

# Using Pesticides Safely

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## Always Read the Label

The single most important approach to pesticide safety is to read the pesticide label before each use and then follow the directions. If still in doubt after reading the label, contact a person qualified to help evaluate the hazard of the chemical and its use. Qualified people include extension specialists, county educators, pesticide product representatives, and retailers.

Pesticides are toxic and should be handled with care—but pesticides can be used safely if you follow recommended precautions. Follow all label requirements and strongly consider any recommendations for additional personal protective clothing and equipment. In addition to reading and following the label, other major factors in the safe and effective use of pesticides are the pesticide applicator's qualifications, common sense, and good attitude. Always take all safety precautions when using pesticides.

In case of accidents involving pesticides, see your doctor at once. It will help your doctor to know exactly which pesticide is involved. The label on the container gives this information. Take to the physician the pesticide label or information from the label, such as the product name, registration number of the U.S. Environmental Protection Agency (EPA), common name and percentage of active ingredient, and first aid instructions. If the label cannot be removed, take along the pesticide container (if not contaminated), but do not take it into the hospital or doctor's office.

## Pesticide Safety Checklist

- Use pesticides only when necessary and as part of an Integrated Pest Management (IPM) program.
- Always read the label and follow the instructions.
- Do not allow children to play around sprayers or mixing, storage, and disposal areas.
- Wear appropriate protective clothing and equipment.
- Never eat, drink, or smoke while handling pesticides.
- Avoid drift into non-target areas and pesticide runoff into streams, rivers, lakes, irrigation ponds and canals.
- Avoid spilling materials on skin or clothing.
- Have access to clean water, soap, and first aid supplies.
- Keep pesticides in a dry and locked storage area away from food and feed.
- Triple rinse or pressure rinse empty containers and dispose or recycle in accordance with state and local regulations.
- Stay out of recently sprayed areas until spray has dried, and observe the restricted entry intervals (REI) specified on the pesticide label.
- Follow the pre-harvest interval (PHI) on pesticide label before harvesting crops or gardens and before allowing livestock to graze fields.

## What to Do in Case of Pesticide Poisoning

### Follow the specific first-aid instructions on the pesticide label.

If someone has unexplained symptoms that MAY be related to pesticides, DO NOT DELAY. Get medical advice quickly:

Call the Poison Center (toll free) 1-800-222-1222 or call your doctor.

Take the pesticide label (or information from the label—the product name, EPA registration number, common name, percentage of active ingredient, and first aid instructions) to the physician. If the label cannot be removed, take the pesticide container (if not contaminated), but do not take it into the hospital or doctor's office.

Information regarding pesticides can also be obtained from the

### National Pesticide Information Center

1-800-858-7378 (7:30 am to 3:30 pm PST, Monday - Friday).

Email: at [npic@ace.orst.edu](mailto:npic@ace.orst.edu)

or visit [www.npic.orst.edu](http://www.npic.orst.edu) at any time

Information is printed in English and Spanish and available in over 170 languages through the use of an over-the-phone language service.

If labeling instructions are not available, follow these general guidelines for first aid.

**The best first aid in pesticide emergencies is to remove the source of pesticide exposure as quickly as possible.** Removing the victim from the source not only protects him or her from further poisoning but also protects you while you administer first aid.

**First aid is the initial effort to help a victim while medical help is on the way.** If you are alone with the victim, make sure

the victim is breathing and is not being further exposed to the pesticide before you call for emergency help. Apply artificial respiration if the victim is not breathing. **Do not become exposed to the pesticide yourself while you are trying to help.**

**Pesticide on skin**—Drench contaminated exposed skin with plenty of water. Remove personal protective equipment and contaminated clothing. Wash skin and hair with a mild detergent and water. Dry victim and keep him or her comfortable.

**Pesticide in eye**—Wash the eye quickly but gently with clean running water. Rinse eye for 15 minutes or more.

**Inhaled pesticide**—Get the victim to fresh air immediately. Loosen tight clothing on the victim that would constrict breathing. Apply artificial respiration if the victim is not breathing. If pesticide or vomit is in the victim's mouth or on the face, avoid direct contact and use a shaped airway tube, if available, for mouth-to-mouth resuscitation.

**Pesticide in mouth or swallowed**—Rinse mouth with plenty of water. Do not induce vomiting or give high-potency activated charcoal unless a physician or the label tells you to do so.

**Induce vomiting only if the label indicates.** Position the victim face down or kneeling forward and carefully put a finger or the blunt end of a spoon at the back of the victim's throat.

**Do not induce vomiting** if the victim is unconscious or convulsing, or if the victim has swallowed a corrosive poison or an emulsifiable concentrate or oil solution.

**Atropine should be administered only by a physician.** It can be poisonous if misused and can mask the symptoms of poisoning, thus delaying proper treatment.

**First-aid kit**—A properly equipped portable first-aid kit can be important in a pesticide emergency. Make sure one is available at each work site.

## Personal Protective Equipment Definitions

**Personal protective equipment (PPE)**—Apparel and devices worn to protect the body from contact with pesticides or pesticide residues include:

- Coveralls.
- Chemical-resistant suits, gloves, footwear, aprons, and headgear.
- Protective eyewear.
- Respirators.

The following attire is not defined as PPE but is personal protective clothing required for all pesticide applications. The labeling might require pesticide handlers or early-entry workers to wear it in addition to PPE for some tasks:

- Long-sleeved shirts.
- Long pants.
- Shoes and socks.

If such non-PPE attire is required, the employer must make sure that it is worn.

**Chemical-resistant**—Allows no measurable amount of the pesticide to move through the material during use.

**Waterproof**—Allows no measurable movement of water (or water-based solutions) through the material during use.

**Chemical-resistant suit**—A loosely fitting one- or two-piece chemical-resistant garment that covers, at a minimum, the entire body except for the head, hands, and feet.

**Coverall**—A loosely fitting one- or two-piece garment that covers, at a minimum, the entire body except the head, hands, and feet. Coveralls are made of fabric, such as cotton or a cotton-polyester blend, and are not chemical resistant. The pesticide labeling might specify that the coveralls be worn over a layer of clothing. (Allowable substitution: A chemical-resistant suit can be worn instead of coveralls and any required inner layer of clothing.)

**Chemical-resistant apron**—One made of chemical-resistant material, covering the front of the body from mid-chest to knees. (Allowable substitution: if a chemical-resistant suit is worn, no apron is required.)

**Gloves**—Hand coverings of the type listed on the pesticide label. Gloves or glove linings made of leather, cotton, or other absorbent materials cannot be worn for handling or early-entry activities unless these materials are listed on the pesticide labeling as acceptable for such use. (Allowable substitution: Leather gloves may be worn over chemical-resistant liners for tasks with sharp-thorned plants. After leather gloves have been worn for such work, however, they may be worn only with chemical-resistant liners and may not be worn for any other use.)

**Chemical-resistant footwear**—Chemical-resistant shoes, boots, or shoe coverings worn over shoes or boots. (Allowable substitution: Leather boots may be worn in rough terrain if chemical-resistant footwear with appropriate durability and tread is unavailable.)

**Protective eyewear**—Goggles, face shield, or safety glasses with front, brow, and temple protection. (Allowable substitution: A full-face respirator.)

**Chemical-resistant headgear**—A chemical-resistant hood or hat with a wide brim.

## Minimum Personal Protective Equipment and Work Clothing for Handling Activities

Toxicity category of end-use product				
Route of Exposure	I (Danger)	II (Warning)	III (Caution)	IV (Caution)
Dermal toxicity or skin irritation potential <sup>1</sup>	Coveralls worn over long-sleeve shirt and long pants Socks Chemical-resistant footwear Chemical-resistant gloves	Coveralls worn over short-sleeve shirt and short pants Socks Chemical-resistant footwear Chemical-resistant gloves	Long-sleeve shirt and long pants Socks Shoes Chemical-resistant gloves	Long-sleeve shirt and long pants Socks Shoes No minimum <sup>2</sup>
Inhalation toxicity	Respiratory protection device	Respiration protection device		
Eye irritation potential	Protective eyewear	Protective eyewear		

<sup>1</sup>If dermal toxicity and skin irritation potential are in different toxicity categories, protection shall be based on the more toxic (lower numbered) category.

The following table lists EPA chemical resistance categories for selected personal protective materials of gloves (Oregon OSHA: <http://www.orosha.org/publications/pesticidepubs.html>)

<b>Chemical Resistance Categories for Selected Personal Protective Materials</b>								
Selection category listed on pesticide label	Type of personal protective material							
	Barrier laminate	Butyl rubber > 14 mils	Nitrile rubber >14 mils	Neoprene rubber >14 mils	Natural rubber >14 mils	Polyethylene	Polyvinyl chloride (PVC) > 14 mils	Viton > 14 mils
A (dry and water-based)	High	High	High	High	High	High	High	High
B	High	High	Slight	Slight	None	Slight	Slight	Slight
C	High	High	High	High	Moderate	Moderate	High	High
D	High	High	Moderate	Moderate	None	None	None	Slight
E	High	Slight	High	High	Slight	None	Moderate	High
F	High	High	High	Moderate	Slight	None	Slight	High
G	High	Slight	Slight	Slight	None	None	None	High
H	High	Slight	Slight	Slight	None	None	None	High

### Pesticide Spills and Cleanup

#### Handling Spills

The best way to handle a spill is to prevent it from happening. Review your process for using, transporting, and storing pesticides to identify areas for additional training or precautions. Train workers to take the necessary actions if a spill should occur. Prior training on how to limit a spill and then safely clean it up is invaluable. Accidents most commonly happen when pesticides are being transported or when pesticide containers have leaked in storage.

Pesticide spills require immediate action. Keep a spill cleanup kit immediately available at all locations where pesticides are handled, transported, or stored, because you will not have time to locate all the necessary items before a significant amount of contamination has occurred. Important items in a typical spill kit include:

- Telephone numbers for emergency assistance

- Personal protective clothing and equipment as required by the label, including:
- Sturdy gloves, footwear, and apron that are chemically resistant to most pesticides
- Protective eyewear
- An appropriate respirator, if any of the pesticides requires using a respirator during handling or for spill cleanup
- Containment “snakes” to confine the leak or spill to a small area
- Absorbent materials such as spill pillows, absorbent clay, dry peat moss, sawdust, “kitty litter,” activated charcoal, vermiculite, or paper to soak up liquid spills
- Sweeping compound to keep dry spills from drifting or wafting during cleanup
- A shovel, broom, and dustpan made from non-sparking and nonreactive material (foldable brooms and shovels are handy because they can be carried easily)
- Heavy-duty detergent
- Fire extinguisher rated for all types of fires
- Any other spill cleanup items specified on the labeling of any products you use regularly
- Sturdy plastic container that will hold the entire volume of the largest pesticide container being handled and that can be tightly closed
- Highway flares (do NOT use flares near flammable material)

All these items should be stored in the sturdy plastic container and kept easily accessible, clean, and in working order until a spill occurs.

Response to a pesticide spill may vary with size and location of the spill.

You must know how to respond correctly to a spill. Stopping large leaks or spills is often not simple. If you cannot manage a spill by yourself, get help. Even a spill that appears to be minor can endanger you, other people, and the environment if not handled correctly. Never leave a spill unattended. When in doubt, get help.

The faster you can contain, absorb, and dispose of a spill, the less chance it will cause harm. Clean up spills immediately. Even minor dribbles or spills should be cleaned up as soon as possible to keep unprotected persons or animals from being exposed.

A good way to remember the steps for a spill emergency is the “three C’s”: Control, Contain, Clean up.

*Control* the spill situation: Protect yourself, stop the leak, protect others, and stay at the site.

*Contain* the spill: Confine the spill, protect water sources, absorb liquids, and cover dry materials.

*Clean up* the spill, decontaminate the spill site, neutralize spill site, decontaminate equipment, and decontaminate your PPE.

### Reporting Spills

Report pesticide spills as well as pesticide-related fires and poisonings first to 9-1-1 for immediate response. Then report to the appropriate number below.

**Idaho** Report all spills, fires, and poisonings to the EMS dispatcher: 800-632-8000 (in Idaho only).

**Oregon** Report spills to the Oregon Emergency Response System: 800-452-0311 (in Oregon) 503-378-6377 (Salem area)

**Washington** Report all spills, fires, and poisonings to the Department of Emergency Management: 800-258-5990.

Report spills or discharges from containment areas to the nearest regional office of the Department of Ecology; find locations online at <http://www.ecy.wa.gov>

Additional help with chemical emergencies, including pesticide emergencies involving spills, leaks, fires, or exposures, can be obtained from the Chemical Transportation Emergency Center:

CHEMTREC, 800-424-9300

### Cleaning, Recycling, and Disposing of Agricultural Pesticide Containers

Unrinsed or contaminated empty pesticide containers are considered hazardous waste, unless a pesticide distributor or manufacturer will accept them for refilling. Hazardous waste is more difficult and more expensive to dispose of than solid waste.

Clean, dry containers are considered solid waste and can be disposed of in a state-permitted solid waste site. Clean, dry containers may be recycled and it is recommended that the containers are recycled through the state pesticide container recycling program. Only dry, properly rinsed containers are accepted at collection sites, so thoroughly rinse all residues from the containers immediately after use. Properly rinsing and handling empty pesticide containers is very important, because it:

- Protects humans by removing hazardous materials
- Prevents sources of environmental contamination
- Saves money by putting all product into the spray tank

## How to Properly Clean Pesticide Containers

A website with helpful container-rinsing information:

Ag Container Recycling Council <http://www.acrecycle.org>

### Think Safety!

Unrinsed pesticide containers still can hold enough material to harm people and the environment. The person cleaning the containers should observe these precautions:

- Read and understand all safety and environmental precautions on the pesticide label.
- Wear eye protection such as goggles or a face shield.
- Wear chemical-resistant gloves that will neither absorb pesticide or rinse water nor let the material contact the skin.
- Wear chemical-resistant apron, gloves, and footwear or chemical-resistant covers over shoes or boots.

The best way to dispose of rinsate is to add it in the spray mixture and apply it according to the label directions. Rinsate also can be collected for later use in a spray mix or for disposal. Do not mix different pesticide rinsates. Label each storage container clearly. Do not dump rinsate on the ground or into storm drains.

### Triple/Multiple Rinsing

#### *Plastic and metal containers (jugs)*

- Empty the container's contents into a spray tank, turning the container so that any product trapped in the handle can flow out. Once flow is down to a drip, drain the container an additional 30 seconds.
- Immediately begin rinsing. Do not wait, or the product may become difficult to remove.
- Fill the empty container one-quarter full of clean water.
- Replace the cap on the container. With the container opening facing to your left, shake the container about 6 inches left to right. Shake the container about twice per second for 30 seconds.
- Drain rinse water into spray tank as described above.
- Fill the empty container one-quarter full of clean water a second time.
- Recap the container. With the opening of the container pointed toward the ground, shake the container about 6 inches up and down. Then drain the rinse water into the spray tank.
- Finally, fill the empty container one-quarter full for a third time with clean water. Recap the container. With the container in the normal upright position, shake the container about 6 inches up and down. Pour the rinse water into the spray tank.
- Carefully rinse residue from the outside of the container into the spray tank.
- Carefully rinse cap over spray tank opening.
- Look closely at the container inside and out to make sure that all pesticide has been removed.
- Allow the containers to dry.
- Store cleaned jugs and caps where they will be protected from rain until they can be recycled or disposed of properly.
- Oregon requires that 1- and 5-gallon metal containers be punctured at least three times with 1-inch holes and then crushed.
- Oregon law requires rinsing the containers as many times as is necessary with an appropriate diluent (solvent) to get the container clean.

#### *Drums*

- Empty the drum as much as possible.
- Fill the drum one-quarter full with water. Replace and tighten bungs.
- Tip the drum on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds.
- Stand the drum on its end and tip it back and forth several times to rinse the corners.
- Turn the drum over on its other end and repeat this procedure.
- Carefully empty the rinsate into the spray tank.
- Repeat this procedure until the rinse water runs clear.
- Carefully rinse cap over spray tank opening and then dispose of appropriately as regular solid waste.
- Look closely at the containers inside and out to make sure all pesticide has been removed.
- Puncture the base of the drum with a drill so that it cannot be reused.

- Allow drums to dry.
- Store drums where they will be protected from rain until they can be recycled or disposed of properly.
- Oregon requires that the tops and bottoms of 30- and 55-gallon containers be removed and the container flattened after it has dried.
- Oregon law requires persons cleaning pesticide containers to rinse the containers as many times as is necessary with an appropriate diluent (solvent) to get the container clean.

### **Pressure Rinsing**

This method continuously washes the inside of the container and drains into the spray tank. A pressure nozzle punctures and rinses the container in one step. It is easier and more effective than triple/multiple rinsing.

#### **Containers (jugs)**

- Empty contents of container into a spray tank, turning the container so that any product trapped in the handle can flow out. Once flow is down to a drip, drain the container an additional 30 seconds.
- Immediately begin rinsing. Do not wait, or the product may become difficult to remove.
- Hold the container so the opening can drain into the spray tank.
- Force the tip of the pressure nozzle through the lower portion of the side closest to the handle.
- Connect nozzle to a clean water source of at least 40 psi. Rotate the nozzle inside the container to assure good coverage of all sides, including the handle.
- Rinse at least 30 seconds.
- Rinse cap under water coming out of the jug and into the spray tank and then dispose of cap appropriately as regular solid waste.
- Drain all rinse water into the spray tank.
- Look closely at the containers inside and out to make sure that all pesticide has been removed.
- Allow containers to dry.
- Store cleaned jugs and caps where they will be protected from rain until they can be recycled or disposed of properly.
- Oregon requires that an appropriate solvent be used for rinsing and that 1- and 5-gallon metal containers be punctured at least three times with 1-inch holes and then crushed.

#### **Drums**

- Be sure the drum is completely empty.
- Drill a pilot hole in the bottom of the drum and then position the drum mouth over the spray tank so that rinse water will empty directly into the tank.
- With the water turned off, use the pressure rinse nozzle to widen the hole in the bottom.
- Turn water on and rotate the nozzle inside the drum to rinse all sides.
- Rinse drum at least 30 seconds or until rinse water runs completely clear.
- Rinse cap under water coming out of the drum and into the spray can and then dispose of appropriately as regular solid waste.
- Turn water off and replace the tip guard on the nozzle.
- Look closely at the containers inside and out to make sure all pesticide has been removed.
- Allow containers to dry.
- Store drums where they will be protected from rain until they can be recycled or disposed of properly.
- Oregon requires an appropriate solvent be used for rinsing and that the tops and bottoms of 30- and 55-gallon drums be removed and the container flattened after it has dried.

### **Cleaning Paper or Plastic Sacks and Fiber Containers**

- Empty the contents completely into the application equipment. You may need to cut open the container to clean out all the material in the seams. Never rip the container; use scissors or a knife but not a personal pocketknife. Do not let material blow around.
- Wear appropriate personal protective equipment, including breathing protection if necessary.
- If possible, rinse the container. Some containers have plastic or foil liners that can be rinsed. Use the rinsate in the spray mixture or collect it for disposal.
- Once the containers are clean, dispose of them as regular solid waste. Do not burn the containers. Burning can release poisonous fumes and is illegal.

## **Recycling Procedures for Plastic Containers**

### ***Disposal and Recycling***

Proper disposal or recycling of pesticide containers helps to protect the environment and helps promote a positive image of agricultural users. Recycling also saves money for the pesticide user and for local landfills.

### ***Landfill Procedures***

Landfills accept only containers that have been cleaned. Some landfills inspect containers and/or require written verification of their cleanliness. Disposal site locations are listed below.

Idaho, Oregon, and Washington have programs to collect and recycle clean plastic pesticide containers. The following steps will help in the recycling process. For times and places of recycling events, see the appropriate state contact listed below.

- Only clean, dry plastic containers can be accepted.
- Remove slip-on labels and label booklets. Glued labels may stay.
- Remove hard plastic lids and place them in a separate container for recycling.
- Remove most of the foil seal from around the opening of the container. A small amount of foil is acceptable.
- Remove lids and metal bails from 5-gallon buckets. Lids from buckets are accepted if metal rings and rubber gaskets are removed. Containers of 5 gal and smaller are accepted whole.
- Do not put plastic lids back on empty containers. This inhibits container inspections.

## **Disposing of Unusable Pesticides and Agricultural, Household and Residential Pesticide Products**

Unusable pesticide is regulated as a hazardous waste and needs to be disposed of according to Resource Conservation and Recovery Act (RCRA) regulations. Be sure to check the pesticide label for instructions on disposing of pesticides — this includes both agricultural, household and residential pesticides. The EPA advises consumers to call local authorities for specific disposal instructions. This is to provide state and local government greater latitude in carrying out their responsibilities for product disposal and waste management. Specific instructions will be provided for products based on formulation.

### **Household and Residential Unusable Pesticide Products and Containers**

Labels on aerosol products will state: "Do Not Puncture or Incinerate! If empty, place in trash or offer for recycling if available. If partly filled, call your local solid waste agency or 800-CLEANUP (253-2687) or other qualified number for disposal instructions."

Labels on all other types of products will state: "If empty: Do not reuse this container. Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency or 800-CLEANUP (253-2687) or other qualified number for disposal instructions." This includes liquids, tablets, dusts, gels, pet products, etc., in other types of containers such as bags, bottles, bait stations, etc.

## **Pesticide Recycling and Disposal Contacts (Agricultural and Household Products)**

### **Idaho**

#### ***Recycling***

Northwest Ag Plastics, Inc.  
509-457-3850

<http://www.nwagplastics.com/>

#### ***Disposal***

Contact Idaho State Department of Agriculture  
208-332-8531

[PesticideDisposalProgram@ISDA.Idaho.Gov](mailto:PesticideDisposalProgram@ISDA.Idaho.Gov)

### **Oregon**

#### ***Household Waste***

A toll free number (1-800-732-9253) is available to residents statewide to find out information about household hazardous waste collection programs. Information on state and local government sponsored household hazardous waste collection events can be found in the following links.

Household Hazardous Waste Program:

<https://www.oregon.gov/deq/Hazards-and-Cleanup/hw/Pages/hhw.aspx>

Oregon Household Hazardous Waste Collection Event Schedule:

<http://www.deq.state.or.us/lq/sw/hhw/events.htm>

Locally Sponsored Collection Programs:

<http://www.deq.state.or.us/lq/sw/hhw/collection.htm>

### **Recycling**

Oregon Agricultural Chemicals and Fertilizers Assn.

503-370-7024

Agri-Plas, Inc. 503-390-2381

<http://www.agriplasinc.com/>

## **Oregon**

### **Department of Agriculture Pesticide Stewardship Program—Waste Pesticide Disposal Program**

<https://www.oregon.gov/oda/programs/pesticides/water/pages/pesticidestewardship.aspx#:~:text=Household%20pesticides%20can%20be%20disposed,required%20by%20March%2023%2C%202022.>

Additional information for Oregon regarding pesticide waste, pesticide containers, and storage: <https://www.oregon.gov/oda/programs/Pesticides/RegulatoryIssues/Pages/PesticideStorageDisposal.aspx>

## **Washington**

### **Recycling**

Northwest Ag Plastics, Inc.

509-457-3850; <http://www.nwagplastics.com/>

### **Disposal**

Washington State Department of Agriculture:

<http://agr.wa.gov/PestFert/Pesticides/WastePesticide.aspx>

You may call toll free at 1-877-301-4555 or email [WastePesticide@agr.wa.gov](mailto:WastePesticide@agr.wa.gov).

### **Hazardous Waste**

Washington State Dept of Ecology 360-407-6000

<http://www.ecy.wa.gov/programs/hwtr/>

Northwest Regional Office (Bellevue) 425-649-7000

Southwest Regional Office (Lacey) 360-407-6300

Central Regional Office (Yakima) 509-575-2490

Eastern Regional Office (Spokane) 509-329-3400

## **Pesticides and Water Quality**

Proper handling, use, and disposal of pesticides are critical for preventing adverse impacts on water resources. Environmental pollution can occur when pesticides enter surface and ground water systems through misapplication, movement of treated soils, irrigation return flows, runoff from urban and agricultural land, storm water runoff, and leaching through soils. It is important to know the pesticide and soil properties to help avoid water contamination. Your local NRCS Soil Conservationist can provide you with more site specific pesticide and soil properties information. For additional information and links to publications on this topic, visit:

- National Water Quality Program, <http://www.usawaterquality.org/themes/npm/default.html>
- Idaho State Department of Agriculture, <http://www.agri.idaho.gov/AGRI/Categories/Environment/water/indexwater.php>
- Oregon Department of Agriculture, <http://www.oregon.gov/ODA/programs/Pesticides/Water>
- Washington Department of Agriculture, <https://agr.wa.gov/departments/land-and-water/natural-resources/water-resources-protection>

### **Water Quality Related Databases**

State and county offices of the USDA-Natural Resources Conservation Service will provide decision aids and risk assessment tools to predict groundwater and surface water vulnerability to pesticide contamination. The decision aids utilize pesticide properties and soil types to help predict site-specific vulnerabilities. <http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>

### **Clean Water Permits for Certain Pesticide Applications**

A permit is required for certain pesticide applications in, over, or near waters of the State and/or United States. A National Pollutant Discharge Elimination System (NPDES) pesticide general permit and a Notice of Intent (NOI) may be required before an aquatic application or pesticide application near waterways. Be sure to check the state and federal regulations.

**Idaho:** Idaho Department of Environmental Quality issues NPDES permits under the Idaho Pollutant Discharge Elimination System. <https://www.deq.idaho.gov/permitting/water-quality-permitting/npdes/>



**Oregon:** <http://www.oregon.gov/ODA/PEST/Pages/npdes.aspx>

**Washington:** <http://www.ecy.wa.gov/programs/wq/pesticides/index.html>

## **Pesticides, Endangered Species, and Mandatory No-spray Buffer Zones**

No-spray buffers have been established for some pesticides in some areas of Washington and Oregon. Buffers extend 60 ft by ground and 300 ft by air from affected water bodies. For a list of pesticides and buffer requirement: <http://www2.epa.gov/endangered-species/salmon-mapper>

The EPA reviews pesticides for their effects on endangered species. The list of affected pesticides can change frequently; therefore, consult the list each time before applying pesticides in affected areas. EPA publishes Endangered Species Protection Bulletins that set forth geographically specific pesticide use limitations for species protection. The pesticide label will direct you to the Bulletins Live! Website (<http://www.epa.gov/oppfead1/endanger/bulletins.htm>) and you are required to follow the pesticide use limitations. Direct any questions to your state department of agriculture.

## **Pollinator Protection**

In an effort to protect pollinators from certain types of insecticide applications, EPA has revised the labels of neonicotinoid insecticides (imidacloprid, dinotefuran, clothianidin, thiamethoxam) to include pollinator protection instructions. These special instructions are included in the "Directions for Use" section of the label. A bee advisory box and icon appear on the label and contain information on routes of exposure and spray drift precautions. EPA is continuing to review the toxicity of certain pesticides as a result of direct treatment and their extended residual toxicity.

## **Special Pesticide Registration Options**

Pesticides are federally registered by the U.S. Environmental Protection Agency (EPA) under Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended. This law also contains two provisions for states to obtain certain pesticide uses to address local pest management needs:

- Emergency exemptions from registration under Section 18

- Special local needs registrations under Section 24(c)

### **Emergency Exemptions Under Section 18**

Section 18 of FIFRA provides that the Administrator of EPA may exempt certain federal and state agencies from any provision of the Act if it is determined that emergency conditions exist. Section 18 authorizes EPA to allow states to use an unregistered use of a pesticide, or a pesticide that does not have a tolerance for the food or feed crop to be treated, for a limited time.

EPA regulations for Section 18 provide four types of emergency exemptions: specific, public health, quarantine, and crisis.

### **Special Local Needs Registrations — Section 24(c)**

In each state the department of agriculture is the designated lead agency responsible for registering pesticides to meet special local needs under section 24(c) of the FIFRA. A special local need (SLN) is defined as, "an existing or imminent pest problem within a State for which the State lead agency, based upon satisfactory supporting information, has determined that an appropriate federally registered pesticide is not sufficiently available."

Each state is authorized to register a new end use product for any use, or an additional use of a federally registered pesticide product, under the following conditions:

- There is a special local need for the use within the state.

- The use is covered by necessary tolerances, exemptions or other clearances under the Federal Food, Drug and Cosmetic Act, if the use is a food or feed use.

SLN registrations have been useful particularly to growers of minor crops, who often have limited access to pest management options. Types of SLN registration requests considered include: adding a crop or site; incorporating an alternate application method, such as chemigation or dip (e.g., for bulbs); changing application timing; encouraging the use of reduced-risk pesticides or pesticides that facilitate resistance management; or modifying the application rate.

**Contact the local State Department of Agriculture for specific instructions on Section 18 and 24c registrations:**

**Idaho:** <https://agri.idaho.gov/main/56-2/pesticides/product-registration-2/pesticide-label-search/>

**Oregon:** <https://agr.wa.gov/departments/pesticides-and-fertilizers/pesticides/external-websites-and-related-information>

**Washington:** <http://agr.wa.gov/PestFert/Pesticides/ProductRegistration.aspx>

## **Regulatory Authorities**

The specific laws and regulations governing use, storage, disposal, and transportation of pesticides differ slightly in each north-western state. Before you use pesticides, obtain a copy of the detailed pesticide use laws and rules for the state(s) in which you are operating. The state-specific pesticide laws and rules can be found at each state department of agriculture website.

## Idaho

<https://agri.idaho.gov/main/56-2/pesticides/>

### For regulations on hazardous waste

Department of Environmental Quality  
1410 North Hilton  
Boise, ID 83706-1255  
208-373-0502; <http://www.deq.state.id.us/>

## Oregon

<http://egov.oregon.gov/ODA/PEST>

## Washington

<https://agr.wa.gov/departments/pesticides-and-fertilizers/pesticides>

## Additional Pesticide Information

<b>Note:</b> The table below is not a complete listing of websites containing additional information on pesticide use and safety. The presence or absence of a given website below does not constitute an endorsement of one website over another.	
Website Information	Website
Crop Data Management Systems (CDMS): A searchable database of print-on-demand pesticide labels including many SLN 24(c)	<a href="http://www.cdms.net/manuf/default.asp">http://www.cdms.net/manuf/default.asp</a>
A searchable database of pesticides registered with the Idaho Dept. of Agriculture	<a href="http://www.kellysolutions.com/id">http://www.kellysolutions.com/id</a>
NPIC (National Pesticide Information Center): A source of scientific, unbiased information	<a href="http://npic.orst.edu">http://npic.orst.edu</a>
Pesticide Information Center On-Line (PICOL): A searchable database of Washington and Oregon registered pesticides	<a href="http://cru66.cahe.wsu.edu/LabelTolerance.html">http://cru66.cahe.wsu.edu/LabelTolerance.html</a>
Pesticide toxicology information at EXTTOXNET	<a href="http://exttoxnet.orst.edu/">http://exttoxnet.orst.edu/</a>
Northwest Coalition for Alternatives to Pesticides	<a href="http://www.pesticide.org/">http://www.pesticide.org/</a>
A searchable database of pesticides registered with the Oregon Dept. of Agriculture	<a href="http://oda.state.or.us/dbs/pest_productsL2K/search.lasso">http://oda.state.or.us/dbs/pest_productsL2K/search.lasso</a>
Idaho State Dept. of Agriculture	<a href="http://www.agri.idaho.gov">http://www.agri.idaho.gov</a>
Washington State Dept. of Agriculture	<a href="http://agr.wa.gov/">http://agr.wa.gov/</a>
Oregon State Dept. of Agriculture	<a href="http://oregon.gov/ODA/">http://oregon.gov/ODA/</a>

## Worker Protection Standard for Agricultural Pesticides

### Key Features

The U.S. Environmental Protection Agency (EPA) revised the Worker Protection Standard for Agricultural Pesticides (WPS), on November 2, 2015. The WPS revisions are intended to decrease the pesticide exposure incidents among farmworkers and their family members. The WPS is designed to protect employees of farms, forests, nurseries, and greenhouses from occupational exposure to agricultural pesticides.

The WPS contains requirements for notifying employees of applications, the use of personal protective equipment, and restrictions on entry to treated areas. Additionally, the WPS also requires certain actions by employers to ensure worker safety. The WPS requires the registrants of pesticides to add label references to the WPS and to list specific application restrictions and other requirements.

Most of the revised WPS requirements became effective on January 2, 2017. Three requirements go into effect on January 2, 2019: <https://www.epa.gov/pesticide-worker-safety/agricultural-worker-protection-standard-wps>

Pesticide safety training must cover the expanded content;

Pesticide safety information (posters) must meet the revised standards;

Handlers must suspend applications if workers or other people are in the application exclusion zone.

WPS provisions are directed toward two types of employees:

Pesticide handlers—Those who mix, load, or apply agricultural pesticides; clean or repair pesticide application equipment; or assist with the application of pesticides.

Agricultural workers—Those who perform tasks related to growing and harvesting plants on farms or in greenhouses, nurseries, or

forests for any type of compensation.

### **Pesticide Products Covered by the WPS**

The WPS covers nearly all pesticide products used to produce plants commercially, including pesticides used on soil and potting media. It also covers restricted-use and general-use products. WPS provisions are intended to:

- Minimize worker exposure to pesticides
- Mitigate any exposures
- Inform employees about the hazards of pesticides

The new revisions of the Worker Protection Standard are very extensive and detailed. An EPA funded "Pesticide Educational Resources Collaborative" PERC has all of the information on the new Standard. It is recommended that everyone visit the PERC website to obtain training materials and WPS Handouts, such as the Quick Reference Guide, Checklists for Employers, and Compliance Requirement Schedule. <http://pesticideresources.org//index.htm>

### **Idaho**

Luis Urias  
Idaho State Department of Agriculture  
Division of Agricultural Resources, Boise  
208-332-8663  
[luis.urias@agri.idaho.gov](mailto:luis.urias@agri.idaho.gov)

### **Oregon**

Oregon Department of Agriculture: <https://www.oregon.gov/oda/programs/Pesticides/RegulatoryIssues/Pages/WPS.aspx>  
State of Oregon OSHA website: <https://osha.oregon.gov/Pages/topics/worker-protection-standard.aspx>  
Oregon State University: [https://agsci.oregonstate.edu/mycas/safety-and-compliance/worker-protection-standard-wps#:~:text=The%20Worker%20Protection%20Standard%20\(WPS,agricultural%20workers%20and%20pesticide%20handlers](https://agsci.oregonstate.edu/mycas/safety-and-compliance/worker-protection-standard-wps#:~:text=The%20Worker%20Protection%20Standard%20(WPS,agricultural%20workers%20and%20pesticide%20handlers).

### **Washington**

Washington Department of Agriculture  
Pest Management Division  
PO Box 42589  
Olympia, WA 98504  
360-902-2015  
<https://agr.wa.gov/departments/pesticides-and-fertilizers/pesticides/worker-protection>

Information is also available from your local Extension educator.