

# Shoptalk

Dangerous Waste & Pollution Prevention

## FALL 2016 ISSUE

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## Finding Safer Alternatives to Methylene Chloride-Based Paint Strippers

Article courtesy of Washington State Labor and Industries (L&I) Safety and Health Assessment and Research for Prevention (SHARP) program

Paint strippers that contain methylene chloride (also known as dichloromethane) pose an extreme risk to workers and have extensive OSHA safety regulations. Methylene chloride is an industrial solvent and effective paint stripper found in both industrial and consumer products. L&I's Safety and Health Assessment and Research for Prevention (SHARP) program works to educate Washington businesses on the dangers of methylene chloride and



guide them to safer alternatives.

### The dangers of methylene chloride for bathtub refinishers

Methylene chloride is highly volatile and easy to inhale, with vapors that are heavier than air. As a result, the vapors sink and collect inside bathtubs where bathtub refinishers are working and breathing. Between 2000 and 2011, exposure to methylene chloride-based paint strippers caused the deaths of 13 bathtub refinishers across 10 states—some of these deaths resulted from less than 90

minutes of exposure to methylene chloride ([cdc.gov/mmwr/preview/mmwrhtml/mm6107a2.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6107a2.htm)).

Bathtub refinishers often work alone in small bathroom spaces with limited or no ventilation. These working conditions, combined with methylene chloride's toxicity and its heavier-than-air (continued on page 2)



## Safer Alternatives (Continued from page 1)

chemical properties, make bathtub refinishing with methylene chloride-based products a very hazardous task. Beyond the immediate fatal health effects, long-term health effects of methylene chloride exposure include cancer, depression of respiratory function, and central nervous system damage. Other effects include skin burns and skin irritation.

While ventilation and personal protective equipment (PPE) can reduce a worker's risks when used correctly, some experts argue that methylene chloride-based strippers can't be used safely in the conditions bathtub refinishers work under. In 2009, the European Union banned the use of methylene chloride-based paint strippers outside of a controlled industrial setting.

### **Safer products and methods for bathtub refinishing**

Finding safe but effective bathtub strippers wasn't easy, but SHARP has profiled two businesses who successfully use safer alternatives to methylene chloride-based paint strippers. One business uses a benzyl alcohol-based chemical stripper and the other relies on mechanical scraping and sanding for finish removal ([lni.wa.gov/Safety/Research/Files/MCHazAlertBenzylAlcoholAlternative.pdf](http://lni.wa.gov/Safety/Research/Files/MCHazAlertBenzylAlcoholAlternative.pdf) and [lni.wa.gov/Safety/Research/Files/BusinessProfileSanding.pdf](http://lni.wa.gov/Safety/Research/Files/BusinessProfileSanding.pdf)).



# Washington State Department of Labor & Industries

## *Workers' Compensation Services*

While the alternative products or methods may require more time or labor, businesses must factor in the expense and time needed for the extra training and PPE necessary when using methylene chloride-containing products.

### **Choose products wisely**

To check if a product contains methylene chloride (CAS number 75-09-2), review the Safety Data Sheet (SDS) or active ingredients on the product label. Be aware that some alternative products advertised as "safer" still contain hazardous substances, such as N-methylpyrrolidone (NMP), a known reproductive hazard. Products containing NMP are not recommended. All chemicals in paint stripping and refinishing have hazards, so be sure to read each product's SDS.

Visit SHARP's methylene chloride webpage to find fact sheets, reports, and other resources: [lni.wa.gov/Safety/Research/HazardousChem/MethyleneChloride/Default.asp](http://lni.wa.gov/Safety/Research/HazardousChem/MethyleneChloride/Default.asp).

## Help finding safer alternatives to chemicals

Both Ecology and L&I have consulting staff that can help you learn the risks of chemicals your company uses and explore possible safer alternatives.

### **Contact:**

Ecology, Hazardous Waste and Toxics Reduction: 360-407-6700  
L&I, SHARP program: 1-888-66-SHARP



# TurboWaste Changes Will Slow Report Submission – Plan Ahead!

By Mariusz Twardowski and Janna Ryan

Because of new federal requirements for data certification, businesses should anticipate delays in submitting their Dangerous Waste Annual Report next year.

## What's changing with TurboWaste?

Starting in January 2017 Large Quantity Generators (LQGs) must use three accounts to certify and submit their Dangerous Waste Annual Reports:

- TurboWaste requires a user ID and password.
- Secure Access Washington (SAW) requires a user ID and password.
- EPA's Cross-Media Electronic Reporting Rule (CROMERR) requires a user ID, password, AND security questions.

Beginning in 2018 all reporting generators will have to use the additional SAW account to certify and submit. LQGs and businesses notifying Ecology of changes to their dangerous waste activities, via the Site ID Form, will have to use a CROMERR account as well.

If your business already has a SAW or CROMERR account (for other environmental reporting) you can add TurboWaste—no need to create additional accounts.

## What to plan for

The requirements for usernames and passwords for SAW and CROMERR are different than TurboWaste so you won't be able to use your existing login info on the other systems. We aren't able to change your existing TurboWaste ID, but you can update your password in the TurboWaste system.

Once you create a CROMERR account, you'll receive a confirmation email with a form attached. You must print, sign, and return the form to us in order to confirm your account. Please allow at least 10 days for mail and processing before submitting your Dangerous Waste Annual Report to ensure



## Cross-Media Electronic Reporting Rule

that it won't prevent you from meeting the March 1 reporting deadline.

The CROMERR system requires that the person who signs and certifies your report is someone who has legal authority to sign contracts for the company. Keep that in mind when creating your CROMERR account. You will be asked a security question each time you log in, and it's common for people to forget the answers they chose. Also know that if you enter the password incorrectly two times, your account will be locked and you'll have to contact us for a new password.

## More information

We plan to send out notices with additional information in October. If you have questions about TurboWaste, SAW, or CROMERR, please contact our Dangerous Waste Annual Reporting Team at 1-800-874-2022 (within Washington state) or 360-407-6170.

# Training and Education on Identifying Safer Chemicals

By Saskia van Bergen

If you're interested in learning about safer chemical alternatives and green chemistry, Ecology promotes a variety of opportunities to suit all schedules and skill levels. Whether you have an hour, a day, or longer, training is available to help you understand the risks of chemicals and take steps to creating safer workplaces and products.

## Learn the basics

To open the door to safer chemicals, webinars offer an overview of many topics from the convenience of your computer. These short courses are a great starting place to learn basic concepts of safer chemicals and green chemistry:

- Chemical Hazard Assessment: Informing Decisions for Safer Chemicals, Materials, and Products, 59 mins ([greenchemistryandcommerce.org/safer-chemistry-training/webinars/chemical-hazard-assessment](https://greenchemistryandcommerce.org/safer-chemistry-training/webinars/chemical-hazard-assessment))
- Introduction to Green Engineering, 93 mins ([greenchemistryandcommerce.org/safer-chemistry-training/webinars/introduction-to-green-engineering](https://greenchemistryandcommerce.org/safer-chemistry-training/webinars/introduction-to-green-engineering))

See more webinars and resources: [ecy.wa.gov/greenchemistry/greenchem\\_resources.html#Recorded\\_Webinars](https://ecy.wa.gov/greenchemistry/greenchem_resources.html#Recorded_Webinars).

## Transition to safer chemicals

For more advanced coursework, the US Occupational Safety and Health Administration (OSHA) and the University of Washington offer the 1.5-day Transitioning to Safer Chemicals course: [osha.washington.edu/osha/course/transitioning-safer-chemicals](https://osha.washington.edu/osha/course/transitioning-safer-chemicals). The hands-on course introduces participants to OSHA's step-by-step process of evaluating and understanding chemical use, finding and assessing alternatives, and implementing the safer options. Participants will also learn about tools and databases to help them through this process.

This course is ideal for purchasing staff, maintenance supervisors, facility managers, and workers who use hazardous chemicals at the



worksite. The course is also great for occupational safety and health or pollution prevention professionals who provide technical assistance on chemical hazards.

## Earn a certificate in green chemistry and chemical stewardship

If you're serious about integrating green chemistry into your career, the University of Washington offers an online certificate program in green chemistry and chemical stewardship. This eight-month, comprehensive program allows you to go at your own pace. Participants learn the fundamental principles of green chemistry and evaluate frameworks for incorporating chemical toxicity and human health considerations into product design, material selections, and supply chain decision-making. The program consists of three courses:

- Sustainability, Toxicology & Human Health
- Principles of Green Chemistry
- Assessment Tools for Safer Chemical Decisions

Visit the program website to learn more: [pce.uw.edu/certificates/green-chemistry-and-chemical-stewardship](https://pce.uw.edu/certificates/green-chemistry-and-chemical-stewardship).

Visit Ecology's green chemistry webpage for more trainings, events, and conferences: [ecy.wa.gov/greenchemistry/events.html](https://ecy.wa.gov/greenchemistry/events.html).



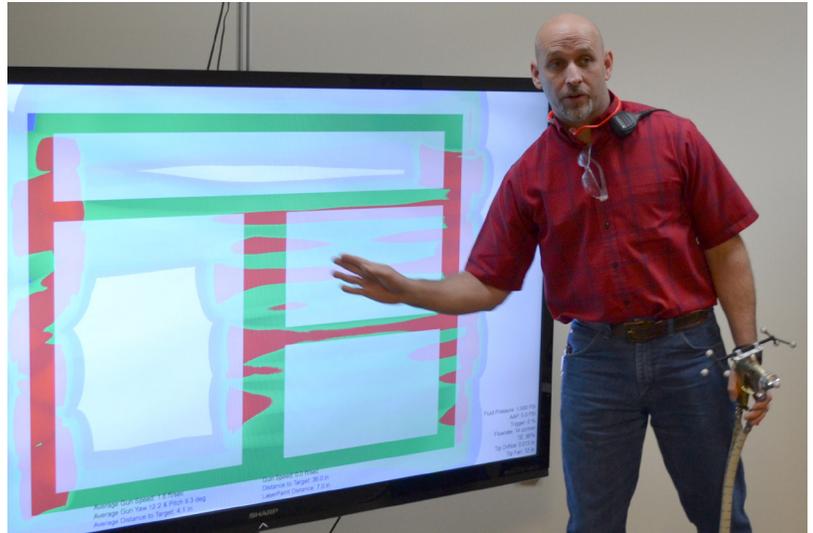
# Canyon Creek Cabinet Company Saves \$100,000/Year With Virtual Paint Training

By Janna Ryan

Ecology's Toxics Reduction Specialists provide technical assistance to industries and facilities to find cost savings, process improvements, toxicity reductions, reduced waste and resource use, and increased energy efficiency. We helped Canyon Creek calculate the cost of a virtual training system for their facility—around \$33,000 in equipment and setup. The system now saves around \$100,000 per year in purchasing and disposal!

By spraying virtual parts on a screen, employees don't waste actual wood pieces and coatings when they train. This saves Canyon Creek 9,000 pounds of product per year, including 1,000 pounds of hazardous substances. Read more about their training system at [ecy.wa.gov/programs/hwtr/p2/success/CanyonCreek.html](http://ecy.wa.gov/programs/hwtr/p2/success/CanyonCreek.html).

Do your employees spray paints or coatings onto metal, plastic, or wood? Spray Efficiency Training

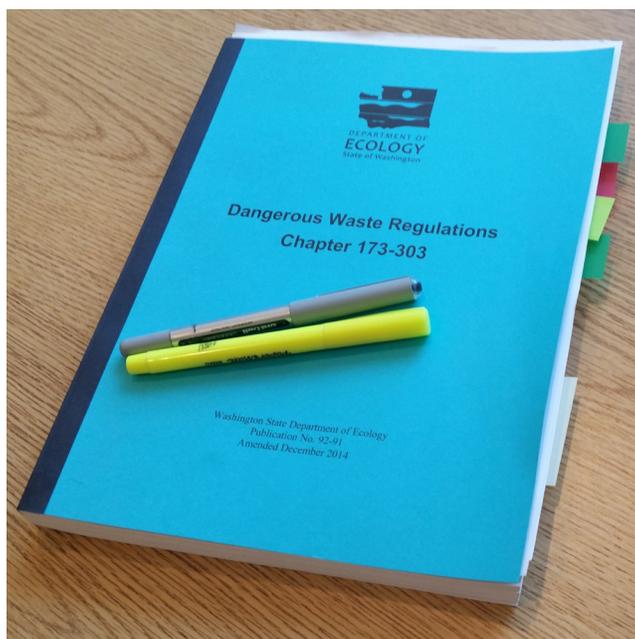


Michael Reed, Finish Manager at Canyon Creek, demonstrates the virtual paint system.

offered by the Pollution Prevention Resource Center (PPRC) in Seattle can increase their accuracy and efficiency. Contact Ken Grimm at 206-352-2050 or [kgrimm@pprc.org](mailto:kgrimm@pprc.org) for more info.

# Ecology Proposes Amendments to the Dangerous Waste Regulations

By Rob Rieck



## Ecology Proposes Amendments to the Dangerous Waste Regulations

As of February 2016 Ecology started rulemaking to amend the Dangerous Waste Regulations, Chapter 173-303 WAC. These regulations set standards for the safe management of dangerous wastes in Washington. We plan to amend specific sections of the regulations to incorporate new federal hazardous waste rules. The changes will impact:

- Pharmaceutical waste.
- Solvent-contaminated wipes.
- The definition of solid waste.
- Exports of cathode ray tubes (CRT).

### Why we're amending the regulations

Ecology regularly updates the dangerous waste rules to stay consistent with (continued on page 8)

# Safer Alternatives to Copper Boat Paint

By Alex Stone

A 2007 Ecology study found high levels of copper in two Puget Sound marinas—most of it coming from antifouling paints used to prevent marine life from attaching or growing on boat hulls ([fortress.wa.gov/ecy/publications/summarypages/0703037.html](http://fortress.wa.gov/ecy/publications/summarypages/0703037.html)).

This study resulted in a law passed by the Washington Legislature with support from the Northwest Marine Trade Association ([apps.leg.wa.gov/rcw/default.aspx?cite=70.300.020](http://apps.leg.wa.gov/rcw/default.aspx?cite=70.300.020)). The law phases out the use of copper-based anti-fouling paints beginning in 2018. This gives marinas and boat yards time to comply with the legislation and phase out the use of copper boat paint.

## Timeline of the law

By Dec. 31, 2017, Ecology will submit a report to the Legislature with the results of a survey of antifouling paints available in the state and how antifouling paints affect marine organisms and water quality. Ecology will also evaluate potentially safer alternatives to copper-based anti-fouling paint.

Jan. 1, 2018: Sale of new recreational vessels up to 65 feet with copper antifouling paint banned.

Jan. 1, 2020: Sale and application of antifouling paint containing more than 0.5% copper for recreational vessels banned for boats up to 65 feet.

Similar regulations are being considered in other states and countries.

## How is copper harmful?

Copper is a concern because of its effects on fish, especially young salmon. Even low levels of copper pose a significant threat to salmon and other fish in Puget Sound. Copper interferes with a salmon's sense of smell. This reduces their ability to avoid predators, find their way back to their birthplace to spawn, and find mates. Copper also makes it harder for fish eggs and fry to develop naturally.

The National Marine Manufacturers Association reports that boating accounts for \$3.18 billion

of economic activity in Washington each year and supports over 17,256 jobs in the state. Boating also supports local communities that depend on recreational tourism.

## History of antifouling paint issues

Problems with antifouling paints are not new. For many years, paints containing mercury or tributyltin were used as anti-fouling paints. Tributyltin was initially (and mistakenly) identified as environmentally safe. When concerns arose in the 1970s about the environmental effects of tributyltin, copper became the preferred alternative. A 2011 Ecology study identified copper as a special concern for Puget Sound, where urban runoff and household toxics have already threatened many salmon runs ([fortress.wa.gov/ecy/publications/documents/1103055.pdf](http://fortress.wa.gov/ecy/publications/documents/1103055.pdf)).

## Safer Alternatives

Ecology, Northwest Green Chemistry, and industry leaders like the Clean Boating Foundation are partnering to evaluate alternatives to copper boat paints. The goal is to find effective products that won't become another regrettable substitution—replacing one toxic chemical with another of equal or greater toxicity—like copper was for tributyltin. Northwest Green Chemistry will work directly with manufacturers and other stakeholders to evaluate alternatives. They will look at toxicity, performance, cost, availability, and exposure. (Continued on page 8)





# Ecology Proposes Amendments to the Hazardous Waste Fee Regulation

By Rob Rieck

Ecology plans to amend Chapter 173-305 WAC, the Hazardous Waste Fee Regulation. The amendments align rule language with the agency's existing fee calculation practices. This rulemaking only pertains to the hazardous waste planning fee calculation found in 173-305-220 WAC. These rule changes would:

- Exclude dangerous waste that is treated on-site by the generator according to 173-303-170(3)(b) and(c) WAC.
- Exclude non-recurrent dangerous waste as reported on the Dangerous Waste Annual Report required under 173-303-060(5) WAC.
- Clarify language used to calculate inflation as applied to the fee.

The proposed amendments **won't**:

- Introduce new requirements for pollution prevention planners.
- Make changes to the Hazardous Waste Generation Fee. These fees are often confused—read about them both on our website: [ecy.wa.gov/programs/hwtr/fees.html](http://ecy.wa.gov/programs/hwtr/fees.html).

We intend to formally propose rule amendments in

## EPA Proposes Rulemaking on Hazardous Waste Manifests

By Tom Cusack

The US Environmental Protection Agency (EPA) has proposed changes to the rules around Hazardous Waste Manifests.

These amendments would:

- Require certain users of the e-Manifest system to pay a fee for each electronic and paper manifest they submit. This is intended to help recover the costs of developing and operating the e-Manifest system.
- Affect how changes can be made to manifests.
- Modify a provision on the use of mixed electronic and paper manifests.

Comments must be received by September 26, 2016. See Federal Register Volume 81, Number 143 for full details and instructions on submitting comments.

November 2016, and expect to adopt new regulations in April 2017.

### Public involvement

Ecology hosted an informal public workshop on August 25 and will host a public webinar on September 8. We will accept informal comments on the draft rules until September 15, 2016. A 60-day formal comment period on this rulemaking is scheduled to begin in November 2016.



### More information

See our rulemaking website for more information: [ecy.wa.gov/programs/hwtr/laws\\_rules/HWFee/1606ov.html](http://ecy.wa.gov/programs/hwtr/laws_rules/HWFee/1606ov.html). You can also subscribe to the HW Fee Rule listserv to receive regular updates about meetings and rulemaking activity.

If you have questions, please contact John Ridgway at 360-407-6713 or [hwtrrulemaking@ecy.wa.gov](mailto:hwtrrulemaking@ecy.wa.gov).





## Amendments (continued from page 5)

the Environmental Protection Agency's (EPA) hazardous waste regulations. In September 2015 EPA proposed pharmaceutical waste rules, which gave us another reason to amend the regulations. These new regulations will help make it easier for health care facilities to manage their waste pharmaceuticals.

### Schedule

We expect to have draft rules available for review on our website mid-September 2016. We also plan to hold an informational meeting in October 2016 and additional stakeholder meetings as needed. EPA originally indicated it would finalize the pharmaceutical hazardous waste rule by September 2016, but delays have prevented a final rule until

sometime next year. Since updates to the state's Dangerous Waste Regulations are tied to EPA's rulemaking schedule, our rulemaking timeline is also delayed.

### More information

See our rulemaking website for more information: [ecy.wa.gov/programs/hwtr/laws\\_rules/HWFee/1606ov.html](http://ecy.wa.gov/programs/hwtr/laws_rules/HWFee/1606ov.html). Or subscribe to the dangerous waste rules listserv to receive updates on rulemaking activity and meeting notices: [listserv.wa.gov/cgi-bin/wa?SUBED1=DW-RULES&A=1](mailto:listserv.wa.gov/cgi-bin/wa?SUBED1=DW-RULES&A=1).

Questions? Contact Rob Rieck at [hwtrrulemaking@ecy.wa.gov](mailto:hwtrrulemaking@ecy.wa.gov).

## Copper Boat Paint (continued from page 6)

Check out this preliminary scorecard of paints and costs for alternatives already on the market: [northwestgreenchemistry.org/product-scorecards-antifouling-boat-paint.html](http://northwestgreenchemistry.org/product-scorecards-antifouling-boat-paint.html). Northwest Green Chemistry worked with boaters to develop this list. They plan to expand on this information during the alternatives assessment process.

If you have any questions, please contact Alex Stone, Ecology's Safer Alternatives Chemist, at [Alex.Stone@ecy.wa.gov](mailto:Alex.Stone@ecy.wa.gov) or Lauren Heine, Executive Director of Northwest Green Chemistry at [lheine@northwestgreenchemistry.org](mailto:lheine@northwestgreenchemistry.org).

### Accommodation Requests:

To request ADA accommodation including materials in a format for the visually impaired, call the Hazardous Waste and Toxics Reduction Program, 360-407-6700. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.