

## Is Pesticide Use Around Our Homes Harming Salmon?

Could some of our seemingly harmless activities around our homes and gardens actually be harming salmon and other marine animals?

Two recent “biological opinions” released by the National Marine Fisheries Service (NMFS) has found that all six pesticides that they examined – carbaryl, carbofuran, methomyl, chlorpyrifos, diazinon, and malathion – jeopardize the very existence of protected salmon and steelhead. Carbaryl, chlorpyrifos, and malathion are marketed under various trade names and can be purchased here in San Juan County at garden stores. The other compounds can only be purchased and applied by licensed pesticide applicators.

All of these pesticides are classified as neurotoxins. This means that they disrupt the nervous systems of animals. At high concentrations, pesticides kill fish outright. At lower concentrations, these chemicals impact feeding behavior, swimming ability, predator avoidance, spawning, homing and migration capabilities. Pesticides also have indirect affects on fish by simply doing what they were created to do: killing off the insects that fish rely on for their food supply.

The biological opinion includes measures necessary to keep these pesticides out of salmon waters in Washington, Oregon, California, and Idaho. These new mitigation measures must be implemented within one year. They include no-spray buffers where the use of these pesticides is prohibited within prescribed distances to salmon waters (nearshore and streams) and also prohibiting the use of these pesticides when wind speeds are 10 mph or greater.

“Salmon runs all along the west coast are collapsing,” said Glen Spain of the Pacific Coast Federation of Fishermen’s Associations (PCFFA). “This new NMFS decision will help keep pesticides out of salmon-bearing streams and is a step toward protecting these economically valuable salmon runs and the tens of thousands of jobs they support.”

Not everyone is supportive of placing additional restrictions on pesticide use to help protect threatened and endangered fish from extinction. Pesticide manufacturers have filed a lawsuit to have the biological opinion set aside and block the implementation of the prescribed protective measures.

From a local perspective, the biological opinions from NMFS could restrict the use of these pesticides for property owners within the prescribed buffers. However, these first assessments (31 additional pesticides are scheduled for review over the next 3 years) have focused primarily on agricultural chemicals and not on the new generation of lawn and garden chemicals that are actually showing up in San Juan County waters. A recent study by KWIÄHT, a local non-profit biological research laboratory, examined concentrations of some of these new generation pyrethroid pesticides in surface water and sediment samples across San Juan County. This study found widespread pyrethroid concentrations at or near levels known to be toxic to fish. Pyrethroids are a class of pesticides that are extremely attractive for use by homeowners due to their low toxicity to mammals, including humans. Unfortunately, these chemicals also share the unintended characteristic of being extremely toxic to fish, including salmon, at low concentrations in the environment.

Here in San Juan County, we all live close to the shore. The biological opinions from NMFS remind us that if we must use these chemicals, we need to exercise extreme care.