

Business Pollution Prevention Program

*Nursery Technical
Assistance Campaign*



*Thurston County
Hazardous Waste Program*

May 2003



Nursery Technical Assistance Campaign Executive Summary

May 2003

In 2002, Thurston County's Business Pollution Prevention team conducted a single- industry campaign focused on nurseries, including tree and turf farms. As is typical of single-industry – type campaigns, the focus was on the risks to public health by improper storage, use, or disposal of hazardous materials. All 27 of the nurseries visited were indeed found to store hazardous materials and /or generate hazardous waste. However, at the time of the initial visit, the majority of the inspected businesses (23 out of 27, or 85%) was in full compliance with the Sanitary Code.

The campaign staff concluded that nurseries are responsible users of pesticides and other hazardous materials, and that nursery owners and operators are very aware of the environment and pollution of surface and ground water. Nurseries tend to use up hazardous products and therefore they produce very little pesticide waste, especially small nurseries. Some nurseries do not use any pesticides or have any hazardous materials onsite. However, small nurseries are harder to identify and track because they may operate seasonally. They also go out of business more frequently than large nurseries; of the 63 nurseries originally identified, only 30 were found open for business when the Business Pollution Prevention team conducted the campaign.

The primary issues were secondary containment and disposal. Secondary containment prevents pesticides and other hazardous materials from contaminating the environment in case the original container leaks, ruptures, or spills. At the start of the campaign, four nurseries were out of compliance for secondary containment. Each of these four businesses had a follow-up visit and three of the sites took steps to achieve compliance. Two nurseries placed 50 gallons within secondary containment, and one turf farm placed 2500 gallons within secondary containment and was thus partially brought into compliance. The fourth site has not yet corrected its secondary containment situation.

None of the nurseries were out of compliance for disposal, however, several did have excessive amounts of unused and unwanted products being stored indefinitely. As a result of the campaign, four nurseries disposed of 234.4 pounds of hazardous waste through HazoHouse. These wastes included fluorescent tubes, paints, flammable liquids, and corrosive materials. Also as a result of the campaign, three nurseries registered to use HazoHouse. Many others received information and encouragement on the proper disposal of fluorescent light tubes and other universal wastes.

Part of the nursery campaign included distributing information on the Washington State Department of Agriculture (WSDA) pesticide turn-in, which took place in June 2002, following the Thurston County visits. This program collected 1,596 pounds of unusable pesticides from eleven customers. These customers include businesses other than nurseries.

Best management practices (BMPs) are voluntary recommendations made to businesses. The Business Pollution Prevention team suggested 18 different BMPs for nurseries to follow in five categories. The categories include recycling, waste disposal, waste reduction, chemical storage, and integrated pest management (IPM). Thirty-seven BMP recommendations were made during this campaign, notably to write and implement a spill plan (suggested 11 times) and to obtain spill kit materials and MSDSs (seven and six times, respectively). Many businesses were already doing these and other BMPs, for a total of 90 that were in practice. Eight of 25 nurseries (32%) reported they practice IPM.

Recommendations for future nursery campaigns include:

- Obtain an accurate inventory of all hazardous materials used in all nurseries and other agricultural operations.
- Concentrate on educating and encouraging nurseries to expand IPM methods in the business operations.
- Try to visit large nurseries in conjunction with WSDA regular inspections.
- Use the Best Management Practice Recommendations form during visits, and include a line about use of proper Personal Protective Equipment when using pesticides or other hazardous materials.
- Conduct follow-up contact with businesses to measure implementation of recommended Best Management Practices.

Although nurseries have been inspected in the past, that information unfortunately was lost. The 2002 campaign establishes a baseline for future campaigns.

Introduction

This report summarizes the Nursery Technical Assistance Campaign conducted in 2002 by Thurston County's Business Pollution Prevention Program (which is part of the Public Health and Social Services Department). The campaign was funded through tipping fees and a grant from the Washington State Department of Ecology. Site visits focused on hazardous waste storage, disposal, and pollution prevention.

Goals

Success of the Business Pollution Prevention Program is measured by goals established in the 1998 Hazardous Waste Plan for Thurston County. The goals are:

1. Protect ground water, surface water, soils, sediments, and private property from hazardous materials and hazardous waste contamination.
2. Increase the rate of waste reduction, which conserves resources and reduces demand for disposal and recycling services.
3. Increase the percentage of hazardous waste collected (that cannot be prevented through waste reduction in the first place).
4. Reduce the amount of hazardous materials that is improperly stored, improperly disposed, and accidentally spilled into the environment.
5. Reduce damage to collection and transfer vehicles, and disposal equipment, and reduce disruption of treatment facilities by ensuring hazardous waste is kept out of these facilities or systems.
6. Reduce potential for causing publicly owned facilities such as the landfill or sewage treatment plants to exceed pollutant discharge limits.

Overview and Results

Table 1: Basic Information

Audience:	All Nurseries in Thurston County
Project team:	Jane Stavish R.S. – lead, Dave Tipton R.S. – field staff
Other agency partners:	Wa. St. Dept of Agriculture – Jeff Britt
Start and end dates:	January 2002 thru May 2002
Geographic area served:	Thurston County, Washington State
Funding source:	DOE Coordinated Prevention Grant & Solid Waste Tipping Fees

Table 2: List of Sites that were Visited – see attached list in Appendix A

Table 3: List of Sites that Refused Access – see attached list in Appendix A

Table 4: Audience Size

Number of sites on initial list:	63
Number of actual sites targeted for visits:	30
Number of sites that received a visit:	27
Number of sites that were referred to another agency:	1 - Baker's Greenhouses
Number of sites that refused to grant access:	2
Number of sites that were found to store hazardous materials and/or generate hazardous wastes:	27

Table 5: Initial and Follow-Up Visits

Number of initial technical assistance visits:	27
Number of follow-up technical assistance visits:	4 – see list in Appendix A
Number of compliance audits:	0
Number of follow-up compliance audits:	0
Number of total initial and follow-up visits:	31

Table 6: Compliance Results

Compliance Status	At the time of the Initial Visit	After Follow-Up Visits	At the end of Campaign
In compliance	23	25	25
Out of compliance*	4	2**	2
Pending compliance	0	2	2
Total Sites	27	29	29

*Gordon's Nursery – Yelm, Roots & Stems – Yelm, Country Green Turf Farms – Lacey, Emerald Turfgrass Farms - Rochester

** Country Green Turf Farms – Lacey, Emerald Turfgrass Farms - Rochester

Table 7: Compliance Issues

Compliance Issue	At the time of the Initial Visit	After the Follow up Visit
Secondary containment	4	2
Improper disposal	0	0
No disposal receipts	0	0
Other:	0	0
Other:	0	0
Other:	0	0
Total: All Issues	4	2

Table 8: Secondary Containment and Proper Disposal

Amount of secondary containment installed b/c of site visits (estimate)	50 gallons – 2 nurseries 2500 – 1 turf farm
Amount of hazardous materials verified to be safely stored (estimate)	No information gathered regarding total amounts of chemicals on-hand at all sites during the campaign.**
Amount of hazardous waste verified to be safely disposed (estimate)	Four Nurseries disposed of 234.4 lbs. of hazardous waste through HazoHouse – see attached list in Appendix B.
Amount of pesticide verified to be safely disposed through WSDA* Free Pesticide Disposal Program.	Unable to determine from info provided by WSDA. See Appendix C.

*Washington State Department of Agriculture

** see conclusions/recommendations

Table 9: Comparison of Compliance Rates from Businesses who Participated in Previous Campaigns

	Total
Businesses previously inspected before this campaign	Unknown*
Previously inspected sites that were in compliance at initial visit	Unknown
Previously inspected sites that were out of compliance at initial visit	Unknown
Businesses not previously inspected before this campaign	Unknown
Not previously inspected and refused access	Unknown
Not previously inspected and were in compliance at initial visit	Unknown
Not previously inspected and were not in compliance at initial visit	Unknown

* Files for most of the Nurseries were lost prior to the campaign. In addition, staff that worked on the previous campaign had left Thurston County prior to this campaign. This campaign was intended to re-construct the files for all the nurseries and to re-establish a baseline for future campaigns.

Table 10: Best Management Practices

Best Management Practice (BMP)	Number who are already doing	Number of Times Suggested	Number of Times Implemented*
Recycle: totals	18	7	
Fluorescent light tubes	2	5	
Used oil	9		
Antifreeze	6	2	
Lead-acid batteries	1		
Waste Disposal: totals	4	3	
Proper disposal of pesticides	2		
Other wastes	1	2	
Retain disposal receipts	1	1	
Waste Reduction: totals	10	0	
Control spills/leaks/drips	10		
Chemical Storage: totals	56	27	
Secure tanks & shelving	10		
Separate incompatible chemicals	12		
Properly label products / post sign on bldg	12		
Store pump sprayer with pesticides		2	
Written spill plan/implement spill plan	1	11	
Train staff about hazardous materials	6		
Obtain MSDS	10	6	
Obtain spill kit materials	5	7	
Seal floor to walls in pesticide storage room		1	
IPM: totals	2	0	
Create & Implement IPM plan	2		
Total BMP's:	90	37	

*The Campaign did not follow up on BMP's implemented due to staff vacancies.

Table 11: Customer Survey Response

Survey Question	Yes	No	Unsure	Comments
1. Was your business in compliance at the initial visit?	9	1		1) 2 types old pesticides on shelf; advised & put into containment.
2. Did the visit provide you with helpful information on management/reduction?	9	1		1) particularly at fluorescent bulb recycling. 2) a few things.
3. After the visit did you make changes in the way you manage your hazardous materials?	3	7		1) we were okay 2) containers within containers 3) eye wash kit
4. Did county staff answer specific questions and help solve specific problems?	7	1	1	
5. Did the visit provide you with any new information about pesticide use, storage, disposal or IPM methods?	7	3		1) although we don't use them we had 2 old bottles & we were advised how to dispose of them with handouts provided. 2) used oil recycling that might be available for use personally.
6. In addition to technical assistance program, TCEH provides businesses with a hotline, disposal site, and workshops. Do you currently use or will you use these services?	8	2		1) we don't use hazardous materials. Fuel is properly contained at all times. 2) disposal
7. Are there additional services TCEH can provide?	2		8	1) handouts to customers. 2) provide brochures for our customers to be <u>more</u> aware of chemical & their use for average homeowners.

Additional comments: 1) Dave did a great job!

2) Dave is a great representative & very professional & friendly. I enjoyed his input & guidance.

Meeting the Goals of the Regional Hazardous Waste Plan

Protect ground water, surface water, soils, sediments, and private property from hazardous materials and hazardous waste contamination.

- ✓ Verified proper use, handling, storage and disposal of hazardous materials used by nurseries and turf farms.
- ✓ found 81% of nurseries with adequate secondary containment.
- ✓ 2550 gallons secondary containment installed prior to end of campaign.
- ✓ Verified 1,596 pounds of unusable pesticides were collected from eleven customers during 2002 WSDA pesticide turn-in program conducted after the County visits. Please note: WSDA pesticide turn-in figures do not distinguish between types of agriculture, i.e.; food crops, dairy, tree farms, nurseries, turf farms, feed crops, etc. Therefore, there is no way to know how much of the above listed amount of pesticides turned into WSDA was from nurseries or tree/turf farms in Thurston County. However, removal of 1,596 pounds of pesticides from agricultural operations in Thurston County will reduce threats of contamination of surface and ground waters.

Increase the rate of waste reduction, which conserves resources and reduces demand for disposal and recycling services.

- ✓ encouraged use of IPM methods wherever possible.
- ✓ Verified 8 of 25 nurseries (32%) currently do IPM
- ✓ Verified proper use of pesticides and applicators such that no waste is generated by use of pesticides.

Increase the percentage of hazardous waste collected (that cannot be prevented through waste reduction in the first place).

- ✓ three nurseries registered to use HazoHouse as a result of the campaign.
- ✓ Two nurseries disposed of hazardous wastes at HazoHouse as a result of the campaign
- ✓ Seven nurseries and no turf farms are currently registered to use HazoHouse for waste disposal
- ✓ Distributed information and encouraged the proper disposal of fluorescent light tubes and other universal wastes.

Reduce the amount of hazardous materials that is improperly stored, improperly disposed, and accidentally spilled into the environment.

- ✓ 2550 gallons secondary containment installed prior to end of campaign.
- ✓ Distributed information and encouraged the use of the 2002 WSDA pesticide turn-in program to be conducted after the County visits.
- ✓ Distributed information and encouraged the use of IPM methods
- ✓ Distributed information and encouraged the proper disposal of fluorescent light tubes and other universal wastes.

Reduce damage to collection and transfer vehicles, and disposal equipment, and reduce disruption of treatment facilities by ensuring hazardous waste is kept out of these facilities or systems.

- ✓ By encouraging use of HazoHouse, private hazardous waste vendors and the WSDA pesticides and pesticide container turn-in, over 1800 pounds of hazardous waste was verified to be properly disposed of assuring reduced damage to collection and transfer vehicles and disposal equipment and reducing disruption of treatment facilities.
- ✓ Damage to collection and transfer vehicles and disposal equipment and reduction of disruption to treatment facilities is reduced by encouraging proper disposal of universal wastes containing mercury.

Reduce potential for causing publicly owned facilities such as the landfill or sewage treatment plants to exceed pollutant discharge limits.

- ✓ Distributed information and encouraged the use of the 2002 WSDA pesticide container turn-in program to be conducted after the County visits.
- ✓ Distributed information and encouraged the proper disposal of fluorescent light tubes and other universal wastes.

Conclusions and Recommendations

What were the most important things learned about this audience?

- ✓ Nurseries are responsible users of pesticides and other hazardous materials.
- ✓ Most nurseries that use pesticides use household pesticides such as Round Up and Weed B Gone.
- ✓ Nurseries tend to use up hazardous products and therefore they produce very little pesticide waste.
- ✓ All nursery owners and operators are very aware of the environment and pollution of surface and ground water.
- ✓ Small nurseries tend to use very few pesticides and other chemicals.
- ✓ Small nurseries are harder to identify and track because:
 - Small nurseries may only operate a few months per year. “Farmers Market” nurseries fall into this category and tend to operate March through July only of each year.
 - Small nurseries start up and go out of business more frequently than large nurseries.
 - Some small nurseries are “hobby” businesses and do not retail directly to the public.
- ✓ Large nurseries have all the engineering controls, training and records required for storage, use and disposal of hazardous materials.

What were the common waste streams and how were they managed?

Large Nurseries:

- ✓ Pesticide Containers – triple rinsed and disposed of as solid waste, or triple rinsed and saved for the WSDA container turn in.
- ✓ Lab Wastes – Oxidizers, toxic liquids and solids and corrosives managed through disposal by private vendors or at HazoHouse.
- ✓ Equipment Maintenance – used oil, antifreeze, fuels and solvents managed through disposal by private vendors or at HazoHouse.
- ✓ Paint Related Materials and Adhesives - through disposal by private vendors or at HazoHouse.

Turf Farms: same as large nurseries except:

- ✓ No lab wastes,
- ✓ fewer types of pesticides used although volume used is greater,
- ✓ large volumes of fuels

Small nurseries: same as large nurseries except:

- ✓ No lab wastes,
- ✓ Other wastes not generated in volumes greater than an average household.

What improvements would you recommend for future campaigns with this audience?

- ✓ Concentrate on obtaining an accurate inventory of all hazardous materials used in all nurseries and other agricultural operations. Accurate inventories will help determine volumes of hazardous materials used in Thurston County.
- ✓ Concentrate on a more detailed look and IPM used in nurseries and other agricultural operations. Spend more time on educating and encouraging nurseries to expand IPM methods in the business operations. Develop a Pledge for nurseries and other agricultural operations, which leads to reduced use of hazardous materials and increased use of IPM methods. Research all best available IPM methods for nurseries and other agricultural operations and provide the latest and best information.
- ✓ Try to visit large nurseries in conjunction with WSDA regular inspections. It is very helpful to have an agricultural expert along when reviewing an operation as complex as Brigg's Nursery or Bark and Garden Nursery. It is also an opportunity to learn about all aspects of "restricted use" pesticide use.
- ✓ A Best Management Practice Recommendations form was developed specifically for this campaign but was not used in the campaign due to logistic issues. Future nursery campaigns should use this form. This BMP form should also include a line about use of proper Personal Protective Equipment when using pesticides or other hazardous materials.

Appendix A

- **Master Nursery List – 2002 Technical Assistance Campaign**

Initial Inspections:

Name	Address	City	State	Zip	Date Inspected
Acorn's Nursery	PO Box 4023	Tenino	WA	98589	03/08/02
Baker's Greenhouses	4609 87 th Ave SE	Olympia	WA	98501	03/06/02
Bark and Garden Center	3334 Mud Bay Rd W	Olympia	WA	98502	01/31/02
Barn Nursery, The	9440 Old Hwy 99 SE	Olympia	WA	98501	03/07/02
Boulevard Nursery	2021 Boulevard Rd SE	Olympia	WA	98501	03/12/02
Briggs Nursery	4407 Henderson Blvd	Olympia	WA	98501	05/23/02
Bush Prairie Gardens	1321 88 th Ave SE	Olympia	WA	98501	04/18/02
Classical Farms	12447 Vail Cut-off Rd SE	Rainier	WA	98576	04/04/02
College Street Nursery	3616 College St SE	Lacey	WA	98503	03/05/02
Country Green Turf Farms	7725-B Yelm Hwy	Olympia	WA	98513	04/23/02
Courtyard Nursery	6400 Capitol Blvd SE	Tumwater	WA	98501	03/07/02
Delphi Valley Greenhouse	6311 Shawn Ave	Olympia	WA	98502	03/25/02
Down's Rhododendrons	11736 Littlerock Rd SW	Olympia	WA	98502	03/06/02
Emerald Turfgrass Farms	12320 175 th Ave SW	Rochester	WA	98579	04/02/02
Fairie Perennial and Herb	6236 Elm St SE	Tumwater	WA	98501	03/12/02
Flower Market and Bonsai Nursery	7945 Martin Way E	Olympia	WA	98516	03/12/02
Gordon's Garden Center	308 Yelm Ave E	Yelm	WA	98597	03/06/02
Green Acres Gardens and Ponds	15011 Vail Rd SE	Yelm	WA	98597	03/10/02
Hulbert Nursery	1611 Yelm Hwy SE	Olympia	WA	98501	03/27/02
Jenny's Cactus Garden	18819 Crescent Dr SW	Rochester	WA	98579	04/11/02
Lael's Moon Garden Nursery	17813 Moon Rd SW	Rochester	WA	98579	05/01/02
Mountain Shadow Nursery	8617 Tobacco Ln SE	Olympia	WA	98513	04/17/02
Mountain View Nursery	13226 Mima Rd SW	Olympia	WA	98512	05/07/02
Puget Sound Plants	3147 46 th Ave NE	Olympia	WA	98506	04/24/02
Roots & Stems	11337 Bald Hill Rd SE	Yelm	WA	98597	04/08/02
Sound Native Plants	3914 11 th Ave NW	Olympia	WA	98501	04/24/02
Tsuki Nursery	1611 Yelm Hwy SE	Olympia	WA	98501	03/27/02

Low Risk Nurseries:

Name	Address	City	State	Zip	Comments
Black Lake Organic	4711 Black Lake Blvd SW	Olympia	WA	98512	organic only
Gull Harbor Nursery	5241 Cushman Rd NE	Olympia	WA	98506	-----
Johnson's Garden Nursery	7032 Spurgeon Crk Rd SE	Olympia	WA	98513	-----
Perennial Gardner	5424 Boston Harbor Rd NE	Olympia	WA	98506	-----
Plantasia Specialty Nursery	3938 88 th Ave SW	Olympia	WA	98512	-----
Rocky Ridge Nursery	2027 Bobb Ct SE	Olympia	WA	98503	-----
Tenino Wholesale Nursery	17607 Mima Acres Dr SE	Tenino	WA	98589	-----

No Phone/No Response to Invitation:

Name	Address	City	State	Zip	Comments
Elam's Fuschia Gardens	6210 Waldon Dr SE	Olympia	WA	98513	-----
Madrona Nursery	8424 Steamboat Island Rd NW	Olympia	WA	98502	-----
Native Nursery Supply	2100 Grove Rd NW	Olympia	WA	98502	-----
Steamboat Island Nursery	8424 Steamboat Island Rd NW	Olympia	WA	98502	-----
Weyerhaeuser Mima Tree Nursery	8844 Gate Rd SW	Olympia	WA	98502	-----
Woodland Creek Rhododendron	1824 Draham Rd NE	Olympia	WA	98506	-----

Previously Inspected:

Name	Address	City	State	Zip	Comments
Lawyer Nursery	7515 Meridian Rd SW	Olympia	WA	98513	McAllister WHPA

Out of Business:

Name	Address	City	State	Zip	Comments
Campbell Lane Nursery	no info	no info			-----
Cascade Olympic Nursery	800 Sleater Kinney Rd SE #158	Lacey	WA	98503	-----
D & J Rhodies	no info	no info			-----
Grow Organic	no info	no info			-----
Henderson & Conboy	no info	no info			-----
Highland Wholesale Nursery	no info	no info			-----
Independence Valley	no info	no info			-----
Meadowbrook Gardens	no info	no info			-----
Medicine Creek Farm	no info	no info			-----
Medicine Creek Farm Inc	947-b Old Pacific Hwy SE	Olympia	WA	98503	-----
Melrose Nursery II	8708 Johnson Point Rd NE	Olympia	WA	98506	-----
Meridian Nursery	4300 Meridian Rd NE	Olympia	WA	98516	-----
Miniature Gardens	no info	no info			-----
Northern Star Greenhouses	no info	no info			-----
Northern Star Greenhouses	11337 Bald Hill Rd SE	Yelm	WA	98597	-----
R & R Rhododendrons	5339 Heights Lane NE	Olympia	WA	98506	-----
Riverside Nursery	no info	no info			-----
Secret Garden Perennials	2911 S Quince St	Olympia	WA	98501	-----
Secret Gardens, The	8716 Libby Rd NE	Olympia	WA	98506	-----
The Rhody Ranch	5208 26 th Ave SE	Lacey	WA	98503	-----

Refused Inspection:

Name	Address	City	State	Zip	Comments
Nisqually Nursery	135 Nisqually Cut-off Rd SE	Olympia	WA	98513	Whsle Fir Trees
Scatter Creek Nursery	17101 Vircon Dr SW	Rochester	WA	98579	Farmers Market

Summation:

Invitation Letters Sent:	63
Nurseries Inspected:	27
Out of Business:	20
Low Risk/Organic:	7
No Phone/No Response:	6
Refused Inspection:	2
<u>Previously Inspected (2001):</u>	<u>1</u>

Follow Up Inspections:

Gordon's Garden Center (Yelm)
Roots & Stems (Yelm)
Country Green Turf Farm (Lacey)
Emerald Turf Farm (Rochester)

Appendix B

- **Amount of hazardous waste verified to be safely disposed at HazoHouse**

Nursery	Hazardous Material	Total
Bark & Garden Center	fluorescent light tubes:	30 each
Medicine Creek Farms	paint related materials:	136.0 lbs.
Fairie Gardens	adhesives:	6.4 lbs.
	flammable liquids :	10.0 lbs.
Briggs Nursery	flammable liquids:	6.6 lbs.
	paint related materials:	18.8 lbs.
	oxidizers:	2.0 lbs.
	toxic liquids:	1.2 lbs.
	toxic solids:	4.2 lbs.
	corrosives – acids:	9.8 lbs.
	corrosives – bases:	39.4 lbs.
<hr/>		
Totals:		234.4 lbs.

Appendix C

- **Information provided by WSDA regarding 2002 Pesticide Turn-In for Olympia/Thurston County per email from Joe Hoffman.**

Hello Sally:

Sorry for the tardiness of this info.

The pesticide collection event held in Thurston County this year was held at the Tilley Road Maintenance Facility on June 21, 2002.

1,596 pounds of unusable pesticides were collected from eleven customers at a total event cost of 5,531.26. This comes out to a total cost of \$3.47 per pound. Approximately 145 pounds per customer.

While the cost per pound for Olympia seems high, the total cost per pound for the fiscal year came in at \$1.82. As you remember from your time at Burlington, these small events require nearly the same mobilization fee as a large event. I also spread out the contractor's travel and transportation expense among the events in a travel series (normally a weeks worth of events). This also makes a smaller event seem more expensive. The other option is to tag the travel and transport only to the large event and give the smaller ones a free ride. However, since we cover the entire event cost it really doesn't matter which method is chosen as long as it is attached to the events.

Regarding the survey question ("How did you first hear about this collection event?") One responder said from the county, the others responded by direct mail. We did direct mail to all certified applicators within the county so this may have skewed the responses since the last announcement they received (and probably remembered) was the direct mail notice. This response is consistent statewide, few people note newspapers, newsletters etc. By far the most common response is by direct mail from WSDA. In fact this last year we did far less press releases than in the past but had a higher response rate and collected a record amount of over 162,000 pounds in the last fiscal year. The Olympia collection was the last one of that fiscal year. Our grand total since inception in 1988 is 1,382,032 pounds (691 tons) of unusable pesticides from 4,420 customers collected and properly disposed. Ave. 313 lbs. per customer.

Attached below was the "pre-registration" inventory of what the customers planned to bring to the event. The total pack-out was slightly less weight due to some of the containers being partials that the customers reported being full.

<<Olympia total by ACTIVE.xls>> <<Olympia Inventory.xls>>

If you need and/or want any more info, please let me know.

Wishing you and your staff a wonderful, warm holiday season!

Sincerely,

Joe A. Hoffman
Program Coordinator
WSDA Waste Pesticide Program
360-902-2048

Olympia Combined Total Expected Inventory as of 06/9/2002

Sorted by active ingredients

Comp Code	Active Ingredients	WC1	WC2	WC3	WC4	D/E	UN Number	Haz Class	Oral LD50	Dermal LD50	Fish LC50	RQ	Total Pounds
5	2,4-D	D016	U240			D		MNR	699		377	100	10.0
697	2,4-D; DICAMBA; MCPP	D016	WT02	WP01		E		9				100	5.0
166	ACEPHATE	WT02				D		MNR	1030(F)	>10250	>1000		1.3
45	ADJUVANT							MNR					207.5
59	ATRAZINE	WT02	WP01			E		MNR	1780	>3100	>10		10.0
52	AZINPHOS-METHYL	WT01				E	UN2783	6.1	10	200	0.003	1	2.5
235	BENOMYL	U271				D		MNR	>10000	>10000	0.17		2.0
303	CADMIUM CHLORIDE	D006	WT02			D	UN2570	6.1	88		T	10	25.0
404	CARBOXIN	WT02				D		MNR	3820	>8000	2		30.0
88	CHLORPYRIFOS	WT02	WP01			E	UN2783	6.1	96	2000	0.18(24H)	1	4.0
230	COPPER HYDROXIDE	WT02				D	UN2775	MNR	1000				10.0
28	COPPER SULFATE	WT02				D	UN2775	6.1	472	NT	>1	10	5.0
26	DIAZINON	WT02				D	UN2783	MNR	1250	>2020	>.1	1	3.0
180	DICAMBA	WT02	WP01			E	UN2769	MNR	2629	>2000	>1000	1000	5.0
132	DICHOLOBENIL	WT02	WP01			E		MNR	>3160	1350	18(24HR)	100	4.0
111	DIQUAT DIBROMIDE	WT02	WP01			E	UN3016	6.1	215	>400		1000	35.0
20	ENDOSULFAN	P050				E	UN2761	6.1	22.7(F)	359	T	1	30.0
792	IRON SULFATE	WT02				D		MNR	1520				25.0
469	MALATHION; XYLENE	D001	WT02			D	UN1307	3	<5,500	>2000	200	100	7.5
83	MALEIC HYDRAZIDE	U148				D		9	3900			5000	850.0
36	MANCOZEB	WT02				D	UN2968	4.3	11200	15000	>1		50.0
260	METALAXYL	WT02				D		MNR	669	>3100	NT		10.0
66	PETROLEUM OIL	WT02				D	UN1270	MNR	>15000	>5000	>100		300.0
370	PHENYLMERCURIC ACETATE (PMA) (PMAS)	D009	P092			E	UN1674	6.1	50		T	100	25.0
148	PROMETON	WT02				D		MNR	2276	2000	20		20.0
793	SAMPLE CONTAINER							MNR					50.8
61	THIRAM	U244				D	UN2771	9	1000	>5000	>.1	10	9.0
687	TRIFLURALIN; XYLENE	D001	WT02	WP01		E		3	3700		T	100	10.0

Total Pounds (10# / gal) = 1,746.6

Olympia Participant Expected Inventory as of 06/9/2002

Part ID#	Product Name	Manufacturer	Comp Code	Active Ingredients	Gallons Liquid	Pounds Dry	Liq	Dry	Product Container and Count	Total Pounds
N003	MANEB PLUS ZINC	ATOCHEM	36	MANCOZEB	5.00		L		2 X 2.5 GAL	50.0
N003	HERBICIDE OIL (DILLUTED)		66	PETROLEUM OIL	30.00		L		1 X 30 GAL DRUM	300.0
N004	CLASS 40A	CENEX	5	2,4-D	1.00		L		1 GAL POLY	10.0
N004	ORTHENE	ORTHO	166	ACEPHATE	0.13		L		1 PT. POLY	1.3
N004	LI 700	LOVELAND	45	ADJUVANT	0.25		L		1 QT POLY	2.5
N004	NOROSAC 46	PB GORDON	132	DICHOLOBENIL		4.0		D	4 LB PAPER BAG	4.0
N004	FERROMED AD	GORDONS	792	IRON SULFATE	2.50		L		2.5 GAL POLY	25.0
N005	LESCO 3-WAY	LESCO INC	697	2,4-D; DICAMBA; MCPP	0.50		L		5 GAL POLY JUG	5.0
N005	CADDY	WA CLEARY CHEMICAL	303	CADMIUM CHLORIDE	2.50		L		2.5 GAL POLY JUG	25.0
N005	PMAS	WA CLEARY CHEMICAL	370	PHENYLMERCURIC ACETATE (PMA) (PMAS)	2.50		L		2.5 GAL POLY JUG	25.0
N006	GROTARD	D.H.HUNTER	83	MALEIC HYDRAZIDE	85.00		L		12 X 5 GAL PAILS & 1 X 25 GAL DRUM	850.0
N007	CUPRIC SULPHATE		28	COPPER SULFATE		5.0		D	50# BAG	5.0
N007	DIAZINON	CIBA GEIGY	26	DIAZINON		3.0		D	3# BAG	3.0
N007	BANVEL	VELSICOL	180	DICAMBA	0.50		L		1 GAL POLY JUG	5.0
N007	THIRAM	WESTERN FARM SERVICE	61	THIRAM		9.0		D	10# BAG	9.0
N008	TK-10 LIQUID VEG. KILLER	TOPAZ TURF CORP	148	PROMETON	2.00		L		2 X 1 GAL CONTAINERS	20.0
N009	ATRAZINE 4L	SOSTRAM	59	ATRAZINE	1.00		L		2.5 GAL POLY	10.0
N009	AZIPHOS-METHYL	MICRO-FLO	52	AZINPHOS-METHYL		2.5		D	2.5# PAPER BAG	2.5
N009	BENLATE	DUPONT	235	BENOMYL		2.0		D	2# PAPER BOX	2.0
N009	CHAMP	AGTROL	230	COPPER HYDROXIDE	1.00		L		2.5 GAL POLY	10.0
N009	THIODAN 50	FMC	20	ENDOSULFAN		30.0		D	1 X 50# BAG	30.0
N009	TRIFLURALIN 4 EC	RIVERSIDE	687	TRIFLURALIN; XYLENE	1.00		L		2.5 GAL POLY	10.0
N011	DURSBAN LAWN INSECT GRANULES	LILLY MILLER	88	CHLORPYRIFOS		4.0		D	40# BAG	4.0
N011	UNKNOWN		793	SAMPLE CONTAINER		50.0		D	5 GAL BUCKET	50.0
N012	NALCOTROL II	WILBUR ELLIS	45	ADJUVANT	8.50		L		34 X 1 QT POLY BOTTLES	85.0
N012	MOR-ACT	WILBUR ELLIS	45	ADJUVANT	12.00		L		30 GAL POLY DRUM	120.0
N015	VITAVAX-200	UNIROYAL	404	CARBOXIN	3.00		L		3 X 1 GAL CONTAINER	30.0
N015	DIQUAT	VALENT	111	DIQUAT DIBROMIDE	1.00		L		1 GAL POLY	10.0
N015	DIQUAT	ZENECA	111	DIQUAT DIBROMIDE	2.50		L		2.5 GAL CONTAINER	25.0
N015	MALATHION 57 EC	CLEAN CROP	469	MALATHION; XYLENE	0.75		L		1 GAL CONTAINER	7.5
N015	RIDOMIL	CIBA GEIGY	260	METALAXYL	1.00		L		1 GAL	10.0
N016	UNKNOWN	MILLERS	793	SAMPLE CONTAINER		0.5		D	1# PAPER TUBE	0.5
N016	UNKNOWN		793	SAMPLE CONTAINER	0.03		L		1 QT GLASS JAR	0.3

Gallons = 163.66 Pounds = 110.0 Total Pounds (10# / gal) = 1,746.6

Pesticides and other Hazardous Materials turned in to Washington State Department of Agriculture – June 2002

<u>Hazardous Material</u>	<u>Description, Class, Action</u>
2,4-D	Chlorinated phenoxy. Selective, hormone-type, translocated phenoxy compound used mainly as a postemergence herbicide .
2,4-D; Dicamba; MCPP	2,4-D: Postemergence herbicide ; Benzoic acid herbicide; Dicamba: herbicide containing benzoic acid; MCPP: systemic hormone type herbicide containing propionic acid and potassium salts.
Acephate	Organophosphate. Contact and systemic insecticide .
Adjuvant	Used in a formulation to aid the operation or improve the effectiveness of the pesticide. Includes wetting agents, spreaders, emulsifiers, dispersing agents, foaming adjuvants, foam suppressants, penetrants and correctives. May also contain surfactants, solvents, solubilizers, buffering agents and stickers.
Atrazine	Triazine. Selective herbicide .
Azinphos-methyl	Organophosphate, insecticide .
Benomyl	Systemic foliar fungicide .
Cadmium Chloride	Heavy metal, fungicide .
Carboxin	Systemic fungicide , seed protectant.
Chlorpyrifos	Organophosphate, insecticide .
Copper Hydroxide	Fungicide , bactericide.
Copper Sulfate	Fungicide , algicide.
Diazinon	Organophosphate, insecticide , nematicide .
Dicamba	Herbicide containing benzoic acid.
Dichlorbenil	Benzonitrile, herbicide .
Diquat Dibromide	Dibromide monohydrate salt. Contact herbicide , desiccant.
Endosulfan	Chlorinated hydrocarbon, insecticide, acaricide (spiders, ticks, mites).
Iron Sulfate	Inorganic salts. Selective herbicide for broadleaf weeds, wood preservative.
Malathion; Xylene	Organophosphate with solvent, insecticide .
Maleic Hydrazide	Pyridazinone. Plant growth regulator.
Mancozeb	Ethylene bisdithiocarbamate, fungicide .
Metalaxyl	Fungicide seed dressing, soil and foliar fungicide .
Petroleum Oil	Dormant and summer spray insecticide , parasiticide s for livestock, carriers for other pesticides, herbicides by themselves, adjuvants to increase efficacy of fungicides.
Phenylmercuric Acetate	aka PMA & PMAS. Organo mercury compounds, fungicide .
Prometon	Nonselective herbicide .
Thiram	fungicide , seed protectant, animal repellent.
Trifluralin; xylene	Dinitroaniline. Selective preemergence herbicide mixed with solvent.