



A Lesson in Prevention

**Measuring
Pesticide Use
in Washington Schools**

A Washington Toxics Coalition Report

Acknowledgements

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The Washington Toxics Coalition is a non-profit, nonpartisan, 501(c)(3) organization that works to protect public health and the environment by preventing pollution.

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A Lesson in Prevention: Measuring Pesticide Use in Washington Schools

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Measuring Pesticide Use in Washington Schools



**A Washington Toxics Coalition Report
April 2004**



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Executive Summary

Schools are one of the most important elements of a child's development. Our children spend a major portion of their formative years in school, acquiring tools to make them successful throughout their lives. Clearly, it is essential that schools be safe and productive learning environments. Unfortunately, Washington school districts are falling short in their efforts to maintain a healthy learning environment for our children, as the majority use pesticides that can cause cancer, harm the developing nervous system, damage the reproductive system, or disrupt hormones.

A survey of Washington's largest school districts has found that a majority of our children are attending school in districts that use high hazard pesticides, which means that they may be exposed to pesticides linked to serious health problems while they attend school.

The 2002-2003 school year marked the first year of implementation of Washington state's Children's Pesticide Right-to-Know Act. This law, requiring schools to provide pre-notification of school pesticide use to parents and teachers, also requires districts to create annual pesticide use reports. In order to assess pesticide use in Washington public schools and consequent risks to our children's health, the Washington Toxics Coalition sent a survey to all districts in the state with more than 5,000 students, requesting copies of their annual pesticide use summaries.

The responding 50 districts represent 68% of students in our public school system. Their responses show that the majority of Washington school children attend districts that use high hazard pesticides, risking possible exposure to these products.

Summary of Key Findings

1. Nearly all of Washington's largest school districts use high hazard pesticides that can threaten children's health.

Of the 50 responding districts, 96% use pesticide products that have been linked to cancer, nervous system damage, reproductive or developmental harm, or endocrine (hormone) disruption. Of responding districts, 70% use five or more of these products, and 20% use 10 or more. These 50 districts represent 68% of public school students, meaning that the majority — at least 67% — of Washington school children attend school in districts using high hazard pesticides.

2. Some school districts are breaking this trend, successfully reducing and eliminating the use of hazardous pesticides.

The survey also found that some districts are taking significant steps to reduce and/or eliminate the use of pesticides that can be hazardous to children's health. These districts are working to prevent pest problems, and use non-chemical and least-toxic pest management methods. Adopting and implementing policies that restrict the use of pesticides on school property has formed the basis for important shifts in pest management and mindsets at these districts.

3. Many districts do not adequately track pesticide use.

The Children's Pesticide Right-to-Know Act requires all districts to make pesticide use information readily available to parents in an



annual summary. Our survey found that record keeping is insufficient at many districts, and annual reports are often not being created in accordance with state law.

Summary of Recommendations

For schools:

1. Eliminate the use of all high hazard pesticides linked to cancer, nervous system damage, reproductive or developmental harm, or endocrine (hormone) disruption.
2. Adopt a policy to replace pesticide use with safer alternatives.
3. Comply with the Children's Pesticide Right-to-Know Act's notification and record-keeping requirements by keeping complete and accessible records of all pesticide applications, notifying parents and teachers

prior to any pesticide application, and creating accurate annual pesticide use summaries.

For the state:

1. Ban the use in schools of all high hazard pesticides.
2. Provide training and other resources support for schools to reduce or eliminate use of toxic pesticides and replace them with safer alternatives.

For the community:

1. Call your local district and ask about pesticide use; sign up to be notified prior to any pesticide application at your child's school.
2. Get involved! Work with your school to eliminate the use of high hazard pesticides and to adopt a policy that focuses on safer alternatives.



In 2000 Governor Gary Locke signed into law the Children's Pesticide Right-to-Know Act. WTC and our members and partners worked for several years to get this important legislation passed. See Chapter 1 for information about this law.

Chapter 1

Introduction

What we tell our children stays with them for a lifetime: buckle your seat belt, look both ways before crossing the street. But what we aren't telling them could have as serious an impact on their lives: *Pesticides are poisons.*

Although their danger may not be as obvious as a car crash, pesticides are an ever-present hazard in our children's lives. Kids come into contact with pesticides constantly: in their food, in parks, and at their schools.

There is no question that pesticides can pose threats to children's health. We know that children are generally more vulnerable to the health hazards of exposure to pesticides and that kids are exposed at higher levels than most adults because of their behavior and metabolism. Our children have become the test subjects for the toxic cocktail of chemicals used in homes, businesses, agriculture, and schools. And we may be seeing the results in skyrocketing rates of learning disabilities, asthma, cancer, and reproductive damage.

Pesticides and Children's Health

Pesticides, including herbicides, insecticides, and other pest control chemicals, can cause a variety of short-term (acute) and long-term (chronic) health effects. Possible acute symptoms of exposure include headache, nausea, diarrhea, dizziness, skin irritation, and respiratory irritation.¹ Many acute symptoms can appear similar to those of common illnesses, such as the "flu," often resulting in misdiagnosis.

Scientific studies link certain pesticides to cancer, birth defects, nervous system disorders, reproductive problems, endocrine (hormone) disruption, and immune deficiency. Cancer rates in the United States, including childhood cancer, have increased in the last 30 years, and many scientists and researchers attribute part of the increase to pollution in the environment, including pesticides.² Certain classes of insecticides have known effects on the nervous system, specifically on developing children.³ An increasing amount of evidence shows that certain chemicals, including many pesticides, can mimic or block the action of naturally occurring hormones in the body, resulting in reproductive problems and birth defects in wildlife, as well as declining sperm counts, increasing cancer rates, and birth defects in humans.⁴ These chronic effects can take many years to appear, making it difficult to connect them to past exposures.

Asthma

Asthma is at epidemic levels in the United States, and is now the most common chronic disease among children. According to the American Lung Association, "close to 6.3 million children under 18 currently have asthma," (based on the 2001 National Health Interview Survey) with an estimated 131,704 children in Washington state suffering from pediatric asthma.⁵

Vital new research on the environmental causes of asthma is just now being done. For example, a new survey assessing childhood asthma concluded that "exposures to herbicides, pesticides, and the farm environment in the first year of life may increase the risk for early onset persistent asthma, a subtype of asthma associated with long-term morbidity."⁶ The authors found that "children exposed to any pesticide or herbicide in the first year of life were at 2.53 times higher risk of asthma compared to children who were never exposed to either."



These significant findings, among many others, open the door for much more exploration into the contributions of pesticide exposure to rapidly rising asthma rates in our children.

Some insects, such as cockroaches, can also exacerbate asthma, but in trying to solve these problems, we must avoid introducing chemicals that can also play a role in asthma.

Learning Disabilities

It is estimated that 5% to 10% of children in public schools in the United States are living with some type of learning disability.⁷ Re-

search has shown that some types of pesticides, particularly organophosphate insecticides, have serious impacts on the developing brain and nervous system, particularly from exposure during the latter stages of pregnancy.³ The pesticide chlorpyrifos was recently cancelled by the U.S. government for many uses due to concern over its impacts to children's nervous system development, among other things, but many similar-acting chemicals remain on the market. Studies conducted by Dr. Elizabeth Guillette in the Yaqui Valley of Mexico found significant neurodevelopmental impacts on children that had high pesticide exposures

High Hazard Pesticides

In this report, when we refer to "high hazard" pesticides, we are referring to pesticides that can threaten children's long-term health because they may cause cancer, nervous system damage, endocrine (hormone) disruption, or reproductive or developmental harm. The criteria for determining if a pesticide is a high hazard were developed by WTC staff scientists, using readily available data from nationally and internationally respected sources and peer-reviewed science. If any active ingredients in a product meet one of these criteria, then the product is a high hazard pesticide:

May cause cancer in humans

- ❖ Classified as a known, likely, probable, or possible carcinogen by the U.S. Environmental Protection Agency (EPA).
- ❖ Classified as a known, likely, probable, or possible carcinogen by the International Agency for Research on Cancer (IARC).
- ❖ Classified as known or reasonably anticipated to be human carcinogen by the National Toxicology Program.
- ❖ Listed by the state of California as a known carcinogen.

Nervous system toxicant in humans

- ❖ Cholinesterase inhibitor.
- ❖ Listed as neurotoxic in U.S. EPA Toxics Release Inventory.

Reproductive or developmental toxicant in humans

- ❖ Classified as known or reasonably anticipated to be a reproductive or developmental toxicant by the National Toxicology Program.
- ❖ Listed by the state of California as a reproductive or developmental toxicant.

Disrupts hormonal systems

- ❖ Listed by the Illinois EPA as a known, probable, or suspect endocrine disruptor.



compared with a control group.⁷

Much more research needs to be done to fully understand the links between pesticide exposures and their impacts on the development of the nervous system. As physician Ted Schettler writes, “neurodevelopmental data are lacking for the large majority of known or suspected neurotoxicants. Regulatory agencies have generally failed to require neurodevelopmental testing of chemicals before they are marketed.”⁸ He adds that “residual uncertainties, however, can not be an excuse for avoiding precautionary action when available evidence establishes the plausibility of harm.”

Exposure Rates

The risk of harm from pesticides depends on the amount of exposure and the individual’s susceptibility, in addition to the inherent toxicity of the material. Since children’s bodies are still developing, they are more susceptible to the risks from pesticide exposure. At the same time, their exposures are greater. Children have more skin surface and breathe more air than adults relative to their body weight, meaning their exposure to pesticides can be much higher. Contact with lawns and playgrounds can also lead to increased exposure. The tendency of kids to put their hands and objects into their mouth dramatically increases the risk of exposure to pesticide residue.

Children are also exposed to pesticide residues found indoors, particularly in carpets. Studies have found that pesticide residues detected indoors are not exclusively from applications made inside. Rather, pesticides can be tracked in from applications made out of doors or elsewhere. A study conducted on the lawn-application pesticides 2,4-D and dicamba — chemicals used by many school districts in our Washington survey — found they were easily tracked indoors, and use on lawns leads to exposure significantly higher than pre-application levels.⁹



Children spend a substantial amount of time on school grounds, so reducing their exposure to pesticides there is very important.

Many of these health concerns have been discovered long after pesticides were allowed for use, since risk assessments conducted for pesticide registration by the federal government have assumed health impacts from pesticide exposure on adults, not on small children. Because there are significantly fewer studies on the impacts of exposure to children, and children’s size and vulnerability to exposure are not taken into full account in pesticide registration, it is likely that we will continue to discover new health impacts as pesticides are used around children. (See the section “What are Pesticides?” to learn more about pesticide registration).

Children’s Pesticide Right-to-Know Act

Washington’s Children’s Pesticide Right-to-Know Act (under RCW 17.21), which became effective in July 2002, gives parents, teachers, and school staff members information about pesticide use in their schools. The law requires school districts to:

1. Post signs at the application site whenever pesticides are used, indoors or outdoors.
2. Post signs in the school’s main office 48



What are Pesticides?

The term “pesticide” is a broad term used to describe any product intended to kill, control, or repel pests — whether it is a weed pest, insect pest, rodent pest, or another. Pesticides therefore include herbicides, insecticides, fungicides, rodenticides, moss killers, baits and lures, wood preservatives, and many other categories of products. Most pesticides used at school districts are either herbicides, insecticides, or rodenticides, but some districts described in this report also use fungicides and moss killers.

Pesticides are regulated by the United States Environmental Protection Agency (EPA) at the federal level, and the Washington State Department of Agriculture (WSDA) within the state. The EPA registers pesticide products for legal sale in the United States and requires that certain tests on pesticide products and the active ingredients in these products be submitted by the manufacturer of the product. Significant concerns have been raised about this registration process, many stemming from the fact that registration is based on a risk-benefit analysis of the chemical and not on a health-based standard. An excellent and exhaustive article on pesticide registration was published by the Northwest Coalition for Alternatives to Pesticides (NCAP) and is available on their website at www.pesticide.org. They summarize major problems with current pesticide registration testing process:

1. Important tests are waived

Chronic toxicity tests can be waived for chemicals that are labeled only for non-agricultural uses, omitting products that children could be exposed to every day at school, home, parks, or elsewhere.

2. Pesticide products are not fully tested

Toxicity tests are often only required on the active ingredients in pesticide products, not on the entire product formulation, including the so-called “inert” ingredients added to pesticides to enhance toxicity or make application easier. Inert ingredients can make up more than 99% of some products, but are not listed on pesticide labels. Some independent tests have found entire product formulations to be more toxic than the active ingredients alone.

3. Tests are not required for many important hazards

Examples of some tests that are not required include: chronic neurotoxicity, impacts on sperm production, immunotoxicity, and complete testing on impacts to wildlife.

4. Tests look at “average” individuals

Testing usually does not take into account impacts to the most vulnerable populations — children, elderly, or immune-compromised individuals.

5. Tests ignore synergy

Studies over the past 50 years have demonstrated that exposure to more than one chemical at once can increase potency. However, the EPA still does not require testing on exposure to a combination of chemicals. Since many school districts report using pesticides in combination, EPA testing does not reflect children’s actual exposures.

6. Tests focus on food exposure

Most required tests are executed by feeding pesticides to laboratory animals, which ignores other routes of exposure, such as inhalation and dermal (through the skin) exposures, which are more common routes of exposure for children at school.



hours before pesticide use anywhere on school property.

3. Notify at least the parents who request it 48 hours before any pesticide use, unless the application is made at a time when the school is not scheduled to be occupied during the following 48 hours.
4. Keep records of all pesticide applications, and prepare an annual summary of pesticide use.

Prior to the passage of the law, no advance notification was required and signs were posted only for outdoor applications. With this new law, parents can better protect their children from pesticide exposure. In addition, parents can more easily obtain information about pesticide use and seek reductions by their school districts.

These regulations are enforced by the Washington State Department of Agriculture. Information about compliance with these requirements and a free computer program for schools to track pesticide use are available at: <http://agr.wa.gov/pestfert/pesticides/>.

Least-toxic Integrated Pest Management

Least-toxic Integrated Pest Management (IPM) emphasizes non-chemical means of preventing and reducing pest problems. These practices can drastically reduce or eliminate the use of chemical pesticides while reducing pest problems in schools. IPM can bring other benefits as well, including better energy efficiency, structural maintenance/building repairs, better indoor air quality, and cost savings. Schools around the country are finding that effective pest control is possible without the use of toxic pesticides and that better practices can save money in the long run.

In order to protect children’s health, **pest prevention** should be the primary pest control tool for landscaping, building maintenance, and other pest management activities. Some of the basic concepts of pest prevention include:

- ❖ **Improved sanitation** (removal of pest attractants such as food and garbage) and mechanical exclusion (caulking, screens) provide significant pest prevention.
- ❖ **Design and construction choices** can reduce potential for creating pest habitats. For example, creating areas without vegetation alongside buildings deters pests and minimizes infestations.
- ❖ **Planting appropriate landscapes** (including pest-resistant and native plants) and using mulch can prevent weed infestation and other pest problems.
- ❖ **Physical barriers**, such as mow strips (concrete or wooden strips along the edges of turf), or filled cracks, can decrease weeds in hard to mow or concrete areas.
- ❖ **Knowledge** about pests, such as infestation thresholds, life cycles, environmental considerations, and natural enemies is necessary for good pest prevention.
- ❖ **Monitoring** pest populations is critical to identify existing problems and areas of potential concern, as well as determining how decisions and practices may impact future pest populations. Ongoing monitoring will prevent a small pest problem — easily controlled with least-toxic means — from becoming an infestation.
- ❖ **Promoting healthy populations of a pest’s natural enemies** can also help prevent infestation.
- ❖ **Establishing tolerance levels** (or thresholds) of pest populations will guide decisions about when pests pose a problem sufficient to warrant some level of treatment.
- ❖ **Good communications** between groundskeepers and custodians, as well as teachers and administrators, is key to successfully implementing IPM.



If treatment is necessary, non-chemical means are given priority. Beneficial organisms, freezing, flame, or heat treatments, among others, are examples of non-chemical pest treatment strategies. Recommended techniques for preventing and resolving some common pest problems include:

Lawn Weeds: Control weeds in turf and playing fields by planting grass species that flourish in the local environment and by maintaining healthy turf (including aerating, de-thatching, fertilizing, proper irrigation, mowing, and overseeding). Non-toxic products, such as corn gluten, are also available to prevent weed seedlings.

Weeds in beds and paved areas: Remove weeds in paved areas by using string trimmers, weed “flamers,” and pouring hot water on weeds. Control weeds in ornamental beds by mulching and planting native sub-shrubs and groundcover plants.

Blackberries: Physical controls are best for these prickly invaders. Consistently mowing down all new growth for several years will eventually kill the root system of these hardy plants. Root removal during dormant times (winter) will prevent reseeding.

Yellowjackets: Ensure lids on all garbage containers and food containers are closed tightly. Simple, non-chemical traps are effective in reducing localized problems. Nest removal can be done if necessary.

Cockroaches: Eliminate roach-attracting habitat, including paper and cardboard stacks and exposed food and water. Store food and organic waste in roach-proof containers. Clean and caulk cracks and crevices. Repair water leaks and keep kitchens and bathrooms dry.

Rats and mice: Combine measures to prevent entry with traps to manage rodents. Seal holes

and potential entryways and weather-strip doors. Remove food sources by cleaning up food scraps and keeping food in sealed containers.

Ants: To manage ants, block their entryways, eliminate food sources, and remove ant trails with soapy water. Caulk cracks and crevices and seal exterior doors and windows with weather stripping and door sweeps.

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Chapter 2

Survey Findings

The Washington Toxics Coalition surveyed the 58 school districts in the state with 5,000 or more students in order to determine the extent of pesticide use as well as compliance with the Children’s Pesticide Right-to-Know Act. These 58 districts make up 74% of students in the public school system in Washington, representing many areas of the state. Surveying these largest districts gives us a clear picture of how schools educating the majority of our students are using pesticides.

1. Nearly all of Washington’s largest school districts use high hazard pesticides that can threaten children’s health

Of the 50 responding school districts, 96% use pesticides that have been linked to cancer, endocrine (hormone) disruption, nervous system damage, and/or reproductive or developmental harm. These 50 districts serve 68% of public school students in Washington state, meaning that the majority — at least 67% — of students in our public school system are possibly being exposed to high hazard pesticides at school.

Perhaps more troublesome is that most of these districts use multiple pesticides linked to serious health problems: 70% of districts use 5 or more high hazard products, and 20% use 10 or more.

These products are used in classrooms, kitchens, bathrooms, hallways, playgrounds, ball fields, flower beds, and turf areas, in order to kill weeds, insects, rodents, or fungi. While some districts limit pesticide applications to times when students are not present, pesticide

residues can persist for days, weeks, or even months, significantly extending the period of possible exposure.

While we did not receive information from every district on the amount of pesticides used, we have reported the information we received in Appendix A.

2. Some school districts are breaking this trend, successfully reducing and eliminating the use of hazardous pesticides.

Fortunately, our survey also found that some districts are taking significant steps to reduce and/or eliminate the use of pesticides that can threaten children’s health. Adopting policies that restrict the use of pesticides on school property has formed the basis for important shifts in pest management and mindsets at these districts.

Several responding districts report limited or decreased use of pesticides, as well as an increased reliance upon pest prevention and focus on least-toxic methods of pest control, be they mechanical, biological, physical, cultural, or chemical. Many districts included notes in their survey responses that indicated use of non-chemical pest prevention and controls. The leadership and initiative of school maintenance and grounds staffs, as well as parents, community members, administrators, and school board members have provided the impetus needed to shift towards more preventive, least-toxic pest management.

The following section, “Leading the Way,” provides more information about several districts that have succeeded in reducing and eliminating pesticide use at a district-wide level, and Appendix A includes information provided by all school districts about methods utilized.



3. Many districts do not adequately track pesticide use

The Children's Pesticide Right-to-Know Act requires all districts to make pesticide use information readily available in an annual summary. Our survey found that record keeping is insufficient at many districts, and annual reports are often not being created in accordance with state law.

Of the 50 surveys we received, more than a quarter of the districts did not provide amounts of pesticide products used, which suggests that they had not created an annual use report. And of the 58 districts we surveyed, eight did not respond at all, suggesting that annual use reports had not been created and indicating a lack of compliance with the requirement to provide this information to the public.

The Washington State Department of Agriculture has invested significant resources in creating tools to assist school districts in complying with the Children's Pesticide Right-to-Know Act (under RCW 17.21), including creating a database for tracking pesticide use and a detailed compliance handbook, both of which are online. A record-keeping program should be utilized by all school districts. This is not only a simple way to track pesticide use throughout the year — but it also creates reports of pesticide use at the end of the year that meet the requirements of RCW 17.21. These resources are available at: <http://agr.wa.gov/pestfert/pesticides/>.

Weed and Feed Products

Philip Dickey, WTC Staff Scientist

“The major concern with weed and feed-type products is that such a mixture of herbicide and fertilizer promotes herbicide overuse because it requires broadcast application and encourages applying herbicide when a fertilizer alone would be sufficient. Weed and feed cannot be practically used for spot treatment because doing so would result in unequal fertilization of the lawn, with more rapid growth occurring only where the product had been applied. When weed and feed is used in its intended way as a broadcast treatment, only the portion of the herbicide that falls near existing weeds provides any benefit; the rest is unnecessary because the ingredients provide little residual control. Thus, if a lawn contains 10% weed cover, almost 90% of the applied herbicide is wasted.

The combination of herbicide with fertilizer also encourages herbicide overuse because the product does not allow separate decisionmaking for its two components. WSU Cooperative Extension generally recommends three or four fertilizer treatments on lawns in Western Washington. Weeding should not be necessary at each fertilizer application, so if weed and feed is used on a fertilizing schedule, unnecessary applications will probably be made. Feeding and weeding decisionmaking should be done separately from each other, and the most appropriate products and procedures should be used for each function.

Excessive use of herbicides increases the potential for runoff and water pollution. Most of the herbicides in weed and feed products are moderately to highly mobile in soils and are frequent contaminants in surface water.”



Chapter 3

Leading the Way: Good Policies and Practices in Washington Schools

Despite the ongoing use of high hazard pesticides in most of our schools, a growing number of Washington districts are showing that dedication to least-toxic pest control can keep schools pest- and pesticide-free.

A strong policy is the backbone of a good pest management program. Several districts included in this report, as well as several districts not covered in our survey, have adopted policies that successfully eliminate the use of all or most pesticides. Switching to pest prevention takes commitment from the school and leadership from maintenance staff, but doesn't happen overnight.

Oak Harbor

The Oak Harbor School District (OHSD) in January 2002 adopted a strong pest manage-

ment policy that bans the use of all high hazard pesticides (including those that threaten children's health and those that can cause environmental harm), requires advance posting of any pesticide application, and adopts preventive and non-chemical pest control.

The policy's approval was motivated by a state investigation of the illegal burial of several hundred pounds of pesticides on school grounds by maintenance staff members. Concern over use, misuse, and disposal of pesticides lead to widespread support for the policy.

As school board and IPM Committee member Kathy Chalfant said, "We have to put the health of the children in our district first."

A committee of administrators, maintenance personnel, teachers, nurses, school board members, and community members oversees implementation of the policy. This IPM committee has assisted the maintenance staff in creating a manual for pest management, and helped identify least-toxic ways to control pests. Any pesticide product to be used on school grounds must be approved by the committee. This year, OHSD used only three pesticide products: *Timbor*, a least-toxic product used for ants; *EcoExempt*, a least-toxic herbicide; and *Roundup*, only approved for use

Oak Harbor School District IPM Committee members (l-r): Az Franciose, district nurse; Marianne Edain, Whidbey Environmental Action Network; Kathy Chalfant, school board member; Sue Karahalios, teacher; Diane Piazzon, teacher; Bill Armbrust, maintenance director; and Bruce Worley, executive director for operations. (Not pictured: Bill Rick, Susan Wagner, and Richard Andres.)





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by the IPM committee for the 2003 summer break while least-toxic weed control methods and herbicides are being tested by the grounds staff.

One of the impediments to moving away from pesticide use is site design. Some school grounds in the district seem to have been designed in ways that openly invite weeds to grow. Maintenance staff personnel are addressing these troublesome areas by proposing redesigns that would create landscapes that are easier to maintain, and especially easier to maintain without pesticides. A proposal for redesigning one school's courtyard is in the works, including native and drought-tolerant plants, fewer cracks for weeds to sprout through, and possibly a new watering system.

The IPM Committee is also working with the grounds staff to develop a program for community members to volunteer to help maintain specific landscape areas at some school sites. Sue Karahalios, teacher, IPM Committee member, city council member, and former state representative, said of the district's work, "We've come a long way on reducing our pesticide use. I hope the work we've done can be a model for other districts in the state."

Vancouver

Vancouver School District (VSD) has quickly become a vocal state leader in pest management without the use of hazardous pesticides. Adopted in March of 2002, VSD's policy bans the use of high hazard pesticides (except as a last resort) and requires use of pest prevention. It also provides notification to all parents in a school prior to any pesticide application. VSD also has a very active IPM Committee that includes school staff members, administrators, and community members. The committee has gone so far as to identify ways to include education about IPM and pest prevention in science class curriculum around the district.

**Seattle
School
District IPM
Volunteers**




Volunteers of all ages and from all parts of local communities can help school districts eliminate pesticide use.

Parent and IPM Committee member Elizabeth Koch was instrumental in getting the policy adopted. "Thankfully we have a school board and district staff that prioritize our children's health and have embraced this move to least-toxic pest control," said Koch.

Facilities Maintenance Director George Bryant has been directing the implementation of the district policy, focusing on training the staff in pest prevention and exploring innovative alternatives to pesticides. Bryant is now testing the use of humus and humus tea on some athletic fields. Preliminary results seem to indicate that the applications make the turf healthier and more able to choke out weeds, possibly eliminating the need for fertilizer or herbicide applications.

"I think that we can't afford not to be using the IPM process," Bryant said. "With the new state law requiring the performance of all pesticide applications by licensed applicators, the cost of pest control is skyrocketing. Most IPM techniques are free or of minimal cost. And besides,



IPM is the right thing to do. It strikes a balance between caring for the needs of our students and staff and caring for our environment.”

Tahoma

Tahoma School District’s pesticide use list is short: there’s nothing on it at all. “We try not to use any pesticides at all,” said district Maintenance Supervisor Bob Schuler. “We have in the past used some, but we try to always use least-toxic pesticides, and use them very sparingly and only in extreme cases.” Instead, the district has taken simple steps like moving the dumpsters away from buildings, keeping the lids closed on garbage cans, and collecting trash regularly. These fairly obvious actions can significantly reduce the risk of rodent and insect infestations in buildings, transferring work for district personnel from reaction to

prevention. Tahoma focuses also on monitoring for insect problems, using various traps to check if insect populations are reaching a threshold that would indicate action is necessary. Schuler is also in the process of developing a district policy to formalize the least-toxic approach to pest management.

The parent of several children in the district, Julie Novak is pleased with what the district is doing. “The key word here is prevention — prevention of pest problems, prevention of exposure to pesticides, and prevention of possible health problems for our children. Reducing pesticide use is vital in protecting our children’s health, and I’m glad that our school district has taken positive steps to reduce their use.”

The Costs of IPM

One major concern about switching to IPM is that it will increase costs of maintenance. While this survey does not consider costs associated with any schools district’s pest management programs, information is available from many districts that have saved money by using IPM and moving away from pesticide use. The following quotes are from the U.S. EPA’s website on school IPM, www.epa.gov/pesticides/ipm/.

“Monroe County Indiana achieved a 92 percent reduction in pesticide use, enabling them to also direct their cost savings to hire a district-wide coordinator to oversee pest management in the schools. As a result of this achievement, Monroe County was awarded the Governor’s Award for Pollution Prevention.”

— *John Carter, Director of Planning, Monroe County Community Schools Corporation, Indiana*

“Our IPM program reduced pesticide use 90 percent between 1988 and 1990. Pesticide use has been cut from 5,000 applications in 1985 to none four years later, saving the school district \$1800 per school and \$30,000 at the food service warehouse.”

— *Richard Stack, IPM Administrator, Montgomery County Public Schools, Maryland*

“In the Vista de las Cruces School in California, pest management costs went from \$1,740 a year to \$270 (plus labor) for two years.”

— *Phil Boise, IPM/Agronomy Programs Manager, Santa Barbara, California*



Chapter 4

Recommendations

The findings of this survey clearly show that use of high hazard pesticides use is widespread in Washington schools. Fortunately, there are clear solutions and opportunities to take action right now, both locally and statewide. Examples abound of parents, school maintenance staffs, teachers, school board members, legislators, and even students who have made a huge difference in helping our schools move away from reliance on pesticides. Opportunities exist for all of us to play a central role in protecting our children’s health.

For schools:

1. *Eliminate the use of all high hazard pesticides, including those linked to cancer, nervous system damage, reproductive or developmental harm, or endocrine (hormone) disruption.*

Pesticides that can threaten our children’s health should not be used in schools. Schools should operate on a policy of preventing harm by identifying and eliminating potential hazards. Schools must move away from high hazard pesticides and instead use preventive and least-toxic techniques that can effectively maintain landscapes and protect structures and student health from pest problems.

2. *Adopt a policy to replace pesticide use with safer alternatives.*

Schools should voluntarily adopt policies that eliminate high hazard pesticides, reduce use overall, and ensure full notification of all parents and teachers. It is important for districts to have school board-adopted policies that can set a course for using pest prevention and least-toxic methods instead

of high hazard pesticides. See Appendix C for a model policy and pesticide selection criteria.

In order for district policies to be effective, they must limit and eliminate the use of pesticides that threaten our children’s health. Policies must clearly articulate the district’s intention to not only focus on prevention but to eliminate the possibility of using high hazard products. The High Hazard Criteria



included in the model policy in Appendix C, is an effective and scientific way for school personnel to make a determination about the hazards of products being used. Without such clear criteria for researching products, there is no way for a district to make consistent choices on the pesticide products being used. Currently, six districts in the state are successfully using policies containing these high hazard criteria to ensure that products that pose serious health threats to our children, or to the environment, are not used at



school. For more information on these districts, see Appendix C.

3. *Comply with the Children’s Pesticide Right-to-Know Act.*

To fully comply with state law and to provide parents with the information they need, all districts must fully implement the provisions of the Children’s Pesticide Right-to-Know Act. Districts must comply with the notification and record-keeping requirements of this law by keeping complete and accessible records of all pesticide applications, notifying parents and teachers prior to any pesticide application, and creating accurate and timely annual pesticide use summaries. Besides being required under state law, annual reports provide a critical baseline for districts to assess their practices and measure their changing pesticide use and pest management approach.

For the state:

1. *Ban the use in schools of high hazard pesticides that can threaten children’s health.*

The state of Washington should take the lead in protecting children’s health by adopting public policy that would eliminate the use in schools of all pesticides that are linked to cancer, nervous system damage, endocrine (hormone) disruption, or reproductive or developmental harm. Every child in Washington has the right to attend school without being exposed to pesticides that could impact their health and development. With a growing number of districts in Washington and around the country proving that pest control can be successful and economical without the use of the most toxic pesticides, Washington state should extend this protection to all of our children.

2. *Assist schools in reducing and eliminating the use of toxic pesticides.*

State government can encourage pesticide use reduction by giving school districts the resources they need to replace pesticides with safer methods. Indeed, in our survey, many school districts expressed interest in learning more about reducing use of pesticides and focusing on pest prevention. Funding for training and on-the-ground assistance to school districts in reducing pesticide use could make a tremendous difference in districts’ abilities to change maintenance practices and further protect our children’s health.

For the community:

1. *Call your school and ask about pesticide use.*

Parents, teachers, and community members should call their local school today to sign up to be notified prior to any pesticide applications and to request a list of all pesticide products used on school grounds, either by school district employees or contracted pest control operators. State law requires that this information be readily available to the public, along with basic information on the products being used (pesticide labels and Material Data Safety Sheets (MSDSs)).

2. *Get involved!*

Once you know pesticides are a problem, be a part of the solution! When community members find out what pesticides are being used in their district, they can play an important role in working with maintenance staff members and decision-makers on finding ways to reduce use of pesticides. You can call on the school board to adopt a policy eliminating all high hazard pesticides and reducing pesticide use overall. The Healthy Schools Pesticide Action Kit will assist parents and teachers in making their school pest- and pesticide-free. See Appendix C for information about the action kit.



Chapter 5

Conclusion

The health of our children is too important to risk with the unnecessary use of high hazard pesticides in schools. Many school districts in Washington and across the nation have demonstrated that we can maintain safe and beautiful buildings and grounds without the use of pesticides that can threaten children's health. All districts in the state should follow this lead and adopt policies that eliminate the use of high hazard pesticides, replace pesticides with safer alternatives, and notify all parents prior to any pesticide application. The state should make least-toxic pest management the norm by adopting legislation that does not allow use of high hazard pesticides at schools. We must move away from the mentality of reaction, and begin focusing on preventing pest problems and preventing exposure to pesticides. We owe our children a chance at a full and healthy life.



The school grounds of Columbia Elementary are attractive and successfully maintained without the use of pesticides.

Rodent Baits

Dr. Philip Dickey, WTC Staff Scientist

A bait is a mixture of a pesticide with an attractant substance. Baits are popular for controlling rats and mice in and around schools. In theory, baits are a good idea because they put the poison where the pest will eat it rather than all over the school. In practice, however, there can be some problems.

Rodent baits can be hazardous to non-target organisms if they are eaten by unintended animals or if poisoned rodents are in turn eaten by predatory animals such as eagles. The former situation can usually be prevented by proper bait placement and by enclosing the bait in a container. Preventing secondary poisoning of predatory birds and mammals is more difficult because the

poisoning can occur at a distance from the location where the bait is placed.

In an IPM program, rodent baits should not be the first course of action. Proper sanitation and habitat reduction are the first priorities. Trapping can also be used. If baits are found to be necessary, they should be placed only where children do not have access. Baits should be used only where the label allows. Baits should be used in secure and anchored bait stations and not broadcast. To limit harm to predatory birds and small mammals, baits should be limited to those with low secondary toxicity. Broadifacoum in particular has high secondary toxicity and has been implicated in numerous incidents of non-target exposure.*

* U.S. EPA. 2002. Potential Risks of Nine Rodenticides to Birds and Nontarget Mammals: a Comparative Approach December 19, 2002

Appendix A

Methodology and notes on the data

A survey on pesticide use and pest management was initially sent in July 2003 to the 58 school districts in Washington state with an enrollment of 5,000 students or more. Enrollment data were taken from the Washington State Office of the Superintendent of Public Instruction's *Washington State Public School Building Count by County and District 2002-2003*. The survey requested information from, or a copy of, the annual pesticide use summary required under RCW 17.21. The 2002-2003 school year was the first full year that the law was in effect and all schools should have completed annual reports. In several cases, districts simply provided copies of their annual pesticide use summaries as required under state law.

Follow-up letters and surveys were sent to all non-responding districts in August, and follow-up calls to all districts were conducted from August 2003 through February 2004. Of the 58 districts to which surveys were sent, 50 districts responded. The eight non-responding districts are: Bremerton, Franklin Pierce, Lake Stevens, Mount Vernon, North Kitsap, Pasco, Peninsula, and University Place. Each of these non-responding districts received at least two letters and between three and eight follow-up phone calls.

The information on pesticide use by district is based entirely on the information provided by each district for the 2002-2003 school year. All attempts were made to ensure that the information provided by the schools is accurately represented in this report. We utilized labels and Material Safety Data Sheets (MSDSs) for individual products to confirm active ingredients for each product listed by school districts.

Pesticide Adjuvants

Dr. Philip Dickey, WTC Staff Scientist

Some pesticide adjuvants or "spreader-stickers" contain surfactants that may be toxic to non-target organisms, especially if used near surface water. While all surfactants are toxic to fish to some degree, some are worse than others. Of particular concern are those based on alkylphenol ethoxylate (APE) surfactants. These ingredients are relatively slow to biodegrade and their breakdown products are endocrine disruptors. Even in small amounts, as little as a few parts per billion, these chemicals can feminize male fish and affect reproduction.

An example is the commonly used product R-11, which contains an octylphenol ethoxylate, a specific type of APE. A recent study of eight adjuvants found R-11 to be the most toxic to a species of daphnia, a representative of the waterborne arthropods that serve as a food source for fish.** The researchers concluded that R-11 could be present in the environment in amounts that could cause damage to daphnia populations.

R-11 was reported as used by many school districts in this survey, but was removed from the use tables in Appendix A along with all other adjuvants, fertilizers, and traps.

APE surfactants are not necessary for the proper functioning of adjuvants. A variety of products using other ingredients are available.

** Stark, J.D. and W.K. Walthall. 2003. Agricultural adjuvants: acute mortality and effects on population growth rate of *Daphnia pulex* after chronic exposure. *Environmental Toxicology and Chemistry* 22(12): 197-202.



In cases where information was incomplete, we made our best effort to confirm the information with the district or made an educated guess if the information provided strongly indicated that data was correct (e.g. the EPA registration number was missing a digit, or active ingredients were not listed by the district).

We cannot verify that schools provided information on all pesticides applied on school grounds. Some district may not have sent in information in on pesticides applied by contractors that are not on the school staff. We attempt to identify in the summary for each district any specific questions we may have had with the information from that district.

This report only attempts to identify pesticides that are human health hazards. However, many pesticides also pose significant hazards to the environment, including: water contamination; toxicity to beneficial insects, birds, salmon, mammals, and other wildlife; and impacts to non-target plants. Several products that are not listed as threats to children's health can pose serious hazards to the environment.

Another hazard that is not evaluated in this report is short-term toxicity, or acute hazard. Pesticide products are given an acute toxicity ranking that represents the entire product formulation, which may include several active ingredients. As the information on long-term toxicity is by active ingredient, not entire product formulation, we decided not to include acute toxicity data in this report for the sake of creating simpler tables in these appendices. However, acute toxicity is important to assess, especially for worker safety.

Many pesticide products can pose various exposure dangers at the time of application, or shortly afterwards. These can include: irritation to skin, eyes, mucous membranes, or respiratory tract; nausea; diarrhea; seizures; fatigue;

headaches; vomiting; shortness of breath; or dizziness. The easiest way to determine acute toxicity is to read the label on a pesticide product. The EPA requires a signal word on each label to designate short-term toxicity, either DANGER, WARNING, or CAUTION. Products with DANGER labels pose the highest short-term exposure hazards, then WARNING, and then CAUTION. It is important to know the short-term toxicity of a products being used, especially to evaluate dangers to applicators, or if products are used at times and in areas when others could come into contact with recently applied products. However, it is also important to remember that these toxicity determinations are only reflective of short-term toxicity, and do not take into account any long-term hazards, such as nervous system damage, endocrine disruption, cancer, or reproductive or developmental harm.

Analysis of Each School's Use Data

Note on use amounts: The data on product use amounts provided in these tables are NOT consistent. We requested that districts provide information on the total, mixed amount of each pesticide products used during the 2002-03 school year. Many pesticides, especially herbicides, are purchased in concentrated form and then mixed with water and other adjuvants (for ease in application). Quite a few districts provided data representing concentrated amounts of product used or did not provide amounts at all. We attempt to identify in the text following each district's table what kind of amounts were provided.



Arlington

5,146 students
4 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Casoron 4g	dichlobenil		X			
	Crossbow	2,4-D; triclopyr		X	X		
	Eraser	glyphosate					
	Finale	glufosinate-ammonium					
	Monobar Chlorate	sodium metaborate; sodium chlorate					
	Roundup	glyphosate isopropylamine salt					
	Trimec	dicamba; MCPP; 2,4-D		X	X		X
	Weed B Gone	dicamba; MCPP; 2,4-D		X	X		X

Arlington School District reported using four products that WTC considers to be high hazard pesticides. The district reports that it attempts to limit exposure, making pesticide applications during schools breaks, when students are not present. However, this does not eliminate the dangers of exposure, as pesticide residue can be very persistent and even low levels of exposure can contribute to the development of long-term health problems.

Auburn

13,621 students
5 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Casoron 4g	dichlobenil	500 lbs	X			
	Cool Power	dicamba; mcpa; triclopyr	10 gallons	X			X
	Crossbow	2,4-D, triclopyr	10 gallons	X	X		
	De-moss	potassium laurate	5 gallons				
	Diazinon	diazinon	.5 gallonslon			X	X
	Pendulum	pendimethalin	50 lbs	X			
	Roundup	glyphosate isopropylamine salt	30 gallons				

Auburn School District reported using five products that WTC considers to be high hazard pesticides. Auburn's Operating Procedures note that herbicide applications will occur at only three planned times during the year: February, late May/early June, and late September/early October. While limiting herbicide application to specific times may reduce some exposure to students, pre-timed applications indicate that pesticide products are not used as a last resort and possibly that they are used whether needed in a given area or not. Good IPM principles state that pesticides should only be used after a problem is identified and other solutions attempted.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



A Lesson in Prevention

Battleground

12,024 students

10 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
☠	Ronstar G*	oxadiazon	330 lbs	X			X
	Roundup Pro *	glyphosate isopropylamine salt	328.25 gallons				
☠	Ant Bait	propoxur	3 oz	X		X	
☠	Misty	tetramethrin; permethrin; piperonyl butoxide	27 oz	X	X	X	
	D-Con	brodifacoum	3 oz				
☠	Wasp Bee Killer	d-trans allethrin; tralomethrin	90 oz			X	
	Confront	triclopyr; clopyralid	24 oz				
☠	Casoron 4g	dichlobenil	434 lbs	X			
☠	Diazinon	diazinon	16 oz			X	X
☠	Orthene*	acephate; triforine	65.5 oz	X		X	X
☠	Attain TR	bifenthrin	8 oz	X		X	X
☠	Surflan	oryzalin	9 oz	X			
☠	Crossbow	2,4-D; triclopyr	16 oz	X	X		
	* amount not indicated for some applications						

Battleground School District reported using ten products that WTC considers to be high hazard pesticides. Amounts reported are for product mixtures — concentrate plus water and adjuvants.

Bellevue

15,656 students

10 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Clear-Out 41 Plus	glyphosate isopropylamine salt	582 gallons				
☠	Crossbow	2,4-D; triclopyr	6 gallons	X	X		
☠	Demand CS	lambda-cyhalothrin	15 gallons			X	
☠	Hot Shot Roach & Ant Killer3	tralomethrin	49.5 ounces (liquid)			X	
☠	Misty Anti-Crawl Residual Insecticide	n-octyl bicycloheptene dicarboximide; propoxur; piperonyl butoxide; pyrethrins	8.5 ounces (liquid)	X		X	
	Phantom Termiticide-Insecticide	chlorfenapyr	1.75 gallons				
☠	Pyrenone	pyrethrins; piperonyl butoxide	.5 gallons	X		X	
	Roundup Pro	glyphosate isopropylamine salt	993 gallons				
☠	Surflan AS	oryzalin	385 gallons	X			
☠	Talstar PL granular	bifenthrin	5 lbs	X		X	X
☠	Termidor SC	fipronil	3 gallons	X			
☠	Zep Wasp & Hornet Killer	tetramethrin; phenothrin	8 ounces (liquid)	X		X	
☠	ZepTox II	pyrethrins; piperonyl butoxide; n-octyl bicycloheptene dicarboximide; propoxur	17 ounces (liquid)	X		X	

Bellevue School District reported using ten products that WTC considers to be high hazard pesticides. They note in school district policy that no pesticide applications are to be made when students



are present, with the exception of antimicrobials and emergency situations. Bellevue School District has a thorough record-keeping system for pesticide applications. They note that they are utilizing non-chemical, prevention-based techniques for pest control such as traps, limiting access for rodents, and mowing, hoeing, and mulching for weeds.

Bellingham

10,455 students

11 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
☠	Crossbow	2,4-D; triclopyr		X	X		
☠	Diuron 80-W	diuron		X			X
	Oust	sulfometuron methyl					
	Roundup Ultra	glyphosate isopropylamine salt					
	Merit 75 WSP	imidicloprid					
	Sulforix fungicide	lime-sulfur					
	Superior Oil Spray	mineral oil					
	Oxidate Biosafe	hydrogen peroxide					
	Nu-Cop 3L Fungicide	copper hydroxide					
☠	Daconil Ultrex	chlorothalonil		X			
☠	Py-Rin 60-6 EC	piperonyl butoxide; pyrethrins		X		X	
☠	Delta Dust	deltamethrin				X	
☠	Talstar fl.	bifenthrin		X		X	X
☠	Drione dust	piperonyl butoxide; silica gel; pyrethrins		X		X	
☠	Ficam-D	bendiocarb				X	X
☠	Eagle fungicide WSP	myclobutanil					X
☠	CB-38 Extra insecticide	pyrethrins; piperonyl butoxide		X		X	
☠	Weed-Stopper	oryzalin		X			
	Roundup Super	glyphosate isopropylamine salt					
	Finale	glufosinate-ammonium					

Bellingham School District reported using eleven products that WTC considers to be high hazard pesticides. Information on application amounts was incomplete, however, so it is difficult to know if many of these products were used in large amounts. Amounts that were provided indicate that at least several large applications of “Py-Rin 60-6” were made (45 gallons, 40 gallons, 10 gallons), an insecticide which includes active ingredients linked to cancer and nervous system damage. The district reports that they are also using several EPA-exempt products, considered to be low toxicity by the EPA.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



A Lesson in Prevention

Bethel

16,641 students
6 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup Pro	glyphosate isopropylamine salt	12 gallons				
	Garlon	triclopyr	.5 gallons				
☠	Crossbow	2,4-D; triclopyr	approx 1.5 gallons	X	X		
☠	Horsepower	mcpa; triclopyr; dicamba	contracted out No summary	X			X
	Niban FG	boric acid	contracted out No summary				
☠	Delta Dust	deltamethrin				X	
☠	Wasp & Hornet Killer	tetramethrin; phenothrin	10-16 oz cans (approx 160 oz)	X		X	
☠	Ant Kill & Barrier Treatment	pyrethrins; permethrin; n-octyl bicycloheptene dicarboximide	8-16 oz cans	X	X	X	
☠	Suspend SC	deltamethrin	contracted out No summary			X	

Bethel School District reported using six products that WTC considers to be high hazard pesticides. The district notes that they attempt to prevent pest problems by cleaning up debris and keeping tall grass to a minimum.

Central Kitsap


13,393
6 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Fastrac All-Weather Blox	bromethalin	10 blocks				
☠	ULD BP 100	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	.5 gallons	X		X	
	Phantom	chlorfenapyr	9 gallons				
	Premise 2	imidacloprid	4 gallons				
☠	Suspend SC	deltamethrin				X	
☠	Talstar Lawn and Tree	bifenthrin	11 gallons	X		X	X
☠	Talstar PL	bifenthrin	23 lbs	X		X	X
	Top Gun	bromethalin	212 blocks				
☠	Ficam dust	bendiocarb	4 oz			X	X
	Roundup Pro	glyphosate isopropylamine salt	20 gallons				
☠	Surflan a.s.	oryzalin	10 gallons	X			

Central Kitsap School District reported using six products that WTC considers to be high hazard pesticides. The district does use a number of non-chemical and prevention-based techniques, including traps for mice and wasps, flamers to control weeds, and pest exclusion methods. The district also notes that some areas are either no-spray or locations where only least-toxic products are used. The district has an IPM policy that focuses on pest prevention, maintenance, cleaning, monitoring, design, and least-toxic products. The policy indicates that pesticides should only be used judiciously and as a last resort.

Central Valley






11,195 students
1 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Surflan AS	oryzalin	2.5 gallons	X			
	Roundup Pro	glyphosate isopropylamine salt	7.5 gallons				
	Gly-Star Original	glyphosate	2.5 gallons				

Central Valley School District reported using one product that WTC considers to be high hazard pesticides, and in a relatively minimal amount. The district reports that they do not often use insecticides, as they prefer not to, and sometimes do not for several years.

Clover Park

13,501 students
5 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup Pro	glyphosate isopropylamine salt	40 gallons				
	Surflan	oryzalin	40 gallons	X			
	Diazinon AG 500	diazinon	37 oz			X	X
	Moss-out	ferric sulfate (anhydrous)	2 gallons				
	Trimec	dicamba; MCPP; 2,4-D	11.5 gallons	X	X		X
	Casoron 4g	dichlobenil	636 lbs	X			
	Wasp Freeze	d-trans allethrin; phenothrin	666.5 oz			X	

Clover Park School District reported using five products that WTC considers to be high hazard pesticides. The district reports that they have been using IPM strategies as a primary strategy and with some success.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



A Lesson in Prevention

Eastmont

5,462 students

2 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt	116 gallons (with Surflan)				
	Surflan a.s.	oryzalin	116 gallons (with Roundup)	X			
	Wil-gro Weed & Feed	2,4,d; dicamba; MCPP	14,000 lbs	X	X		X

Eastmont School District reported using two products that WTC considers to be high hazard pesticides. A tremendous 14,100 pounds of “Wilgro Weed & Feed” is troublesome, as using this type of mixed product (herbicide and fertilizer combined) can lead to much larger applications of herbicides than necessary to control existing weed problems. Fertilizers and herbicides should be applied separately in order for the correct amount of both to be determined and over-application avoided. For information on problems with mixed herbicide/fertilizer products, see page 12.

Edmonds

21,998 students

6 High Hazard Pesticides










High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup Pro	glyphosate isopropylamine salt	approx 36 gallons				
	Crossbow	2,4-D; triclopyr	approx 18 gallons	X	X		
	Surflan a.s.	oryzalin	approx 18 gallons	X			
	Gallery 75 DF	isoxaben	approx 27 gallons	X			
	Scotts Turf Builder Plus with Weed Control	2,4-D; MCPP	approx 30 lbs	X	X		
	Havoc	brodifocoum	approx 1 lb				
	Tempo SC	cyfluthrin	one application			X	
	PT-565	d-trans allethin; n- octyl bicycloheptene dicarboximide; piperonyl butoxide; pyrethrins	one application	X		X	

Edmonds School District reported using six products that WTC considers to be high hazard pesticides. The district has a policy that requires use of IPM and focuses maintenance work on cultural controls, sanitation, education, biological control such as lacewings, ladybug larvae, B.t., and neem oil. Currently, one school (Martha Lake Elementary) is pesticide-free.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See “High Hazard Pesticides” on page 6 for full explanations.

Enumclaw




5,112 students
9 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup Pro	glyphosate isopropylamine salt	15 gallons				
	Power Zone	dicamba; mcpa; carfentrazone-ethyl; MCP-p	10 gallons	X			X
	Casoron 4g	dichlobenil	400 lbs	X			
	Snapshot 2.5	trifluralin; isoxaben	150 lbs	X	X		
	Gallery 75 dryflowable	isoxaben	4 lbs	X			
	Barricade liquid	proflaminate	2 gallons	X			
	Barricade granule	proflaminate	5 lbs	X			
	Crossbow	2,4-D; triclopyr	2.5 gallons	X	X		
	Wasp Freeze	d-trans allethrin; phenothrin	12 cans			X	
	Duraguard for ants	chlorpyrifos	4 oz			X	

Enumclaw School District reported using nine products that WTC considers to be high hazard pesticides. Some of these herbicides are used at fairly high rates (Casoron: 400 lbs., Snapshot: 150 lbs.). The district notes that no school areas are treated when students are present, and that a recovering wetland area at one middle school is no-spray. The district also states that they are “... educating staff as to the importance of removing food sources and entry point(s).” They also “... mandate that all pest complaints are directed at our IPM Manager,” and that “... all pesticides were removed from schools and from non-licensed personnel.” This important step of ensuring that no teachers or custodians have or use pesticide products is in compliance with state law.

Everett

18,743 students
3 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Trailblazer	glyphosate	334 gallons				
	Crossbow	2,4-D; triclopyr	49 gallons	X	X		
	Roundup	glyphosate isopropylamine salt	20 gallons				
	Squelch	bensulide	59.5 gallons			X	
	Chem Weed	MCP	5 gallons	X			

Everett School District reported using three products that WTC considers to be high hazard pesticides. One of these products, the herbicide Trailblazer, was used in fairly large amounts (334 gallons — amounts are for total mixed product, including concentrate and any water or adjuvants). The district notes that no pesticides are used inside buildings, which is a significant step towards protecting children’s health. The district also has an IPM program and focuses on identifying non-chemical control options. The district notes that they currently are using mechanical removal for ants, water blasting and mechanical removal for stinging insects, trapping with cheese or peanut butter for rodents, and volunteers to assist with removing unwanted vegetation.



A Lesson in Prevention

Evergreen

23,369 students
10 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
☠	Speed Zone	dicamba; 2,4-D; carfentrazone-ethyl; MCPP-p		X	X		X
	RazorPro	glyphosate					
☠	Pendulum	pendimethalin		X			
☠	Crossbow	2,4-D; triclopyr		X	X		
	Contrac	bromadiolone					
☠	Cy-Kick CS	cyfluthrin				X	
☠	Demand	lambda-cyhalothrin				X	
	Generation	difethialone					
☠	Maxforce FC	fipronil		X			
☠	Micro Care	pyrethrins; piperonyl butoxide; n-octyl bicycloheptene dicarboximide		X		X	
☠	Precor 2000	s-methoprene; permethrin			X	X	
☠	Suspend SC	deltamethrin				X	
☠	Talstar F	bifenthrin		X		X	X

Evergreen School District reported using ten products that WTC considers to be high hazard pesticides. As no amounts were included in their survey, it is difficult to fully assess their pest-control program.

Federal Way

22,449 students
7 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup Pro	glyphosate isopropylamine salt					
☠	Surflan a.s.	oryzalin		X			
☠	Trimec	dicamba; 2,4-D, 2-ethylhexyl ester; 2,4-Dp-p, isooctyl ester		X	X		X
☠	Cynoff	cypermethrin		X	X	X	
☠	Snapshot 2.5TG	trifluralin; isoxaben		X	X		
☠	Wasp Freeze	d-trans allethrin; phenothrin				X	
☠	Crossbow	2,4-D; triclopyr		X	X		
	De-moss	potassium laurate					
☠	Dragnet	permethrin			X	X	

Federal Way School District reported using seven products that WTC considers to be high hazard pesticides. This district did not have an annual use summary compiled as required under state law,

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



and asked us to pay for copies of their entire application database if we wanted access to this public information. The application database used by the district contains incomplete information and often notes that applications were made in amounts of “zero.”

Ferndale

5,304 students

6 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
☠	Synoss W. P.	cypermethrin		X	X	X	
☠	Pro Exterminator Ant Killer	deltamethrin; s-bioallethrin				X	
☠	Pro Exterminator Crawling & Flying Insect Killer	pyrethrins; piperonyl butoxide		X		X	
☠	Pro Exerminator Wasp, Hornet, and Yellow Jacket Killer	tetramethrin; phenothrin	24 cans	X		X	
☠	Crossbow	2,4-D; triclopyr	approx 15 gallons (conc)	X	X		
	Roundup	glyphosate isopropylamine salt	approx 30 gallons (conc)				
☠	Weed B Gone (Trimec)	dicamba; MCPP; 2,4-D	approx 50 gallons (conc) (250 acres)	X	X		X

Ferndale School District reported using six products that WTC considers to be high hazard pesticides. The district is attempting to cut down on chemical use and is using rodent traps and cultural control methods in some areas.

Highline

17,735 students

1 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Advance Bait	sulfuramid	Weekly check				
	Contrac Blox	bromadiolone	monthly				
☠	Wasp Freeze	d-trans allethrin; phenothrin	as needed			X	
	Roundup Pro	glyphosate isopropylamine salt	spot spray at closed sites only				

Highline School District reported using one product that WTC considers to be a high hazard pesticide. The district notes that they are formalizing an IPM policy for the district, and that they attempt to not spray play areas except during the summer when schools are closed. A variety of non-chemical methods are also utilized, including: hand removal of weeds, mulch, mowing, overseeding, hand removal of tent caterpillars, keeping food handling and storage areas clean, emptying trash containers, and general cleanliness. This is a significant change from our survey in 1998 in which the district reported using 23 pesticide products, seven of which were high hazards.



A Lesson in Prevention

Issaquah

14,759 students

4 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Clearout	glyphosate isopropylamine salt	931 gallons				
	Garlon	triclopyr	549 gallons				
☠	Surflan	oryzalin	518 gallons	X			
	Roundup	glyphosate isopropylamine salt	1 gallons				
☠	Snapshot	trifluralin; isoxaben	182.96 lbs	X	X		
☠	Wasp Freeze	d-trans allethrin; phenothrin	48 oz			X	
	Advance Carpenter Ant Bait	sufluramid	22 lbs				
	Contrac Rodent Bait	bromadiolone	288 oz				
☠	ULD BP 100 (Fogging)	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	2 qts	X		X	

Issaquah School District reported using four products that WTC considers to be high hazard pesticides. One is a fogger, which has particular dangers for children's health. Foggers disseminate the product throughout a room, and the chemicals can coat every object in the room. Some of the products used by the are in exceptionally high amounts (Clear Out: 931 gallons, Garlon: 549 gallons). While differences in reporting make it difficult to compare amounts between districts, Issaquah's amounts appear much higher than for other districts surveyed. The amounts reported are for mixed product (concentrate plus water). The district notes that no products are used when children are present. The district has developed an IPM program that focuses on pest prevention and appears to have reduced pesticide-use amounts to some degree since our 1998 survey. They note that they are manually removing weeds with summer help and using a weed burner on hard surfaces such as asphalt, curbs, and concrete.

Kelso

5,306 students

7 High Hazard Pesticides






High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
☠	Misty Anti-Crawl Residual Insecticide	n-octyl bicycloheptene dicarboximide; propoxur; piperonyl butoxide; pyrethrins	60 oz (4 cans)	X		X	
☠	Casoron 4G	dichlobenil	183 lbs	X			
☠	Crossbow	2,4-D; triclopyr	50 gallons	X	X		
☠	Mec Amine D	2,4-D dimethylamine salt; dicamba; MCPP	304 gallons	X	X		X
☠	Pro Exterminator	deltamethrin; s-bioallethrin	87.5 oz (5 cans)			X	
☠	Proxy	ethephon	100 gallons			X	
	Razor Pro	glyphosate	26 gallons				
	Roundup Pro	glyphosate isopropylamine salt	236 gallons				
☠	Triple S Insect Fogger	pyrethrins; piperonyl butoxide; permethrin	12 oz (2 cans)	X		X	

Kelso School District reported using seven products that WTC considers to be high hazard pesticides. Several of these products are used in fairly large amounts (amounts reported above are for total product applied — concentrate plus water and adjuvants). The district notes that they include some basic non-chemical controls, such as hand-pulling weeds, using string trimmers, building turf health, and pressure washing.

Kennewick

14,698 students

5 High Hazard Pesticides






High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Spray PAK Insect Killer	pyrethrins; permethrin; piperonyl butoxide		X	X	X	
	Spray PAK wasp/bee/hornet	tetramethrin; phenothrin		X		X	
	Crawling Insect Killer	d-trans allethrin; n-octyl bicycloheptene dicarboximide; permethrin		X	X	X	
	Casoron 4g	dichlobenil		X			
	Roundup Ultra	glyphosate isopropylamine salt					
	Arsenal	imazapyr					
	Chaser 2 amine	2,4-D; triclopyr		X	X		
	Dimension ultra	dithiopyr					

Kennewick School District reported using five products that WTC considers to be high hazard pesticides. At the time the district submitted their survey (promptly), they were still in the process of reviewing records, so no amounts were included. The district notes efforts to “maintain a healthy and full turf to keep weeds out,” as well as work to “replace door sweeps to keep bugs out,” and attempting to keep kitchens cleaner to prevent pest problems. The district has an IPM policy that states in its introduction that it “emphasizes prevention and common sense strategies rather than responding to a pest nuisance with pesticides.” However, nothing within the rest of the policy discusses any further what preventative or non-chemical methods are to be used beyond “normal cleaning methods.” The policy lays out the procedures for using pesticides, but not for using alternatives.

Kent

26,694 students

5 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt	10 gallons (conc)				
	Gallery	isoxaben	6 gallons (conc)	X			
	Garlon 3A	triclopyr	5 gallons (conc)				
	Casoron 4g	dichlobenil	300 lbs	X			
	Pendulum	pendimethalin	30 lbs	X			
	Embark	mefluidide diethanolamine salt	1 gallon (conc)				
	Trimec	dicamba; 2,4-D, 2-ethylhexyl ester; 2,4-Dp-p, isooctyl ester	1 pint (conc)	X	X		X
	Wasp Spray	tetramethrin; phenothrin	36 cans	X		X	



A Lesson in Prevention

Kent School District reported using five products that WTC considers to be high hazard pesticides. The district notes that “whenever practical, treatments will be at times when school is not in session.” The district has adopted IPM procedures, focusing on using least-toxic controls and pest prevention.

Lake Washington

24,098 students



13 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Drione	piperonyl butoxide; silica gel; pyrethrins	43 oz	X		X	
	Gallery	isoxaben	52.5 lbs	X			
	Norasac	dichlobenil	150 lbs	X			
	Surflan	oryzalin	19 gallonss.	X			
	Casaron	dichlobenil	12 lbs	X			
	Pendulum	pendimethalin	19.5 qts.	X			
	Razor	glyphosate	73.18 gallonss.				
	Crossbow	2,4-D; triclopyr	80 oz	X	X		
	Stinger	phenothrin; tetramethrin	24 cans	X		X	
	Wasp Freeze	d-trans allethrin; phenothrin	13 oz			X	
	565 Plus	pyrethrins; d-trans allethrin, piperonyl butoxide; n-octyl bicycloheptene dicarboximide	32 1/2 oz	X		X	
	Terro Ant Kill	borax	8 oz plus 32 c.c.s.				
	Tempo	cyfluthrin	1 gallons 91 oz			X	
	Tempo SC-Ultra	cyfluthrin	17 gallons 15 oz			X	
	BP-100	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	15 oz	X		X	
	B. t. Briquets	bacillus thuringiensis	60 Briquets				

Lake Washington School District reported using 13 products that WTC considers to be high hazard pesticides. While the district has adopted an IPM policy and notes use of non-chemical methods, there does not seem to be any decrease in pesticide use since our 1998 survey. One school, Carl Sandburg Elementary, continues to be herbicide-free, due to the work of some parents of children within that school.

Longview





7,506 students
2 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Wasp/hornet jet spray	propoxur; n-octyl bicycloheptene dicaboximide; piperonyl butoxide; pyrethrins	17 cans @ 13.5 oz each	X		X	
	Just One Bite	bromadiolone	42 packages @ 1.5 oz each				
	Crossbow	2,4-D; triclopyr	14 gallons	X	X		
	Roundup	glyphosate isopropylamine salt	25 gallons				

Longview School District reported using two products that WTC considers to be high hazard pesticides. These products appear to be used in fairly moderate amounts. The signage used by the district to identify application sites is particularly notable, as it is large (8.5 x 11), includes the word “WARNING” at the top of the posting, and clearly notes: “Pesticide Treated Area Keep Off.” The sign also has a graphic reinforcing that people and pets should stay away from areas that have been treated with pesticides. This sign is much more obvious and explanatory than those used in other districts.

Marysville

12,009 students
4 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt					
	Crossbow	2,4-D; triclopyr		X	X		
	Triplet	dicamba; 2,4-D; MCPP		X	X		X
	Enforcer Hornet Spray	tetramethrin; phenothrin		X		X	
	Just One Bite Rodent Treatment	bromadiolone					
	Tempo SC Ultra	cyfluthrin				X	

Marysville School District reported using four products that WTC considers to be high hazard pesticides. The district notes that they use some non-chemical methods as well, including weed eaters, hand weeding, and bark as mulch.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See “High Hazard Pesticides” on page 6 for full explanations.



A Lesson in Prevention

Mead

8,510 students

5 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Horsepower	mcpa; triclopyr; dicamba	31 gallons	X			X
	Quick-Pro	glyphosate; diquat dibromide	8.56 gallons				
	Roundup	glyphosate isopropylamine salt	1.65 gallons				
	Surflan	oryzalin	7.56 gallons	X			
	Top-Site	diuron; imizapyr	45 lbs	X			X
	Uld BP-100	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide		X		X	
	Dragnet	permethrin			X	X	

Mead School District reported using five products that WTC considers to be high hazard pesticides. However, the amounts indicated above are only for six months, April-September of 2003. While this may encompass most or all of the applications made during a school year, it is unclear from the information provided.

Monroe

6,226 students

8 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Roundup	glyphosate isopropylamine salt	141 gallons				
	Crossbow	2,4-D; triclopyr	141 gallons	X	X		
	Confront	triclopyr; clopyralid	3 gallons				
	Wasp & Hornet spray	tetramethrin	43 oz	X		X	
	Monobor-chlorate	sodium metaborate tetrahydrate	85 lbs				
	Crawling Insect Killer II	d-trans allethin; n-octyl bicycloheptene dicarboximide; chlorpyrifos	100 linear feet of spray	X		X	
	Mec Amine D	2,4-D dimethylamine salt; dicamba; MCPP	6 gallons	X	X		X
	Termidor SC	fipronil	Unknown, by contract service	X			
	Casoron 4g	dichlobenil	55 lbs	X			
	Power Zone	dicamba; mcpa; carfentrazone-ethyl; MCPP-P	by contractor	X			X

Monroe School District reported using eight products that WTC considers to be high hazard pesticides. The district notes that they contract with two pesticide applicators and it is unclear whether or

not this list includes applications made by these companies. The district notes that they attempt to clean areas by hand and have an increased tolerance of pests.

Moses Lake

6,812 students

15 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
(H)	Tempo 60 Ultra	cyfluthrin, beta	1 gallon			X	
(H)	Tempo 20 WP	cyfluthrin	15.25 gallons; and with Vapon 2, 4.2 gallons + 15 oz			X	
	Dual Choice Ant Baits	sulfluramid	691.35 oz				
	Generation Mini Blocks	difethialone	30.4 oz (+ 2 applications of unknown amounts)				
(H)	Maxforce Ant Gell	fipronil	312.72 grams	X			
(H)	Advance 375A"G"	abamectin b1 (avermectin)	65.5 oz				X
	388B Advance Ant Gell	borax (sodium tetraborate decahydrate)	46 grams				
(H)	CB-38 Extra	pyrethrins; piperonyl butoxide	3 oz	X		X	
(H)	Wasp Freeze	d-trans allethrin; phenothrin	36 oz			X	
(H)	Vapon 2	ddvp	with Tempo 20 WP - 4.2 gallons + 15 oz	X		X	
(H)	Tempo Ultra WP	cyfluthrin, beta	12 gallons (with surfactant R-41)			X	
(H)	Ficam D #5	bendiocarb	13 oz			X	X
(H)	Maxforce Roach Bait	fipronil	1.25 oz	X			
(H)	Suspend SC	Deltamethrin	2 gallons			X	
(H)	Hi-Dep	2,4-D diethanolamine salt; 2,4-D dimethylamine salt	8.7 gallons	X	X		
(H)	Turflon II Amine	2,4-D; triclopyr	26.2 gallons	X	X		
	Roundup Pro	glyphosate isopropylamine salt					
(H)	Casoron 4G	dichlobenil		X			
(H)	Trimec Plus	msma; dicamba; 2,4-D; MCPP-p		X	X		X

Moses Lake School District reported using 15 products that WTC considers to be high hazard pesticides. The district notes that they utilize some non-pesticide techniques including insect monitor traps. The district also notes that herbicide applications are only made during school breaks.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



A Lesson in Prevention

Mukilteo

13,865 students

8 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt	202 gallons				
☠	Gallery	isoxaben	165 gallons	X			
☠	Crossbow	2,4-D; triclopyr	15 gallons	X	X		
	Burn Out	acetic acid	7 gallons				
☠	Snap Shot 2.5	trifluralin; isoxaben	11 lbs	X	X		
☠	BP 100 (Fly Fogger)	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	89 oz (fog)	X		X	
☠	Dragnet	permethrin	1 gallons		X	X	
☠	Drione	piperonyl butoxide; silica gel; pyrethrins	1 oz	X		X	
☠	Tempo 20 W	cyfluthrin	4 gallons			X	
☠	Tempo SC	cyfluthrin	4.6 gallons			X	
	Dormant Oil (Supreme Oil 98 or Hort Oil 98-2)	mineral oil	2 gallons				

Mukilteo School District reported using eight products that WTC considers to be high hazard pesticides. This is a similar number of hazardous products they reported in our 1998 survey. The application amounts listed in the table above are for total mixed product applied, not for concentrated amounts. The district has adopted a general IPM program that indicates focus on pest prevention and monitoring. The district notes specifically using “competitive vegetation methods, some weed burning, use of vinegar/citric acid as a post-emergent, cultural and biological methods for insect control, (and) traps for rats.” One school in the district, Columbia Elementary, is pesticide-free and is maintained by dedicated PTA members, teachers, classes, administrators, and community members.

North Thurston

13,089 students

2 High Hazard Pesticides

High Hazard	Product Name	active ingredients	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Clearout	glyphosate isopropylamine salt	3.01 gallons				
☠	Crossbow	2,4-D; triclopyr	.62 gallons	X	X		
☠	Sting -X (Wasp/Bee Spray)	pyrethroid	42 cans			X	
	Mole Scoot (Deterrent)	castor oil	1.285 qt				
	Blackberry and Brush Remover	acetic/citric acid	10 gallons				

North Thurston School District reported using two products that WTC considers to be high hazard pesticides. One of these products was used in a minute amount. The district notes that they are using

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See “High Hazard Pesticides” on page 6 for full explanations.



mechanical weeding with crews and volunteers, and are “enforcing cleanup of rooms and work stations to mitigate insect attraction.” The district also notes that “most spraying is for perimeter maintenance — fencelines, curbs, etc.”

Northshore

20,181 students

9 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Borid (Tim-bor)	disodium octaborate tetrahydrate	16 oz weight				
	Contrac Blox	bromadiolone	366 oz weight				
☠	Cy-Kick CS	cyfluthrin	1602.5 oz liquid			X	
☠	Delta Dust (K-othrine dust)	deltamethrin	8 oz weight			X	
☠	Demand CS	lamdba-cyhalothrin	2032 oz liquid			X	
☠	Drione	piperonyl butoxide, silica gel, pyrethrins	6.5 oz weight	X		X	
	Fastrac	bromethalin	46.5 oz weight				
☠	Ficam d	bendiocarb	9 oz weight			X	X
☠	Ficam w	bendiocarb	64 oz liquid			X	X
☠	Talstar F	bifenthrin	96 oz liquid	X		X	X
☠	Tempo	cyfluthrin	32 oz liquid; 35 oz weight			X	
☠	Termidor	fipronil	256 oz liquid	X			
	Top Gun	bromethalin	8 oz weight				

Northshore School District reported using nine products that WTC considers to be high hazard pesticides. None of the products reported are herbicides, although the only information provided was from a company contracted by the district, and not the district staff. In our 1999 report we noted that Westhill Elementary was mostly no-spray, but it is unclear whether or not this continues to be true.

Oak Harbor

6,153 students

No High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Timbor	disodium otaborate tetrahydrate	1 lb				
	EcoExempt HC	eugenol (clove oil); 2 phenethyl propionate	4 gallons				
	Roundup	glyphosate isopropylamine salt	2 gallons				

Oak Harbor School District reported using no products that WTC considers to be high hazard pesticides. In 2002, the district adopted a policy that eliminates the use of any such products. For more information on this policy and the implementation of it, see the section in the text titled “Leading the Way” on page 13.



Olympia

8,991 students

8 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Pre-Empt	imidacloprid	3 oz				
☠	Uld-BP 300	n-octyl bicycloheptene dicarboximide; piperonyl butoxide; pyrethrins	5 oz	X		X	
☠	Ficam	bendiocarb	3 oz			X	X
?	D-Con	brodifacoum OR warfarin	20 boxes				
☠	Ant Stop Spray (Ortho Ant Stop Ant Killer Spray)	tetramethrin; permethrin	6 cans	X	X	X	
☠	Green Thumb Wasp Spray	resmethrin	11 cans				X
☠	Moss Out for roof	zinc chloride	7 qt				X
	Killz All	glyphosate	3 gallons				
	Victor Roach Killing Power	boric acid					
☠	Raid Wasp & Hornet	tetramethrin; permethrin	16 cans	X	X	X	
☠	Home Insect Fogger	tralomethrin	4 cans			X	
☠	Speedzone	dicamba; 2,4-D; carfentrazone-ethyl; MCPP-p	.5 gallons	X	X		X

Olympia School District reported using eight products that WTC considers to be high hazard pesticides. Amounts listed above are for concentrate. The district notes that they are using bark mulch, molasses, and a wasp collection service as well. The district has a school pest management policy that includes a focus on education, IPM, and use of least-toxic products. The policy dictates that all pesticide applications must be approved by the Director of Facilities and Operations or the Director of Vocational Education, that no pesticides are to be applied on a preset schedule, and that “efforts shall be made to avoid the use of pesticides on days when schools are in session.” Two elementary schools in the district, Lincoln and Columbia, have been pesticide-free for several years.

Puyallup

20,454 students

16 High Hazard Pesticides

(table on next page)

Puyallup School District reported using 16 products that WTC considers to be high hazard pesticides. While the district has an IPM policy and reports using several non-chemical pest management methods — poison-free wasp and hornet killer, manual control of weeds in shrub beds, monitoring of insect problems with sticky traps, and use of bait stations for most ant problems — they are still using fairly large amounts of pesticides.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See “High Hazard Pesticides” on page 6 for full explanations.



Puyallup

(text on previous page)

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt	13.03 gallons				
	Mirage	glyphosate	6.52 gallons				
	Finale	glufosinate-ammonium	1.09 gallons				
☠	Krovar IDF	bromacil; diuron	21.3 lbs	X			X
☠	Casoron	dichlobenil	435 lbs	X			
☠	Ronstar 50	oxadiazon	20 lbs	X			X
☠	Treflan	trifluralin	6 lbs	X	X		
☠	Surflan	oryzalin	1.91 gallons	X			
☠	Supertrimec	2,4-D, 2-ethylhexyl ester; dicamba; 2,4-Dp-p, isooctyl ester	.55 gallons	X	X		
	Confront	triclopyr; clopyralid	1.13 gallons				
☠	Crossbow	2,4-D; triclopyr	9.3 gallons	X	X		
☠	Wasp Freeze	d-trans allethrin; phenothrin	1.59 gallons			X	
☠	Stinger	phenothrin, tetramethrin	3.57 gallons	X		X	
☠	AMP flying insect killer	pyrethrins; permethrin; n-octyl bicycloheptene dicarboximide	22 oz	X	X	X	
☠	Talstar	bifenthrin	10 lbs	X		X	X
☠	Dragnet	permethrin	2.56 oz		X	X	
☠	Dursban pt-270	chlorpyrifos	10 oz			X	
	Contrac Blox	bromadiolone	8.11 lbs				
☠	Ficam D	bendiocarb	2.5 lbs			X	X
☠	Maxforce Ant Bait Stations	fipronil	113 stations=5.98 oz	X			
	Premise 2	imidacloprid	4 mL				
☠	Suspend SC	deltamethrin	1.5 oz			X	
	Victor poison-free wasp and hornet killer	mint oil					

Renton

13,100 students

7 High Hazard Pesticides

(table on next page)

Renton School District reported using seven products that WTC considers to be high hazard pesticides. The district states that it only applies pesticides when students are not present and reports using IPM operating principles. Specifically in turf maintenance, the district reports using turf health-building methods such as overseeding, aeration, pH control, and fertilization.



Renton

(text on previous page)

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt	11.66 gallons				
☠	Speed Zone	dicamba; 2,4-D; carfentrazone-ethyl; MCPP-p	5 gallons	X	X		X
☠	Pennant	metolachlor	54 fluid oz	X			
☠	Trimec	dicamba; MCPP; 2,4-D	42 fluid oz	X	X		X
	Ferrous Sulfate	ferrous sulfate	240 lbs				
☠	Dragnet	permethrin	1 gallons		X	X	
☠	BP 100	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	3 oz	X		X	
☠	Tempo SC	cyfluthrin	6 gallons			X	
☠	PT 565	d-trans allethin; n- octyl bicycloheptene dicarboximide; piperonyl butoxide; pyrethrins	4 oz	X		X	

Richland

9,800 students

2 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup Pro	glyphosate isopropylamine salt	50 gallons				
☠	Weedar 64	2,4-D	20 gallons	X	X		
☠	Surflan a.s.	oryzalin	30 gallons	X			

Richland School District reports using two products that WTC considers to be high hazard pesticides. This report does not appear to include any insecticides the district may use.

Seattle

47,853 students

10 High Hazard Pesticides

(table on next page)

Seattle School District reported using ten products that WTC considers to be high hazard pesticides. The district has an IPM policy, and since the 1998 survey the district has eliminated the use of several dangerous herbicides. The district also now uses some least-toxic products as well as non-chemical management methods including mulching, corn gluten, flaming, volunteer weeding, and turf renovation. However, there continues to be use of many hazardous insecticides. The district notes that some areas are either pesticide-free or have only least-toxic products used.

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



Seattle

(text on previous page)

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
☹️	Misty Wasp and Hornet Killer	propoxur; pyrethrins; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	12 oz	X		X	
	Generation	difethialone	2,398 blocks				
☹️	Seige	hydramethylon	15 grams	X			X
	Gentrol Pointsource (Roach control)	(7s)-hydroprene	5 stations				
☹️	Max Force	hydramethylon	17 stations	X			
☹️	Suspend SC	deltamethrin	24 gallons			X	
	Talon weatherblok	brodifocoum	914 blocks				
☹️	Talstar	bifenthrin	96 gallons	X		X	X
	Terro Ant Killer II	borax (sodium tetraborate decahydrate)	21 bait stations				
☹️	Cynoff WP	cypermethrin	11.25 gallons	X	X	X	
☹️	Ficam-D	bendiocarb	4 oz			X	X
☹️	CB-40	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	26 oz	X		X	
	Blackberry Block	acetic acid	40 gallons				
	Roundup Pro	glyphosate isopropylamine salt	1.13 gallons				
☹️	Wasp Freeze	d-trans allethrin; phenothrin	280 oz			X	
☹️	Croc-Block Hornet and Wasp Killer	piperonyl butoxide; tetramethrin; permethrin	13 oz	X	X	X	

Shoreline

10,099 students

6 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt	1539 gallons				
☹️	Crossbow	2,4-D; triclopyr	950 gallons	X	X		
☹️	Trimec Encore	dicamba; mcpa; MCPP	1089 gallons	X			X
☹️	Barricade	prodiamine	3.75 lbs	X			
☹️	Gallery	isoxaben	3 lbs	X			
☹️	Tordon RTU	picloram; 2,4-D	16 oz	X	X		
☹️	Casoron 4G	dichlobenil	376 lbs	X			
	B.t.	Bacillus thuringiensis	2.5 gallons				



A Lesson in Prevention

Shoreline School District reported using six products that WTC considers to be high hazard pesticides. Some pesticide products are used in very high amounts (Roundup: 1539 lbs.; Crossbow: 950 gallons; Trimec Encore: 1089 gallons; Casoron: 376 lbs.). The district does report that this pesticide use will not be representative of most years, as the previous year had brought serious budget and staff constraints, and regular maintenance could not be accomplished. No fungicides or broad-spectrum insecticides are used. The district has an adopted IPM policy with general guidelines.

Snohomish

8,991 students

7 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
☹️	Crossbow	2,4-D; triclopyr	15000 square feet covered	X	X		
	Roundup	glyphosate isopropylamine salt	15000 square feet covered				
☹️	Trimec Classic Broadleaf Herbicide	dicamba; MCPP; 2,4-D	5000 square feet covered	X	X		X
☹️	Claire Fastkill III Residual Roach & Ant Killer	piperonyl butoxide; tetramethrin; permethrin	6 square feet covered	X	X	X	
☹️	Claire Golden Jot Bee & Wasp & Hornet Killer	malathion; piperonyl butoxide; pyrethrins; ddvp	4 square feet covered	X	X	X	
☹️	Rapid Roach & Flea Fogger	n-octyl bicycloheptene dicarboximide; piperonyl butoxide; pyrethrins; tetramethrin;	1200 square feet covered	X		X	
☹️	Ortho Hornet & Wasp Killer	sumithrin (phenothrin); tetramethrin	12 square feet covered	X		X	
☹️	Ortho Home Defense Hi-power Brand Indoor Insect Fogger	permethrin; n-octyl bicycloheptene dicarboximide	1200 square feet covered	X	X	X	

Snohomish School District reports using seven products that WTC considers to be high hazard pesticides. The district notes that hand removal of weeds is a priority over chemical control.

South Kitsap

11,169 students

7 High Hazard Pesticides

(table on next page)

South Kitsap School District reported using seven products that WTC considers to be high hazard pesticides. Of these, three are used exclusively in bait stations, and several of the products were used in fairly small amounts. The district notes sealing “opening around windows and doors,” using “plastic bags on any hanging bee nests that can be safely handled,” and removing food sources that may attract pests. The district has also recently begun to work with the State Working Group on IPM in Schools to implement IPM at one school in the district.



South Kitsap

(text on previous page)

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup Pro	glyphosate isopropylamine salt	299.5 gallons				
☠	Spray PAK Wasp and Bee	tetramethrin; phenothrin	967.5 oz	X		X	
☠	Surflan a.s.	oryzalin	100 gallons	X			
	Contrac	bromadiolone	15 oz				
	Fastrac	bromethalin	10 oz				
	Top Gun	bromethalin	63 oz				
☠	Suspend SC	deltamethrin	512 oz			X	
☠	Termidor	fipronil	576 oz	X			
☠	Demand CS	lambda-cyhalothrin	128 oz			X	
☠	BP-100	pyrethrin; piperonyl butoxide; n-octyl bicycloheptene dicarboximide	8 oz	X		X	
	Premise 2	imidacloprid	32 oz				
☠	Cy-Kick CS	cyfluthrin	960 oz			X	

Spokane

31,362 students

8 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
☠	Horsepower	mcpa; triclopyr; dicamba	16,932 gallons	X			X
	Gly Star	glyphosate	18,535 gallons				
☠	Maxforce bait	fipronil	25.5 oz	X			
☠	Tempo SC Ultra	cyfluthrin	7.9 gallons			X	
☠	Tempo 20 WP	cyfluthrin	8.5 cups			X	
☠	Top Site Soil Sterilant	diuron; imazapyr	120 lbs	X			X
☠	Ortho indoor fogger	pyrethrins; permethrin	50 oz	X	X	X	
☠	Casoron 4G	dichlobenil	254 lbs	X			
	Wil-Grow Hort Oil 98-8	mineral oil	2012 gallons				
☠	Vikor wasp and Hornet Spray	tetramethrin; permethrin; piperonyl butoxide	30 oz	X	X	X	

Spokane School District reported using eight products that WTC considers to be high hazard pesticides. The district has adopted IPM procedures, and has established clear guidelines for where and when each listed pesticide can be used. However, the district includes several particularly hazardous pesticides on their possible use list, including the neurotoxic carbamate insecticide carbaryl. The

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



A Lesson in Prevention

district has also identified a clear list of non-chemical controls to be used for weeds, rodents, and other pests. The district is attempting to notify parents of any planned pesticide application, through establishing a notification registry system and also posting planned applications on school reader boards.

Stanwood-Camano

5,559 students

3 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Cornerstone	glyphosate					
	Razor	glyphosate					
	Crossbow	2,4-D, triclopyr		X	X		
	Speed Zone	dicamba; 2,4-D; carfentrazone-ethyl; MCPP-p		X	X		X
	Casoron 4g	dichlobenil		X			

Stanwood-Camano School District reported using three products that WTC considers to be high hazard pesticides. The district has established an “Herbicide Application Procedure” that notes “Spraying is never to occur when school is in session,” that the Maintenance Supervisor must be notified prior to any application, and that IPM will be used.

Sumner

7,984 students

9 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Roundup Pro	glyphosate isopropylamine salt	102 gallons				
	Razor	glyphosate	13.76 gallons				
	Casoron 4g	dichlobenil	260 lbs	X			
	Diuron	diuron	88.13 lbs	X			X
	Maki paraffin block	bromodiolone	42 oz				
	Suspend SC	deltamethrin	3.188 gallons			X	
	Talon weather block	brodifocoum	42 oz				
	AMP Crawling Insect Killer	d-trans allethrin; permethrin; n-octyl bicycloheptene dicarboximide	14 oz	X	X	X	
	Delta Dust (K-othrine dust)	deltamethrin	11 oz			X	
	Micro-Gel ULD	pyrethrin; piperonyl butoxide	4 oz	X		X	
	Fast Kill	n-octyl bicycloheptene dicarboximide; diazinon; piperonyl butoxide; pyrethrins	12 oz	X		X	X
	NiBan	boric acid	3.5 oz				
	Ficam W	bendiocarb	4.5 gallons			X	X
	Diazinon 50 W	diazinon	3 gallons			X	X

Sumner School District reported using nine products that WTC considers to be high hazard pesticides.



Sunnyside

5,657 students
6 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
☠	Pendulum	pendimethalin		X			
☠	Gallery	isoxaben		X			
	Roundup Original	glyphosate isopropylamine salt					
☠	Turflon II	2,4-D; triclopyr		X	X		
☠	Amine 2,4-D	2,4-D		X	X		
	Reward	diquat dibromide					
☠	Weedar	2,4-D		X	X		
	Finale	glufosinate-ammonium					
☠	Snapshot 2.5TG	trifluralin; isoxaben		X	X		
	Rozal Paraffinized pellets	chlorophacinone					
	Fort Dodge Gopher Bait	strychnine					

Sunnyside School District reported using six products that WTC considers to be high hazard pesticides. It is unclear whether this includes applications made by contracted pest control operators. The district notes using string trimmers, hand pulling and shovels, and gopher traps.

Tacoma

33,955 students
8 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
☠	Casoron 4g	dichlobenil	7,288 lbs	X			
☠	Ortho Wasp & Hornet Spray	sumithrin (phenothrin); tetramethrin	11 cans	X		X	
	Roundup	glyphosate isopropylamine salt	1,329 gallons (applied with Krovar)				
☠	Krovar	bromacil; diuron	1,329 gallons (applied with Round Up)	X			X
☠	Weed-N-Feed 25-3-5	dicamba; 2,4-D; MCPP- p	775 lbs	X	X		X
☠	Zinc Sulfate Monohydrate	zinc sulfate monohydrate	85 lbs				X
☠	Avert Dry Flowable Crack & Crevice Coackroach	ivermectin	14 grams				X
	Contrac All-Weather Blox	bromadiolone	9 blks + 3 oz				
☠	Advance Granular Ant Bait	abamectin b1 (ivermectin)	1 tube + 2 grams				X
☠	Talstar Termiticide/Insecticide	bifenthrin	3 gallons	X		X	X

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See "High Hazard Pesticides" on page 6 for full explanations.



A Lesson in Prevention

Tacoma School District reported using eight products that WTC considers to be high hazard pesticides. Some of these products were used in extremely high amounts (Casoron: 7,288 lbs.; Krovar (with glyphosate): 1,329 gallons), especially considering that the amounts given were only for July-December 2002. A few products were listed as used during the entire school year on another use list (Avert Dry Flowable Crack and Crevice Cockroach, Advance Granular Ant Bait, Contrac All-Weather Blox, Talstar Termiticide/Insecticide). This may represent the bulk of applications for the year, but it is unclear from the information provided. The district does have an IPM program, which notes no pesticides are to be applied without prior approval and that no pesticides are to be applied on a pre-set schedule. The district also reported using 25,961 pounds of fertilizer.

Tahoma

6,272 students

No High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Fruit Fly and Insect Glue Trap						
	Super Glue Board						
	Trapper Monitor and Insect Trap						
	Pheromone Traps						

Tahoma School District reported using no products that WTC considers to be high hazard pesticides. For more information on this district's practices, see the section in the text titled "Leading the Way" on page 13.

Tumwater

6,150 students





14 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
☠	Weedar 64	2,4-D		X	X		
☠	Chaser Turf Herbicide	2,4-D; triclopyr		X	X		
☠	Mecomec 4	MCPP		X			
☠	Casoron 4g	dichlobenil		X			
☠	Snap Shot 2.5	trifluralin; isoxaben		X	X		
	Confront	triclopyr; clopyralid					
☠	Gallery 75	isoxaben		X			
	Roundup Pro	glyphosate isopropylamine salt					
☠	Surflan a.s.	oryzalin		X			
☠	Cy-kick	cyfluthrin	21.25 gallons			X	
	Drax Gel Bait (Roach kill gel)	boric acid	30 grams				
☠	Drione dust	piperonyl butoxide; silica gel; pyrethrins	5 oz	X		X	
☠	Max Force Ant Gel	fipronil	20 grams	X			
☠	Suspend SC	deltamethrin	.5 gallons			X	
☠	Talstar FL	bifenthrin	18 gallons	X		X	X
☠	Termidor	fipronil	2 gallons	X			
☠	565 Plus	pyrethrins; d-trans allethrin, piperonyl butoxide; dicarboximide, n-octyl bicycloheptene	5 oz	X		X	

Tumwater School District reported using 14 products that WTC considers to be high hazard pesticides. The district notes that they utilize some non-chemical pest management techniques such as door sweeps and sticky traps, removing garbage regularly, keeping food in tightly sealed containers, and adding exclusion lids to trash cans.

Vancouver











22,166 students
4 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Roundup	glyphosate isopropylamine salt	3,263.82 oz				
	Misty Bee Spray	tetramethrin; permethrin; piperonyl butoxide	189 oz	X	X	X	
	Misty	resmethrin	24 oz			X	X
	AC Formula 90 Rodenticide	chlorophacinone	48 packets				
	Quintox	cholecalciferol	160 grams				
	Demon EC	cypermethrin	5.5 oz	X	X	X	
	disodium octoborate tetrahydrate	disodium octoborate tetrahydrate	50 oz				
	Cy-Kick CS	cyfluthrin	2.5 gallons			X	

Vancouver School District reported using four products that WTC considers to be high hazard pesticides. In 2002, the district adopted a policy that eliminates the use of any such products except for specific circumstances, and has drastically reduced its pesticide use overall. For more information on this policy and its implementation, see the section in the text titled “Leading the Way” on page 13.

Walla Walla

6,215 students
10 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/Dev
	Tempo SC-Ultra	cyfluthrin	2624 oz			X	
	Dragnet SFR	permethrin	5440 oz		X	X	
	Talon W-Block	brodifocoum	40 grams				
	Suspend SC	deltamethrin	248 oz			X	
	Talstar	bifenthrin	10496 oz	X		X	X
	Carbaryl 4L	carbaryl	6400 oz	X	X	X	
	Max Force Ant Bait	fipronil	75 grams	X			
	Roundup Pro	glyphosate isopropylamine salt	10 gallons				
	Surflan AS (Ornamental)	oryzalin	7.5 gallons	X			
	Surflan AS (AG)	oryzalin	5 gallons	X			
	Weedar 64	2,4-D	6 gallons	X	X		
	Wil-Gro Triplet	dicamba; 2,4-D; MCPP	45 gallons	X	X		X

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
See “High Hazard Pesticides” on page 6 for full explanations.



A Lesson in Prevention

Walla Walla School District reported using ten products that WTC considers to be high hazard pesticides. The district notes that they are attempting to reduce pest problems by “keeping trash picked up, (and) using effective plantings.”

Wenatchee

7,402 students

3 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Scythe	nonanoic acid	576 oz				
☹	Casoron	dichlobenil	352 lbs	X			
☹	Horsepower	mcpa; triclopyr; dicamba	3 pints	X			X
	Roundup	glyphosate isopropylamine salt	1783 oz				
☹	Triple	dicamba; 2,4-D; MCPP- P	50 gallons	X	X		X

Wenatchee School District reported using three products that WTC considers to be high hazard pesticides. One of these products was used in fairly high quantities (Casoron: 352 lbs.).

Yakima

14,313 students

8 High Hazard Pesticides

High Hazard	Product Name	Active Ingredient(s)	Amount Used	Carc	Endo	Neuro	Repro/ Dev
	Roundup	glyphosate isopropylamine salt	1475 gallons				
☹	Maxforce FC Roach	fipronil	8.5 tubes	X			
☹	Avert	ivermectin	1 tube				X
☹	Tempo SC	cyfluthrin	10 oz			X	
☹	Suspend SC	deltamethrin	6 gallons 15 oz			X	
☹	Talstar PL	bifenthrin	4 oz	X		X	X
☹	Max Force Roach Killer	fipronil	.75 tube	X			
	Drax Ant Gel	boric acid	.25 tube				
☹	Intruder HPX	piperonyl butoxide; pyrethrins; cyfluthrin	8 oz	X		X	
	Phantom	chlorfenapyr	15 oz				
	Quicksilver	carfentrazone-ethyl	84 oz (conc)				
☹	Triamine II	mcpa; 2,4-D; MCPP	42.5 gallons (conc)	X	X		
			1782 gallons (total mixture of Quicksilver and Triamine II combined)				

Yakima School District reported using eight products that WTC considers to be high hazard pesticides. Some of these products are used in very high quantities; 1,782 gallons (concentrate only) of the herbicides Quicksilver and Triamine II were applied in mixture. The district notes that they are utilizing sticky traps for mice.



APPENDIX B: Health Impacts of Pesticides Used by School Districts

Active Ingredient	High Hazard	Carc	Endo	Neuro	Repro/Dev	Type of Product
(7s)-Hydroprene	No	Not listed	Not listed	No	Not listed	Insect Growth Regulator
2 Phenethyl Propionate	No	Not listed	Not listed	No	Not listed	Insecticide, Repellent
2,4-D, salts and esters	Yes	Possible (IARC)	Probable	No	Not listed	Herbicide
Abamectin B1 (Avermectin)	Yes	Not likely (EPA)	Not listed	No	Yes (U.S. TRI dev)	Insecticide
Acephate	Yes	Possible (EPA)	Not listed	Yes	Not listed	Insecticide
Acetic Acid	No	Not listed	Not listed	No	Not listed	Herbicide
Acetic/Citric Acid	No	Not listed	Not listed	No	Not listed	Herbicide
Bacillus thuringiensis	No	Not listed	Not Evaluated	No	Not listed	Insecticide
Bendiocarb	Yes	Not likely (EPA)	Not listed	Yes	Yes (U.S. TRI repro)	Insecticide
Bensulide	Yes	Not likely (EPA)	Not listed	Yes	Not listed	Herbicide
Bifenthrin	Yes	Possible	Not listed	Yes	Yes (U.S. TRI dev)	Insecticide
Borax (Sodium Tetraborate Decahydrate)	No	Unlikely	Not listed	No	Not listed	Insecticide, Herbicide
Boric acid	No	Unlikely	Not listed	No	Not listed	Insecticide
Brodifacoum	No	Not listed	Not listed	No	Not listed	Rodenticide
Bromacil	Yes	Possible	Not listed	No	Not listed	Herbicide
Bromadiolone	No	Not listed	Not listed	No	Not listed	Rodenticide
Bromethalin	No	Not listed	Not listed	No	Not listed	Rodenticide
Carbaryl	Yes	Possible (EPA)	Suspected	Yes	Not listed	Insecticide
Carfentrazone-ethyl	No	Not listed	Not listed	No	Not listed	Herbicide
Castor Oil	No	Not listed	Not listed	No	Not listed	Insecticide, Rodenticide, Insect Repellent
Chlorfenapyr	No	Unclassifiable (EPA)	Not listed	No	Not listed	Insecticide
Chlorophacinone	No	Not listed	Not listed	No	Not listed	Rodenticide
Chlorothalonil	Yes	Likely (EPA)	Not listed	No	Not listed	Fungicide
Chlorpyrifos	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Cholecalciferol	No	Not listed	Not listed	No	Not listed	Rodenticide
Clopyralid	No	Not likely (EPA)	Not listed	No	Not listed	Herbicide
Copper hydroxide	No	Not listed	Not listed	No	Not listed	Fungicide
Cyfluthrin	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Cyfluthrin, beta	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Cypermethrin	Yes	Possible (EPA)	Suspected	Yes	Not listed	Insecticide
DDVP	Yes	Possible (EPA)	Not listed	Yes	Not listed	Insecticide,
Deltamethrin	Yes	Unclassifiable	Not listed	Yes	Not listed	Insecticide
Diazinon	Yes	Not likely	Not listed	Yes	Yes (U.S. TRI dev)	Insecticide
Dicamba	Yes	Unclassifiable	Not listed	No	Yes (U.S. TRI dev)	Herbicide
Dichlobenil	Yes	Possible	Not listed	No	Not listed	Herbicide
Difethialone	No	Not listed	Not listed	No	Not listed	Rodenticide
Diquat dibromide	No	Not likely	Not listed	No	Not listed	Herbicide
Disodium octaborate tetrahydrate	No	Not listed	Not listed	No	Not listed	Insecticide

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EPA = U.S. Environmental Protection Agency; **IARC** = International Agency for Research on Cancer; **U.S. TRI** = U.S. Toxics Release Inventory;
CA = Listed as carcinogen by California Proposition 65; See "High Hazard Pesticides" on page 6 for full explanations.



Health Impacts of Pesticides Used by School Districts (Continued)

Active Ingredient	High Hazard	Carc	Endo	Neuro	Repro/Dev	Type of Product
Dithiopyr	No	Unlikely (EPA)	Not listed	No	Not listed	Herbicide
Diuron	Yes	Known/Likely (EPA)	Not listed	No	Yes (U.S. TRI dev)	Herbicide
D-trans allethrin	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Ethephon	Yes	Unclassifiable, inadequate data (EPA)	Not listed	Yes	Not listed	Plant Growth Regulator
Eugenol (Clove Oil)	No	Not listed	Not listed	No	Not listed	Repellent, Insecticide
Ferric sulfate (anhydrous)	No	Not listed	Not listed	No	Not listed	Herbicide
Ferrous sulfate	No	Not listed	Not listed	No	Not listed	Herbicide, Molluscicide
Fipronil	Yes	Possible (EPA)	Not listed	No	Not listed	Insecticide
Glufosinate-ammonium	No	Not listed	Not listed	No	Not listed	Herbicide
Glyphosate, salts and esters	No	Not likely	Not listed	No	Not listed	Herbicide
Hydramethylnon	Yes	Possible (EPA)	Not listed	No	Yes	Insecticide
Hydrogen peroxide	No	Not listed	Not listed	No	Not listed	Microbiocide, Fungicide, Herbicide, Rodenticide
Imazapyr	No	Unlikely (EPA)	Not listed	No	Not listed	Herbicide
Imidicloprid	No	Not likely	Not listed	No	Not listed	Insecticide
Isoxaben	Yes	Possible (EPA)	Not listed	No	Not listed	Herbicide
Lambda-cyhalothrin	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Lime-Sulfur	No	Not listed	Not listed	No	Not listed	Insecticide, Fungicide
Malathion	Yes	Suggestive (EPA)	Suspected	Yes	Not listed	Insecticide
MCPA	Yes	Possible (IARC)	Not listed	No	Not listed	Herbicide
MCPP (Mecoprop)	Yes	Possible (IARC)	Not listed	No	Not listed	Herbicide
MCPP-P (Mecoprop-P)	Yes	Possible (IARC)	Not listed	No	Not listed	Herbicide
Mefluidide diethanolamine salt	No	Not listed	Not listed	No	Not listed	Herbicide
Metolachlor	Yes	Possible (EPA)	Not listed	No	Not listed	Herbicide
Mineral Oil	No	Not listed	Not listed	No	Not listed	Insecticide, Adjuvant, Solvent
Mint Oil	No	Not listed	Not listed	No	Not listed	Insecticide
Myclobutanil	Yes	Unlikely (EPA)	Not listed	No	Yes (U.S. TRI repro and dev)	Fungicide
N-octyl bicycloheptene dicarboximide	Yes	Possible (EPA)	Not listed	No	Not listed	Insecticide synergist
Nonanoic acid	No	Not listed	Not listed	No	Not listed	Herbicide
Oryzalin	Yes	Likely (EPA)	Not listed	No	Not listed	Herbicide, Fungicide
Oxadiazon	Yes	Likely (EPA)	Not listed	No	Yes (U.S. TRI dev)	Herbicide
Pendimethalin	Yes	Possible (EPA)	Not listed	No	Not listed	Herbicide
Permethrin	Yes	Possible (EPA)	Suspected	Yes	Not listed	Insecticide
Phenothrin	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Picloram	No	Unlikely (EPA)	Not listed	No	Not listed	Herbicide
Piperonyl butoxide	Yes	Possible (EPA)	Not listed	No	Not listed	Insecticide synergist

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Health Impacts of Pesticides Used by School Districts (Continued)

Active Ingredient	High Hazard	Carc	Endo	Neuro	Repro/Dev	Type of Product
Potassium laurate (potassium salts of fatty acids)	No	Not listed	Not listed	No	Not listed	Adjuvant, Insecticide, Microbiocide, Fungicide, Soap/Surfactant
Prodiamine	Yes	Possible (EPA)	Not listed	No	Not listed	Herbicide
Propoxur	Yes	Probable (EPA)	Not listed	Yes	Not listed	Insecticide
Pyrethroid	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Pyrethrins	Yes	Likely (EPA)	Not listed	Yes	Not listed	Insecticide
Resmethrin	Yes	Not listed	Not listed	Yes	Yes (U.S. TRI repro and dev)	Insecticide
S-Bioallethrin	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Silica gel	Yes	Yes (CA)	Not listed	No	Not listed	Insecticide, Adjuvant, Fungicide, Microbiocide
S-Methoprene	No	Not listed	Not listed	No	Not listed	Insect Growth Regulator
Sodium chlorate	No	Not listed	Not listed	No	Not listed	Defoliant, Herbicide, Microbiocide
Sodium metaborate	No	Not listed	Not listed	No	Not listed	Insecticide
Strychnine	No	Not listed	Not listed	No	Not listed	Rodenticide, Avicide
Sulfluramid	No	Not listed	Not listed	No	Not listed	Insecticide
Sulfometuron methyl	No	Not listed	Not listed	No	Not listed	Herbicide
Sumithrin (Phenothrin)	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Tetramethrin	Yes	Possible (EPA)	Not listed	Yes	Not listed	Insecticide
Tralomethrin	Yes	Not listed	Not listed	Yes	Not listed	Insecticide
Triclopyr	No	Unclassifiable	Not listed	No	Not listed	Herbicide
Trifluralin	Yes	Possible (EPA)	Probable	No	Not listed	Herbicide
Triforine	Yes	Not listed	Not listed	No	Yes (TRI dev)	Fungicide, Insecticide
Urea	No	Not listed	Not listed	No	Not listed	Microbiocide, Fungicide
Warfarin	Yes	Not listed	Not listed	No	Yes (TRI dev)	Rodenticide
Zinc chloride	Yes	Not listed	Not listed	No	Yes (U.S. TRI repro and dev)	Microbiocide
Zinc Sulfate, monohydrate	Yes	Not listed	Not listed	No	Yes (U.S. TRI dev)	Herbicide

Carc = carcinogen; **Endo** = endocrine disruptor; **Neuro** = neurotoxic; **Repro/Dev** = reproductive or developmental toxic; **conc** = concentrate
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APPENDIX C: Resources

Many resources exist for schools interested in shifting toward more preventive and less toxic pest management and for community members interested in working with their districts on pesticide-related issues.

Passing Policies

Decreasing pesticide use is key to protecting our children’s health, but despite good intentions to simply reduce use, experience shows that adopted policies are necessary to ensure best practices in the long run. Adopted policies eliminate the use of the most hazardous pesticides, outline specific steps to solving pest problems, ensure complete implementation, and guarantee that pesticides will not be used even when changes in staff occur.

To assist community members in reducing pesticide use in schools, the Washington Toxics Coalition has created a Healthy Schools Pesticide Action Kit. It contains fact sheets, reference tables, and resource lists to help pass a strong policy for your local district. Copies are available from Washington Toxics by calling 800-844-SAFE or as downloadable PDF files at www.watoxics.org.

For further information about school pesticide use, or for assistance in passing a local pesticide reduction policy, contact the Washington Toxics Coalition at 1-800-844-SAFE or info@watoxics.org.

Model Schools Policy

The following policy captures the main elements of successful, least-toxic pest management for schools. These include:

- ❖ End the use of pesticides that either threaten our children’s health or may cause environmental harm.

- ❖ Establish least-toxic pest management as official district policy, and ensure that pesticides will not be used for purely aesthetic reasons.
- ❖ Notify all parents, teachers, and staff members prior to any pesticide use on school grounds.
- ❖ Establish a pest-management committee consisting of school staff members, parents, teachers, and public-health organizations to assist with and oversee policy implementation.

Model IPM Policy for Schools:

POLICY _____: Least-Toxic Integrated Pest Management (IPM) and Pesticide Use Minimization

Because the health and safety of students and staff is our first priority, and a prerequisite to learning, the _____ School District manages vegetation and pests using a minimum of least-toxic pesticides. The district utilizes physical, mechanical, cultural, biological and educational tactics as primary controls. Least-toxic chemical controls are used as a last resort.

Pesticide Use and Selection

Pesticides will only be used if necessary for the health and safety of students and staff. No high-hazard pesticides will be used. To ensure that no high-hazard pesticides are used, any pesticide used by the school district must meet the following criteria:

- a. Pesticide is not classified as highly acutely toxic (Hazard Category I or II) by the Environmental Protection Agency (signal word for Hazard Category I products = DANGER; signal word for Hazard Category II products = WARNING);
- b. Pesticide is not a restricted use pesticide (use of the product is restricted to certified pesticide applicators);



- c. Ingredients in product have been evaluated by the U.S. EPA and found to include no possible, probable, known or likely carcinogens;
- d. Ingredients in product include no reproductive or developmental toxicants (CA Prop 65 list, or U.S. TRI list);
- e. Ingredients in product not listed by Illinois EPA as known, probable or suspected endocrine disruptors;
- f. Ingredients in product include no nervous system toxicants (i.e. ingredients that are cholinesterase inhibitors and/or are listed as neurotoxic by the Toxics Release Inventory);
- g. Ingredients have soil half-life of 30 days or less;
- h. Ingredients have extremely low or very low mobility in soil, according to Groundwater Ubiquity Score (GUS) index;
- i. Product is not labeled as toxic to fish, birds, bees, wildlife, or domestic animals.

No pesticide will be used if the school district does not have information on all pesticide ingredients.

No routinely scheduled (e.g. seasonal, monthly, or weekly) pesticide applications will be made. No pesticide fogging or space spraying will be done. Insecticides will be used only in containerized baits, or for spot treatments targeted to insect nests or problem areas where a minimal amount of material will be used. Pesticides will not be used solely for aesthetic purposes. Cost and staffing are not sufficient justification for use of a pesticide.

Notification and Timing

Pesticide notification signs shall be posted at the treatment site, at a prominent place in the main office, and at primary entry points to the site of application prior to any pesticide application. Signs shall remain in place for one

week after pesticide application, or a longer period of time if specified by the pesticide label.

In addition, written notice shall be provided to students, parents, guardians and employees 48 hours in advance of any pesticide application.

Posted notices shall begin with a header containing the words “NOTICE: Pesticide Application; THIS AREA (or “LANDSCAPE” for outdoor applications) HAS BEEN RECENTLY SPRAYED OR TREATED WITH PESTICIDES BY YOUR SCHOOL.”

Notices shall be at least 8-1/2 by 11 inches, and shall include the following information: the signal word from the pesticide label, alongside the product name (e.g. “DANGER: Confront”); the pesticide’s active ingredient; the intended date and time of application; the location and area to which the pesticide is to be applied; the rate of application; the pest to be controlled; the name and phone number of the responsible party where the pesticide label and material safety data sheets may be obtained; a footer including “FOR MORE INFORMATION PLEASE CALL” and name and phone number of the contact person for the application; and a boxed-off warning stating: “CAUTION: Individuals taking medication, pregnant women, infants, children, and individuals with respiratory or heart disease, chemical sensitivities, or weakened immune systems may be particularly susceptible to adverse health effects due to pesticide exposure.”

Notification signs shall be printed in colors contrasting to the background.

Any pesticide application will be timed for maximum protection of human health and beneficial organisms. Any pest control activities will be conducted in consideration of effects on classroom activities.



Recordkeeping

The school district will maintain records of all pesticides used and their active ingredients, amounts and locations of treatments, and target pests. Alternative pest control measures will also be documented. Pesticide use and pest control records, pesticide Material Safety Data Sheets (MSDS), pesticide product labels, and manufacturer information about all pesticide ingredients will be on file at each school as well as at school district headquarters.

School staff, parents and students will have access to all records upon request, including an annual summary of pesticide use records for each school and for the district as a whole.

Pest Management Committee

Any proposals for pesticide use must be approved by a Pest Management Committee or other committee consisting of parents, staff, and community members.

The Pest Management Committee will be responsible for the progress review described below, and carry out other activities as needed to oversee the implementation of the least-toxic IPM policy.

Progress Review

At the beginning of each school year, the district will provide written information to staff, students, and parents regarding pest control activities within the school district. This information will include the names of all compounds that may be used, and a description of the district's pest control policies and methods, including all posting and notification policies.

The district will annually review its pest management program to evaluate how well its pest prevention and control objectives are being met, and to identify areas where improvement is needed. The district will prepare

a report containing the following information:

- a. Quantities of each pesticide applied during the previous year;
- b. Target pest for each pesticide used;
- c. Non-chemical pest prevention and control measures used;
- d. Pest management plan for the coming year.

The report will be provided to members of the school board of directors, all district parents, and made available to the public upon request.

Note: These reporting specifications satisfy the annual notification and reporting requirements of the Children's Pesticide Right-to-Know Act (under RCW 17.21), including the required annual summary of pesticide use, and the required notice of pest control policies and methods.

Right to Appeal

Parents, staff, and neighbors may appeal pesticide use plans to the Pest Management Committee. Notification of this right will be provided at the beginning of the school year, as well as with any additional notification of a particular planned use of pesticides during the school year. The Pest Management Committee will consider all appeals received up to three days prior to the planned pesticide application. Appeals received within three days prior to the application will be considered by the superintendent.

Identification and Notification of Sensitive Individuals

The district will maintain a registry of chemically-sensitive students, staff, or others requesting special consideration in the event of the use of pesticides. The district will provide personal notification to these individuals two weeks prior to any planned pesticide use, and will make an effort to address their concerns and special needs relative to such pesticide applications.

School District Policies in Washington

A growing number of Washington school districts are implementing effective, least-toxic pest management programs that eliminate or minimize toxic pesticide use. Districts with strong school policies in place include:

1. Bainbridge Island School District

Contact: Jack Evans, Maintenance Department, 206-842-4117

Passed originally in 1997, and then revised to include a ban on high hazard pesticides in 2001, the Bainbridge Island School District has a strong dedication to least-toxic pest management. The policy includes an IPM committee and a 24-hour hotline with information about any pesticide use on school grounds.

2. Sedro-Woolley School District

Contact: Mike Riddle, Maintenance Department, 360-855-3505

Sedro-Woolley's policy is one of the strongest in the state, with a comprehensive ban on high hazard pesticides, IPM committee, and dedication to least-toxic pest management. The policy does not allow calendar-based applications, fertilizer use when children are present, or pesticide use for aesthetic reasons.

3. Vancouver School District

Contact: George Bryant, Facilities Department, 360-313-4777

The Vancouver School Board unanimously passed their policy in the spring of 2002. The policy requires written notification of all parents and school staff members 48 hours before any pesticide application. It also includes a high-hazard ban, IPM committee, and primary use of least-toxic pest-management practices. See profile in "Leading the Way" on page 13.

4. Oak Harbor School District

Contact: Bruce Worley, Operations Department, 360-279-5007

Oak Harbor's policy bans the use of high-hazard pesticides and calendar-based applications. It includes creation of an IPM committee and dedication to least-toxic pest management. See profile in "Leading the Way" on page 13.

5. Mercer Island School District

Contact: Tom Otto, Maintenance Department, 206-230-6388
Spearheaded by Maintenance Director Tom Otto, Mercer Island passed their policy in the spring of 2002. The policy includes a high hazard ban and a dedication to least-toxic pest management.

6. South Whidbey School District

Contact: John Turner, Facilities Department, 360-221-1897
Based in strong community support for least-toxic pest management, South Whidbey adopted a policy that bans the use of all high hazard pesticides and indicates their dedication to least-toxic methods.

Organizational Resources

A. Washington Toxics Coalition

4649 Sunnyside Ave N, Suite 540

Seattle, WA 98103

Phone: 206-632-1545

Email: info@watoxics.org

Website: www.watoxics.org

The Washington Toxics Coalition works to protect public health and the environment by preventing pollution in industry, agriculture, schools, public places, and the home. WTC's website and hotline have information on pesticides, least-toxic products, and alternative solutions.

B. Northwest Coalition for Alternatives to Pesticides

PO Box 1393

Eugene, OR 97440

Phone: 541-344-5044

Email: info@pesticide.org

Website: www.pesticide.org

NCAP works to protect people and the environment by advancing healthy solutions to pest problems. NCAP has a wealth of information on pesticides and least-toxic alternatives, including comprehensive fact sheets on specific pesticides and pests.

C. Seattle Tilth

4649 Sunnyside Avenue North, Room 1

Seattle, Washington 98103

Phone: 206-633-0451

Email: tilth@seattletilth.org

Website: www.seattletilth.org

Seattle Tilth provides hands-on education about organic gardening, supports local farms, and works to explore more sustainable ways of using the world's resources. Seattle Tilth runs a hotline for the City of Seattle to answer gardening questions.

D. Beyond Pesticides

701 E Street SE

Washington, DC 20003

Phone: 202-543-5450

Email: info@beyondpesticides.org

Website: www.beyondpesticides.org



Beyond Pesticides is a national pesticide-activist network that promotes pesticide safety and adoption of pest control alternatives to reduce or eliminate dependency on toxic chemicals. They provide useful information on pesticides and alternative pest management, including fact sheets on pesticides, pesticide policy, and least-toxic alternatives.

E. School Pesticide Reform Coalition

701 E Street SE
Washington, DC 20003
Phone: 202-543-5450
Website: www.toxicfreeschools.org
SPRC advocates for every child's and school employee's right to an environmentally healthy school. The Coalition works to protect children's and the general public's health by supporting nationwide grassroots action and focusing local, state, and national attention on the reduction, and where possible, the elimination of pesticide use at schools.

Hotline Help

Washington Toxics Coalitions's hotline
800-844-SAFE ext. 7
(Information on pesticides and alternatives for the home and garden)

Northwest Coalition for Alternatives to Pesticides
541-344-5044
(Information on pesticides and alternatives for the home and garden)

Natural Lawn and Garden Hotline 206-633-0224
(Seattle/King County only; IPM expertise, composting, and plant pathology)

Websites

Washington Toxics Coalition
<http://www.watoxics.org>

Northwest Coalition for Alternatives to Pesticides
<http://www.pesticide.org>

Green Gardening Program *pro*IPM Fact Sheets
<http://www.ci.seattle.wa.us/util/proipm>

University of California Integrated Pest Management (IPM) online
<http://www.ipm.ucdavis.edu>

Integrated Plant Protection Center: Oregon State University
<http://ippc.orst.edu/oregonIPM.html>

King County Local Hazardous Waste Management Program
<http://www.metrokc.gov/hazwaste/house/garden/index.htm>

Pesticide Action Network of North America Pesticide Information Database
<http://www.pesticideinfo.org>

EXTOXNET
<http://www.ace.orst.edu/info/extoxnet>

Publications

1. *Growing Trends: Successful Strategies for Reducing Pesticides in Public Places* (2002). Washington Toxics Coalition.
2. *Safer Schools: Achieving a Healthy Learning Environment Through Integrated Pest Management* (2003). School Pesticide Reform Coalition and Beyond Pesticides.
3. *Common Sense Pest Control: Least-toxic Solutions for Your Home, Garden, Pets, and Community* (1991). Olkowski, William, et al., Newtown, CT, The Taunton Press.
4. *Ecologically Sound Lawn Care for the Pacific Northwest: Findings from the scientific literature and recommendations from turf professionals.* (1997) David McDonald, Seattle Public Utilities. <http://www.cityofseattle.net/util/lawncare/LawnReport.htm>
5. *Common Sense Pest Control Quarterly* and *The IPM Practitioner*, both published by the Bio-Integral Resource Center (BIRC).
6. *Building Blocks for School IPM: A Least-toxic Structural Pest Management Manual*, (2002), Beyond Pesticides.
7. *IPM for Schools: A How-to Manual.* (1997) Darr, Sheila, et al. Environmental Protection Agency.
8. *pro*IPM fact sheets, <http://www.ci.seattle.wa.us/util/proipm/>
9. *Poisoned Waters: Pesticide Contamination of Waters and Solutions to Protect Pacific Salmon* (2002). Pollyanna Lind, Northwest Coalition for Alternatives to Pesticides.
10. *Grow Smart, Grow Safe: A Consumer Guide to Lawn and Garden Products.* Philip Dickey, Local Hazardous Waste Management Program in King County.

WASHINGTON
TOXICS
COALITION

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