



# *Pesticides Threaten Salmon and Steelhead*

*Salmon are a legacy of the Pacific Northwest.  
Their survival is threatened by pesticide  
contamination of our rivers and streams.*

Designed to kill or damage living things, pesticides are “perhaps the only toxic substances that are purposefully applied to the environment.”<sup>1</sup> Pesticides include insecticides, herbicides, fungicides, rodenticides, etc.<sup>2</sup> They are commonly used in schools, parks, homes and gardens, on farms and forests, in lakes and irrigation canals, along roads and railways, and in many other settings. Researchers, looking at where pesticides go in our environment, find that they often end up in our waterways.

The best information about how pesticides are contaminating our water comes from the U.S. Geological Survey (USGS). **Nationwide, more than 95% of river and stream samples contained at least one pesticide.**<sup>3</sup> Over half of the streams sampled contained five or more pesticides.<sup>4</sup> Both urban and agricultural areas have pesticide-contaminated streams and rivers.<sup>3,4</sup>

The river basins of the Pacific coast studied by the USGS that overlap salmon habitat are the Willamette River Basin in Oregon, Sacramento and San Joaquin-Tulare basins in California, Yakima and Puget Sound basins in Washington, and the Central Columbia Plateau in Washington and Idaho. **The USGS found 15 pesticides in Oregon, Washington, California and Idaho’s river basins at or above levels set to protect aquatic life.**<sup>5</sup> These results show that risks to salmon and their habitat are very real.

More than ten years ago, the first Pacific salmon run was listed under the Endangered Species Act. Twenty-six different salmon runs are now listed as threatened or endangered.<sup>6</sup> Since the first listing, a decade ago, the US Environmental Protection Agency has failed to examine and prevent the role that pesticides may be playing in salmon decline.

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## **Areas of Threatened and Endangered Pacific Salmon and Steelhead Species.**



<http://research.nwfsc.noaa.gov/cbd/trt/>

More scientific information is published each year about risks that pesticides pose to salmon survival. Most recently, a scientist at the National Marine Fisheries Service published a study that showed that the widely used insecticide diazinon can, at very low concentrations (levels commonly measured in western river systems), interfere with the chinook salmon's sense of smell, which is crucial for behaviors like predator avoidance.<sup>7</sup>

Salmon are part of our western heritage. They symbolize many aspects of life that we value: clean water, freedom, survival, strength, endurance, beauty, and abundance. We must all work together to protect these incredible fish. By restricting pesticide use and promoting alternative practices we can achieve cleaner water for salmon and all of us who depend upon this precious resource.

**THE PROBLEM: Pesticides have profound effects on Northwest salmon and may be a serious factor in their decline.<sup>8</sup>**

- \* The US Geological Survey has found concentrations of 15 pesticides in Pacific rivers and streams<sup>4</sup> at levels that are associated with negative impacts on fish.
- \* Some pesticides are lethal to salmon, and large fish kills have occurred.
- \* Pesticides can impair swimming ability, growth, development, behavior, reproduction, as well as cause abnormal sexual development and skeletal deformities.
- \* Pesticides can indirectly affect fish by changing the aquatic environment, by reducing the food supply, and by eliminating vegetative cover.
- \* Pesticides can impair salmon's ability to transition from freshwater to seawater.

(For more information on pesticides & salmon see: *Diminishing Returns: Pesticides and Salmon Decline*, available at <http://www.pond.net/~fish1ifr/salpest.htm> and *Lethal Lawns: Diazinon Use Threatens Salmon Survival*, available at <http://www.pesticide.org/diazsalmon.pdf>)

**References**

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4. *The quality of our nation's waters: Nutrients and pesticides*. 1999. Reston, VA: USGS. p. 76. USGS Circular 1225.
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6. NOAA/National Marine Fisheries Service website: <http://www.nwr.noaa.gov/1salmon/salmesa/pubs/1pgr.pdf>. Updated April 2001.
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**THE SOLUTION: *The Clean Water for Salmon Network***

Salmon are a cornerstone of the Pacific Northwest's cultural and environmental heritage. In order to thrive, salmon need clean water. However, the use of pesticides has polluted our streams and rivers, and poses a serious threat to the health of salmon runs and communities.

For the health of the salmon and our way of life, we call for the following:

1. Phase out the use of pesticides that are hazardous to the health of salmon and their habitat.
2. Adoption of measures to keep pesticides out of water needed for salmon survival.
3. Establishment of pesticide use reporting for tracking of pesticide use to aid in salmon recovery.
4. Promotion of salmon-friendly practices that reduce reliance on pesticides.

The *Clean Water for Salmon Network* is committed to addressing the risks that pesticides pose to salmon survival in a comprehensive regional campaign. To become a part of, or for more information about, the *Clean Water for Salmon Network* contact:

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