach is called “direct-to-implementation,” which is an alternative to the more complex TMDL process. Direct-to-implementation means that when we know where the pollution is coming from, we directly implement a plan to stop it. This water cleanup model results in effective and immediate improvements to water quality.

During the next two years, the Task Force is poised to:

- Complete technical studies needed to understand and identify the source of toxics.
- Participate in public education and engagement to advance the region-wide understanding of toxics issues.
- Engage in planning efforts to develop best management practices, identify long-term monitoring requirements, and reduce PCBs from all sources.

How it will work

To accomplish these goals, we have an immediate need of \$350,000 to evaluate and implement early actions in 2013 actions to accelerate the “direct to implementation” approach. Finding PCB sources and preventing future releases will help ensure that what gets fixed stays fixed. Funding will help Ecology to initiate the Spokane River Monitoring plan, which will measure the progress in reducing PCBs, as required in the existing NPDES permits.

If we fund early actions in 2013, NPDES permit holders can meet their 2017 permit compliance conditions.

It is well known that in addition to the legacy commercial sources of PCBs, some of these chemicals are inadvertently produced as a result of manufacturing processes. One PCB source entering the river comes from pigments found in inks, dyes, and paints. Simply identifying these pigments, or even banning them, is not sufficient. We need to identify techniques to manufacture pigments that don't contain PCBs. Ecology will use this funding to hire a contractor to explore the availability of such techniques.

PCB pollution in the Spokane River is not coming from a few isolated point sources. It is diffuse and difficult to trace. So it is important to determine the extent of diffuse sources of PCBs from widespread use of consumer products, such as motor oil, hydraulic fluid, soaps, and caulk. We plan to test select consumer products that may be also contributing to the river's pollution problems. If PCB containing products are identified, the Task Force would use that information to develop source-reducing activities. For example, PCB impacts from motor oil and caulk are already an emerging concern in the Spokane basin and will likely be identified as a priority action. Funding of this task will be used to test selected products such as motor oil and caulk for levels of PCBs and evaluate the extent of harm from these commercial and consumer products on PCB pollution in the river.