



Toxic Reduction Successes

Office of Communication and Education

Real Programs Bring Real Results in Reducing Toxics

The Department of Ecology's (Ecology) mandate for Washington's environment is a sizeable one. Plus, the state's population is expected to grow rapidly in the next few years, increasing pressures on the environment. If toxic chemicals are not safely managed at the source, new contamination and recontamination can occur.

Pollution Prevention programs aimed at reducing or eliminating toxic substances at the source are expected to play a vital role in Ecology's ability to accomplish its mission to provide a clean, healthy and vibrant environment for Washingtonians. The task of restoring Puget Sound is one example of the importance of pollution prevention. If we are to restore this inland sea by the goal of 2020, clean-up efforts are not enough. Our aim is to prevent toxic substances from reaching the Sound in first place for the clean up of water, sediments, and shorelands to be successful and to be sustained in the future.

Historically, our approach has been to clean up pollution after it has occurred. This is a time-consuming and expensive process and the results are often mixed because there are always more contaminated sites to clean up than dollars to clean them.

The principles of Pollution Prevention are embodied in the state's Hazardous Waste Reduction Act (Revised Code of Washington 70.95). Pollution prevention is a success when industries replace harmful substances with less hazardous ones and when they eliminate toxic substances from the production process. In addition, Ecology advises businesses on how to become more sustainable by more efficiently using raw materials, water, energy, and other resources. By reducing the use and production of hazardous substances and by operating more efficiently, we protect human health, reduce risk and liability, strengthen our economic well-being, and preserve the environment.

By focusing on prevention, the Ecology Hazardous Waste and Toxic Reduction program has achieved real results:

Mercury:

- Ecology has kept more than 10,000 pounds of mercury out of the waste stream since 2003 by working cooperatively with targeted waste producers. For example, we have a Memorandum of Understanding (MOU) between Ecology and the Washington Dental Association that focuses on "Best Management Practices" for handling dental office waste. More than 90 percent of the state's dentists are using these practices, to prevent 300 pounds of mercury from going down the drain each year. Ecology also has MOU's with hospitals and auto recyclers to reduce mercury contamination from those industries.

Engineering Efficiencies:

- Through the Technical Resources for Engineering Efficiency (TREE) program, Ecology engineers work closely with three to five businesses per year to re-engineer their manufacturing processes. The TREE team makes suggestions that can result in saving industry millions of dollars through new efficiencies, as well as reducing hazardous waste by an average of more than 200,000 pounds and lowering water usage by 160 million gallons.

Lean Manufacturing:

- “Lean and Green” projects are another way for businesses to save both money and the environment. The purpose of “Lean” manufacturing is to reduce or eliminate processes that don’t add value to the product or service being sold. “Green” processes eliminate toxic or hazardous materials and promote sustainability. Ecology is working with Washington Manufacturing Services (WMS) to bring “Lean and Green” benefits to several businesses. Canyon Creek Cabinets is one company that is making use of the “Lean and Green” approach. By doing so, they have reduced their used of toxic chemicals by thousands of pounds per year. As a result of these changes, Canyon Creek has also avoided having to operate under a costly air permit; increased its capacity to grow by 150 percent; and realized savings of more than \$1.5 million per year.

Voluntary Conservation:

- The Cleaner Production Challenge (CPC) is a voluntary resource conservation program that helps the metal finishing and printed circuit board manufacturing industries gain better process control, reduce water use, produce less waste, and improve environmental compliance. By implementing improved techniques, 40 businesses have reduced their wastewater and sludge by 67 percent and 40 percent, respectively. A key to the success of this program has been the willingness of industry leaders to share proven techniques with other metal finishing and circuit board manufacturing operations.

Regulation of Hazardous Wastes:

- Ecology enforces the Dangerous Waste rules (Washington Administrative Code 173-303). These rules ensure that dangerous waste is handled safely and disposed of properly so that it does not contaminate land or drinking water. The Dangerous Waste rules do more than regulate. They provide a model for the safe management of toxic chemicals. Consultants from Ecology’s Hazardous Waste and Toxic Reduction program work with business, local government, and others to integrate these best management practices into their business processes.

Industry Certification:

- The “Environmental Results Program” is under development. The program is modeled after the successful “EnviroStars” concept. This new program will ask companies within selected industries to self-certify environmental compliance at their facility. Ecology consultants will then work with these businesses to move beyond basic compliance toward measures to reduce or eliminate the use of toxic chemicals.

More Information:

Visit Ecology’s web site for more information about these programs.

- Mercury Reduction and Education: www.ecy.wa.gov/mercury/
- Technical Resources for Engineering Efficiency (TREE): www.ecy.wa.gov/programs/hwtr/TREE/index.html
- Lean Manufacturing: www.ecy.wa.gov/pubs/0604024ex.pdf
- Cleaner Production Challenge: www.ecy.wa.gov/programs/hwtr/P2/CPC.html
- Regulation of Hazardous Wastes: www.ecy.wa.gov/programs/hwtr/managewaste.html
- Pollution Prevention: www.ecy.wa.gov/programs/hwtr/p2/

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