

Business Pollution Prevention Program

Automotive Industry



Thurston County Hazardous Waste Program

July 2009



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The Thurston County Hazardous Waste Program serves small businesses in Thurston County and the communities of Bucoda, Lacey, Olympia, Rainier, Rochester, Tenino, Tumwater, and Yelm.

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Introduction

Thurston County Environmental Health (TCEH), a division of the Public Health and Social Services Department, conducted a technical assistance campaign for auto repair businesses between January 2007 and June 2009. The businesses were identified as good candidates for technical assistance since significant volumes of potentially hazardous materials are often stored at the facilities. The amount stored depends on the nature of the business, for example an oil change only business versus a small repair shop. Liquid hazardous materials such as petroleum products, antifreeze and solvents can present a threat to soil, ground water, and surface water if accidentally spilled or leaked. Petroleum products also pose a problem if disposed into the municipal wastewater treatment systems or on-site septic systems. Additionally, past technical assistance efforts identified lack of secondary containment and improper disposal of hazardous waste as areas needing to be addressed.

Regulatory Framework

The Thurston County Nonpoint Source Pollution Ordinance (Article VI) is based on the framework of the Washington State Dangerous Waste Regulations in Chapter 173-303 of the Washington Administrative Code.

Article VI, Rules and Regulations of the Thurston County Board of Health Governing Nonpoint Source Pollution states:

Section 3 Definitions:

3.14 **Moderate Risk Waste** – means two types of hazardous wastes: 1) hazardous waste generated by households, called household hazardous waste; and 2) hazardous waste generated by businesses in amounts less than the quantity exclusion limit established in Chapter 173-303-070 through 173-303-103 WAC, which is most commonly 220 pounds per month or batch, called small quantity generator waste.

Section 4 Practices and Procedures:

4.1 (a) Moderate risk waste and petroleum products including, but not limited to, oil and grease, shall be disposed of by recycling or use of a hazardous waste management facility operating under interim status or with a permit issued by EPA or an authorized state. Such facilities include, but are not limited to, the county's HazoHouse for citizens to deposit household hazardous waste or contracted hazardous waste management facilities for moderate risk waste generators. No person shall, intentionally or negligently, dump or deposit, or permit the dumping or depositing of any such waste in any other manner, including onto or under the surface of the ground or into surface water or ground water.

(b) Moderate risk waste, petroleum products, and hazardous materials shall be kept in containers and shall be stored in such a manner and location that if the container is ruptured, the contents will not discharge, flow, be washed or fall into surface water or ground water. This does not supersede any regulations as stated in the Uniform Fire code.

(c) Any person violating this section or owning or in possession of the premises, facility, vehicle or vessel from on which waste is discharged or placed in violation of this section shall notify the department of the location and nature of the violation and shall immediately take or cause to be taken all necessary steps to prevent injury and protect waters from pollution.

The health officer may notify the Washington State Department of Ecology (Ecology) of the discharge and request their appropriate response.

The businesses included in this campaign are classified as Small Quantity Generators (SQG) of hazardous wastes. Small Quantity Generators (as defined in WAC 173-303-070) may not generate more than 220 pounds of hazardous waste per month or batch, and may not accumulate or store more than 2,200 pounds at any time. The Thurston County Hazardous Waste Program regulates only those businesses with SQG status, while Ecology regulates businesses with Medium Quantity Generator (MQG) and Large Quantity Generator (LQG) status.

The Thurston County Critical Areas Ordinance Chapter 17.15.520 C (2) also requires that businesses located in aquifer recharge areas provide secondary containment for hazardous materials stored on-site.

Goals

The Thurston County Hazardous Waste Program conducted a business technical assistance and education campaign. Success of the technical assistance and compliance campaign is measured using goals established in the 1998 Hazardous Waste Plan for Thurston County. By working with SQG's, the goals of this campaign are to:

- 1) Increase the percentage of hazardous waste collected (that cannot be prevented through waste reduction in the first place).
- 2) Protect ground water, surface water, soils and sediments and private property from hazardous materials and hazardous waste contamination.
- 3) Increase the rate of waste reduction, which conserves resources and reduces demand for disposal and recycling services.
- 4) Reduce the amount of hazardous materials that is improperly stored, improperly disposed, and accidentally spilled into the environment.
- 5) Reduce potential for causing publicly owned facilities such as landfills or sewage treatment plants to exceed pollution discharge limits.

Methodology

Thurston County conducted a similar automotive campaign in 1996. With the support of the Automotive Service Association of Washington, this campaign is a continuation of our efforts to educate, advise and assist the automotive repair industry.

The campaign began by assembling a list of 247 facilities, based on the information gathered from local resources (e.g. phone book, Washington State Department of Licensing, and area knowledge). The campaign was divided into two parts:

Part 1- 139 specialty shops (e.g. oil change, transmission repair shops, recreational vehicle, tire centers, brake shops, muffler shops, and collision centers); auto sales; and auto repair shops.

Part 2- 18 auto dealerships.

From the initial list, 90 businesses were not inspected for the following reasons:

- 1) 40 were in the process of closing or had closed;

- 2) 25 businesses did not generate or store hazardous materials (i.e. auto sales, parts sales, gas stations only, etc);
- 3) 7 businesses declined the technical assistance visit;
- 4) 6 could not be located or did not respond to attempted contacts;
- 5) 6 letters were returned as undeliverable as addressed;
- 6) 4 were duplicate entries;
- 7) 1 site was visited by Ecology; and
- 8) 1 business that was contacted is located in Pierce County;

Beginning in January 2007, a letter of invitation (Appendix A) was sent to the businesses identified for the campaign. The letter announced the upcoming campaign and explained the purpose of the visits. Businesses were then contacted to schedule the visit. Site visits were conducted during the winter of 2007 through the summer of 2009 to:

- 1) verify that the facility is an SQG;
- 2) educate the SQG businesses concerning local regulations;
- 3) provide information on hazardous waste management;
- 4) educate the industry regarding disposal and recycle resources;
- 5) assist in resolving potential violations; and
- 6) discuss waste reduction technologies and techniques.

To assist in the campaign Hazardous Waste Fact Sheets were developed or updated (Appendix B). The most common fact sheets used during the campaign were:

- 1) Compliance with the Nonpoint Source Pollution Ordinance
- 2) Doing Business in a Wellhead Protection Area
- 3) Solvents and Parts Cleaners
- 4) Spill Plans
- 5) Hazardous Waste Disposal Program for Thurston County Businesses
- 6) HazoHouse Charge Account Contract Registration Form
- 7) Does Your Business Generate Hazardous Waste?
- 8) Managing Used Shop Towels and Contaminated Absorbent Materials
- 9) Oil/Water Separator Fact Sheet
- 10) Aqueous Parts Washers
- 11) Fluorescent Lamps
- 12) Secondary Containment
- 13) Solvents and Parts Cleaners
- 14) Antifreeze Used Oil and Oil Filters

The fact sheets were provided during visits and upon request. Fact sheets are also available at: <http://www.co.thurston.wa.us/health/ehem/index.html>

For participating businesses, a commercial parcel inventory form (Appendix C) was used to collect information about the property such as, property ownership information, specific types of equipment utilized, volumes of hazardous materials, and disposal methods of hazardous materials.

An on-site assessment of hazardous material management was performed as a component of the technical assistance visit. The assessment looked at hazardous materials used by each business and verified compliance with State and County regulations. County staff also utilized the opportunity to recognize or suggest Best Management Practices (BMPs). BMPs are non-regulated practices designed to:

- 1) reduce the generation of hazardous waste;
- 2) promote recycling;
- 3) encourage the use of less-toxic products;
- 4) assist in identifying improvements in hazardous material management; and
- 5) promote employee health and safety.

After the technical assistance visit, the business representative was notified as to whether their business was in compliance with the state regulations and the Thurston County Nonpoint Source Pollution Ordinance. Businesses meeting these requirements were issued a Notice of Compliance (Appendix D). Businesses that were not in compliance were issued a Notice of Noncompliance (Appendix E). A mutually agreed upon time frame was established in which to correct the problem(s). When compliance had been achieved, a Notice of Compliance was issued during a follow-up visit. The majority of the visits required just one follow up while others required as many as nine.

A customer survey (Appendix F) with a self-addressed, stamped envelope was also given to businesses participating in the campaign. The survey requested businesses describe any changes they made in their hazardous waste management practices as a result of the campaign. It also asked the businesses how they gained information concerning hazardous waste management, how useful they found the campaign, and their impressions of the quality of service provided by Thurston County's Hazardous Waste Program.

Follow-up calls or site visits were conducted after the initial visit to evaluate the implementation of voluntary BMPs. Since BMPs are not considered compliance issues, businesses were given educational information and recommendations. The list of recommended BMPs is located in Appendix G.

Results

Part 1. Specialty Shops, Auto Sales, and Auto Repair Shops

To date 139 businesses have been inspected or contacted by phone. A total of 245 initial and follow up inspections were completed. Five additional site visits are pending for those who need additional time to attain compliance.

Of the 139 businesses receiving site visits, 60% were in compliance with state and county regulations at the time of the initial visit. Compliance summaries are listed below in **Table 1**. Specific issues resulting in noncompliance are listed in **Table 2**. Customer survey results are listed in **Table 3**.

Table 1: Compliance Results

Compliance Status	At the Time of the Initial Visit	At the End of Campaign
In compliance	83	134
Out of compliance	56	5

Table 2: Compliance Issues

Compliance Issue	Time of the Initial Visit	End of the Campaign
Inadequate secondary containment	51	5
Oil staining on ground	2	0
Open floor drain in chemical storage areas	1	0
Manage aqueous parts washer waste separately from oil/water separator	6	0
Improper still bottom disposal	2	0
Improperly stored oily excess scrap metal causing staining	3	0
Inadequate waste disposal documentation	3	0

Table 3: Customer Survey Responses

Survey Question	Yes	No	Unsure
1. Was your business in compliance following the initial visit?	7	15	1

Survey Question	Yes	No	No change needed
2. Did the visit assist you in making changes in the way you manage your hazardous materials/wastes?	21	0	2

Survey Question	Disposal costs	Equipment costs	Where to obtain disposal information	Understanding regulations	Extra time required for proper management and disposal	Safety and liability issues
3. What concerns you most about proper hazardous waste management?	7	1	5	7	2	14

4. Where do you get your information regarding hazardous materials management?
 Comments: *Thurston County (3), Trade Association Jobbers (4), Vendor (6), County PUD (1), Suppliers (1), Material Safety Data Sheets (3), Department of Ecology (1).*

Survey Question	Yes	No	No Questions
5. Did the county specialist provide specific answers that addressed your question?	22	0	1

Survey Question	Yes	No	Unsure
6. Overall, did your business benefit from the technical assistance program?	17	0	6

Survey Question	Yes	No	Unsure
7a. In addition to the technical assistance programs, TCEH provides businesses with the following: a) Hazardous waste hotline b) Newsletter: "Hazardous Waste Update" c) Hazardous waste disposal site (Thurston County HazoHouse) d) Hazardous Waste Website, www.co.thurston.wa.us/health/ehhw/index.html Do you currently use or will you use these services?	17	3	3

7b. Which service(s) will you most likely use? *HazoHouse (10), Newsletter (2), Website (1), All (1).*

Survey Question	Email	Regular Mail	Neither
8. What is your preferred method of receiving Thurston County newsletters and other information?	4	19	1

9. Please share any additional comments or suggestions. Your suggestions help us improve our services Thank you!	<i>Good attitude by county employee. Thanks for your help. Very Helpful. Helped obtain bins to hold 55 gallon drum. Helpful information. Keep up the good work.</i>
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Current Trends in the Auto Repair Profession

Information was collected about individual businesses utilizing the commercial parcel inventory form. After completing the initial inspections several key trends were identified regarding hazardous products use and disposal in the industry. These trends are listed below in **Table 4, Table 5, Table 6, and Table 7.**

Table 4: General Facility Trends

Facility Trend	Number of businesses	Percent of businesses
Sites with Material Safety Data Sheets on site	97	70%
Sites with adequate spill kits	92	66%
Sites with floor drains	44	32%
Sites with sealed floor drains	5	4%
Sites with floor drain that discharge directly to sealed sump or vault	6	4%
Sites with an oil/water separator and floor drains	33	24%

Table 5: Oil/Water Separator Discharge Point

Sanitary Sewer (LOTT)	Drywell/ Leach field	Storm water	Septic System	Other/ Unknown
19	3	3	1	7
% Connected to sanitary sewer (LOTT)	% connected to drywell/ leach field	% connected to storm water drain	% connected to on-site septic system	% connected to other/ unknown
58%	9%	9%	3%	21%

Table 6: Disposal Trends

Disposal Trend	Number of businesses	Percent of businesses
Sites using vendor pick-up services for used oil management	73	53%
Sites using drop-off vendor for used oil management	37	27%
Sites using on-site recovery management (oil burner)	16	12%
Sites using vendor pick-up services for antifreeze management	81	58%
Sites using drop-off vendor for antifreeze management	11	8%
Sites using on-site hazardous waste management (distillation, recycle/treatment, filtering, evaporator, owned equipment)	36	26%
Sites utilizing HazoHouse or oil collection facilities	13	9%

Table 7: Parts Washing

Method	Total number	Disposal Vendor Pickup	Distillation On-site	Aqueous Recycle Treatment
Parts washer using aqueous-based fluid	37	17	0	26
Parts washer using solvent-based fluid	66	47	8	0
Water-based parts washer	2	0	0	0
Businesses that employed spray can parts cleaners utilizing non-chlorinated product	36	N/A	N/A	N/A

Best Management Practices

In addition to regulatory requirements, other recommended BMPs were presented during the visits. The goal was to encourage businesses to improve all aspects of hazardous material management, ranging from product purchasing to final waste disposal.

Table 8: Best Management Practices

Best Management Practice (BMP)	Times Suggested	Times Implemented	Percent Implemented
1. Recycle oil filters	12	4	33%
2. Prepare written spill plan	20	2	10%
3. Store scrap metal under cover	14	2	14%
4. Remove excess accumulation of waste	10	3	30%
5. Keep outdoor areas free from oil stains	11	6	55%
6. Keep containers closed when not in use	7	7	100%
7. Recycle fluorescent lights	58	58	100%
8. Avoid using chlorinated solvents	14	6	43%
9. Research less toxic alternatives	1	0	0%
10. Get permission from LOTT before discharging wash water to sewer	22	22	100%
11. Label product and waste containers	18	18	100%
12. Seal floor drain(s)	12	3	25%
13. Seal floor drain leading to storm sewer	2	2	100%
14. Store batteries on covered concrete pad	1	1	100%
15. Provide secondary containment for smaller items	11	4	36%
16. Provide secondary containment for shipping and receiving area or move all hazardous liquids to containment area the same day	1	1	100%
17. Seal floor drain over sump in work bay area	1	1	100%

Best Management Practice (BMP)	Times Suggested	Times Implemented	Percent Implemented
18. Always contact LOTT before discharging process waste into sewer system	6	6	100%
19. Drain vehicle fluids as soon as possible after receiving	1	1	100%
20. Clean catch basin	2	1	50%
21. Carefully manage floor cleaning wash water	1	1	100%
22. Obtain Material Safety Data Sheets for products in addition to label warnings	6	4	67%
23. Use Thurston County HazoHouse	10	10	100%
24. Provide additional containment for antifreeze	1	1	100%
25. Switch to aqueous parts washer	7	2	29%
26. Construct cover over outside used oil tank	3	2	50%
27. Move drum of window washer fluid farther back from bay door into shop	1	1	100%
28. Install floor seal in storage building	1	1	100%
29. Never allow wash water to enter storm drain or septic system	20	20	100%
30. Store all 55 gallon drums at rear of building	1	1	100%
31. Seal floor cracks	2	0	0%
32. Control spills, leaks and drips	1	1	100%
33. Use less toxic products	2	0	0%
34. Train staff about hazardous material handling	1	0	0%
35. Use an industrial cleaning and environmental company to clean oily concrete	7	0	0%
36. Keep disposal receipts and other records	2	2	100%
37. On-site spill kit	1	1	100%
38. Test paint booth filters	5	0	0%

Best Management Practice (BMP)	Times Suggested	Times Implemented	Percent Implemented
39. Place petroleum absorbent in drain across from bay entry to catch drips before discharging to storm water	1	0	0%
40. Use vendor service for parts washer waste disposal	2	0	0%
41. Do not mix solvents with other waste (i.e. oil)	3	3	100%
42. Use funnels/pumps to transfer liquid	1	1	100%
43. Service parts washer and dispose of spent solvent	1	1	100%
44. Clean or inspect oil water separator	4	4	100%
45. Install magnetic drain cover	1	0	0%
46. Manage storm water from outdoor containment area	1	0	0%
47. Consider on-site solvent recycling (i.e. distillation)	8	0	0%
48. Label hazardous waste containers	5	5	100%
49. Test aqueous parts washer	1	0	0%
50. Obtain spill clean up materials	1	1	100%
51. Use smaller waste containers for easy handling	1	1	100%
Total BMPs	348	211	61%

Part 2. Auto Dealerships

To date seventeen (17) dealerships have been inspected or contacted by phone, with one (1) initial inspection remaining. A total of 33 initial and follow up inspections were conducted. Two (2) dealerships did not generate or store hazardous materials. Compliance summaries are listed below in **Table 9** and the specific issues resulting in noncompliance are listed in **Table 10**. Key trends in the industry are listed in **Table 11**, **Table 12**, and **Table 13**.

Table 9: Compliance Results

Compliance Status	At the Time of the Initial Visit	At the End of Campaign
In compliance	0	3
Out of compliance	14	11

Table 10: Compliance Issues

Compliance Issue	Time of the Initial Visit	End of the Campaign
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Inadequate secondary containment	14	11
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Table 11: Disposal Trends

Disposal Trend	Number of businesses	Percent of businesses
Sites using vendor pick-up services for used oil management	14	100%
Sites using vendor pick-up services for antifreeze management	14	100%

Table 12: General Facility Trends

Facility Trend	Number of businesses	Percent of businesses
Sites with Material Safety Data Sheets on site	14	100%
Sites with adequate spill kits	14	100%
Sites with floor drains	14	100%
Sites with an oil/water separator and floor drains	14	100%
Sites with oil/water separator discharging to sanitary sewer (LOTT)	14	100%

Table 13: Parts Washing

Method	Total number	Disposal Vendor Pickup	Distillation On-site
Parts washer using aqueous-based fluid	3	4	0
Parts washer using solvent-based fluid	10	6	12
Businesses that employed spray can parts cleaners utilizing non-chlorinated products	All facilities	N/A	N/A

Meeting the Goals of the Hazardous Waste Plan for Thurston County

Success of the technical assistance campaign and compliance elements of the Thurston County Business Prevention Pollution Program are measured by established goals in the 1998 Hazardous Waste Plan for Thurston County. The outcomes for the goals set in this campaign are listed below.

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

The following are best management practices that resulted in the increase of hazardous waste collected.

- a) Fifty-eight (58) businesses agreed to recycle fluorescent lights.
- b) Four (4) businesses began recycling oil filters rather than using solid waste disposal.
- c) Ten (10) businesses stated they would begin utilizing Thurston County HazoHouse recycling facilities.

The following are existing best management practices that meet the established goal.

- d) One hundred six (106) businesses used vendor service for used antifreeze.
- e) Thirteen (13) businesses used HazoHouse or used oil collection facilities.
- f) Six (6) businesses used on-site recycling for used antifreeze.
- g) Forty (40) businesses utilized vendor services for used oil management.

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

- a) Verified that eighty four (84) businesses were in compliance with the Thurston County Nonpoint Source Pollution Ordinance.
- b) Twenty (20) businesses stated that they would improve their floor cleaning practices and prevent any contaminated wash water from entering a storm drain or an on-site sewage system.
- c) Forty eight (48) businesses achieved compliance with the Thurston County Nonpoint Source Pollution Ordinance. A total of 11,405 gallons of hazardous materials now have secondary containment.

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

The following business practices meet the established goal.

- a) Sixteen (16) businesses utilize certified oil burners for on-site recovery management.
- b) Twenty six (26) businesses use recycle treatment for aqueous-based cleaning fluid.
- c) Thirty six (36) businesses use a combination of distillation, evaporation, or filtering components for antifreeze and solvent management.
- d) Three (3) businesses use a centralized and pressurized non-chlorinated solvent cleaner similar to a paint sprayer.

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

- a) Twenty (20) businesses stated that they would not dispose of any contaminated wash water into a storm drain or on-site sewage system.
- b) Forty seven (47) businesses put into operation adequate secondary containment.

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

- a) Twenty two (22) businesses stated they would contact LOTT prior to discharging any wash water into the sewer system.
- b) Six (6) businesses were informed and stated they would contact LOTT prior to discharging any process waste into the sewer system.

Conclusions

This Technical Assistance campaign focused on the automobile service industry. Most single-industry campaigns focus on business types that represent a potential risk to public health and the environment. This risk is illustrated by improper storage, use, and disposal of hazardous materials. Auto dealerships and repair shops were recognized as good candidates for technical assistance based on the large variety of hazardous materials utilized at these facilities.

Part 1 of the campaign included 139 businesses. Eighty three (60%) of the businesses were already in compliance with the Thurston County Nonpoint Source Pollution Ordinance, while 56 (40%) were not. At the end of the campaign, 134 (96%) businesses were in compliance; while five (4%) are pending compliance.

The most common compliance issue involved inadequate secondary containment of hazardous materials for 51 businesses. Forty six of 51 businesses now have adequate secondary containment. All other compliance issues have been resolved.

Two businesses require significant capital improvements and are planning for adequate secondary containment. One business will complete construction of a secondary containment area by August 1, 2009. One business will complete construction of a secondary containment area by September 1, 2009. One business is purchasing a spill deck for secondary containment. None of the five businesses pending compliance pose an imminent threat to environmental or public health.

The business that uses a mechanical parts washer employed vendor pickup services or used on-site techniques such as filtration, evaporation or distillation when managing waste from this practice. These observed practices along with the technical assistance visit and educational approach provides assurance that this waste is properly disposed of and not introduced into the environment.

Part 2 focused specifically on auto dealerships. All 14 dealerships (100%) were out of compliance at the initial inspection. Noncompliance was primarily due to a lack of adequate secondary containment. Three (3) businesses are now in compliance with adequate secondary containment.

The difficulty in obtaining secondary containment for auto dealerships is due to large volumes of product and capital improvement costs needed for secondary containment. Many of the dealerships

require approval from corporate partners prior to conducting any type of construction. Therefore compliance is anticipated to be a lengthy process.

Overall fifty-one (51) BMPs were suggested a total of 348 times during the campaign. Forty of the BMPs were implemented 211 times by the end of the campaign. At the conclusion of the campaign 39 out of 51 (76%) of the BMPs suggested were put into practice at least one time.

The types of services used for the hazardous waste disposal or recovery of used oil products, solvents, and antifreeze are:

- 1) 95 businesses utilized pick up vendors for antifreeze.
- 2) 87 businesses utilized pick up vendors for oil.
- 3) 37 businesses utilized drop off vendors for oil.
- 4) 36 businesses used equipment employing distillation, filtering, on site recycling/treatment, and evaporators for hazardous waste management.
- 5) 16 businesses employed on-site management recovery for used oil (oil burner).
- 6) 11 businesses utilized drop off vendors for antifreeze.
- 7) The remaining business generated small amounts of used oil and antifreeze resulting in the use of drop off sites such as Thurston County HazoHouse and used oil collection facilities.

Twenty three customer surveys were returned. The most notable responses are:

- 1) Twenty-one businesses stated that the campaign facilitated improvements to their hazardous material management practices.
- 2) Business concerns pertaining to proper hazardous waste management:
 - Fourteen indicated safety and liability issues
 - Seven indicated disposal costs
 - Seven understanding regulations
 - Five where to obtain disposal information
 - Two time required for proper management and disposal
 - One was equipment costs
- 3) When asked where information is obtained regarding hazardous materials management:
 - Six indicated Vendors
 - Four indicated Trade Association Jobbers
 - Three indicated Material Safety Data Sheets
 - Three indicated Thurston County Environmental Health
 - One indicated the County PUD
 - One indicated the Department of Ecology
- 4) Which Thurston County services will you most likely use:
 - Ten said HazoHouse
 - Two said the Newsletter
 - One said the Website
 - One said all of them
- 5) What is the preferred method of receiving information from Thurston County:
 - Nineteen said regular mail
 - Four said e-mail
 - One said neither

Throughout the campaign all the businesses expressed a desire to comply with the requirements once they understood the focus of the campaign. After concluding the campaign, it was evident that the participating businesses improved their waste management practices and clearly benefited as a result

of this effort. Many of the businesses voiced a concern that simple and understandable information is not readily available. Key to addressing this concern are the TCEH Hazardous Waste Fact Sheets.

Project Goal Statement: The goal of this project is to protect water and environmental quality by working with SQGs to ensure proper handling, storage and disposal of hazardous wastes and materials.

Project Outcome Statement: Over the two year grant period, the RECIPIENT expects to conduct at least 200 site visits to local SQGs. The RECIPIENT expects 75% of SQGs visited will implement a minimum of one voluntary Best Management Practice (BMP) within three months of the receiving technical assistance, and that 90% of businesses receiving Notices of Noncompliance will achieve compliance within three months of the initial notice.

In accordance with the grants goal and outcome statements:

- 1) 278 initial and follow up site visits were conducted.
- 2) 81% of the SQGs visited implemented at least one of the BMPs suggested.
- 3) The campaign achieved a 90% compliance rate. The volume of hazardous material that now has adequate secondary containment is 13,405 gallons.
- 4) When 100% compliance is obtained a total of 26,730 gallons of hazardous material will have adequate secondary containment.

By working with SQGs to ensure proper handling, storage, and disposal of hazardous materials, the goals and outcomes identified in this campaign were successfully met.

Appendix A:

Letter of Invitation



COUNTY COMMISSIONERS

Cathy Wolfe
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District Three

**PUBLIC HEALTH AND
SOCIAL SERVICES DEPARTMENT**

Letter of Invitation

Sherri McDonald, RN, MPA,
Director
Diana T. Yu, MD, MSPH
Health Officer

Date:

To: Automotive Service Professionals

RE: Technical Assistance Campaign – Automotive Service Industry

Dear Business Owner/Manager:

Thurston County Business Pollution Prevention Program will be conducting a Technical Assistance Campaign for the automotive service industry. The purpose of our campaign is to provide the industry with updated information regarding hazardous materials management. In addition, we will also suggest Best Management Practices (BMPs) as they pertain to waste reduction and recycling.

During our technical assistance visit, we will provide information to help your business gain or maintain compliance with the Thurston County Nonpoint Source Pollution Ordinance as well as local sanitary sewer regulations (LOTT Alliance). These ordinances require the proper storage and disposal of hazardous materials. If issues are found that cannot be corrected during the visit, we will provide information to assist with corrective actions and conduct a follow-up visit to help you attain compliance.

The Thurston County Environmental Health Division has been conducting Technical Assistance Campaigns since 1994. Past campaigns have included wrecking yards, marinas, dental facilities, furniture manufacturers, and school chemistry laboratories. As some of you may recall, Thurston County conducted a similar automotive campaign in 1996. With full support of the Automotive Service Association of Washington (ASA), the 2008 campaign will be a continuation of our efforts to protect public health and the environment by assisting businesses that store and dispose of hazardous wastes.

Due to the large number of automotive facilities, county staff will conduct individual drop-in visits. However, if you would like to schedule a specific time, feel free to call me at 360-786-5458. For additional information about our program, please visit our website at www.co.thurston.wa.us/health/ehhw/index.html. We look forward to working with you.

Respectfully,

Al Schmidt, R.S.
Environmental Health Specialist

Appendix B:

Hazardous Waste Fact Sheets

Hazardous Waste Factsheet

Secondary containment may be required for proper storage of hazardous liquids.

Compliance with the Nonpoint Source Pollution Ordinance

The Thurston County Nonpoint Source Pollution Ordinance (Article VI of the Sanitary Code) requires that hazardous materials and wastes be handled, stored, and disposed in a manner that is protective of the environment. Section 4.1 of Article VI states:

- (a) Moderate risk waste and petroleum products including, but not limited to, oil and grease, shall be disposed of by recycling or use of a hazardous waste management facility operating under interim status or with a permit issued by EPA or an authorized state . . . No person shall, intentionally or negligently, dump or deposit, or permit the dumping or depositing of any such waste in any other manner, including onto or under the surface of the ground or into surface or ground water.
- (b) Moderate risk waste, petroleum products, and hazardous materials shall be kept in containers and shall be stored in such a manner and location that if the container is ruptured, the contents will not discharge, flow, be washed or fall into surface water or ground water.

In order to comply with Section 4.1 (b), secondary containment may be required for proper storage of petroleum products and other hazardous liquids.

What is Secondary Containment?

Secondary containment is a liquid-tight barrier that will adequately contain hazardous materials that are released from a leaking storage container. Examples include, but are not limited to the following:

- Placement drums or tanks (primary containment) inside an area surrounded by a concrete curb or metal lip (secondary containment).
- Placement of containers inside of plastic or metal tubs, bins, pans, troughs, or any other suitable secondary container.
- Double-walled storage tanks.
- Storage areas that drain into sealed vaults or sumps.

When is Secondary Containment Required?

Secondary containment is required for any hazardous liquid that has the potential to reach the environment (i.e. soil, surface water, etc) in the event that the primary container is ruptured. Examples include, but are not limited to the following:

- Any outdoor storage area.
- Indoor storage areas located near floor drains.
- Indoor storage areas located near an outside doorway or outside wall that is not sealed to the floor.
- Indoor areas containing dirt surfaces, cracked concrete floor, or concrete expansion joints.

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Olympia, WA 98502-6045

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TDD Line: 360-754-2933

<http://www.co.thurston.wa.us/>



The Options

The size and design of a secondary containment unit depends on the type and amount of material that it holds. The following secondary containment options will satisfy Thurston County regulatory requirements. Liquid hazardous materials, including petroleum products, can be:

1. Stored **indoors** on a liquid-tight concrete floor without secondary containment *if* the storage area is able to contain 100 percent of the largest container in the event of a spill and prevent it from flowing or leaking out of the building. In addition, spilled or leaked materials must be prevented from entering floor drains that are not part of a liquid-tight containment system designed to capture and hold hazardous materials.
2. Stored in outdoor or indoor **covered** secondary containment that can hold 110 percent of the volume of the largest storage container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement volume of any items inside the containment.
3. Stored in **outdoor uncovered** secondary containment that can hold 120 percent of the volume of the largest storage container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement volume of any items inside the containment. Uncovered containment is not generally recommended (see below).
4. Stored in UL-certified double-walled storage tanks. The volume requirements that are listed in options 1, 2, and 3 do not apply to these storage tanks, because they do not require additional containment provisions.

Secondary Containment Criteria

Calculations for Determining Proper Containment Volume

- First, measure cubic feet of the containment area: Multiply length x width x height
- To convert cubic feet to gallons, multiply number of cubic feet by 7.48
- 1 inch equals 0.083 feet.
- Example: Containment area measures 10 feet wide by 10 feet long by 4 inches tall.
Multiply 10 x 10 x 0.332 (4 inches x 0.083 per inch) = 33.2 cubic feet
Multiply 33.2 cubic feet x 7.48 = 248 gallons total containment capacity

Chemical Compatibility and Structural Integrity

- The structural materials used in secondary containment units, including expansion joints and seals (if applicable) must be chemically compatible with the substance(s) that will be contained.
- Secondary containment must be maintained liquid-tight at all times.
- Secondary containment must be physically adequate to hold a release and remain liquid-tight.

Stormwater Accumulation and Discharge

All stormwater that accumulates in outdoor uncovered secondary containment must be managed in accordance with the Thurston County Drainage Design and Erosion Control Manual.

- Outdoor uncovered containments must be maintained free of stormwater accumulation.
- An operator must be present during stormwater discharge from secondary containment.
- All discharge valves must be closed and locked after a supervised discharge is completed.
- Stormwater discharged from petroleum product secondary containment must be treated through an oil/water separator or handled as hazardous waste. (See the hazardous waste fact sheet "Oil/Water Separators.")

Additional Information

Please call the Thurston County Business Pollution Prevention Program at (360) 786-5457 or TDD (360) 754-2933 or visit our website at www.co.thurston.wa.us/health/ehhw/index.html



**Hazardous
Waste
Factsheet**

“If your business is in the one-year time-of-travel zone, a hazardous material spill may reach a drinking water well in only one year.”

Doing Business in a Wellhead Protection Area

Help Keep Our Drinking Water Clean

Groundwater is Thurston County's sole source of drinking water. About 98% of us drink groundwater from local aquifers. Wells for public water utilities operated by Olympia, Tumwater, Lacey, and Thurston County are located throughout the county.

To protect and ensure safe drinking water for the future, “wellhead protection areas” were designated in the areas surrounding a well that replenish the aquifer through rainfall. These recharge areas are divided into time-of-travel zones, based on estimates of how long it will take water infiltrating within the zone to reach the well.

Thurston County’s drinking water and wellhead protection areas are vulnerable to contamination for three reasons:

1. Our soils are permeable; a pollutant can easily flow through our soils to contaminate local aquifers, impacting drinking water supplies.
2. Our groundwater moves rapidly. Once a pollutant reaches the groundwater, it can reach an aquifer in relatively little time. For example, if your business is located in a one-year time-of-travel zone, a spill of a hazardous material, such as gasoline, is predicted to reach a drinking water well in only one year.
3. Our public drinking water wells are shallow, usually around 200 feet or less. Most private wells are even shallower, often only 50 feet deep.

For these reasons, contamination within a wellhead protection area threatens our drinking water supply. Each resident and business needs to pay attention to avoid contamination in wellhead protection areas.

Doing Business in a Wellhead Protection Area - Know the Risks

A variety of materials and products threaten safe drinking water. Hazardous materials such as solvents, oil, kerosene, pesticides, and fertilizers, if handled carelessly or stored improperly, are all potential threats. Leaking underground fuel storage tanks and failing septic systems are also sources of contamination. Groundwater contamination can and has occurred here in Thurston County. Cleanup is expensive, in terms of both time and money.

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The City of Tumwater's experience with contaminated municipal wells is one example. During routine water testing, unacceptable levels of trichloroethylene, an industrial solvent, were discovered in its city wells. Three of the city's wells were immediately taken out of service – equaling approximately 25% of Tumwater's water supply. The area was declared a Superfund site by the U.S. Environmental Protection Agency (EPA). This determination spurred an investigation to determine the cause and extent of the contamination.

The researchers found that the most likely source of the hazardous materials was improper waste disposal by gas stations, a testing lab, and a dry cleaner. The chemicals moved underground to the Palermo Valley (also known as Tumwater Valley), where the city's drinking water wells are located.

Tumwater drilled two new wells to ensure an adequate water supply for residents. It has cost taxpayers, businesses, and ratepayers close to four million dollars to clean up the solvent and provide new water supplies.

An Ounce of Prevention is Worth Millions in Cure

Learn how to manage hazardous materials properly to save money, protect the health of your employees, and protect our community's drinking water supply.

1). Develop a spill prevention and response plan for your business.

A spill plan prepares you and your employees to deal with small spills and leaks during business operations. Even small spills that occur on a regular basis can turn into big problems. A spill plan will also provide a strategy for catastrophic, unexpected spills. The basic plan includes:

- Description of business activities, with a site map showing where hazardous materials are stored.
- A list of spill control equipment on the site (low-cost items include spill pads and floor dry).
- An emergency response procedure, including whom to call in an emergency.
- Training and awareness building for employees on a regular basis.

2). Keep all hazardous materials in secondary containment.

Hazardous materials, such as petroleum products and solvents, should be stored in secondary containment. Secondary containment is a liquid-tight barrier or container that prevents a hazardous material that spills or leaks from contaminating surface water or groundwater. In case of flooding, earthquake or fire, secondary containment can prevent hazardous materials from escaping into the soil or nearby waterways.

Secondary containment doesn't have to be expensive. It can be as simple as placing a gasoline container into a plastic tub. However, there are technical requirements for the capacity of any secondary containment.

3). Reduce the amount of hazardous materials you store and use.

Reduce the risk of spills by using less-toxic products. Less toxic products are less likely to contaminate groundwater if a spill or leak occurs. Consult your vendor, trade association or other businesses in your industry about less-toxic products that are available and effective alternatives.

Additional Information

Thurston County Business Pollution Prevention Program staff will answer questions, offers **FREE** on-site technical assistance, and can provide you with detailed fact sheets on the spill plans and secondary containment. Contact the Hazardous Waste Assistance Line (360) 786-5457, Monday through Friday, TDD (360) 754-2933, or visit our website at www.co.thurston.wa.us/health/ehhw/index.html.



Hazardous Waste Factsheet

Solvents and Parts Cleaners

“Short-term exposure to many solvents can affect the brain and nervous system; long-term exposure can cause permanent physical damage.”

The Problem

Most organic solvents are hazardous because they are flammable or can cause harm if they are inhaled, ingested, or absorbed through the skin. Short-term exposure to many solvents can affect the brain and nervous system; long-term exposure can cause permanent physical damage. Many solvents contribute to smog formation when they evaporate into the air. Certain solvents, specifically chlorofluorocarbons (CFCs) and some chlorinated solvents, are especially harmful to human health and the environment.

Solvents discharged into surface water can harm aquatic organisms, and solvents poured on the ground or into septic tanks can easily pollute ground water, ruining its use as drinking water. In Thurston County, solvents have contaminated a number of large municipal wells and small private wells.

Water-based (or aqueous) parts cleaning solutions can also be hazardous because the detergent is often very caustic. These solutions usually pick up metals, oils, and dirt during the cleaning process that can make them even more hazardous. These wastes can also cause harm if they are discharged into the sanitary sewer or a septic tank, put down a storm drain, dumped on the ground, or poured directly into a lake, stream, or Puget Sound. A fact sheet on aqueous parts washing is available.

The Regulatory Requirements

The Thurston County Nonpoint Source Pollution Ordinance, which went into effect May 9, 1993, requires that hazardous waste be disposed of either by recycling or through a permitted hazardous waste management facility. This requirement applies to waste solvents. Disposal of waste solvents in the garbage, down the drain, on the ground, or by mixing with used oil is prohibited.

Small quantity hazardous waste generators (SQGs) operating in Thurston County are subject to the requirements of this ordinance. Businesses classified as SQGs generate less than 220 pounds of hazardous waste per month. SQGs are exempt from the oversight by the Department of Ecology only if they manage all of their hazardous wastes properly.

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The Options

Small quantity generators can satisfy the requirements of the Nonpoint Source Pollution Ordinance by managing their waste solvents through one of the following options:

1. Some waste solvents can be distilled on-site and reused. The resulting sludge and filters from this process must be managed as a hazardous waste. For more details, contact the Thurston County Business Pollution Program at (360) 754-4111.
2. Send your waste solvent off-site to be recycled. Thurston County's HazoHouse can accept small quantities of waste solvent from qualified small quantity generators in Thurston County.

For businesses with larger quantities of solvents, or on-site parts washing units to maintain, using a vendor is the best option. The following is a partial list of companies that provide waste solvent pick-up, recycling, and/or disposal for local businesses. This information was obtained from the Department of Ecology's Hazardous Waste Services Directory, available at <http://www.ecy.wa.gov/apps/hwtr/hwsd/default.htm>

Vendor Name	Phone Number
Emerald Services (western WA)	888-832-3008
Clean Harbors Env. Services (western WA)	206-429-9100
Philip Services (Kent, WA)	800-882-9785
Phoenix Environmental (Tacoma, WA)	888-475-0116
Safety-Kleen (Auburn, WA)	253-939-2022
Thermo Fluids (Sumner, WA)	253-863-3310

Remember, you are liable for any harm caused by the waste solvent you generate until it is properly recycled, reprocessed or burned. Therefore, be selective when choosing a business to manage your waste solvent. Some questions to ask a business that you are considering hiring to manage your waste solvent:

1. Can they provide the names and phone numbers of current customers as references?
2. What type of insurance do they have?
3. Where will your wastes go?
4. What documentation is provided? (At a minimum, you should request a signed receipt for every shipment.)

Additional Information

Many businesses have begun to look at ways to cut down on the amount and toxicity of solvents they use. Many product suppliers now sell less-toxic alternatives to traditional solvents. Hazardous waste specialists recommend using the least-toxic solvent that accomplishes the required cleaning work. This may require trying some different options, or talking with other businesses about alternatives that have worked in their shops or facilities.

Many businesses also sell or lease re-circulating solvent systems that can reduce solvent evaporation, and therefore reducing on air pollution and worker exposure. Others distill their spent solvent and reuse it to reduce their wastes.

Specialists from the Business Pollution Prevention Program are available to answer questions about best management practices for waste solvents, vendors of equipment or services, and ways to calculate pollution prevention costs. Contact us at 754-4111 or TDD 754-2933, Monday - Friday during regular business hours. Other waste management fact sheets available from our website: www.co.thurston.wa.us/health/ehhw/index.html



Hazardous Waste Factsheet

Spill Plans

Spill plans help to prepare and organize employees to deal with small spills, drips, and leaks that occur during routine operations as well as the more catastrophic, unexpected spills.

The Problem

Accidental spills of hazardous materials, hazardous waste, or petroleum products can have negative impacts on public health and the environment. Business owners that use and store dangerous substances can take steps to prevent spills from happening and should know what to do in case a spill does occur.

The Regulatory Requirements

The Thurston County Nonpoint Source Pollution Ordinance (Article VI of the Sanitary Code) provides for protection of the county's vulnerable water resources. It requires that hazardous waste, petroleum products, and hazardous materials be kept in containers and stored in such a manner and location that if the container is ruptured, the contents will not discharge, flow, be washed, or fall into surface water or ground water.

Although spill plans are not specifically required under the county ordinance, they have proven valuable in minimizing the cost and effort of cleaning up an uncontrolled release of hazardous materials to the environment. You should also be aware that the fire department or the LOTT Wastewater Alliance may require a spill plan, depending on the type and quantity of materials you have.

The Options

The following outline is intended to help business owners and operators write a spill plan. The basic parts of the plan are in bold and underlined type. Below these headings are listed specific topics to be addressed. Only address those parts and topics that are applicable to your business. If you have more than one business location, you should write a spill plan specific to each location. A current copy of the plan should be made available to all employees at the site at all times.

General Information

- A. Briefly describe the business' activities, and include a map of storage locations for hazardous materials, hazardous wastes, and petroleum products.
- B. List the number, type, and size of storage tanks at all locations on site.
- C. List the types and amounts of hazardous materials (product) and hazardous waste that are stored on site.
- D. Show the locations of any hazardous material and petroleum product transfer areas on the map.

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Spill Prevention and Control

- A. Describe when preventive leak maintenance and checks are conducted on equipment and how they are documented.
- B. Storage tanks must be inspected regularly for leaks or damage. Describe how often storage tanks are inspected and how the inspections are documented.
- C. Describe the types of spill prevention/clean up training your employees receive, when they receive it, and where training records are kept.
- D. Document the location of secondary containment areas and the materials that are stored in them. Secondary containment units must be inspected regularly. Indicate when inspections take place and how they are documented. (Refer to the "Secondary Containment" fact sheet.)
- E. List the type and amount of spill control equipment kept on site.
- F. List the personnel that are trained in spill response procedures and dates of training.
- G. Leaks and drips from mobile and stationary equipment must be cleaned up immediately. Describe how leak and drip control is accomplished.

Hazardous Waste Management

- A. List the types and quantities of hazardous waste that are generated on site.
- B. Describe the storage, handling and disposal procedures for hazardous waste generated on site.
- C. Indicate which personnel have received hazardous waste training and dates of training.
- D. Describe the management practices to be used for petroleum-contaminated soil and spill absorbents (Refer to the "Managing Used Shop Towels and Contaminated Absorbent Materials" fact sheet).

Emergency Response Plan

- A. Give detailed emergency response procedures that employees will take in case of a spill or accidental release.
- B. Provide, and post by phones, a list of emergency notification phone numbers and after-hours contacts.
- C. Indicate the responsibilities and actions of each employee in the case of an emergency.
- D. Indicate emergency local Fire, Police, Ambulance, and Hospital arrangements.

Reporting and Records

- A. Indicate that all spills and leaks will be reported to the Thurston County Business Pollution Prevention Program (post contact information listed below) and the Department of Ecology (360-407-6300).
- B. Include a sample copy of any on site spill prevention inspection forms.
- C. Include copies of all spill or release records.
- D. Include information on spill prevention, hazardous materials and waste training records and schedules.
- E. Keep a current inventory of hazardous materials, hazardous waste and petroleum products on site.
- F. Keep all certificates, correspondence, fact sheets, and other materials received from regulatory agencies.

Additional Information

For answers to your questions about spill plans, assistance in writing one, or reviews for completeness, please contact the Thurston County Hazardous Waste Assistance Line at (360) 786-5457 or the Business Pollution Prevention Program 754-4111, Monday through Friday 8:00 a.m. - 5:00 p.m.; the TDD line for the hearing impaired is (360) 754-2933. We have a number of fact sheets for small businesses that can be viewed on our website <http://www.co.thurston.wa.us/health/ehhw/index.html> or by calling the office.



**Hazardous
Waste
Factsheet**

Hazardous Waste Disposal Program for Thurston County Businesses

“Businesses are only charged a disposal fee that directly covers the cost to safely recycle or dispose of the waste they bring.”

DO YOU HAVE HAZARDOUS WASTE?

Many small business owners generate hazardous waste, but may not realize that they do. If your business produces wastes such as solvents, oil-based paints, photographic fixers, or flammable wastes, then Thurston County may have a disposal option for you.

Thurston County’s small business hazardous waste disposal program is co-sponsored by the Hazardous Waste Program, which is part of the Thurston County Public Health and Social Services’ Environmental Health Division, and the Thurston County Department of Water and Waste Management. It is set up to allow businesses that generate small quantities of hazardous waste, also called Small Quantity Generators, to dispose of those wastes at HazoHouse, the county’s hazardous waste collection site.

WHAT IS A SMALL QUANTITY GENERATOR?

Your business is a Small Quantity Generator if it generates less than 220 pounds (about 27 gallons) of hazardous waste per month and stores no more than 2,200 pounds of hazardous waste on site at any one time. Small Quantity Generators typically include painters, printers, clinics, furniture repair shops, maintenance shops, and auto shops.

IS YOUR BUSINESS ELIGIBLE?

Because of regulatory restrictions, only Small Quantity Generators are eligible to use this service. Businesses that generate more than the allowable amount mentioned above have stricter state regulations and cannot participate in this program. The larger businesses are classified as Medium and Large Quantity Generators and are regulated by the Department of Ecology. For more information, please visit Ecology’s website at www.ecy.wa.gov/programs/hwtr/reg_comp_guide/ to help determine your regulatory status.

HOW DO I USE THIS PROGRAM?

To dispose of waste through the Thurston County Small Quantity Generator Disposal program, eligible businesses may take their hazardous wastes directly to HazoHouse. HazoHouse is located at the Thurston County Waste and Recovery Center, 2418 Hogum Bay Road in Lacey. HazoHouse is open Friday, Saturday, Sunday, and Monday from 8:00 am to 5:00 pm. If your business has not used this service before, you will be asked to sign up at the initial visit, or you can pre-register by calling our office. You will be billed following your visit; no payment is accepted at the site.

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CAN I TRANSPORT MY OWN WASTE?

Small quantity generators can transport their own waste to the collection site; however, they may be subject to U. S. Department of Transportation requirements. Some regulations may require proper shipping papers, secondary containment, proper labeling, and emergency response numbers. Waste should be transported in the trunk, truck bed, or an area separate from passengers. **DO NOT MIX DIFFERENT TYPES OF WASTES TOGETHER!**

HOW MUCH WILL IT COST?

Under this program, businesses are only charged a disposal fee that directly covers the cost to safely recycle or dispose of the waste they bring. Other handling, transportation, and overhead costs are paid out of funds already collected through garbage rates.

Disposal rates are charged based on the type of waste. Materials that can easily be recycled are free (uncontaminated used motor oil, lead acid batteries) or low cost (\$0.09 per pound for antifreeze). Paints and related materials cost \$0.77 per pound, and fluorescent lamps cost \$0.12 per foot. Materials that cannot be neutralized, recycled, or rendered non-toxic are more expensive, such as oxidizers for \$2.10 per pound and flammable solids for \$7.75 per pound.

For a current price list, businesses should contact specialists with the Business Pollution Prevention Program at 360-786-5457. Specialists can also assist businesses with questions about designating their hazardous wastes or preparing wastes for secure transport to HazoHouse.

REUSE OPTIONS

An alternative to disposal for surplus materials is to list unwanted products with the Industrial Materials Exchange (IMEX) catalog. Call 206-296-4899 or go to <http://www.govlink.org/hazwaste/business/imex/>.

THE BUSINESS POLLUTION PREVENTION TEAM

The Business Pollution Prevention Team is a part of the Thurston County Hazardous Waste Program. We offer free technical assistance to help Thurston County businesses meet the requirements of the Thurston County Nonpoint Source Pollution Ordinance. We also help businesses reduce, recycle, and properly dispose of hazardous waste.

The Pollution Prevention Team provides the following services:

- ◆ Printed and on-line educational material and fact sheets giving you specific information on the best waste management practices for your type of business.
- ◆ **FREE** on-site consultations to help you identify the hazardous wastes your business generates; evaluate methods that could reduce wastes and save you money; and help clarify the regulatory requirements of being a small quantity hazardous waste generator.
- ◆ Information on local disposal options.

For more information, including electronic versions of this and other hazardous waste management fact sheets, call the Thurston County Hazardous Waste Program at 360-786-5457 or TDD 360-754-2933, Monday through Friday from 8:00 a.m. to 5:00 p.m. or visit our website at: <http://www.co.thurston.wa.us/health/ehhw/index.html>.



Hours of operation: Friday through Monday, 8 a.m. - 5 p.m.

Charge Account Contract Registration Form

Please print required information in space provided below

Business Name _____	Type of Business _____
Business Address _____	City _____ ST _____ Zip _____
Mailing Address (if different than business address) _____	City _____ ST _____ Zip _____
Contact Name (for follow up billing questions) _____	Phone _____
SQG Number _____	Fax _____

Certification

According to Washington state law, Chapter 173-303 Washington Administrative Code, a small quantity generator is a business, institution or government office that generates less than 220 pounds of hazardous waste per month or batch, and less than 2.2 pounds of acute hazardous waste per month. Small quantity generators may accumulate or store no more than 2,200 pounds of hazardous waste on site at any time. Based on state law and the facility operating permit, HazoHouse can only accept wastes from small quantity generators.

I certify that my organization is a small quantity generator as defined by Chapter 173-303 (070) WAC. I understand that I must complete this registration form in order to deliver hazardous waste to HazoHouse. I certify under penalty of perjury under the laws of the state of Washington that the foregoing statement is true and correct.

Charge Account Contract

The undersigned agrees to pay all fees associated with the disposal of hazardous waste brought to HazoHouse. The undersigned is liable for payment within 15 working days from the date of the invoice by the Thurston County Department of Water and Waste Management.

The undersigned further agrees to pay all costs associated with any effort or action needed to collect payment of a past due account which require the services of a collection agency, attorney, or other judicial action. The undersigned also agrees that the County may refuse to extend services to any customer with an invoice 30 days past due.

The undersigned agrees that fees are subject to change.

Signature of Owner/Operator or Manager _____

Date _____

Name (Please Print) _____

Title _____



HAZARDOUS WASTE DISPOSAL RATES

For Small Quantity Generators

Type of Waste	Cost per Unit
Acids	\$1.19/lb.
Antifreeze	\$0.09/lb.
Bases	\$1.22/lb.
Batteries	
Nickel-Cadmium	\$1.32/lb.
Mercury	\$3.50/lb.
Lithium	\$2.25/lb.
Lead Acid	No charge
CRTs (TVs and Monitors)*	See below
Dental Amalgam Scraps (disinfected)	\$1.58/lb.
Flammable Acids	\$2.19/lb.
Flammable Bases	\$2.26/lb.
Flammable Gases (other than propane)	\$1.36/lb.
Flammable Liquids/Fuels (gasoline, misc. flammable liquids)	\$0.28/lb.
Flammable Solids	\$7.75/lb.
5 Gallon Drum	\$80/drum
Fluorescent Bulbs	
Fluorescent Tubes	\$0.12/ft.
Compact Fluorescent Lamps	\$1.20 ea.
HID Lamps <3"	\$2.50 ea.
HID Lamps >3"	\$3.00 ea.
4' Storage Cartons	\$4.75 ea.
8' Storage Cartons	\$9.50 ea.
Non-Regulated Materials	\$0.26/lb.
Oxidizers	\$2.10/lb.
Paint-Related Materials	\$0.77/lb.
Petroleum-Contaminated Soils	\$0.26/lb.
Propane Tanks - 1 to 5 Gallon Gas Grill-Sized	No charge
Toxic Liquids	\$1.53/lb.
Toxic Solids	\$1.58/lb.
Used Oil	No charge
Used Oil - Contaminated	\$0.30/lb.
Used Oil Filters	\$0.90/lb.
Water Contaminated with Oil	\$0.18/lb.
Overpack Drum - 85 Gallon Metal	\$60.00
Overpack Drum - 95 Gallon Plastic	\$200.00
Overpack Drum - 55 Gallon Metal	\$23.00
Overpack Drum - 55 Gallon Plastic	\$70.00
X-Ray and Photo Fixer (used, containing silver)	No charge

* CRTs are not accepted at HazoHouse. Televisions, desktop computers, monitors and other electronics can be taken to the Goodwill Lacey Donation Station at the Thurston County Waste & Recovery Center and disposed of free-of-charge. Call (360) 413-7191 for additional information.

Note: SQG hazardous waste disposal fees were established in 2003 under TC Resolution 13010, which updated Thurston County Code Section 8.12.030.



**Hazardous
Waste
Factsheet**

Does Your Business Generate Hazardous Waste?

Good Hazardous Waste Management is Good Business

Hazardous wastes are common in small businesses as well as large. Even small quantities of improperly managed hazardous wastes can have major impacts on worker health and safety, environmental quality, property value, and legal liability.

Proper management of hazardous waste is wise from a business point of view. Business owners are legally and financially responsible for the proper handling of their hazardous wastes. Violators are subject to enforcement actions that may include fines. Proper hazardous waste management is necessary to maintain your ability to get insurance or bank loans. It also protects you, your workers, and others from serious illness and injury.

An important part of doing business in Thurston County is handling your wastes in the safest manner possible to protect your investment and our shared water resources. Disposal of hazardous waste in the trash, down a drain, on the ground, or into surface water is prohibited by the Thurston County Nonpoint Source Pollution ordinance.

Some typical businesses that generate (produce) hazardous wastes are auto shops, painters, printers, medical clinics, and dry cleaners. Some examples of less obvious generators are landscapers, general contractors, and beauty shops, to name a few.

Is Your Business Subject to Hazardous Waste Regulations?

To determine if your business is subject to hazardous waste handling requirements, you need to answer two questions: does your business generate hazardous waste, and if so, how much?

1) Does your business generate hazardous waste?

A hazardous waste is a solid or liquid material that could pose dangers to human health, property, or the environment.

A waste is considered hazardous if it is:

- Ignitable (with a flash point of less than 140 degrees F),
Corrosive (with a pH below 2.0 or above 12.5),
Reactive (explosives, unstable chemicals),
Toxic (poisonous), or
Persistent (non-biodegradable, containing chlorine compounds);
OR
- Is listed by the state's "dangerous waste" list, published by the Washington Department of Ecology.

“Business owners are legally and financially responsible for the proper handling of their hazardous wastes.”

Thurston County Public
Health and Social Services
Environmental Health Division

2000 Lakeridge Dr. SW
Olympia, WA 98502-6045

Hazardous Waste Hotline:
360-786-5457

TDD Line: 360-754-2933

<http://www.co.thurston.wa.us/>



Check the “Material Safety Data Sheets” (MSDS) for your products to learn if they contain any of these hazardous characteristics or meet these criteria. It is important to note that products not originally designated as hazardous may become contaminated during use to the point where they would then be designated as hazardous waste. For additional help, call the Thurston County Hazardous Waste Assistance Line at (360) 786-5457.

2) **How much hazardous waste does your business generate?**

If your business:

- Generates less than 220 pounds (about 27 gallons) of hazardous waste/ month,
- Generates less than 2.2 pounds of extremely hazardous waste (certain chemicals)/month
- Stores no more than 2,200 pounds (roughly five 55-gallon drums) of waste at any time
- Manages its waste properly,

then your business is classified as a “small quantity generator (SQG).” This means your business is subject to local regulations on hazardous material management; however, you are conditionally exempt from the state Dangerous Waste Regulations.

If your business generates more than 220 pounds of hazardous wastes during any month, you must comply with the Washington State Dangerous Waste Regulations. For more information, call the Department of Ecology Southwest Regional Office, (360) 407-6300, and ask for the Hazardous Waste/Toxics Reduction section.

Even if your business only produces a few pounds or gallons of hazardous waste, you are considered a small-quantity generator. Note that home businesses that use hazardous products, such as jewelry making or photography, must also comply with local regulations for small-quantity generators.

Local Regulations for Small-Quantity Generators

All small quantity generators are subject to the Thurston County Nonpoint Source Pollution Ordinance. The goal of this ordinance is to protect ground and surface water from hazardous waste contamination, and requires small-quantity generators to:

- Properly dispose of hazardous wastes either by recycling or through a permitted hazardous waste management facility, and
- Provide secondary containment for on-site storage of hazardous materials and petroleum products.

The ordinance also strongly recommends that businesses have adequate plans and preparations in case of a spill. To get details on the Nonpoint Source Pollution Ordinance, see “For More Information.” Thurston County operates a hazardous waste disposal program for small quantity generators; call (360) 786-5457 to request more information about this service.

For More Information

Specialists from the Thurston County Business Pollution Prevention Program are available to answer questions on your generator status, what regulations apply to your operation, and how to reduce, recycle, and manage your wastes. We also offer free on-site technical assistance to businesses in Thurston County. Please contact the Hazardous Waste Assistance Line at (360) 786-5457, Monday through Friday, or at TDD (360) 754-2933, or visit our website at www.co.thurston.wa.us/health/ehhw/index.html.



Hazardous Waste Factsheet

“The presence of contaminated towels and other absorbent materials in the garbage increases the health risks to sanitation workers and the costs of operating the facility.”

Managing Used Shop Towels and Contaminated Absorbent Materials

Shop towels and absorbent materials are common items around many businesses. Shop towels, including durable cloth wipers, rags, or disposable towels, are commonly used to spread cleaners and wipe oil, grease, dirt, ink and other substances from parts and surfaces.

In addition to shop towels, businesses usually stock absorbent materials around the work area to clean up spills of automotive or other industrial fluids. Items like absorbent spill pads (available in several types/shapes) and granular spill supplies (think something similar to kitty litter) are used to contain and clean up minor spills and leaks.

The Problem

As they are used, shop towels and absorbent materials can become contaminated with hazardous substances such as solvents, petroleum products and heavy metals, and are often improperly managed. Disposable shop towels and paper wipers are usually thrown away in the garbage.

Significant amounts of contaminated spill pads and granular absorbent materials end up in the garbage that goes to the Thurston County Waste and Recovery Center (the former Hawks Prairie landfill). The presence of contaminated towels and other absorbent materials in the garbage increases the health risks to sanitation workers and the costs of operating the facility.

One of the most common contaminants of shop towels are solvents, which are used by auto shops, printers, and other businesses to clean parts and equipment. Many solvents contain chemicals that are ignitable, volatile, or toxic. **Towels contaminated with solvents should not be placed in municipal trash containers and treated like regular solid waste.**

Solvents that contain chlorinated chemicals, such as methylene chloride, carbon tetrachloride, and 1,1,1-trichloroethane, are toxic and do not break down easily in the environment. Other contaminants of concern are heavy metals, which are absorbed onto towels when cleaning or preparing metal equipment parts and surfaces.

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Regulatory Requirements

The Solid Waste Handling Ordinance, Article V of the Thurston County Sanitary Code governs the disposal of solid waste in Thurston County. This ordinance refers directly to Article VI regarding management and disposal of hazardous wastes.

The Nonpoint Source Pollution Ordinance, Article VI of the Thurston County Sanitary Code, governs handling and disposition of hazardous waste. This ordinance requires that hazardous wastes be properly stored, and recycled or disposed of by licensed hazardous waste disposal companies.

Used shop towels, spills pads and granular absorbent materials that become contaminated with hazardous substances can designate as a hazardous waste. If so, businesses must store these materials in such a way to prevent any contaminants from entering local water resources or soils, as well as ensure proper recycling, treatment or disposal of contaminated materials by a permitted waste management vendor.

Management Options

Petroleum-contaminated Absorbent Materials

As a policy, the Thurston County Waste and Recovery will accept small numbers spill pads and granular absorbent materials contaminated with petroleum products **only**. Each year, residents may dispose of petroleum-contaminated materials, equivalent to the volume of one 55-gallon drum.

Although small amounts of petroleum-contaminated absorbent materials and shop towels will be accepted as garbage, businesses should seek to limit the amount of oily absorbent materials they generate by preventing spills and leaks from occurring in the first place.

Some easy steps you can take to limit the amount of absorbents needed include:

- Use drip pans when working under cars or machinery, and place draining pans under any removed parts.
- Use funnels when pouring used oil into waste drums to reduce the chance of a spill.
- Take the time to fix small leaks or drips instead of repeatedly tossing on more absorbent material.
- Use a reusable absorbent pad to clean out sumps and oil/water separators, and carefully wring it out completely before re-using it.

Following these simple practices does more than just keep excess petroleum-contaminated waste out of the Waste and Recovery Center. Businesses can save money in product and disposal costs, spend less time cleaning facility work areas, cut down on the chance of someone slipping or tracking oil outside the shop, and present a cleaner image to the public.

Any absorbent material contaminated with substances other than petroleum products may be a hazardous waste, and will likely need to be handled by a licensed hazardous waste management company.

Used Shop Towels

Small quantity generators can satisfy the requirements of the Nonpoint Source Pollution Ordinance by managing their used shop towels in one of the following ways:

1. Reuse soiled towels by sending them to an industrial laundry that is equipped to process used shop towels and treat residual wastewater. Please refer to a partial list of industrial laundry services on the back of this fact sheet.

Be sure to provide information to the laundry service about what contaminants may be on the towels.

2. Disposable towels that are contaminated with hazardous substances must be managed as a hazardous waste. Several companies can provide disposal services for shop towels. Check with the Business Pollution Prevention Program for a list of vendors. Reusable shop towels are recommended over disposable wipes.
3. Small numbers of shop towels soiled only with petroleum products (not solvents) may be disposed of in the municipal trash.

The following best management practices for used shop towels can make managing these materials easier, maintain a safer work environment, and keep your shop in compliance.

1. To minimize exposure to workers and decrease fire potential, make sure shop towels contaminated with hazardous substances are collected, transported, and stored in closed containers that are compatible with the materials stored in them. Consult materials safety data sheets for the hazardous products used for specific material incompatibilities or contact specialists with the Business Pollution Prevention Program at for assistance.
2. Because of fire potential, containers holding flammable materials such as solvent- saturated rags must be managed according to all local fire district standards. Containers must be sufficiently separated from all external sources of ignition and "No smoking" signs must be legible and placed at all accumulation areas. Such areas must meet the minimum property line setback requirements. Container type, color, and labels must also meet local fire district codes. Contact your local fire district for the specific requirements for these containers.
3. Remove free liquids before tossing soiled shop towels into containers. This can be done by carefully pressing the towels while wearing appropriate safety equipment such as chemical resistant gloves, eye protection and respiratory protection. Rags may not be left out to air dry to evaporate excess solvents. Free liquids should be collected and reused, or, if not reusable, managed as a separate hazardous waste stream.
4. Do not dispose of waste solvents, sludges or inks by pouring them into containers of used shop towels. If you do, the saturated rags cannot be laundered through industrial cleaning facility. Instead, these materials would need to be managed as a hazardous waste.

Industrial Laundry Services

Vendor Name	Location	Phone Number
AlSCO	Tacoma, WA	253-474-9446
Aramark Uniform Services	Kent, WA	800-873-7041
Cintas	Puyallup, WA	800-732-2022
Overall Laundry Services	Seattle, WA	800-683-7255
Rezorb Environmental	Woodinville, WA	425-489-2895
Superior Linen Service	Tacoma, WA	800-232-1012

Additional Information

If you have questions about disposal of petroleum-contaminated soils, please call the Solid Waste Program of the Thurston County Health Department, (360) 786-5461 or TDD (360) 754-2933, during regular business hours.

If you have questions about storing and handling used shop towels, or about how to determine if a towel or absorbent material designates as a hazardous waste, please call the Thurston County Business Pollution Prevention Program at 360-786-5457 or 754-4111; the TDD line is 754-2933.

Additional fact sheets for small businesses regarding proper storage, handling, and disposal of hazardous materials and wastes can be viewed on our program website: <http://www.co.thurston.wa.us/health/ehhw/index.html>

Hazardous Waste Factsheet

“Any business that discharges oily water or oily sediment-laden wastewater to a storm drain or sewer may be required to install an oil/water separator by Thurston County or Washington State.”

Oil/Water Separator Fact Sheet

Standard oil/water separators are underground vaults installed between a drain and a connection to either a sewer or storm water pipe. These vaults are designed with baffles to trap sediments and retain floating oils. The large capacities of the vaults slow down the wastewater, allowing oil to float to the surface and solid material (sludge) to settle out. There are two main types of oil/water separators: the gravity-drained oil/water separator (see Figure 1, inside) and the coalescing plate separator (Figure 2). Each type of separator is designed to allow the trapped oil and sludge to be removed while allowing water containing relatively low concentrations of oil to pass through.

The effectiveness of an oil/water separator depends on capacity, concentration of oil to water, presence of contaminants, and maintenance. If the flow of oily water is more than the system was designed for, there will not be enough time for separation and settling to occur, which may result in a discharge of untreated water. Concentrated amounts of oil in the water can overload the baffles or plates and pass through the system. Contaminants such as soap, solvent, fuel, degreasers, etc. can hinder separation by emulsifying the oil in water (mixing them so that they cannot be separated). In addition, routine cleaning out of the sump area of separators is necessary for proper function.

You can save on maintenance costs by diverting oil and sludge away from your separator. Place absorbent pads or socks that float on the water and attract only oil in the inlet chamber and it will minimize the amount of oil that gets into the vault. These pads can be wrung out and reused if stored properly.

Sludge that builds up in a separator can be difficult and expensive to clean out. Installing a catch basin (Figure 3) before your oil/water separator will trap solids that can be shoveled out before they reach the separator. Often these solids will not designate as dangerous waste and are acceptable for garbage disposal. For information on sludge testing and disposal call the Thurston County Business Pollution Prevention Program at (360) 786-5457 or TDD (360) 754-2933.

Regulatory Requirements

Any business that discharges oily water or oily sediment-laden wastewater to a storm drain or sewer may be required to install an oil/water separator by Thurston County or Washington State.

Oil/water separators need to be sized according to the maximum discharge or peak flow through the system. Typically, design specifications are submitted to the local public works department and the LOTT Wastewater Alliance for approval prior to installation. The discharge of oil from a facility to a sewer cannot exceed 50 parts per million. For more information on design and installation requirements, call the public works department in your jurisdiction.

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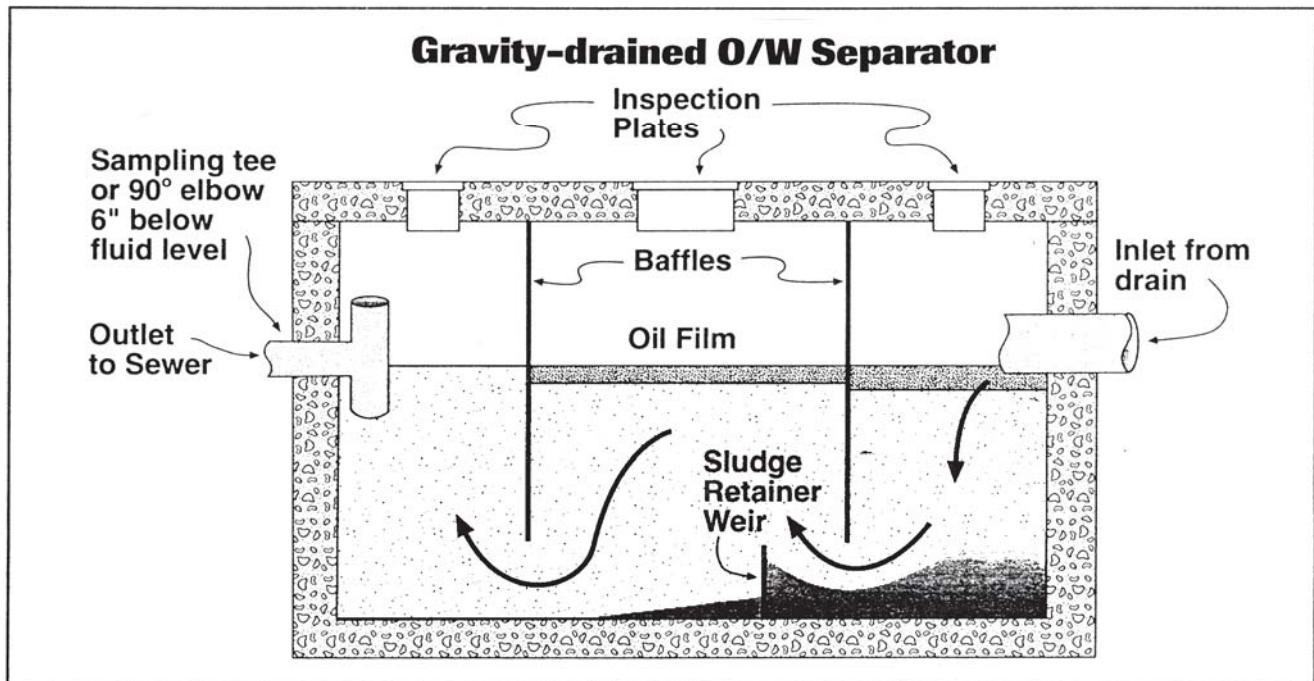
Hazardous Waste Hotline:
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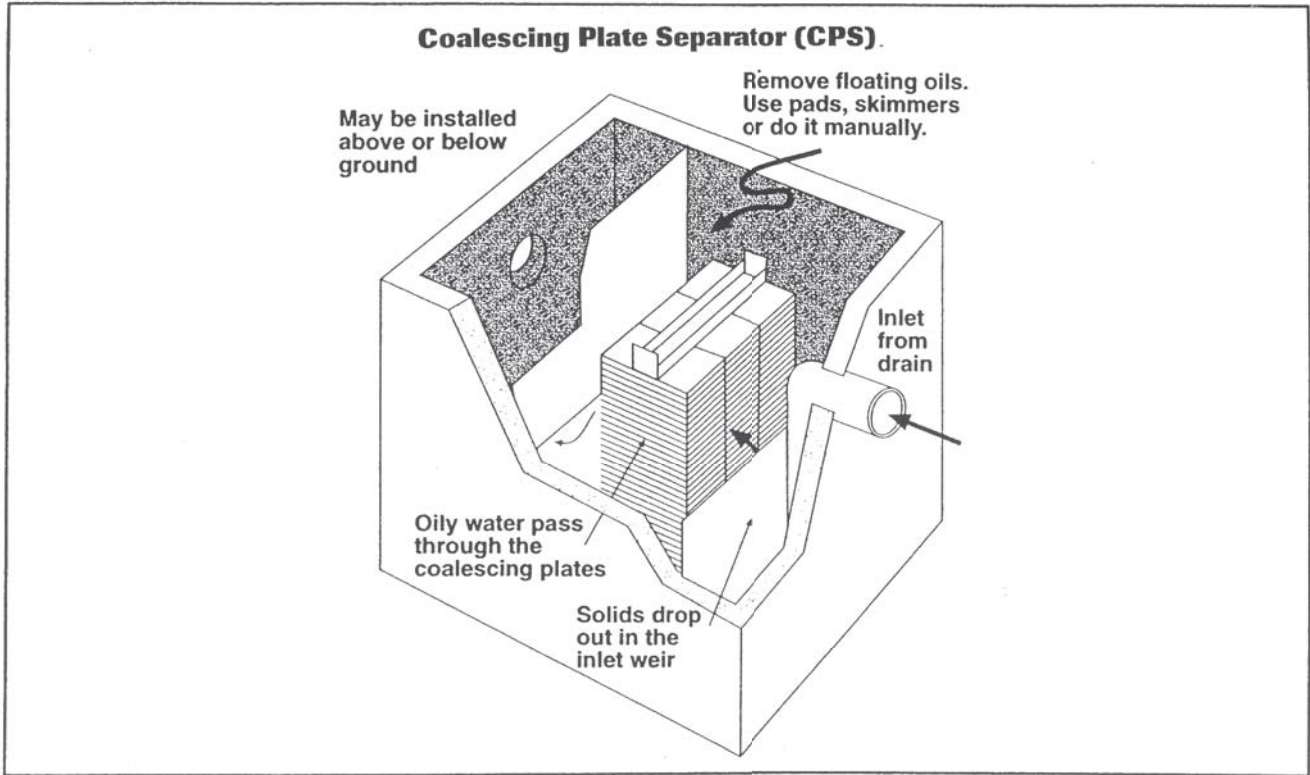


Figure 1



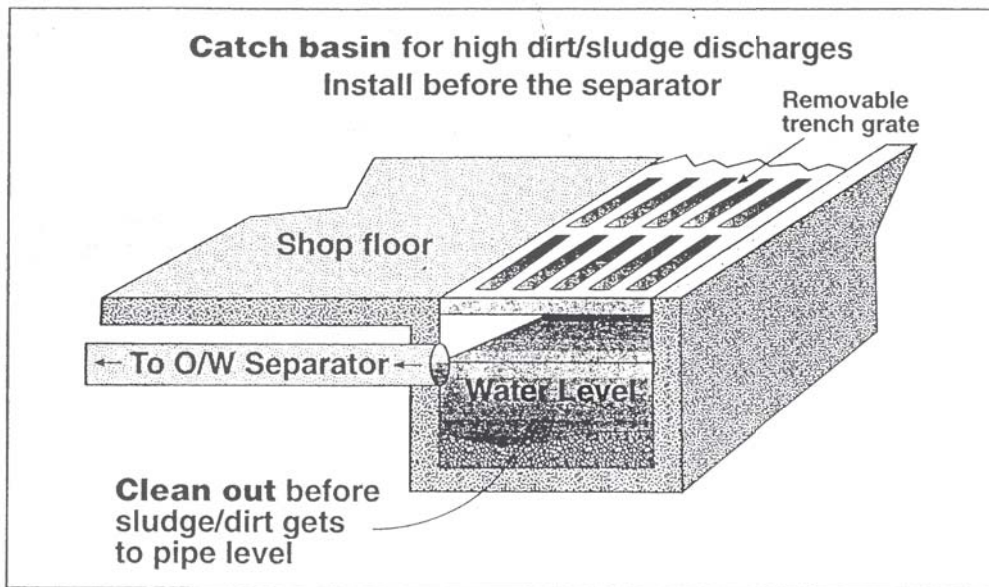
This drawing shows a standard gravity-type oil/water separator. It's important to minimize the amounts of detergents, solvents and other contaminants that enter the separator, thus helping to keep oils separate from water and preventing them from passing through the system.

Figure 2



This drawing shows a coalescing plate separator. It's important to remove and clean the plates before they get coated with silt or solids.

Figure 3



This drawing shows how a typical catch basin is constructed. The catch basin is located before (upstream of) the separator and will trap solids that can be shoveled out before they wash into the separator.

Maintaining Your Oil/Water Separator

A separator's efficiency is reduced most by an accumulation of settled solids, sludge, and oil. Thurston County recommends that you inspect the separator every six months – preferably in October (before the wet season) and again after a significant storm. Here are some steps you can take to maintain your separator:

- Open the inspection plates and look into each chamber and make sure your **outlet** chamber has a sampling “T.” It should have at least a six-inch extension below the water surface.
- Use a pole that can reach the bottom of your separator to see if there is any resistance as you push to reach the bottom. Resistance means there is sludge build up. Service the separator when the build up is about eight inches deep in the **inlet** chamber.
- Measure floating oil on top of the water. When there are two inches or more of oil in any chamber, it should be removed. Older oil can become emulsified and pass through the separator with the water.
- For coalescing plate separators, it is critical to remove and clean the plates before they get coated with silt or solids. When this happens, oil may pass through.

Servicing Your Oil/Water Separator

Vendors that clean separators have special vacuum trucks that pump out both the liquid and the sludge wastes. The bulk liquid is shipped to a licensed treatment facility where the oil, solids, and heavy metals are separated from the water. The treated water is then discharged to the sewer. **You should never use a septic tank pumping service to maintain your oil/water separator or catch basin.**

Many companies provide oil-water separator management services in the Puget Sound region. For an up to date list of these companies and their contact information, please visit the Department of Ecology's Hazardous Waste Management Services Directory at www.ecy.wa.gov/apps/hwtr/hwsd/default.htm When selecting a vendor, make sure it has the right equipment for your situation by describing your system and what you want accomplished (cleaning and/or pumping).

Consider asking these questions to the vendors before selecting one to manage your waste:

1. To what facility or facilities will my waste go?
2. Can you provide the names and phone numbers of current customers as references?
3. What documentation, labeling, and other paperwork are provided? (At a minimum, you should obtain a signed receipt for every visit and what they haul away.)
4. Do you test my waste on-site for the presence of hazardous waste contamination? What does this test cost and what do you do if contamination is detected?

Make sure the vendor vacuums all the sludge out of each chamber. Inspect and then **fill up the separator with clean water before you begin discharging** to it again.

Additional Information

Staff from the Business Pollution Prevention Program are available to answer questions about the proper management of oil, oil water separators, hazardous waste, and ways to calculate pollution prevention costs. Please contact the Business Pollution Prevention Program at (360) 786-5457, Monday through Friday, or TDD (360) 754-2933, or visit our website at www.co.thurston.wa.us/health/ehhw/index.html.



**Hazardous
Waste
Factsheet**

“Automatic aqueous parts washers can reduce labor costs and increase productivity.”

Aqueous Parts Washers

Many solvent users are seeking alternative methods for parts cleaning and surface preparation. Regulatory pressures and safety concerns have led to a search for less hazardous cleaners. Many companies have already converted to aqueous (water-based) cleaning systems to reduce costs and regulatory requirements while reducing the liability of waste disposal, air emissions, and worker safety.

What’s wrong with petroleum solvents?

Mineral spirits and other chlorinated solvents (commonly brake cleaners) are used for parts cleaning because of their ability to quickly dissolve oil, grease, grime, and burnt-on carbon. Although these solvents are very effective, their continued use raises significant environmental, health, and economic concerns:

- Chlorinated solvents can contaminate used oil, resulting in costly disposal.
- Petroleum and chlorinated solvents contain chemicals that may be toxic if inhaled or may increase the risk of cancer.
- Petroleum solvents evaporate quickly, making worker exposure difficult to control.
- Solvent cleaning units are often the largest source of a facility’s hazardous waste.
- Some solvents leave an oily residue, requiring additional cleaning prior to painting or finishing.

How does an aqueous parts cleaner work?

Aqueous cleaning products are water-based solutions that, unlike petroleum solvents, are nonflammable and non-hazardous. Instead of dissolving grease, aqueous parts washer units utilize heat, pressurized water, soap action, and agitation to break up dirt and grease. Although they clean differently, aqueous cleaners perform as well as solvents in most cases. Some units are even fully automated, thereby reducing labor costs and increasing productivity!

Types of aqueous cleaning units:

Spray Cabinets: Aqueous spray cabinets clean parts by spraying heated solutions at high pressures within an enclosed cabinet. Spray cabinets are available in a full range of capacities from small to very large.

<u>Advantages</u>	<u>Disadvantages</u>
<ul style="list-style-type: none"> • High level of cleaning performance • Ideal for heavily soiled parts • Large cleaning capacities available • Automatic units reduce labor costs • Lower waste management costs • Excellent for aluminum parts 	<ul style="list-style-type: none"> • Moderate to high initial start-up cost • Uses more electricity than solvent unit • May require rust prevention for steel parts (rust inhibitors, additional drying)

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Ultrasonic units: Ultrasonic units consist of a steel tank filled with an aqueous solution and are equipped with transducers along the bottom or sides of the tank. The transducers generate high frequency sound waves that produce an intense microscopic scrubbing action on parts surfaces, including interior surface areas.

<u>Advantages</u>	<u>Disadvantages</u>
<ul style="list-style-type: none"> • Ideal for hard to clean parts with blind holes or hidden surfaces (transmissions, carburetors) • Very high performance cleaning • Significant reduction in cleaning labor 	<ul style="list-style-type: none"> • High initial start-up cost

Immersion units: Immersion units consist of a rectangular tank filled with an aqueous solution and a removable false bottom. These units allow parts to be completely submerged in the solution to loosen soils and reduce scrubbing time.

<u>Advantages</u>	<u>Disadvantages</u>
<ul style="list-style-type: none"> • Reduces scrubbing time and reduces labor costs • Allows for extended soaking time 	<ul style="list-style-type: none"> • More expensive than drum top units • May be difficult to clean heavy or stubborn soils

Drum top units: Aqueous drum top units are used for manual cleaning of parts in the same way as conventional solvent units. Some units utilize microbes in the aqueous solution to degrade oils and organic contaminants, which can significantly extend solution life. In addition, microbes are safe and pose no risk to employees.

<u>Advantages</u>	<u>Disadvantages</u>
<ul style="list-style-type: none"> • Ideal for light duty cleaning activities • Lower initial start-up cost • No toxic vapors, less irritating to skin • Minimal waste production 	<ul style="list-style-type: none"> • Microbial units require more maintenance to keep microbes alive • Difficult to clean heavy or stubborn soils • Not suitable for large parts

Managing Aqueous Cleaning Wastes

Since aqueous waste is typically less toxic than petroleum solvents, waste management is often easier and less expensive. How you manage your spent aqueous waste depends on the type of cleaning solution used, type of equipment, and the type of wastewater treatment system at your facility (i.e. onsite septic, oil/water separator, municipal sewer system). *It is illegal to dispose of any parts washer solutions into drywells, onsite septic systems, storm drains, or onto the ground.*

- **Onsite septic systems:** No type of industrial waste may ever be disposed into on-site septic systems. Doing so may contaminate your septic tank or drain field and disrupt the normal biological processes in a working system, which may result in costly system failure.
- **Oil/water separators:** Since parts washers emulsify oils and greases, disposal of aqueous solution into an oil/water separator is not effective. When emulsified, oils are not separated and will simply pass through the system.
- **Municipal sewer system:** In some cases, aqueous solutions may be disposed into the municipal sewer system. However, special permission is required from the sewer utility, who may also require laboratory testing of the waste. *Always contact your municipal wastewater utility before utilizing this disposal method.*
- **Evaporation of aqueous solutions:** Since most aqueous solutions do not contain volatile organic compounds (VOCs), they may be evaporated, leaving only a smaller amount of sludge for disposal. Some parts washers may contain special evaporator units for this specific purpose. *It is illegal to evaporate petroleum solvents for disposal purposes.*

- **Disposal by hazardous waste vendor:** Utilizing a waste disposal vendor is the preferred method for managing aqueous solutions. Since aqueous solutions are less toxic than petroleum solvents, disposal costs are generally less. A recent study by the Washington Department of Ecology found that large waste vendors typically charge approximately 1/3 less for aqueous solutions. Furthermore, utilizing a licensed vendor reduces your liability and ensures that the waste is properly disposed.
- **Disposal of aqueous sludge:** Tests have shown that aqueous sludge typically contains toxic heavy metals and therefore, should not be disposed into the normal trash. It is recommended that all sludge be managed as hazardous waste.
- **Other types of waste:** Waste such as skimmed oil sludge and solution filters should be managed as hazardous waste. *The Washington Department of Ecology does not allow skimmed oil or sludge to be mixed with used oil.*

Maximizing Aqueous Solution Life

With proper management, aqueous cleaning solutions can last longer than petroleum solvents. Extending the life of an aqueous solution will save you money by reducing your chemical purchase and waste disposal costs. Doing the following will help maximize the life of your aqueous solutions:

- **Filter the solution:** Filters, typically cartridge filters, are used to remove solids as small as a few microns in size.
- **Perform oil skimming:** Oil skimmers remove free-floating oil from the solution, reducing the amount of oil residuals left on parts and significantly extending solution life.
- **Change solution only when necessary:** Change the solution only when the cleaning effectiveness declines. Do not change solutions on a scheduled, “need it or not” basis.
- **Maintain solution concentration:** Perform chemical additions as needed to maintain the cleaning strength of the solution. Some vendors may offer easy-to-use test kits to measure the concentration and determine when chemical additions are necessary.
- **Accept solution discoloration:** Many aqueous solutions turn gray or brown during use, but this discoloration does not affect its cleaning ability. Do not change cleaning solution simply because it looks dirty.

Equipment and Waste Disposal Vendors

Vendors offer a wide variety of services that can assist with all of your parts washing needs. Some vendors offer equipment leases, service contracts, as well as waste disposal services. They can also evaluate your specific needs and make recommendations to help maximize your dollar.

Company Name	Phone	Website	Equipment Sales/Lease	Chemical Sales	Waste Disposal
Advanced Environmental Solutions	(800) 275-3549	www.advenvironmental.com	X	X	
Arcom Oil	(800) 831-5243	none			X
Ben's Cleaner Sales	(800) 446-8778	www.benscleaner.com	X	X	
Clean Harbors	(253) 288-2814	www.cleanharbors.com			X
Cuda Washington, Inc.	(866) 344-8144	www.cudausa.com	X	X	X
Emerald Services	(888) 832-3008	www.emeraldnw.com	X	X	X
Inland Technologies	(800) 552-3100	www.inlandtech.com	X	X	
PSC Environmental Services	(800) 547-2436	www.pscnow.com			X
Safety-Kleen	(253) 939-2022	www.safety-kleen.com	X	X	X
Thermofluids, Inc.	(800) 350-7565	www.thermofluids.com	X	X	X

Frequently Asked Questions

Question #1: Are aqueous parts washers more expensive?

Answer: Companies can reduce labor costs by utilizing automatic aqueous parts washers. Start-up costs may be greater initially, but many units can pay for themselves with increased productivity. A local car dealership in the Olympia Auto Mall prefers an automatic unit, since it allows mechanics to continue working while the parts washer cleans by itself.

Question #2: A supplier says that a cleaner is completely biodegradable. Does this mean I can dispose of it down the drain?

Answer: Not necessarily. "Biodegradable" does not mean the same thing as "non-hazardous." Biodegradable cleaners may still contain regulated chemicals that classify them as a dangerous waste in the State of Washington. Other "biodegradable" cleaners may be highly acidic or caustic, which will also result in a regulated waste (pH greater than 12.5 or less than 2). Keep in mind that even truly non-hazardous cleaners can pick up hazardous contaminants during the cleaning process. Always contact your local wastewater utility before disposing any waste into the drain.

Question #3: Can rusting be a problem?

Answer: Rust can be minimized by simply drying the part quickly. Commercial rust inhibitors can also be added to aqueous cleaners to reduce rust formation.

Question #4: I just cleaned a part using only hot water, without cleaning solution. Can I dispose of the wastewater into my septic system?

Answer: No. The water may now be contaminated with oils, solvents, or heavy metals. No type of industrial wastewater may ever be disposed into on-site septic systems.

Question #5: Aqueous parts washers hold more cleaning solution than my petroleum solvent parts washer. Wouldn't it be better to stick with my old solvent unit?

Answer: Aqueous washers may produce a greater volume of waste, but that waste is less toxic and may be treated on site by evaporation or disposed into the sanitary sewer (only with permission from the local utility). Unlike flammable or toxic petroleum solvents, disposal of non-hazardous aqueous waste is exempt from Washington Department of Ecology dangerous waste reporting requirements.

Question #6: You mentioned that aqueous solutions and sludge can be contaminated by toxic metals, oils, or other solvents. How do I determine if my aqueous waste is a regulated dangerous waste?

Answer: A laboratory can analyze a sample of your waste to determine if it is non-hazardous or a regulated waste. This may be worthwhile for larger volumes of waste, since it could reduce disposal costs. However, for smaller volumes of waste such as sludge and filters, it may be less expensive to just assume that it's hazardous and dispose of it accordingly. It all depends on the volume of waste, your vendor's disposal rates, type of cleaners, and the individual cleaning processes. Your hazardous waste vendor can help you make this decision.

For any questions regarding wastewater discharge regulations, please contact LOTT Alliance at (360) 664-2333, extension 1108. For questions on small business hazardous waste, contact the Business Pollution Prevention Program at (360) 786-5457, Monday through Friday during regular business hours or TDD (360) 754-2933. or visit: <http://www.co.thurston.wa.us/health/ehhw/index.html>



Hazardous Waste Factsheet

Thurston County Environmental Health encourages you to recycle all fluorescent lamps, including those that are not designated as hazardous waste, in an effort to:

- *prevent the release of mercury to the environment;*
- *protect employees;*
- *conserve resources;*

Fluorescent Lamps

Burned out fluorescent and high-intensity discharge (HID) lamps contain mercury and may be a dangerous waste. In Washington, as of June 2000, fluorescent lamps that are designated as hazardous waste can be managed as “Universal Waste” and, as such, cannot be disposed in the garbage. They must go to a lamp recycler or a permitted hazardous waste disposal company. (See “Resources” for more information on Washington’s Universal Waste Rule.)

Mercury is a highly toxic element that does not break down. Each year, broken fluorescent lamps release an estimated 500 pounds of mercury in Washington. This quantity is equivalent to approximately 20,000 four-foot fluorescent lamps. Workers may be exposed to mercury in the vicinity of freshly broken lamps. Mercury in the atmosphere eventually becomes deposited on the ground and in water. A Department of Ecology study found elevated mercury levels in bass from 70% of lakes sampled in Washington, including those from Black Lake in Thurston County.

Fluorescent lamps are still a good environmental and economic choice because they are energy efficient – they often use one-quarter the energy of incandescent lamps and last up to ten times longer. Reducing energy consumption cuts down on power plant emissions of mercury and other emissions that contribute to global climate change, acid rain, and smog.

Types of lamps that may contain mercury are:

- **Fluorescent lamps, tubes, and globes** - used in businesses, schools, offices, and stores.
- **High-intensity discharge (HID) lamps**, including mercury vapor, metal halide, and high-pressure sodium - used for streetlights, floodlights, photography, and industrial lighting.
- **Compact fluorescent lamps** - used in homes and offices.
- **Neon (red) and argon (blue) lamps** (some use mercury and phosphor powder) - used as novelties, in lounges, and retail stores.
- **Ultraviolet Lamps** – uses include tanning and disinfection

DISPOSAL OPTIONS FOR FLUORESCENT LAMPS:

- 1). Recycle all fluorescent lamps (both hazardous and non-hazardous) and other mercury-containing lamps.
- 2). Dispose of non-hazardous* fluorescent lamps as solid waste (although legal, recycling is strongly encouraged).

*Note: These lamps **must** be determined to be non-hazardous by the manufacturer or distributor.

Thurston County Public
Health and Social Services
Environmental Health Division

2000 Lakeridge Dr. SW
Olympia, WA 98502-6045

Hazardous Waste Hotline:
360-786-5457

TDD Line: 360-754-2933

<http://www.co.thurston.wa.us/>



FLUORESCENT LAMP RECYCLING

The preferred management option is that lamps ultimately go to a qualified recycler that separates the glass, mercury, and metal end caps, and sends the mercury for reclamation. Crushing lamps on-site is not allowed under universal waste management regulations. When lamps are crushed, they release a mercury vapor that is difficult to contain, and can be a hazard to human health and the environment.

The cost to recycle fluorescent lamps generated by local businesses ranges from \$0.09 to \$0.12 per foot (plus additional transportation or handling surcharges). Most vendors have a maximum or minimum amount of tubes they will accept at one time. Other mercury-containing lamps, such as HID lamps, may be priced per individual lamp.

COMPANY	LOCATION	PHONE	TYPE OF FACILITY/NOTES
Consolidated Electrical Distributors, Inc. (CED)	Lacey	360-923-2345	Does not collect lamps - administers third party collection program for government agencies and political sub-divisions
Ecolights Northwest	Seattle	206-343-1247	Lamp recycling facility.
Earth Protection Services, Inc.	N. Oregon	503-667-1004	Universal waste management company.
Rainier Lighting and Electrical Supply	Tacoma	800-782-2922	Lamp distributor.
Motors and Controls	Lacey	360-438-3447	Electrical supply company.
Thurston County HazoHouse	Lacey	360-786-5457	Small quantity generator collection facility <i>(Also accepts from households for free)</i>

For additional vendors, try these listings:

- Department of Ecology Hazardous Waste Services Directory: Call 360-407-6300 or go to www.ecy.wa.gov/apps/hwtr/hwsd/default.htm
- King County Fluorescent Lamp Recycling: www.metrokc.gov/hazwaste/fluor/vendors.htm

Some vendors offer pre-paid shipping containers for fluorescent lamp recycling. Several companies sell recycling kits that include shipping containers for different bulb sizes. When the containers are full, businesses affix a pre-paid mailing label and ship to a recycling facility via a national parcel carrier.

HOW TO RECYCLE LAMPS

- Carefully remove bulbs from fixtures
- Put lamps in original cartons or in shipping containers, supplied by the recycler with no packing material
- For large quantities of lamps, call your vendor for packing instructions or special containers
- Do not tape lamps together
- Store cartons in a dry place, and date the boxes the day you begin storing; limit accumulation to one year
- Save the disposal receipt as your record of legal disposal

IF YOU BREAK A LAMP...

If a lamp is broken, carefully collect broken glass and debris into a plastic bag, and then place in a 5-gallon bucket or container with a lid. Ventilate the area for at least 15 minutes. Some vendors, including Thurston County's HazoHouse, accepts small quantities of broken lamps; check with your vendor first.

LOW-MERCURY LAMPS

Low-mercury or "green" fluorescent lamps are available from several companies. The lamps have green markings, including green etching on the bulb and/or green end caps, to denote that they passed the U.S. Federal EPA Toxicity Characteristic Leaching Procedure (TCLP).

Exposure to mercury from even low-mercury lamps may still be a health concern. Although disposal of low-mercury lamps in the trash is a legal management option, recycling of these lamps is highly recommended. Thurston County Environmental Health encourages you to recycle all fluorescent lamps, including those that are not designated as hazardous waste, in order to prevent the release of mercury to the environment, protect workers, and conserve resources.

The amount of mercury in lamps varies widely. Philip's low-mercury four-foot T8 lamp has only 3.5 milligrams (mg) mercury, but some HID lamps have as much as 90 mg. In 1999, the average mercury content for a typical four-foot fluorescent tube was 11.6 grams. The best way to know that you are buying a lamp with low-mercury content is to specifically ask for them from your vendor or retailer.

When purchasing new lamps, buyers should look for low-mercury designations provided by the retailer (i.e. shelf labels or signs) or by the manufacturer (i.e. package labeling). Key words used in such messages may include, but are not limited to: "low-mercury content" or "TCLP-compliant".

Manufacturers have submitted data for specific lamp types to the Washington State Department of Ecology to receive written confirmation that their spent lamps are not designated as a dangerous waste within the state of Washington. Lamp models within the specific low-mercury product lines for each of the manufacturers listed below have received this confirmation from the Department of Ecology.

LAMP MANUFACTURER	LOW-MERCURY FLUORESCENT LAMP PRODUCT LINE**
<u>Osram Sylvania - 978-777-1900</u> www.sylvania.com	Sylvania ECOLOGIC™
<u>Philips Lighting Company - 800-555-0050</u> www.lighting.philips.com/nam	Philips ALTO™
<u>MaxLite - 973-244-7300</u> www.maxlite.com	MaxLite™
<u>GE Lighting - 800-435-4448</u> www.gelighting.com	GE Ecolux™

** Note: Specific lamp models for each low-mercury product line are too numerous to list in this publication. For current models available for each product line, check with the manufacturer, lamp distributor, or retail store for more details. Many models are available on each manufacturer's website.

MANAGING LAMP BALLASTS

New types of energy-efficient fluorescent lamps may not be compatible with your existing fixture ballasts. Fluorescent light ballasts manufactured before 1979 may contain PCBs, or polychlorinated biphenyls, which are toxic and remain in the environment for long periods of time. When replacing old ballasts, look for the label “no PCBs.” If the ballast’s label does not have that language, they must be handled as a federally regulated waste containing PCBs or sampled to prove otherwise. Many lamp recycling companies will accept (for a fee) both PCB and non-PCB ballasts for disposal or recycling.

When replacing fluorescent ballasts or removing old fixtures, wear chemical-resistant gloves made from materials such as latex or nitrile rubber. When handling leaky PCB ballasts, a chemical-resistant Tyvek® suit and respirator are also recommended; if unavailable, at least wear chemical-resistant gloves and minimize contact. If there has been a fire near light fixtures, assume that ballasts are leaky. Place leaky ballasts in a thick plastic bag or bucket to avoid spreading contamination. Contaminated clothing should be treated as hazardous waste along with the ballasts. Call a hazardous waste vendor for disposal options.

FOR MORE INFORMATION

Specialists with the Business Pollution Prevention Program are available to answer questions about best management practices and vendors of equipment or services. Contact the Business Pollution Prevention Program at 360-786-5457 or TDD 754-2933, Monday - Friday between 8 a.m. – 5 p.m. Fact sheets for small businesses are available from our website: <http://www.co.thurston.wa.us/health/ehhw/index.html>.

RESOURCES

Department of Ecology “Washington’s Universal Waste Rule for Dangerous Waste Lamps” www.ecy.wa.gov/pubs/98407.pdf, or call the Department of Ecology Hazardous Waste and Toxics Reduction Program, at 360-407-6700.

Department of Ecology “Fluorescent and HID Lamps” www.ecy.wa.gov/programs/hwtr/demodebris/index.html

King County Fluorescent Lamp Recycling
www.govlink.org/hazwaste/business/wastedirectory/wastedetails.cfm?wasteid=87

Inform Factsheet – Mercury-containing product alternatives
www.informinc.org/fsmercalt.pdf

The National Electrical Manufacturers Association
www.lamprecycle.org

Hazardous Waste Factsheet

“Liquid hazardous materials such as petroleum products, antifreeze, and solvents can present a threat to soil, ground water, and surface water.”

Secondary Containment

The Problem

Liquid hazardous materials such as petroleum products, antifreeze, and solvents can present a threat to soil, ground water, and surface water if accidentally spilled or leaked. These substances must be stored so that if a spill or leak does occur the material remains contained and does not contaminate the environment. A solution to the problem is to use secondary containment when storing hazardous liquids.

The Regulatory Requirements

The Thurston County Nonpoint Source Pollution Ordinance (Article VI of the Sanitary Code) requires that hazardous materials and wastes, including petroleum products, be stored in such a way that if a container leaks or ruptures the contents will not contaminate ground or surface water. The best way to ensure this is to provide secondary containment for all containers of liquid hazardous products and wastes.

The Thurston County Critical Areas Ordinance Chapter 17.15.520 C(2) also requires businesses that are located in aquifer recharge areas to provide secondary containment for hazardous materials that are stored on-site.

The Thurston County Mineral Extraction Code requires that fuel and hazardous materials are stored according to the requirements of the Nonpoint Source Pollution Ordinance. The Department of Ecology requires coverage and containment of hazardous materials through the “National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Process Water and Stormwater Associated with Sand and Gravel Operations and Asphalt Batch Operations” RCW Chapter 90.48.

What is Secondary Containment?

- Secondary containment is a liquid-tight barrier that will adequately contain hazardous materials that are released from a storage container. A simple example of secondary containment is placement of a 5-gallon drum (primary container) inside a 55-gallon drum (secondary containment). Another example is placement of 55-gallon drums or a large fuel tank (primary container) inside a liquid-tight concrete bunker (secondary containment). The outer wall of a double-walled fuel storage tank is also an example of secondary containment.
- The size and design of a secondary containment unit or device depends on the type and amount of material that it holds.

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The Options

Four secondary containment method options will satisfy Thurston County regulatory requirements. Liquid hazardous materials, including petroleum products, can be:

1. Stored **indoors** on a liquid-tight concrete floor without secondary containment *if* the storage area is able to contain 100 percent of the largest container in the event of a spill and prevent it from flowing or leaking out of the building. In addition, spilled or leaked materials must be prevented from entering floor drains that are not part of a liquid-tight containment system designed to capture and hold hazardous materials.
2. Stored in outdoor or indoor **covered** secondary containment that can hold 110 percent of the volume of the largest storage container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement volume of any items inside the containment.
3. Stored in **outdoor uncovered** secondary containment that can hold 120 percent of the volume of the largest storage container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement volume of any items inside the containment. Uncovered containment is not generally recommended (see below).
4. Stored in UL-certified double-walled storage tanks. The volume requirements that are listed in options 1, 2, and 3 do not apply to these storage tanks, because they do not require additional containment provisions.

Secondary Containment Criteria

Chemical Compatibility and Structural Integrity

- The structural materials used in secondary containment units, including expansion joints and seals (if applicable) must be chemically compatible with the substance(s) that will be contained.
- Secondary containment must be maintained liquid-tight at all times.
- Secondary containment must be physically adequate to hold a release and remain liquid-tight.

Stormwater Accumulation and Discharge

All stormwater that accumulates in outdoor uncovered secondary containment must be managed in accordance with the Thurston County Drainage Design and Erosion Control Manual.

- Outdoor uncovered containments must be maintained free of stormwater accumulation.
- An operator must be present during stormwater discharge from secondary containment.
- All discharge valves must be closed and locked after a supervised discharge is completed.
- Stormwater that accumulates in secondary containment units must be treated through an oil/water separator (if appropriate) or handled as hazardous waste. (See the hazardous waste fact sheet “Oil/Water Separators.”)

Spills

Keep secondary containment areas free of small spills and drips. Drip pans that can be conveniently cleaned are helpful in preventing contamination of the secondary containment area. Hazardous materials, liquid hazardous waste and petroleum product spills must be cleaned up immediately. Remember that even a small spill, drip, or leak must be cleaned up and disposed of as a hazardous waste. Absorbents and other cleanup materials that are contaminated with the spilled hazardous materials must also be disposed as a hazardous waste. Absorbent materials that are lightly contaminated with petroleum products, such as grease or oil, may be disposed of solid waste at the Thurston County Waste and Recovery Center, on a case-by-case basis. Cleanup materials that are saturated with petroleum materials may not be disposed of in the solid waste system.

Additional Information

Please call the Thurston County Business Pollution Prevention Program at (360) 786-5457 or TDD 754-2933 or see our website at www.co.thurston.wa.us/health/ehhw/index.html



Hazardous Waste Factsheet

“If your business recycles its oil or antifreeze then there is no upper limit to the amount you can manage in a month or year, and you do not have to report it to the State.”

Thurston County Public
Health and Social Services
Environmental Health Division

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Antifreeze, Used Oil, and Oil Filters

Spent Antifreeze

Antifreeze is exempt from most dangerous waste regulations if it is recycled. Antifreeze is classified as a Washington State dangerous waste, if it contains more than 10% ethylene glycol, due to its toxicity. If your business produces antifreeze as a waste stream, you have two options: recycle it, or dispose of it as dangerous waste. Recycling can be on-site for reuse, or off-site by a vendor (see contact information for regional vendors on the reverse side). On-site recycling units may produce a sludge that designates as dangerous waste.

Used Oil

Used oil is exempt from most dangerous waste requirements if it is recycled. However, used oil cannot be managed under the used oil regulations if it is contaminated with dangerous wastes, such as solvents, PCBs, or other hazardous materials. In Thurston County, your options for used oil management consist of: shipping off-site to be recycled, recycling on-site in an approved space heater or boiler (see WAC 173-303-515), recycling through Thurston County's hazardous waste collection site (call 360-786-5457 for more information), or disposing as hazardous waste through a hazardous waste vendor.

Used oil space heaters must be designed for a maximum capacity of 0.5 million BTU's per hour and have their combustion gases vented to the outside. You can only burn your own oil, do-it-yourself used oil, and on-specification used oil without having to notify as a used oil burner. For questions concerning off-specification vs. on-specification used oil and requirements, including testing contact the Department of Ecology's Southwest Regional Office Hazardous Waste and Toxics Reduction Program (360-407-6340).

Antifreeze and Used Oil Suggestions

Don't mix antifreeze or used oil with other materials such as water, brake fluid, solvents, or gas. Label waste antifreeze and used oil containers and keep them closed (animals are attracted to the sweet odor of antifreeze – and it's very toxic). Don't accumulate large volumes since you will need to provide secondary containment for all of it. Recycle often. Maintain your disposal and/or recycling paperwork for five years (longer if possible).

Regulatory Requirements

If your business recycles its oil and antifreeze, volumes of these materials do not count towards your generator status and do not need to be reported to Ecology.

If your business generates 220 pounds or more of dangerous waste in a month or accumulate greater than 2,200 pounds at any time, your facility is not a small quantity generator – you are a regulated generator. Regulated generators must comply with the Washington State Dangerous Waste Regulations (WAC 173-303).

Thurston County encourages businesses to recycle spent antifreeze and used oil as much as possible. Thurston County also requires businesses to retain their receipts or manifests documenting how much they recycled or disposed of, which vendor was used, where it was recycled or disposed, and when it was collected.

Used Oil Filters

Thurston County encourages business to recycle their used oil filters whenever possible. To recycle your used oil filters you must send them off-site (see vendor list below). Crushing your oil filters gets more of the oil out and may save you money since many disposal companies set their rates by volume. Most recycling companies accept both crushed and whole filters, but you should inquire about this service prior to selecting a vendor. Small quantities of used oil filters may be disposed as solid waste after they have been drained for at least 24 hours. Thurston County’s Waste and Recovery Center will accept up to one 55-gallon drum of crushed or uncrushed used oil filters for disposal per business each year.

Vendors for Management of Antifreeze, Oil, or Oil Filters

The following list does not represent all vendors providing waste management services for used oil, antifreeze and oil filters. Additional vendors can be located in the Washington State Department of Ecology Hazardous Waste Services Directory www.ecy.wa.gov/apps/hwtr/hwsd/default.htm, under the category of “Used Oil Management”.

Vendor Name	Phone Number	Antifreeze	Used Oil	Oil Filters
Arcom Oil	1-800-831-5243	X	X	X
American Petroleum Environmental Services	253-538-5252	X	X	X
Clean Harbors Environmental Services	1-800-444-4244	X	X	X
Emerald Services, Inc	1-888-832-3008	X	X	X
Phoenix Environmental Services	1-888-475-0116	X	X	X
Safety-Kleen	253-939-2022	X	X	X
Thermo Fluids	253-863-3310	X	X	X

Remember, you are liable for the waste antifreeze and used oil you generate until it is properly recycled or disposed. Here are some questions you may want to ask before selecting a vendor:

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. How will my waste be managed? 2. Can you provide the names and phone numbers of current customers as references? 3. What documentation, labeling, and other paperwork are provided? (At a minimum, you should obtain a signed receipt for every shipment.) | <ol style="list-style-type: none"> 4. What type of insurance do you have? 5. Where will my waste go? 6. Do you test my waste on-site for the presence of hazardous waste contamination? What does this test cost and what do you do if contamination is detected? |
|---|--|

Additional Information

Specialists from the Business Pollution Prevention Program is available to answer questions about the proper management of used oil and antifreeze, vendors, best management practices, and ways to calculate pollution prevention costs. Please contact the Business Pollution Prevention Program at (360) 786-5457, Monday through Friday during regular business hours, or TDD (360) 754-2933. For additional fact sheets and other information, please visit our website at www.co.thurston.wa.us/health/ehhw/index.html.



Appendix C:

Commercial Parcel Inventory Form

Commercial Parcel Inventory Form – Auto Service Campaign

Visit Date:	County Staff:	Time On Site: Time Off Site:
Business Name:		Business Owner:
Site Contact and Title:		
Site Address: City: Zip: Phone:		Mailing Address: City: State: Zip: Phone:()
Parcel #		EPA ID #:
1. Nature of Property: <input type="checkbox"/> Home Business <input type="checkbox"/> Commercial/Industrial <input type="checkbox"/> Government Site (Circle one: County, City, State, Federal)		
2. Is the facility: <input type="checkbox"/> Owned <input type="checkbox"/> Rent/Lease		
3. What year did you begin conducting business at this site?		
4. Exceeds SQG?: <input type="checkbox"/> >220/2.2 lbs./month <input type="checkbox"/> >2,200/2.2 lbs. stored		
5. Have there been past environmental inspections at the facility? <input type="checkbox"/> Yes, Year _____ <input type="checkbox"/> No <input type="checkbox"/> Unknown		
6. Does the facility have Material Safety Data Sheets for chemicals on-site? <input type="checkbox"/> No <input type="checkbox"/> Yes		
7. What is facility's means of wastewater disposal? <input type="checkbox"/> City sewer <input type="checkbox"/> Community septic <input type="checkbox"/> Unknown <input type="checkbox"/> On-site septic (Type: Gravity, Mound, Sand filter, Pressure dist., other _____)		
8. Which type of spill kit does the facility have? <input type="checkbox"/> None <input type="checkbox"/> Floor dry <input type="checkbox"/> Pads <input type="checkbox"/> Shop Towels <input type="checkbox"/> Commercial Kit <input type="checkbox"/> Other _____ Adequate Kit? <input type="checkbox"/> No <input type="checkbox"/> Yes		
9. Does facility have floor drains? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Sealed If yes, how many, where?		
10. Where do work area floor drains discharge? <input type="checkbox"/> Sewer: LOTT, Yelm, Grand Mound <input type="checkbox"/> Septic system <input type="checkbox"/> City storm drain, ditch, stream, wetland, lake, pond <input type="checkbox"/> Sump or vault (sealed) <input type="checkbox"/> Oil/Water Separator <input type="checkbox"/> Drywell, leach field <input type="checkbox"/> Unknown		
11. Comments		
Fact Sheets Provided:		

12. Oil/water separator: None

Type: Baffle Coalesce Unknown

Size: _____ gal.

Discharge point: Sewer Septic Stormwater
 Unknown Drywell/Leachfield

Other _____

Maintenance frequency: Unknown

Last inspection _____ Last cleaning _____

12. Parts Washing:

Type of parts washer: None Chlorinated
 Solvent Aqueous

Solvent waste management: Sewer Septic
 Disposal pick-up vendor Drop-off site Used oil

Distillation on site Recycle pick-up vendor Filtration

Aqueous recycle/treatment: None

Filters Evaporator Pick-up Vendor

Oil Skimmer Distillation

Dangerous waste tests? No Yes

Parts washer service frequency:

0-3 months 3-6 months 6-12 months >12 months

Vendor service Self service

Solution strength testing? No Yes

13. Used Oil Management

Management Method: Pick-up vendor Drop-off vendor
 Off-site heat

On-site energy recovery: None Cert. burner Non-cert. burner

14. Anti-freeze Management

Management Method: Pick-up vendor Drop-off vendor

On-site recycling (vendor) On-site recycling (owned equip)

15. Floor Cleaning:

Cleaning Method: Pressure wash Wet mop

Vendor Dry Sweep/pads Solvent

Cleaning Frequency (deep cleaning only-not daily cleanup):

0-3 months 3-6 months 6-12 months >12 months

Wastewater Disposal: Soil Surface water Storm drain

Oil/Water separator Sewer Septic

Drywell/leach field Disposal vendor Other

Dangerous waste tests? No Yes

16. Vehicle Washing: None

Type: Exterior Body Engine/Underside

Location: Indoors Outdoors

Cleaners Used: None Surfactants Caustics Other

Wash Water Discharge: Soil Surface water Storm drain

Oil/Water separator Sewer Septic

Drywell/leach field Disposal vendor Other

HAZARDOUS MATERIAL [L = LIQUID] [S = SOLID]	QUANTITY	P = PRODUCT W = WASTE	CONTAINER LABELED?	ADEQUATE SECONDARY CONTAINMENT	WASTE DISPOSITION (VENDORS – LAST PICKUP)
Used Oil		W			
Oil		P			
Used Anti-Freeze		W			
Anti-Freeze		P			
Trans Fluid		P			
Other Lubes/Oils		P			
Brake Fluid		W			
Shop Towels		W			
Aqueous Parts Washer					
Solvent Parts Washer					
Chlorinated Solvent/Oils					
Misc. Aerosols					
Paint Booth Filters					
Used Brake Pads					
Lamps					

Appendix D:

Nonpoint Source Pollution Ordinance Inspection Checklist



**Thurston County Public Health and Social Services Department
Environmental Health Division**

Nonpoint Source Pollution Ordinance Inspection Checklist

Business Name _____ Phone _____

Business Owner _____ Birthdate _____

Address _____ City _____ Zip _____

Compliance Officer _____ Issue Date _____ Time _____

MODERATE RISK WASTE: _____ **Avg. Qty/Mo** _____

NOTICE OF COMPLIANCE	
<input type="checkbox"/> NO MODERATE RISK WASTE GENERATED.	Explain: _____
<input type="checkbox"/> RECYCLED	Type of system: _____
ON-SITE	Qty/Mo: _____ Date of installation: _____
<input type="checkbox"/> SENT	Vendor: _____ Phone: _____
OFF-SITE	Qty/Mo: _____ Date of last shipment: _____
	<input type="checkbox"/> Documentation verified.
<input type="checkbox"/> SECONDARY CONTAINMENT ADEQUATE.	_____

NOTICE OF VIOLATION	
<input type="checkbox"/> I find you in violation of Thurston County Sanitary Code, Article VI, Section 4.1(a), 4.1(b) OR 4.1(c) as specified below:	Description of violation: _____

<i>See reverse for important information on your right to appeal this notice of violation.</i>	

Compliance officer: _____ Date: _____

Received by: _____ Date: _____

Appendix E:

Notice of Noncompliance



Thurston County Environmental Health
 Phone: (360) 754 4111 Fax: 754 2954

Technical Assistance Notice of Noncompliance

Business Name: _____ Phone: _____

Business Owner: _____

Address: _____

HAZARDOUS MATERIAL / WASTE	QUANTITY

The hazardous materials listed above are currently being stored without secondary containment. The Thurston County Nonpoint Source Pollution Ordinance, Article VI of the Thurston County Sanitary Code, Section 4.1(b) states:

“Moderate risk waste, petroleum products, and hazardous materials shall be kept in containers and shall be stored in such a manner and location that if the container is ruptured, contents will not discharge, flow, be washed or fall into surface water or groundwater. This does not supersede any regulations as stated in the Uniform Fire Code.”

Since your business is participating in a technical assistance campaign, a mutually agreeable grace period is being provided to help you obtain compliance. To obtain compliance your business can choose to dispose of the existing hazardous material or place its container into secondary containment.

Four secondary containment options will satisfy Thurston County regulatory requirements.

- 1) Store indoors on a liquid-tight floor *if* the storage area is able to contain 100 percent of the largest container and prevent it from flowing out of the building.
- 2) Store in **covered** secondary containment that can hold 110 percent of the volume of the largest container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement of any items inside the containment.
- 3) Store in **uncovered** secondary containment that can hold 120 percent of the volume of the largest container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement of any items inside the containment.
- 4) Store in UL-certified double-walled storage tanks.

Secondary containment to be provided by (date): _____

Received by: _____ Date: _____

Compliance Officer: _____ Date: _____

Appendix F:

Customer Survey

Customer Survey- Automotive Service

1. Was your business in compliance at the initial visit?

Yes No Unsure

2. Did the visit assist you in making changes in the way you manage your hazardous materials/waste?

Yes No No changes needed

Comments:

3. What concerns you most about proper hazardous materials management and disposal?

- a) Waste disposal costs
- b) Equipment costs
- c) Knowing where to obtain disposal information
- d) Understanding disposal regulations
- e) Extra time it takes to ensure proper handling, storage, and disposal
- f) Potential safety and liability issues

4. Where do you get your information regarding hazardous materials management?

5. Did the county specialist provide specific answers to your questions?

Yes No No

Questions

Comments:

6. Overall, did your business benefit from the technical assistance program?

Yes No Unsure

Examples:

7. In addition to technical assistance programs, Thurston County Environmental Health provides businesses with the following:

- Hazardous waste hotline
- Newsletter: "Hazardous Waste Update"
- Hazardous waste disposal site (Thurston County HazoHouse)
- Hazardous Waste Website
www.co.thurston.wa.us/health/ehhw/index.html

Do you currently or will you now utilize these services?

Yes No Unsure

Which services?

8. What is your preferred method of receiving Thurston County newsletters and other information?

Email Regular mail
Neither

9. Please share any additional comments or suggestions. Your suggestions help us improve our services. Thank you!

Please return completed survey to:
Thurston County Environmental Health
2000 Lakeridge Drive SW, Bldg. 4
Olympia, WA 98502



Appendix G:
Best Management Practices

BEST MANAGEMENT PRACTICE RECOMMENDATIONS

BUSINESS NAME: _____ DATE: _____

Recommendations	N/A	Already Doing	Suggested	Implemented (Date)
Recycle:				
Conduct on-site antifreeze recycling				
Recycle used oil filters				
Use crusher for oil filters				
Use vendor for shop towels				
Conduct on-site solvent recycling (solvent still)				
Recycle fluorescent lamps				
Solvents and Parts Washers:				
Use vendor for parts washer service				
Switch to aqueous parts washers				
Avoid using chlorinated solvents				
Do not pour solvent on towels for disposal				
Research less toxic solvents at http://es.epa.gov/				
Use filtration to prolong solvent life				
Do not mix solvents with other waste (i.e. waste oil)				
Floor Cleaning:				
Never allow floor cleaning wash water to enter storm drain or septic system				
Get permission from sewer utility (LOTT) before discharging wash water to sewer				
Seal concrete floor				
Use industrial cleaning service to remove oil staining				
Seal floor drains				
Miscellaneous Improvements:				
Obtain and maintain a spill kit				
Prepare written spill plan and conduct training				
Use funnels, pumps, drip pans to control drips/spills				
Label all waste containers				
Store scrap metals under cover				
Remove excess accumulation of waste(s)				
Clean and inspect oil/water separator or catch basin				
Keep outdoor areas free of oil stains				
Keep waste containers tightly closed				
Conduct lab testing for paint booth filter waste				

Business Representative: _____ Position: _____

Thurston County Business Pollution Prevention Program: 360-786-5457

www.co.thurston.wa.us/health/ehhw/index.html