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 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 positive 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—the product name, EPA registration number, common name, percentage of active ingredient, and first aid instructions. 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.

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 the spray has dried, and observe the restricted entry intervals (REI) specified on the pesticide label.
✓ Follow the pre-harvest interval (PHI) on the 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) at 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 (NPIC):
1-800-858-7378 (7:30 am to 3:30 pm Pacific Standard Time, Monday–Friday)
Email at npic@ace.orst.edu
or visit 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:
1. 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.
2. 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.
3. 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.
4. Pesticide in eye: Wash the eye quickly but gently with clean running water. Rinse eye for 15 minutes or more.
5. 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.
6. 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.
7. **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.

8. **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.

9. **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.

10. **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 (PPE) 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

While the following attire is not defined as PPE, the labeling might require pesticide handlers or early-entry workers to wear it for some tasks:

- Long-sleeved shirts
- Long pants
- Shoes and socks
- Other items of regular work clothing

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.

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**MINIMUM PERSONAL PROTECTIVE EQUIPMENT (PPE) AND WORK CLOTHING FOR HANDLING ACTIVITIES**

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Toxicity Category of End-use Product</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I (Danger)</td>
</tr>
<tr>
<td>Dermal toxicity</td>
<td>Coveralls worn over short-sleeve</td>
</tr>
<tr>
<td>or skin irritation</td>
<td>shirt and short pants</td>
</tr>
<tr>
<td>potential</td>
<td>Socks</td>
</tr>
<tr>
<td></td>
<td>Chemical-resistant footwear</td>
</tr>
<tr>
<td></td>
<td>Chemical-resistant gloves</td>
</tr>
<tr>
<td>Inhalation toxicity</td>
<td>Respiratory protection device</td>
</tr>
<tr>
<td>Eye irritation potential</td>
<td>Protective eyewear</td>
</tr>
<tr>
<td></td>
<td>II (Warning)</td>
</tr>
<tr>
<td>Dermal toxicity</td>
<td>Coveralls worn over short-sleeve</td>
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<td>Inhalation toxicity</td>
<td>Respiration protection device</td>
</tr>
<tr>
<td>Eye irritation potential</td>
<td>Protective eyewear</td>
</tr>
<tr>
<td></td>
<td>III (Caution)</td>
</tr>
<tr>
<td>Dermal toxicity</td>
<td>Long-sleeve shirt and long pants</td>
</tr>
<tr>
<td>or skin irritation</td>
<td>Socks</td>
</tr>
<tr>
<td>potential</td>
<td>Shoes</td>
</tr>
<tr>
<td></td>
<td>Chemical-resistant gloves</td>
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<tr>
<td>Inhalation toxicity</td>
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<td>Chemical-resistant gloves</td>
</tr>
<tr>
<td>Eye irritation potential</td>
<td>Protective eyewear</td>
</tr>
</tbody>
</table>

1If 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)

<table>
<thead>
<tr>
<th>Selection category listed on pesticide label</th>
<th>Type of personal protective material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (dry and water-based)</td>
<td>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</td>
</tr>
<tr>
<td>A</td>
<td>High</td>
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<tr>
<td>B</td>
<td>High</td>
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<tr>
<td>C</td>
<td>High</td>
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<td>D</td>
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<td>High</td>
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<td>G</td>
<td>High</td>
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<tr>
<td>H</td>
<td>High</td>
</tr>
</tbody>
</table>

**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 flames (do NOT use flames 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.

1. Control the spill situation: Protect yourself, stop the leak, protect others, and stay at the site.
2. Contain the spill: Confine the spill, protect water sources, absorb liquids, and cover dry materials.
3. Clean up: Clean up the spill, decontaminate the spill site, neutralize the 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
CLINING, 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:

- Carefully rinse cap over spray tank opening, then dispose of it appropriately as regular solid waste.
- Carefully empty the rinsate into the spray tank.
- Turn the drum over on its other end and repeat this procedure.
- Puncture the base of the drum with a drill so it cannot be reused.
- Allow drum 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 containers flattened after they have 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.

PREHSSURE RINSING

This method continuously washes the inside of the container 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.
- 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.

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.
- Rotate the nozzle inside the container to assure good coverage of the side closest to the handle.
- 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 site 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 container to dry.

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.
- Puncture the base of the drum with a drill so it cannot be reused.
- Allow drum 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 containers flattened after they have 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.
• 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, then dispose of it appropriately, as regular solid waste.
• Turn water off and replace the tip guard on the nozzle.
• Look closely at the container 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 use of an appropriate solvent for rinsing, and requires the tops and bottoms of 30- and 55-gallon drums be removed and the containers flattened after they have 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 agrichemical 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 gallons 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 and 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 Container Recycling and Unusable Pesticide Disposal Contacts (Agricultural and household products)

Idaho Recycling
Northwest Ag Plastics, Inc.
509-457-3850
http://www.nwagplastics.com/

Disposal
Contact Vic Mason, Idaho State Department of Agriculture
208-332-8628
Email: vic.mason@agri.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: http://www.deq.state.or.us/lq/sw/hhw
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/
Disposal
Oregon Department of Environmental Quality
800-452-4011 (in Oregon only)
http://www.deq.state.or.us/lq/hw/pesticide.htm
Bend 541-633-2014
Portland 503-229-5336
Salem 503-378-5071
Pendleton 541-278-4613

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

For Hazardous Waste contact:
Washington State Department 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:
• Idaho State Department of Agriculture https://agri.idaho.gov/main/water-quality-program/
• Oregon Department of Agriculture https://www.oregon.gov/ODA/programs/Pesticides/Water/Pages/AboutWaterPesticides.aspx
• Washington Department of Agriculture http://agr.wa.gov/PestFert/natresources/WaterResourcesProtection.aspx

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.
• Oregon: https://www.oregon.gov/ODA/programs/Pesticides/Water/Pages/AboutWaterPesticides.aspx

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 requirements: 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, dinofuran, 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 will 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.

The bee hazard icon on EPA’s new, strengthened labels for neonicotinoid pesticides helps signal the pesticide’s potential hazard to bees. Image courtesy of EPA.

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. A 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: http://www.agri.idaho.gov/AGRI/Categories/Pesticides/registration/indexregistrationmain.php
• Oregon: http://www.oregon.gov/ODA/PEST/Pages/contact_us.aspx
• Washington: http://agr.wa.gov/PestFert/Pesticides/ProductRegistration.aspx

ADDITIONAL PESTICIDE INFORMATION
INTERNET
Note 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.

<table>
<thead>
<tr>
<th>Website Information</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop Data Management Systems (CDMS): a searchable database of print-on-demand pesticide labels including many SLN 24(c)</td>
<td><a href="http://www.cdms.net/manuf/default.asp">http://www.cdms.net/manuf/default.asp</a></td>
</tr>
<tr>
<td>A searchable database of pesticides registered with the Idaho Department of Agriculture</td>
<td><a href="http://www.kellysolutions.com/id">http://www.kellysolutions.com/id</a></td>
</tr>
<tr>
<td>NPIC—National Pesticide Information Center, a source of scientific, unbiased information</td>
<td><a href="http://npic.orst.edu">http://npic.orst.edu</a></td>
</tr>
<tr>
<td>Pesticide Information Center Online (PICOL), a searchable database of Washington and Oregon registered pesticides</td>
<td><a href="http://cru66.cahe.wsu.edu/LabelTolerance.html">http://cru66.cahe.wsu.edu/LabelTolerance.html</a></td>
</tr>
<tr>
<td>Pesticide toxicology information at EXTOXNET</td>
<td><a href="http://extoxnet.orst.edu">http://extoxnet.orst.edu</a></td>
</tr>
<tr>
<td>Northwest Coalition for Alternatives to Pesticides</td>
<td><a href="http://npic.orst.edu">http://npic.orst.edu</a></td>
</tr>
<tr>
<td>A searchable database of pesticides registered with the Oregon Department of Agriculture</td>
<td><a href="http://oda.state.or.us/dbs/pest_productsL2K/search.lasso">http://oda.state.or.us/dbs/pest_productsL2K/search.lasso</a></td>
</tr>
<tr>
<td>Idaho State Department of Agriculture</td>
<td><a href="http://www.agri.idaho.gov">http://www.agri.idaho.gov</a></td>
</tr>
<tr>
<td>Washington State Department of Agriculture</td>
<td><a href="http://agr.wa.gov/">http://agr.wa.gov/</a></td>
</tr>
<tr>
<td>Oregon State Department of Agriculture</td>
<td><a href="http://oregon.gov/ODA/">http://oregon.gov/ODA/</a></td>
</tr>
</tbody>
</table>

REGULATORY AUTHORITIES
The specific laws and regulations governing use, storage, disposal, and transportation of pesticides differ slightly in each northwestern 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
http://www.agri.idaho.gov/AGRI/Categories/Pesticides/indexPesticides.php

OREGON
http://egov.oregon.gov/ODA/PEST/

WASHINGTON
http://agr.wa.gov/PestFert/Pesticides

WORKER PROTECTION STANDARDS (WPS) 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.

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

1. Pesticide safety training must cover the expanded content;
2. Pesticide safety information (posters) must meet the revised standards;
3. Handlers must suspend applications if workers or other people are in the application exclusion zone.

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:

1. Minimize worker exposure to pesticides
2. Mitigate any exposures
3. 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.html

See also—Quick Reference Guide to Worker Protection Standard (WPS) as Revised in 2015 (pages 6-9–6-10)

More Information on the Worker Protection Standard
EPA Worker Protection Standard website:
http://www.epa.gov/pesticides/health/worker.htm

Idaho
Luis Urias
Idaho State Department of Agriculture
Division of Agricultural Resources, Boise
208-332-8663
luis.urias@agri.idaho.gov

Oregon
Oregon Department of Agriculture
Pesticides Division
503-986-4652

Washington
Washington Department of Agriculture
Pest Management Division
PO Box 42589
Olympia, WA 98504
360-902-2015
http://agr.wa.gov/PestFert/Pesticides/WorkerProtection.aspx
Information is also available from your local Extension educator.
Duties for ALL Employers

These requirements apply to agricultural employers and commercial pesticide handler employers except the pesticide safety, application and hazard information requirements apply only to agricultural employers.

Anti-Retaliation

Employers must not retaliate against a worker or handler who attempts to comply with the WPS, files a complaint, or provides information in an investigation of alleged WPS noncompliance. 170.315

Minimum Age Requirements

1. Ensure that early-entry workers and all handlers are at least 18 years old. 170.309 (c) and 170.313 (g)

Pesticide Safety, Application and Hazard Information

An agricultural employer must display or make certain information available on the establishment. Commercial pesticide handler employers do not have to comply with information display requirements.

1. Display or make available all of the information listed in #2 together in an easily accessible (“central”) location on the agricultural establishment. 170.311 (a)(5) and 170.311 (a)(2)

2. The information includes:
   - EPA WPS safety poster or equivalent information, which must include some additional information by January 2, 2018, and must be kept current. 170.311 (a)
   - Application information that includes:
     - Product name, EPA registration number, and active ingredient
     - Crop or site treated, location and description of the treated area
     - Date, start and end times of the application, and duration of restricted-entry interval (REI). 170.311 (a)(1)
   - A copy of the safety data sheet (SDS) for the formulated product for each WPS-labeled pesticide applied. 170.309 and 170.311

3. In addition, display the EPA WPS safety poster (or equivalent) where decontamination supplies are located.

4. Provide water that is safe and cool enough for washing, eye-flushing, and drinking. Do not use water that is also used for mixing pesticides unless steps are taken to ensure safety. 170.411 (b)(1)

5. When applying a product that requires protective eyewear, provide 1 pair of water resistance glasses and 1 pair of water resistant gloves to workers. 170.309 (a)(1)

6. When a product requires protective eyewear for handlers, and/or when using a closed system under pressure, provide the following in mixing and loading areas: a system that can deliver water at a rate of 4 gallons per minute for at least 15 minutes or 6 gallons of water per minute in containers suitable for providing a gentle eye-flush for about 15 minutes. 170.309 (a)(1)

7. Decontamination supplies must be kept outside the treated area, or any area where decontamination supplies are located at permanent sites and where decontamination supplies are provided for handlers. 170.311 (a)(1)

8. For handlers, decontamination supplies must be kept outside the treated area, or any area under an REI unless they are protected from contamination in closed containers. 170.309 (a)(1)(h)(8)

Decontamination Supplies

1. Establish accessible decontamination supplies located together within 1/4 mile of all workers (when required 170.411 (c) and handlers. 170.411 and 170.509
   - 1 gallon of water per worker and 3 gallons of water per handler at the beginning of each work period for routine and emergency decontamination.
   - Plenty of soap and single-use towels. Note: hand sanitizers and wet towelettes are insufficient. 170.411 (b)(2) and 170.509 (b)(2)
   - A clean coverall (or other clean change of clothes) for handlers

2. Provide water that is safe and cool enough for washing, eye-flushing, and drinking. Do not use water that is also used for mixing pesticides unless steps are taken to ensure safety. 170.411 (b)(1)

3. Provide handlers with decontamination supplies where personal protective equipment (PPE) is removed at the end of a task. 170.309

4. Provide handlers with decontamination supplies at each mixing and loading site. 170.509 (c)(1)

5. When a product requires protective eyewear for handlers, and/or when using a closed system under pressure, provide the following in mixing and loading areas: a system that can deliver water at a rate of 4 gallons per minute for at least 15 minutes or 6 gallons of water per minute in containers suitable for providing a gentle eye-flush for about 15 minutes. 170.309 (a)(1)

6. When applying a product that requires protective eyewear, provide 1 pair of water resistant glasses and 1 pair of water resistant gloves to workers. 170.309 (a)(1)

Emergency Assistance

If there is reason to believe a worker or handler has been exposed to pesticides, during or within 72 hours of employment, and needs emergency medical treatment, employers must do the following:

1. Promptly make transportation available to an appropriate emergency medical facility.
2. Promptly provide to the treating medical personnel, information related to each pesticide product to which the person may have been exposed:
   - Safety Data Sheet
   - Product name, EPA registration number, and active ingredient(s)
   - Description of how the pesticide was used on the agricultural establishment.
   - Circumstances that could have resulted in exposure to the pesticide. 170.309 (a)

This is a summary of the requirements. It does not contain all the information to comply with the revised WPS. Refer to the regulations where indicated for complete details.
Additional Duties for Worker Employers

These requirements apply to agricultural employers who employ workers.

Restrictions During Applications 170.405 (a)-(b)
During pesticide applications, keep workers and everyone other than appropriately trained and equipped handlers out of the treated area (for all types of applications) and out of:
- The application exclusion zone (AEZ) for outdoor production, or
- A specified area that varies by the type of application until the ventilation criteria are met for enclosed space production.

Restricted-Entry Intervals (REIs) 170.309 (l) and 170.407
Do not direct or allow any worker to enter or remain in the treated area until the REI has expired and all posted warning signs are removed or covered. Read the exceptions in 170.603.

Notice About Applications 170.409 (a)
1. Orally warn workers and posted areas if required by the pesticide labeling.
2. If not, post warning signs if the REI is greater than:
   - 48 hours for outdoor production or
   - 4 hours for enclosed space production.
3. For all other applications, either orally warn workers or post warning signs.

Posted Warning Signs 170.409 (b)
1. Post legible 14” x 16” WPS-design warning signs no more than 24 hours prior to an application; keep posted during REI; remove or cover before workers enter and within 3 days after the end of the REI. 170.409 (b)(1)(d)
2. Post signs so they can be seen at all reasonably expected entrances to treated areas. 170.409 (b)(3)(ii)
3. Warning signs can be smaller than 14” x 16” under certain conditions. All warning signs must meet specific requirements. 170.409 (b)

Oral Warnings 170.409 (c)
1. Before each application, tell workers who are on the establishment (in a manner they can understand):
   - Location and description of treated area,
   - Date and time entry is restricted
   - AEZ, REI, and not to enter during REI.
2. Workers who enter the establishment after application starts must receive the same warning at the start of their work period.

Additional Duties for Handler Employers

These requirements apply to commercial pesticide handler employers and agricultural employers who employ handlers.

Application Restrictions and Monitoring 170.509
1. Do not allow handlers to apply a pesticide so that it contacts, directly or through drift, anyone other than appropriately trained and equipped handlers.
2. Handlers must suspend applications when anyone other than appropriately trained and equipped handlers enter the application exclusion zone (AEZ). This goes into effect on January 2, 2018. 170.509 (b)
3. When anyone is handling a highly toxic pesticide with a skull and crossbones, maintain sight or voice contact every two hours.
4. Make sure a trained handler equipped with labeling-specific PPE maintains constant voice or visual contact with any handler in an enclosed space production site (e.g., greenhouses, high tunnels, indoor grow houses) while applying a fumigant.

Care of PPE

1. Before handlers do any handling task, inform them, in a manner they can understand, of all pesticide labeling instructions for safe use. 170.503 (a)(1)
2. Ensure that the handler has access to product labeling during the entire handling task. 170.503 (a)(2)

Equipment Safety

1. Inspect pesticide handling equipment before each day of use, and repair or replace as needed. 170.309 (l) and 170.313 (g)
2. Allow only appropriately trained and equipped handlers to repair, clean, or adjust pesticide equipment that contains pesticides or residues, unless they are not employed on the establishment. 170.309 (g) and 170.507 (b). See Additional Agricultural Employer Duties for information regarding non-employed persons.

Personal Protective Equipment (PPE) Handlers Must Use

1. Provide handlers with the PPE required by the pesticide labeling, and be sure it is:
   - Clean and in operating condition. 170.507 (b)
   - Worn and used according to the manufacturer’s instructions. 170.507 (c)
   - Inspected before each day of use. 170.507 (c)(2)
   - Repaired or replaced as needed. 170.507 (c)
2. When a respirator is required by product labeling, provide handlers with:
   - A medical evaluation to ensure the handler is physically able to safely wear the respirator,
   - Training in respirator use, and
   - A fit test to ensure the respirator fits correctly.
   - Keep records on the establishment of these items for two years. 170.507 (d)(10)
3. Take steps to avoid heat-related illness when labeling requires the use of PPE for a handler activity. 170.507 (a)
4. Provide handlers a pesticide-free area for:
   - Storing personal clothing not in use, and
   - Putting on PPE at the start of task.
   - Taking off PPE at end of task. 170.507 (d)(10)
5. Do not allow used PPE to be taken home. 170.507 (d)(10)

Instructions for People Who Clean PPE 170.507 (h)
The handler employer must inform people who clean or launder PPE:
- That PPE may be contaminated with pesticides,
- Of the potential for harmful effects of exposure to pesticides,
- How to protect themselves when handling PPE,
- How to clean PPE correctly, and
- Decontamination procedures to follow after handling contaminated PPE.

Replacing Respirator Purifying Elements

1. Replace particulate filters or filtering facepiece respirators when any of the following conditions is met:
   - When breathing becomes difficult,
   - When the respirator label or pesticide label requires it
   - When odor/taste/irritation is noticed,
   - When the respirator label or pesticide label requires it
   - When breathing resistance becomes excessive,
   - When ODOR/FLAVORS/SMELLS are detected,
   - When the respirator label or pesticide label requires it
2. Replace vapor-removing cartridges/canisters when any following condition is met:
   - When breathing becomes difficult,
   - 4 hours for enclosed space production.
   - After 8 total hours of use, in the absence of any other instructions or indications of service life. 170.313 (g)

Disposal of PPE

1. Discard, do not clean, coveralls and other absorbent materials that are heavily contaminated with pesticide having a signal word “DANGER” or “WARNING.” When discarding PPE, ensure that it is unusable as apparel or made unavailable for further use.
2. Follow federal, state, and local laws when disposing of PPE that cannot be cleaned correctly. 170.507 (d)(2)

Instructions for People Who Clean PPE 170.507 (h)
The handler employer must inform people who clean or launder PPE:
- That PPE may be contaminated with pesticides,
- Of the potential for harmful effects of exposure to pesticides,
- How to protect themselves when handling PPE,
- How to clean PPE correctly, and
- Decontamination procedures to follow after handling contaminated PPE.

Additional Agricultural Employer Duties

Before allowing persons not directly employed by the establishment to clean, repair, or adjust pesticide application equipment, provide the following information:
- The equipment may be contaminated with pesticides.
- The potentially harmful effects of pesticide exposure.
- How to handle equipment to limit exposure to pesticides.
- How to wash themselves and/or their clothes to remove and prevent exposure to pesticide residues. 170.309 (g) and 170.313 (h)

This was developed under cooperative agreement #X8-83616301.
EPA-305-B-16-001

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EPA-305-B-16-001