

Clean Water for Salmon

Keeping Pesticides Out of Our Waterways

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Salmon are the cornerstone of our region's cultural and environmental heritage. In order to thrive, salmon need clean water. The use of pesticides in both rural and urban areas pollutes our streams and rivers, posing a serious threat to the health of salmon runs as well as communities.

Pesticide Contamination of Water is Widespread and Significant

Surface-water testing shows six major watersheds in the Pacific states are contaminated by pesticides. Pesticide pollution of surface water in Oregon, Washington, California, and Idaho is extremely widespread, exposing salmon and their

habitat. The U.S. Geological Survey detected at least 25 and as many as 50 pesticides in each of the six watersheds studied in the region.¹

Sixteen pesticides contaminate the region's watersheds at harmful levels. These currently used pesticides have been found in the region's watersheds at or above aquatic life criteria, indicating that they are likely to cause harm to salmon. Many other pesticides have been detected for which no criteria have been established.

The Environmental Protection Agency (EPA) identified at least 36 pesticides used in the Pacific states that threaten fish or their habitat. The findings in EPA's pesticide registration documents reveal that approved, legal uses of at least these pesticides are expected to have a negative impact on salmon.

How Pesticides Harm Salmon

Pesticides can kill salmon directly, or perhaps more commonly, cause subtle damage that reduces their chance of survival.

Pesticides can kill fish directly. Pesticides

are capable of killing salmon directly and within a short period of time. For example, in 1996 the Talent Irrigation District's use of the herbicide acrolein resulted in the death of almost 10,000 salmon and thousands of other fish in Bear Creek in southern Oregon.²

Pesticides can impair swimming performance. Swimming ability is crucial for feeding, avoidance of predators, and defense of territories. A number of studies have found that pesticides reduce swimming speed and stamina.³

Pesticides can increase predation. Diazinon at very low concentrations can impair a salmon's sense of smell, resulting in a decreased ability to avoid predators. Salmon need their sense of smell to detect alarm pheromones emitted by other salmon that direct them to hide.⁴

Pesticides can harm the immune system. Pesticides have been shown to depress the immune systems of rainbow trout and other fish species, causing a decreased ability to fight off disease.^{5,6,7,8}

Pesticides can disrupt the hormonal system. The endocrine, or hormonal, system is particularly susceptible to disruption because of the low concentrations at which hormones operate. Pesticides at low concentrations interfere with the production and activity of sex hormones in salmon, causing decreases in the production of sperm.^{9,10}

Pesticides can indirectly harm salmon. Pesticides can indirectly affect fish by interfering with their food supply or altering the aquatic habitat, even when the concentrations are too low to affect the fish directly.

Protecting Salmon From Pesticides

The Clean Water for Salmon Network is calling for federal, state, and local governments to take the following actions:

1. Phase out the use of pesticides that are hazardous to the health of salmon and their habitat.
2. Adopt measures to keep pesticides out of water needed for salmon survival.



Many parks, schools, and other landscapes in Washington use little or no pesticides to maintain their grounds.

3. Establish pesticide-use reporting for tracking pesticide use to aid in salmon recovery.
4. Promote salmon-friendly practices that reduce reliance on pesticides.

Several cities and counties have already passed strong policies to protect people and salmon from pesticides, and WTC can help you pass a policy in your area.



The shoreline of Green Lake in Seattle is maintained with coconut fiber logs, native plants, compost, coconut fiber mats, and wood chips. This suppresses weeds and eliminates the need for herbicides.

Clean Water for Salmon Campaign Activities

The Clean Water for Salmon Campaign, coordinated by WTC and Northwest Coalition for Alternatives to Pesticides, works on several fronts to protect salmon and their habitat from pesticide contamination in waterways. At the local level, the campaign supports communities working to pass city or county policies reducing municipal pesticide use and adopting less-toxic practices. At the

state level, the campaign supports state-level restrictions on pesticide use to protect salmon as well as comprehensive pesticide-use reporting to aid with salmon recovery. The campaign is also working to require the EPA to restrict pesticide use through compliance with the Endangered Species Act. Network members fight specific threats to salmon runs, such as spraying of carbaryl in Washington's Willapa Bay. To support these efforts, the Clean Water for Salmon Network was created, and now includes more than 100 groups in the Northwest.

Action at the Local Level

Action at the local level is necessary for salmon protection. Most cities and counties in the Northwest use pesticides in their parks, roadside vegetation management, municipal building and grounds, and other properties. But it doesn't have to be that way! Cities and counties are in a unique position to not only reduce their own use of harmful pesticides, but also serve as models for their citizens and other municipalities.

Resources

WTC has developed many useful resources that can assist your efforts, including the Clean Water for Salmon and Healthy Schools Pesticide Action Kits, model policies, and numerous fact sheets. Reports on the harm that pesticides can cause and successful programs that reduce pesticide use in public places are also available.

Please contact Angela Storey at 206-632-1545 ext.11 or astorey@watoxics.org for information and assistance. ■

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