

**Pesticide-free parks:  
It's time!**





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# Summary

Parks are an important part of our communities. They are islands of green in urban environments; places for children to play; athletic facilities for teams; spaces for dogs, bicyclists, and runners to exercise; and gathering places for families and neighbors.

Parks should be clean and safe, so that the many people who use them find that visiting a park is a healthy activity. But since the 1950s, it's become common for parks to use pesticides as part of their landscape management practices. Pesticides, by definition, are not clean and safe. They are chemicals that are designed to kill, or otherwise harm, living things.

Recognizing the problems that can be associated with pesticide use, many communities over the last few decades have taken significant steps to reduce the use of pesticides in parks. These communities include Eugene and towns elsewhere in Lane County. Widespread use of pesticides has been replaced by targeted, spot applications. Routine calendar-based treatments have been replaced by treatments made when pests become problems.

Now, both in the Northwest and across the country, park managers are taking an additional step. They are designating pesticide-free parks where all of the pest management tasks are done without using these chemicals. In doing so, they create places where people and pets can spend time without being concerned about pesticide exposure. They are also recognizing that parks can serve as a model for the rest of their communities. A move to pesticide-free management demonstrates to families and businesses in the community that pesticides are not necessary, and also encourages them to change their own practices. By acting as a model for the rest of the community, parks can inspire a significant reduction in pesticide use.



Recent research has shown that pesticides cause problems

that were simply unknown a few decades ago. We now have documentation about some of the subtle yet far-reaching effects that pesticides can have:

- Pesticides are especially problematic for children. Children are both more exposed to pesticides, and more susceptible to their effects.
- Pesticides cause problems for pets. Poisonings are not uncommon, and serious diseases like cancer have been linked to pesticide exposure.
- People who apply pesticides are at risk for a variety of diseases. From depression, fatigue, and vision problems, to cancer and breathing problems, the scope of these illnesses is sobering.
- Small amounts of pesticides cause important problems for fish and birds, animals that share our parks with us.
- Pesticides are widespread contaminants of our air, rivers, and streams.

Parks in Eugene and Lane County have an opportunity to be models of how our communities can avoid the problems caused by pesticide use. The Northwest Coalition for Alternatives to Pesticides urges all Lane County communities to take advantage of this opportunity and establish pesticide-free parks now.



# Introducing Pesticide-free Parks

## What is a pesticide-free park?

A pesticide-free park is one in which pest and weed problems are solved in a variety of ways that don't involve the use of pesticides.

Designing landscapes that minimize weed problems, using mulches, planting varieties that are well-adapted to a park's climate so that they aren't susceptible to disease or insect problems, and using hand or power tools to remove weeds are all examples of solutions to pest problems used in pesticide-free parks.

Pesticide-free parks are the culmination of the work done over the last few decades to reduce pesticide use in parks. Parks managers make the commitment to replace the pesticides still in use with pesticide-free techniques.

## Where are pesticides used in parks?

Pesticides are often used on playgrounds, to create grass-free areas around trees, along fence lines, on ball fields, and around sign posts.

## Why are pesticide-free parks a good idea?

This report summarizes recent research and recently collected data that show why pesticide free-parks are an idea whose time has come.

The billions of pounds of pesticides used every year in our country cause special problems for children, are harmful to pets, and cause illness in people who apply them. They're also hazardous to wildlife and frequently pollute air and water.

Over two hundred million pounds of pesticides are used



Pesticide-free parks are just what their name implies — parks that are managed without pesticides.

in and around parks and other public land, schools, businesses, and homes every year. In comparison to that number, the amount of pesticides used in your neighborhood park can seem small, even tiny.

Parks, however, can be important models for the rest of the community. They can demonstrate to families and businesses how to manage pest problems in a way that is healthy for both people and the environment. Pesticide-free parks showcase the many other tools that are available to solve pest problems and encourage the rest of the community to reduce the use of these toxic chemicals.

# Children Are More Exposed to Pesticides and More Vulnerable

Children are special. They represent our future, and most of us, without question, try to protect them from whatever might harm them.

In the last few decades an enormous amount of research has looked at how pesticides and other toxic chemicals are hazardous to children. Pediatrician Philip Landrigan from the Mt. Sinai School of Medicine has summarized the ways that these chemicals pose special problems for children:

- Children are more exposed to pesticides and other toxic chemicals than adults. Relative to their size, “children drink more water, eat more food, and breathe more air.” When pesticides contaminate these essentials of life, children bear a heavy burden.
- Children’s bodies are immature. In the womb and as infants, their ability to break down and detoxify environmental chemicals like pesticides is different than adults.
- Babies grow quickly and their bodies develop rapidly. The processes of growth and development are easily disrupted by toxic chemicals.
- Children have years of life ahead of them. If they’re exposed early in life to pesticides that cause chronic diseases, they have more time to develop these illnesses. Physicians are especially concerned about diseases like cancer and nervous system problems that are caused by a series of changes in our bodies that take years to evolve into illness.



Relative to their size, children are more exposed to pesticides than adults.

We don’t know nearly enough about how pesticides harm children because the way that our regulatory system tests

pesticides misses many of the important effects. Current testing requirements test many parts of the body inadequately: the immune system, the hormone system, and the circulatory system. Most toxicology testing focuses on middle-aged adult animals and misses any effects on the elderly caused by exposures in childhood.

Our challenge is to prevent children from being exposed to toxic chemicals so that they grow up healthy:

*“The ultimate goal is to formulate policies that will protect children against potential toxic agents and allow them to grow, develop, and reach maturity without incurring neurobehavioral impairment, immune dysfunction, reproductive damage, or increased risks of cancer as a consequence of environmental exposures early in life.”*

— Philip Landrigan, Carole Kimmel,  
Adolfo Correa, and Brenda Eskenazi

When parks have pesticide-free management policies, children have healthy, clean places to play. This is especially important when schools are nearby, or use a park as a playground. Pesticide-free parks are also models that show homes and businesses in our community how to protect children from potentially toxic chemicals.



Children are growing and developing. These processes can be disrupted by pesticides and other toxic chemicals.

# Pets and Pesticides: Poisonings, Diseases, and Bringing Toxic Chemicals Home

Like children, pets eat, play, and exercise in places where pesticides are often used, including parks. This means that pet poisonings are common, and that pesticides can cause serious illnesses like cancer in pets. Pets even bring pesticides inside, where you and your family can be exposed.

According to the American Society for the Prevention of Cruelty to Animals, over 30,000 pet poisonings related to pesticides are reported to the society's animal poison control center every year. Insecticides, rodenticides (pesticides used to kill mice, rats, gophers, and moles), and herbicides are common causes of pet poisonings. The only household products that cause more poisonings than these pesticides are common human medications.

Pesticides also have been linked with cancer in pets. For example, veterinarians at Purdue University studied a common kind of bladder cancer in Scottish terriers. They found that dogs who lived in homes with pesticide-treated lawns were more likely than other dogs to develop bladder cancer. "The risk of bladder cancer was between four and seven times more likely in exposed animals," according to the veterinarians. The authors of this study recommend that owners of terriers keep their dogs away from pesticide-treated lawns.

A sobering conclusion of the Purdue study is that it may well be the "inert" ingredients in lawn care pesticides that are the cause of the increased cancer risk. "Inert" ingredients are the unidentified and mostly untested ingredients found in virtually every pesticide product. According to Larry Glickman, one of the authors of the

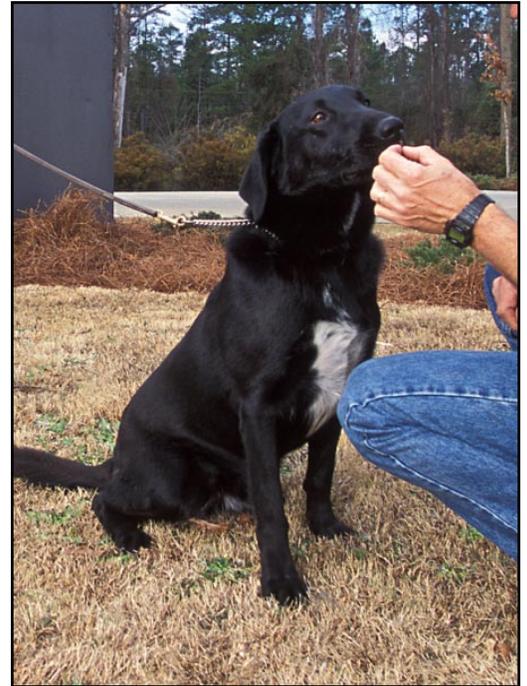
study, “Four billion pounds of these other untested chemicals reach our lawns and gardens every year, and we theorize that they are triggering cancer in these animals.”

One final reason why we need pesticide-free places for pets to play: pets can bring pesticides home if they play in pesticide-treated areas.

Consider the common lawn and turf herbicide 2,4-D. A study funded by the U.S. Environmental Protection Agency looked at how 2,4-D is tracked into homes after a lawn care application. Three of the study’s findings are interesting:

- The researchers found 2,4-D in the air inside the study houses.
- 2,4-D also contaminated all the types of indoor surfaces that were tested. These included carpets, floors, tables, and window sills.
- Pets brought 2,4-D inside. The researchers calculated that 60 to 80 percent of the herbicide they found inside homes was tracked in by active dogs.

Pesticide-free parks are parks where pets can play without being exposed to these chemicals. They also demonstrate to pet owners that pesticide-free solutions are feasible around the community.



Pets who live in houses with pesticide-treated lawns are more likely than other dogs to develop certain cancers.

# Pesticide Applicators Need Protection from Pesticides

When pesticides are used, the most heavily exposed people are often the people who mix and apply the pesticides. Do these people face special health problems? Based on some new studies of farmers who apply pesticides, the answer to this question is yes.

The National Institutes of Health are conducting a long-term study of over 50,000 farmers to understand how pesticide use impacts their health. The results from the first decade of that study suggest that reducing pesticide exposure on the job is a good idea. Here are some examples of the kinds of problems the National Institutes of Health have identified:

- Neurological problems, like tremors, depression, numbness, and fatigue, are linked with use of a common family of insecticides. The link was strongest when researchers considered total lifetime exposure, and neither poisoning accidents nor recent exposures are necessary in order for these problems to develop.
- Respiratory problems (wheezing) are also linked with work exposure to pesticides. The National Institutes of Health study found that use of two common insecticides was associated with an increase in how often applicators developed wheezing.
- People who work with pesticides are also more likely to develop cancer. For example, the risk of lung cancer is increased in farmers who apply any of four different pesticides, including an herbicide and two insecticides that are commonly used in urban settings.
- Retinal degeneration (degeneration of the part of the eye that receives images) is the most common vision problem in older adults. Exposure to fungicides while working is linked to an increased risk of developing



Pesticide applicators can be heavily exposed to pesticides. Their exposure has been linked with a wide variety of health problems.

retina problems, and this link has been documented in both men and women.

- Women who are occupationally exposed to pesticides have special health concerns. The National Institutes of Health study found that women who applied pesticides were more likely to have longer-than-average menstrual cycles and more likely to miss periods than women who never used pesticides.

Pesticide-free parks give communities the opportunity to protect park employees from pesticide exposure, thus avoiding any concerns about health problems associated with applying pesticides.



# Tiny Amounts of Pesticides Mean Trouble for Fish and Birds



The animals who share our parks with us can also be harmed by pesticides. There has been an explosion of research in this area during the last decade, and one of the most striking conclusions is that minute amounts of some pesticides are able to significantly impact the behavior and health of animals. Some of the most important research has looked at problems for fish and birds:

- Scientists from the National Oceanic and Atmospheric Administration showed that tiny amounts (one part per billion) of a common insecticide inhibited behaviors used by salmon to protect themselves from predators. The concentration of one part per billion is described by the researchers as “environmentally relevant,” meaning that these amounts of this pesticide are actually found in our rivers and streams.
- Scientists from the Centre for Environment, Fisheries and Aquaculture Science (in the United Kingdom) showed that even smaller amounts (one-half of a part per billion) of a common herbicide inhibited the production of milt (sperm) in spawning salmon.
- Another study from the National Oceanic and Atmospheric Administration showed that small amounts of a second common insecticide (one-half of a part per billion) impaired swimming and feeding behaviors of salmon.
- A study from the University of Portsmouth (United Kingdom) showed that small amounts (one part per billion) of a common herbicide compromised the ability of salmon smolts to survive as they moved from fresh to salt water.

Today's pesticides cause subtle but significant problems for wildlife.

- According to the U.S. Environmental Protection Agency, another common insecticide damaged quail ovaries and reduced successful hatch of their eggs. Tests using quail such as this one are used by the agency to predict effects on a wide variety of bird species.

Many of us remember the story of DDT, the notorious insecticide that caused problems for birds in the 1960s and even put some species on the brink of extinction. Today's pesticides also cause problems for animals, problems that may be more subtle but are significant nonetheless. Pesticide-free parks show us how we can manage our pest and weed problems in ways that are healthy for fish, birds, and other animals.



# Our Air and Water Are Contaminated with Pesticides

## Air

Pesticides are used in such large quantities and in so many places that too often they end up in the air we breathe. The U.S. Geological Survey summed up the problem this way in one of the agency's recent publications:

*"Nearly every pesticide that has been investigated has been detected in air, rain, snow, or fog throughout the Nation at different times of year."*

The U.S. Geological Survey came to this conclusion by compiling data from all of the available local, state, regional, and national monitoring studies. Some of the results are startling:

- DDT, even though most uses of this notorious insecticide ended in the U.S. in 1972, is still the most commonly found pesticide in air. Over 90 percent of air samples in the U.S. Geological Survey compilation were contaminated with DDT.
- The common agricultural, household, and mosquito insecticide malathion also frequently contaminates air. Over 80 percent of air samples in the U.S. Geological Survey compilation were contaminated with malathion.
- The common agricultural and lawn-care herbicide 2,4-D often ends up in the air. Over 60 percent of the air samples in the U.S. Geological Survey compilation were contaminated with 2,4-D.



## Water

For many years, pesticide users and regulators assumed

that pesticides only rarely ended up in rivers, streams, or wells. Recent research, however, shows just the opposite: pesticides are commonly found in water. As with air, much of the information we have about pesticides in water comes from the U.S. Geological Survey, and the results are startling:

*“Contamination of streams and ground water is widespread in agricultural and urban areas....”*

For example:

- A national monitoring study that collected data over a ten-year period from 50 river basins around the country found at least one pesticide in 94 percent of the samples tested.
- The same study found that over half (55 percent) of shallow wells were contaminated with at least one pesticide.
- Oregon is no different from the rest of the country. In the Willamette River basin, over 90 percent of the U.S. Geological Survey’s samples were contaminated by at least one pesticide. The agency found 50 different pesticides in the Willamette River basin.

Pesticide-free parks demonstrate to our communities that pest management does not have to mean using chemicals that pollute our air and water.



Rivers and streams in the Willamette Valley are often contaminated with pesticides.

# Successful Pesticide-free Parks across the Northwest

## Seattle

Seattle adopted a pesticide use reduction strategy in 1999 that reduced pesticide use by all city departments. Seattle has now added to this strategy by designating six large parks and eight smaller parks as pesticide-free. Seattle is also making improvements at these parks to make them easier to maintain.

## Portland

Portland designated three pesticide-free parks in the fall of 2004. In the year since then, with the help of a group of committed volunteers, the three parks have been maintained without using pesticides.

## Salem

Salem manages 45 city parks, and almost all of them have a playground or play area. In July 2003, Salem's City Council directed park staff to develop a pest management policy. The policy formalizes a decades-old practice of not using pesticides in any of Salem's playgrounds or play areas.

# What You Can Do

**Let park managers know you care.**

Write, call, or e-mail your parks department and tell them you support pesticide-free parks. Ask your friends and neighbors to do the same.

**Let elected officials know you care.**

Write, call, or e-mail your city councilors or county commissioners. Tell them you support pesticide-free parks.

**Ask your neighbors to help.**

Ask your neighbors to sign a petition in support of pesticide-free parks. There is a sample petition on the inside back cover of this report. Give the signed petitions to park managers or elected officials.

**Join with others who care about pesticide-free parks on October 22.**

NCAP is hosting a meeting in Eugene about pesticide-free parks. The event takes place from 3 to 5 PM on Saturday, October 22, and will be held at the Eugene Public Library. Join us! Invite your neighbors to come too. If you can't attend, call NCAP at 344-5044 or e-mail us at [info@pesticide.org](mailto:info@pesticide.org) to find out how you can help.

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# I want my neighborhood park to be pesticide-free!

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

My neighborhood park is \_\_\_\_\_

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