



Clean water Connections from raindrop to river



happyivers.org

Published by the City of Eugene Stormwater Management Program

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Product choices you can live with

Looking for a solution to a cleaning, gardening or maintenance challenge? The choices are almost overwhelming. For instance, when choosing a weed control, would you select active ingredients such as triclopyr, 2,4,D, MCP, dicamba, mecoprop-P and fluzifop-P-butyl?

Understanding product ingredients can be daunting. Pesticides are one of the top ten exposures reported to poison control centers nationwide, and many poisonings are preventable.



Two prominent organizations dedicated to improving public health and preventing poisoning have teamed up to focus on pesticide education and safety. The American Association of Poison Control Centers (AAPCC) supports the work of the nation's 55 poison control centers, and the National Pesticide Information Center (NPIC) is a cooperative agreement between the US Environmental Protection Agency and Oregon State University.

The NPIC website is well-designed and easy to use. In addition to an alphabetic index for subject or product look-up, it includes sections on people and pets, science and regulation, pests and the environment and NPIC publications. Each section contains additional categories

continued on page 5

Spring cleaning tips for leftover products


Do you have a garage shelf, shed or outside storage area that is populated with products you are not sure how to dispose of? It doesn't take long to long to accumulate paint cans, automotive fluids, cleaners, yard chemicals and other assorted items. Depending on the product, the container's condition and the toxicity rating, some of those discards may require special handling.

First step: Read the product labels

Hazardous products must be handled with respect! Read labels and follow directions carefully. Words to look for:

- **Poison:** can injure or kill if absorbed through the skin, ingested or inhaled.
- **Toxic:** can cause injury or death if swallowed, inhaled, or absorbed through the skin.
- **Irritant:** causes soreness or swelling of skin, eyes, mucous membranes, or lungs
- **Flammable:** easily catches fire and tends to burn rapidly.
- **Flammable liquid:** has a flash point below 140°F
- **Combustible liquid:** has a flash point from 140°F to 200°F
- **Corrosive:** a chemical or its vapors that can destroy material or living tissue.

continued on page 3



CAUTION

WARNING

DANGER

Signal words are a key to safe use and storage. See page 5 for details.

Creature Comforts Include a Pet-friendly Garden

Days are growing longer and seed catalogs have made their way to the top of the reading pile. Before completing this season's order, take some time to plan for a garden that you *and* your pets can enjoy.

Room to roam

If dogs share your home and yard, observe their traffic patterns before laying out garden beds. Some dogs will wear a path along fence lines so it's best to avoid those areas. Using mulch on pathways and in flower beds helps discourage digging, and rock borders can help keep pets out. Never use cocoa bean mulch because, like other chocolate products, it can be lethal if ingested.

Employ creative techniques to protect prized blooms. Consider hanging baskets, raised beds and trellises. If your dog is a digger, give him his own space by loosening soil or mixing it with sand. Train him by hiding treats or toys in the sand.

Take care when choosing lawn and garden chemicals to reduce toxic exposure to your pet. Try alternatives like compost for flower beds or a mild solution of dish soap and water to remove insects from garden plants. If you must use more toxic products, be sure to read the label and follow the instructions for mixing and application. Keep your pets inside while applying toxic chemicals and know how long they last—your lawn may be off limits for several days.

Plants that present a danger to pets

Some vegetables and flowers can be toxic to your pets, so either fence them off or avoid planting them altogether. Vegetables that may make your pet sick include onions, chives, garlic, potatoes, tomatoes and rhubarb. Flowers and shrubs to avoid include lilies, autumn crocus, rhododendron, foxglove, hyacinth, tulips, narcissus, hydrangea, yew, nightshade, chrysanthemum, English ivy and lily of the valley.



Symptoms of ingestion can include rapid breathing, irregular pulse, seizures, cold extremities, vomiting and lethargy. If you suspect your pet has eaten a toxic plant, call your veterinarian. If you need to make a trip to the vet's office, try to take along a sample of the plant. Keep the number of the National Animal Poison Control Center, (800-548-2423) in a convenient place. It is staffed 24 hours a day and there may be a fee for the call. The ASPCA also has good information and a hotline for pet poisoning emergencies.

Grow some pet-healthy treats

Lots of plants are actually good for your pets. Consider planting a patch of wheat or oat grass to add dietary fiber, improve bad breath and help maintain healthy teeth and gums. Rose hips—the rounded fruit left when rose blossoms fade—are full of vitamin C and help prevent urinary tract infections. Fleabane, pyrethrum and chamomile make excellent flea repellents. Scatter them in the doghouse, spread where your pet likes to lie in the sun, or make a sachet and hang around his neck.

(Reprinted with permission from Wisconsin Natural Resources Magazine) 💧

Going for a Walk?

Be sure to bring a bag or two to pick up after your pal.



Keep forgetting bags? Stop by our **Canines for Clean Water** booth at **Bark in the Park (BIP)** on Saturday, May 16 at Alton Baker Park. Join our enviro-canine pack and receive a handy bag carrier for your leash (and a lovely blue bandana)! We'll be there from 8:30 a.m. to noon. BIP is our favorite dog-meeting event of the year—a sea of wet noses and waggy tails! Details at <http://green-hill.org/> 💧



Give your garden a java boost

With spring at our doorstep, gardeners aren't the only ones benefiting from a cup of coffee before heading out to the garden. Gardens and compost piles also welcome the pick-me-up that a healthy dose of coffee grounds can supply. Fresh grass clippings will also turn up the burner under a ho-hum compost pile. Here's a recipe from the compost specialists at the Lane County Extension Service for those who are ready to get your garden going. You'll need to turn the pile once a week for ready-to-use compost in six to eight weeks.



- Coffee Grounds Compost** (hot compost)
- 2 parts kitchen scraps or grass clippings
 - 1 part coffee grounds
 - 1 part leaves

Compost materials are easy to find. Leaves are available at many community gardens, and grass clippings are never in short supply in the spring.

Coffee grounds are available year round, smell wonderful, and activate soil and compost pile microorganisms.

Coffee grounds are an excellent nitrogen source for the compost pile, supplying about two percent by volume. They can be used safely in the garden or compost pile just as one would use manure, without the pathogen concerns that manure can bring.

Coffee grounds can be used as a side dressing for established plantings. One inch of coffee grounds can be worked into the top seven inches of soil as an amendment four weeks before planting. A one-inch thick layer of coffee grounds can even be used as a mulch to prevent weed growth, but watch for caking that will deflect water penetration. ♦

Spring Cleaning Tips *continued from page 1*

Some products have the potential for toxic or explosive chemical interactions if accidentally mixed, so should never be stored together. Some examples:

- Oxidizers (like pool chlorine) should not be near fuels and solvents.
- Keep leaky pesticide containers away from gasoline.
- Bleach or pool chlorine should never be near ammonia.

Most toxic products can be taken to Lane County's household hazardous waste facility in Glenwood. Residents can schedule appointments by calling 541-682-4120 (weekdays). Appointments are available on Thursday and Saturday mornings from 8 – 11:30 a.m. at the Glenwood Disposal site.

Wondering what to do with old cans of latex paint? Look for local retailers participating in the PaintCare program—a statewide collection program that collects household paint. Visit www.paintcare.org for more information. ♦



Avoiding toxics in your home?

Look for the new Safer Choice label on household products in stores this summer. Products with the Safer Choice label help consumers and commercial buyers identify and select products with safer chemical ingredients, without sacrificing quality or performance. Learn more <http://www2.epa.gov/safer-choice>. ♦



Have you ever wondered why your City of Eugene stormwater and wastewater user fees appear on your Eugene Water and Electric Board (EWEB) bill? It's the result of a partnership between the two agencies. Rather than sending out a separate bill, Eugene has a contract with EWEB as the billing agent. Having one bill reduces the City's costs and so keeps user fees down. If you have questions about your stormwater or wastewater fees, call the City of Eugene at 541-682-4900. To learn more, visit the City's web site at eugene-or.gov/swfees. ♦



Thoughtful Steps to a Healthy Yard

Gardening pleasure can turn to frustration when new green foliage shows signs of damage from active pests. Weeds can quickly begin to outnumber your careful spring plantings. In case you're tempted to head to your nearest garden center or hardware store for a quick solution, consider a more long-term approach for the health of your garden, your family and your local waterways, too. You'll also save money by not getting caught in the chemical solution cycle.

Integrated Pest Management (IPM) is a proven method of pest control that emphasizes simple, inexpensive prevention practices that cause the least harm to people and the environment.

Rather than using a temporary, quick fix, IPM focuses on eliminating the cause of pests by minimizing access to food, water, and hiding places. Understanding these basic steps helps you map out an overall plan to keep your yard and garden healthy and robust.

1. Learn about your plants and the pests that affect them.

2. Choose the right plants. Consider using native species whenever possible. Native plants are better protected by their own "immune systems" and their relationships with other plants and animals in the area. You may also look for plants that are pest-resistant. Diversifying the garden with a variety of plants will help the plants protect each other from pests. For example, small flowered plants like daisies, mint, and rosemary attract many insects that eat pests. Check with a local garden shop or nursery for recommendations.

3. Maintain healthy, fertile soil by rotating your plants, adding compost, and mulching. Healthy soil contains millions of different organisms that perform many functions such as keeping disease-causing organisms in check, recycling and restoring nutrients and making them available in plants, allowing healthy root growth, and providing pathways for air and water to pass through.

4. Plant early to give plants a chance to establish before the hot weather and the heaviest bug season.

5. Allow growth of the pests' natural predators. Ladybugs, ground beetles, and birds eat many pests, and fungi and moss can infect the pests naturally. Remember, spraying chemicals often kills the beneficial bugs too.

6. Get out and work with your hands! A hoe, spade, and your hands are the best tools to combat weeds. Getting close to your plants will help you identify problems and remove pests and damaged plants by hand. Tilling can eliminate many weeds as well. Pruning plants helps remove diseased parts, leaving the plant's nutrients for the healthy parts. Always prune back to a main branch or stem; leaving "stub" opens a door for pests.

7. Keep a garden journal in which you record when you see pests, what they look like, what they have done to the plants, and the actions taken. In this way, you will learn what works and what doesn't while experimenting with new techniques.

Remember basic ecology: everything is linked to everything else!

Because of this, pesticides can have unintended consequences. For example, don't be surprised if songbirds leave your yards after pesticides have been sprayed. Many birds are directly harmed by pesticides; others leave because the insects they feed on have been killed.

To learn more about IPM, visit the UC Davis website www.ipm.ucdavis.edu 💧



Understanding connections between your garden climate, plants, soil and pests make take a little more time at first, but will give you a healthier system in the long run.

Product Choices *continued from page 1*

and related links. For example, under the science and regulation section, there is a category of pesticide ingredients. Listed under that link is information about active and inert ingredients. Many of us have learned to pay attention to the listing of active ingredients in a product. Another category found on many labels are “inert ingredients” that are worth learning more about. On EPA-registered pesticides, these ingredients are not named on product labels because their identity is considered “confidential business information.” Until 1997, other ingredients were always called “inert” ingredients, in contrast to “active ingredients.” Both terms are now listed on labels.

While many of the chemicals that are used as other ingredients are not known to pose health or environmental risks, some of them can be toxic. In some cases, these ingredients can pose greater risk than the active ingredient. For that

Pest control products are a major source of toxics in our environment. Be informed and be safe!

reason, it is important to look at the signal word (danger, warning or caution) on the label which indicates the toxicity of the formulated product (active and inactive ingredients combined). Other ingredients are used for a variety of reasons including stabilizing the product and extending shelf life; helping the material stick to surfaces like leaves and soil; to help with drift control and more.

To be well-informed about any product, pest, or health risk, or for contact information in a pesticide-related health emergency, check out the NPIC website.

National Pesticide Information Center 1-800-858-7378;
npic.orst.edu ♦

CAUTION
WARNING
DANGER

EPA signal words can help you find a less-toxic product for your pest problem.

CAUTION

means the product is slightly toxic if eaten, absorbed through the skin, inhaled, or it causes slight eye or skin irritation.

WARNING

indicates the product is moderately toxic if eaten, absorbed through the skin, inhaled, or it causes moderate eye or skin irritation.

DANGER

means that the product is highly toxic by at least one route of exposure. It may be corrosive or highly toxic if eaten, absorbed through the skin, or inhaled. ♦

Snails & slugs & slime—oh my!

When it comes to addressing any weed or pest problem, there is a lot to consider. Have you correctly identified the source of the problem, are you choosing a method or product that will work, are there any hazards associated with this method or product, will it linger in your soil or end up getting washed into the street and into a stream or river?

Consider one pest problem found in most Northwest gardens: slugs and snails. They tend to avoid sunlight and are more active at night. Slimy trails and holes in leaves are indicators they've been dining on plants. Slugs like cool, moist and shady areas so may take extra work to track down.

Molluscicides are products formulated to control slugs and snails. The most common active ingredients are **metaldehyde** and **iron phosphate**. **Metaldehyde** is highly toxic and very attractive to dogs, cats and other animals. Exposure can cause twitching and seizures, vomiting, severe irritation of the mucous membranes, and diarrhea. Signs of poisoning usually appear within minutes to hours. If you think your pet has consumed **metaldehyde**, contact your vet immediately.

Iron phosphate is the other common chemical used in slug control. Although products with iron phosphate are often sold as “dog safe”, you should still use them carefully.

Looking for some safer controls for slugs and snails? Here are a few ideas:

Cultural controls include plant watering times and removing cover for slugs. Slugs need moisture, but they avoid sunlight. Watering plants in the morning reduces damage to plants. Limit soil moisture by using drip irrigation to water only the soil near plants. Remove debris, weeds and other cover that slugs use for shelter.

Barrier controls are a physical barrier to keep slugs and snails away from plants. Sprinkle diatomaceous earth or borates along a garden's edges, or put in longer-lasting barriers such as copper strips.

Biological controls allow natural enemies that prey on slugs and snails into your garden. Improve nearby habitat for snakes, amphibians, birds and beneficial insects that eat slugs and snails.

Repellents such as garlic extract, limonene and cinnamon oil may be other options for control of slugs and snails.

Excerpt from Oregon State University Extension Service.

Publication EM 9052.

August 2012 ♦



wetlands & waterways

Final Phase of Amazon Creek Enhancements Complete

Over the past several years, the City of Eugene has been working on a project to stabilize Amazon Creek's eroding banks, add flood water capacity, enhance native habitat and reconstruct the path.

In 2012 the City reconstructed the Fern Ridge Path in a new alignment using Federal funds. The 2013 and 2014 creek restoration projects stabilized the creek banks using over 1,000 tons of boulders, 1,100 feet of bioengineered soil wraps and 1,400 tons of river cobble. The creek bank was cut back and widened on the north side creating a floodplain area that will reduce water velocities during high flows, provide added flood water capacity and improve habitat. Over 14,000 native

plants including Oregon ash and Big leaf maple trees, Oregon grape, red dogwood, Nootka Rose, snowberry, willow and more were planted along with wild flowers and native grasses to create a natural environment.

In addition, the City paved one block of Grant Street from 15th Avenue to the park and added a concrete path from the south end of Grant to the Fern Ridge Path.

Today, many ducks and other birds can be seen in the creek daily. This project combined the multiple objectives of flood protection, natural enhancement, transportation and recreation into a beautiful, practical community asset. 💧

Large boulders, sloping banks and thousands of native plants work together along the creek to provide flood protection and an active wildlife habitat.



A rain garden can be great for the environment, but will it work for you?

Many people ask us about rain gardens for their yards. The decision to install a rain garden needs to balance your desire to help the environment and understanding if a rain garden is a good fit for your landscape. Here are some answers to frequently asked questions that may help you decide.

So, what is a rain garden?

Rain gardens are landscape features that include a shallow depression designed to intercept stormwater and allow for infiltration into the soil. Rain gardens play an important role in urban areas by decreasing stormwater runoff and reducing negative impacts on water quality and flooding.

What are the benefits to our environment?

Stormwater runoff carries pollutants like fertilizers, oil and dirt to local streams, lakes and ponds and can contribute to local flooding during intense rainfall events. These can affect receiving bodies of water (i.e., streams and lakes) by causing erosion, destroying habitat, and spreading illness. Rain gardens help minimize these negative impacts.

How much will it cost?

The cost is dependent on the size, system complexity and type of plantings. In general, a small residential rain garden will cost from \$2-5 per square foot if you build it yourself.

How much space do I need?

Rain gardens can be located in almost any residential landscape. The size will depend on whether it is being designed for water quality (runoff is filtered before entering the public system) or flood control (the runoff will fully infiltrate on-site). A typical residential rain garden that captures runoff from a 2000 sq. ft. area will be about 100 sq. ft. (water quality design) or 260 sq. ft. (flood control design). Remember that the size, shape, and plantings can be tailored to the location and the amount of water you want to capture.

What type of plants do I need?

Native plants are the best choice because of their non-invasive and non-aggressive growth, deep root systems and the ability to tolerate both wet and dry conditions. Native plants require little maintenance and attract beneficial pollinators, birds, and butterflies. While there are many plants suitable for rain gardens, choosing those that fit with your existing landscape is also important.

For step-by-step instructions, search for the Oregon Rain Garden Guide at seagrant.oregonstate.edu. Check with Eugene's Permit and Information Center at 541-682-5086 before you start digging. 💧



Sustainable Landscaping for Homeowners



Lane County homeowners can learn to save money on yard maintenance and have a healthier yard at a workshop offered by the Oregon

State University Extension Service. Sustainable Landscape workshops are planned for June 24-25, October 17 and 24, and December 9 and 10, 2015. Classes will be held at the OSU Extension Service office, 996 Jefferson Street in Eugene.

The training includes class work and yard evaluations that can lead to a Sustainable Landscape Certification. Participants will learn ways to improve water efficiency, enrich soil quality, create wildlife habitat, reduce the use of pesticides, and protect nearby waterways. Efficiencies should also lead to lower power, water, and waste bills.

The cost is \$25. Pre-registration is requested one week prior to training. Registration forms are available at the OSU Extension Service office, 996 Jefferson Street, or at extension.oregonstate.edu/lane/gardens. You may also call 541-344-5859. 💧

If Eugene's natural assets were appraised like a business—based on the value of the goods and services they provide—how much would they be worth annually?

Parks and open spaces contribute value to our city's recreation, air and water quality, flood protection, and property values. The dollar amount? \$42 million. Detailed findings are in the **Economic View of Eugene's Parks, Natural Areas and Urban Forest** at <http://eugene-or.gov/parks>.

FISH-FRIENDLY CAR WASH



Planning a Benefit Car Wash?

Choose our stormwater-friendly kit for your fund-raising event

Use our free, fish-friendly car wash kits that keep soap suds out of storm drains and rivers. To learn more, check out our video at www.happyrivers.org.

To reserve a kit, call 541-682-4929



Mosquitoes are enjoying an early start

Our unusually warm spring weather has encouraged early plant growth and a population explosion of an unpopular pest. During a visit to one of the City's Community Gardens in late February, thousands of mosquitoes were found breeding in a just a few puddles formed on top of black plastic – a popular cover that many gardeners use to blanket their plots for the winter. These resourceful insects don't need much to set up home base. Standing water is a favorite location to lay larvae where they can feed on tiny organisms until they are mature enough to venture out.

Mosquitos have a well-earned reputation for their ability to spread disease. To eliminate their breeding grounds, look around for common places they tend to congregate. Empty water from containers such as flower pots, birdbaths, pet water dishes, cans, gutters, tires and buckets regularly to disrupt the mosquito breeding cycle.

If you see places in public parks where standing water is a concern, call 541-682-4800 to alert us. 💧



Stormwater Connections is published by the City of Eugene Public Works Department to enhance awareness of stormwater and related surface water management issues.

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happyrivers.org



Do you love the outdoors? How about your local park? Some day, you could work there!

Many people work outdoors in our parks and open spaces during the day. You may have seen people mowing the grass or cleaning up around a picnic area in your park. Some help to build playgrounds and sidewalks. But many of the people you may not see are working to keep the ecosystems—plants, animals and waterways—around the parks as healthy as possible. That's a big job too!

Some of the many people that help our parks include:

Ecologists: Love plants and animals? Ecologists know which plants to put where in our parks so they grow well and provide habitat for birds and insects. Some have special knowledge about wetlands, forests, or certain types of plants. Others check to make sure the fish, frogs and turtles that live in our community are doing well.

Geologists: Like to dig in the dirt? That's what geologists do. Do you know there are different types of dirt? Geologists can tell whether an area is going to flood or dry out quickly. This is very important when deciding where to put play equipment, trees and sidewalks.

Water quality monitors: Splish splash! These people take samples from Amazon Creek and the Willamette River to see if there is pollution in the water. If they find something that shouldn't be there, they help find out where it is coming from and stop the pollution if they can. Keeping water clean is important for all of us.

Urban foresters: Did you know that Eugene has almost 100,000 trees along our streets and in our parks? There are several people at public works who take special care of these trees to be sure they grow well. They trim trees to keep branches from falling or getting broken by passing trucks. They are extra busy when branches and trees fall during windy storms.

So the next time you are out chasing bugs or digging in the dirt and someone asks what you are doing, you can tell them you are an ecologist or geologist! And if you would like to learn more about the many interesting people who work in our parks, come visit us at Public Works Day on May 21. 💧



Vocabulary words

ecosystem, waterway, geologist, ecologist, habitat, monitor.

Extra credit

What tools or special clothing do you think different park workers need when doing their jobs?



It's Free! It's Fun! It's the Annual Public Works Day Open House!

Take a behind-the-scenes look at the many ways public works serves our community. Learn more about parks and natural areas, the Eugene airport, wastewater, stormwater, engineering, maintenance and more! Special guests include the Eugene Police and Fire Departments.

Thursday, May 21 from 8:30 a.m. to 3 p.m.

1820 Roosevelt Boulevard

- Climb aboard and explore the big trucks
- Take part in hands-on activities geared for kids of all ages
- Meet stormwater ambassador Lily the frog
- Watch staff demonstrate the use of specialized equipment

Convenient bus, van, and bicycle parking is available.

LTD also has a bus stop right across from the yard's main entrance.



Curious? For more information, visit
call

541-682-4800.