

Think Smart About Pesticides

How Christmas Tree Growers Can Make Our Waterways Healthier

Are there pesticides in the Clackamas watershed?

Yes, pesticides have been found in water samples collected from the Clackamas River and its tributaries. The United States Geological Survey (USGS) evaluated pesticides in the mainstem of the Clackamas River and eight tributaries from 2000 through 2005. In all, 119 water samples were analyzed, detecting the presence of 63 different pesticide compounds. Results revealed that 97% of all samples had 2 or more types of pesticides present. Pesticides were detected in all of the eight sampled tributaries, with Deep and Rock Creeks containing the highest pesticide amounts. Seven of the eight tributaries had pesticide levels that exceeded benchmarks that have been set to protect fish and invertebrates. To read the full report visit: <http://pubs.usgs.gov/sir/2008/5027>. Since 2005, water quality monitoring performed by the Oregon Department of Environmental Quality (DEQ) has also shown exceedances in water quality standards for certain pesticides in Clackamas River tributaries. Pesticides can accumulate in land and run off with water, so it's difficult to pinpoint an exact source. To confound matters further, homeowners, golf course owners, agriculture users, and nurseries may use the same types of pesticides. Through working together, we can all help to keep our water clean, healthy, and drinkable!



Understanding Important Statements on Product Labels

One of the most important actions a pesticide user can take is also one of the simplest: **always read and follow the label**. Labels provide important information on how, when, and where to use a particular product. They also keep pesticide users safe, pointing out risks, how to prevent problems, and requirements for using a particular product. Following a label's instructions is required by state and federal law.

Pesticide labels contain **signal words**, which indicate a product's toxicity. DANGER signifies the highest toxicity, followed by WARNING, then CAUTION. Information about how the product can affect the environment is found in the **Environmental Hazards** section of the label. Precautionary Statements often include important information on Personal Protective Equipment (PPE), Hazards to Humans and Domestic Animals and User Safety Recommendations.

The largest part of the label, the **Directions for Use**, includes specific information about topics such as how much pesticide should be mixed and applied, where the pesticide may be used, and how often applications may be made. Specific restrictions may include statements about not applying the pesticide within 25 feet of a water body, not applying the pesticide when rainfall is forecasted to occur within 24 hours, and not allowing the product to drift off-site.

Use the label to guide your decision-making about which pesticide to use, or if another management choice is available to control the pest you're targeting.

Pesticides of Concern, and Pesticides Under Evaluation

The following pesticides were listed for 2009-10 by the Inter-agency Water Quality Pesticide Management Team (WQPMT, composed of representatives from ODA, DEQ, ODF & OHA) as Oregon "Pesticides of Concern." A Pesticide of Concern (POC) has been evaluated by the WQPMT, which then determines if the pesticide is likely to approach or exceed a human health or environmental standard in a localized area of the State. The active ingredients of these POCs are listed below, along with one or two representative trade names. Always read a pesticide's label to determine the active ingredients.

- Atrazine- Aatrex®
- Azinphosmethyl
- Carbaryl — Sevin®
- Chlorpyrifos—Lorsban®
- Diazanone — Diazinon®
- Diuron
- Simazine — Princep®, Sim-Trol®
- Ethoprop

Pesticides of Interest, which have the **potential** to occur in ground or surface water at concentrations that approach or exceed a human health or ecological reference point currently under evaluation by the WQPMT include 2,4-D, Chlorothalonil, glyphosate, imidacloprid, terbacil, triallate, triclopyr, and trifluralin.

How to Keep Your Farm Green and the Clackamas Watershed Clean

Prevention and Monitoring: It's important to plant tree species that are well-suited for your specific site conditions, especially soil type and drainage. Contact your local Extension Office or SWCD for information on how you can find out what soil type you have, and which trees might be most appropriate. Once you've planted your trees, check them often for pests and disease. Catching an infestation early makes it more likely you'll be able to contain the problem as quickly as possible, and keep damage to a minimum.

Create or Maintain a Vegetative Buffer: One of the best ways to keep pesticides out of our waterways is to plant a vegetative buffer strip along the stream. Buffers trap sediments, pesticides, and pollutants carried by runoff. Buffers can also help minimize costs associated with repairing problems caused by stream bank erosion by holding soil in place. For technical assistance for erosion prevention and control, contact your local SWCD and USDA Natural Resources and Conservation Service (NRCS). Both the SWCD and NRCS can help you find conservation programs like the Environmental Quality Incentives Program (EQIP) and the Conservation Reserve Enhancement Program (CREP) that will work for you. Your local OSU Extension is another good resource.

Pesticide Selection: Ask your Crop Advisor about new or existing products that may be more effective than what you're currently using. When possible, select a product that has a lower toxicity, lower potential to be carried in runoff, shorter persistence, and lower potential to leach into groundwater.

Application Equipment and Weather: Well-maintained and calibrated application equipment is critical for ensuring that the right amount of pesticide (as specified on the label) is being applied to the crop and that off-site movement is avoided. Do not spray when weather conditions favor drift and surface runoff, such as during wind or rain.



Ag Container Recycling Council (container disposal procedures)
http://www.acrecycle.org/triple_rins.html

Clackamas River Basin Council (pesticide reduction)
<http://www.clackamasriver.org>

Clackamas River Water Providers (drinking water quality)
<http://www.clackamasproviders.org>

Clackamas River SWCD (pest ID, land management)
<http://www.conservationdistrict.org>

National Pesticide Information Center (general pesticide questions)
<http://npic.orst.edu/>

North Willamette Research and Extension Center (pest ID, control)
<http://oregonstate.edu/dept/NWREC/resfac.php>

OR Dept. of Agriculture (specific pesticide questions, specific water quality questions)
<http://www.oregon.gov/ODA/PEST> and
<http://www.oregon.gov/ODA/NRD>

OR Dept. of Environmental Quality (toxics reduction)
<http://www.deq.state.or.us/toxics/index.htm>

OSU Extension Christmas Tree Program (land management)
<http://extension.oregonstate.edu/clackamas/xmastrees>

USDA/NRCS (conservation programs, technical assistance)
<http://www.nrcs.usda.gov>

Resources



This fact sheet was developed by Clackamas River Basin Council with guidance and feedback from the professionals at the Oregon Department of Agriculture and the OSU Extension Service. Development was made possible through funding from the Clackamas River Water Providers.

