



2008 Chemical Policy Subcommittee Issue Paper **June 23, 2008**

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The Issue

Many harmful chemicals are used in manufacturing and in products without adequate laws to protect human health and the environment. Deficiencies in federal chemical regulations, primarily the Toxic Substances Control Act (TSCA), have been well-documented in governmental and academic analyses (GAO, 1994, GAO, 2005, GPO, 1995, USEPA, 2005, Wilson et al, 2006). There are gaps in the laws allowing chemicals that are known chemical hazards to be used in products and processes; in the disclosure of what chemicals are used in products and materials; and in the information gathered to assess chemical hazards or identify safer alternatives. A broader preventative approach is needed that makes public health and environmental protection the priority.

In 2007, the Chemical Policy Subcommittee gathered information about chemical policy reform activities in Washington and Oregon through guest speakers, attending forums, and sharing information within the subcommittee. The following information provided the basis for the Chemical Policy Subcommittee's stated position, goals, and proposed recommendations/solutions.

Chemical Policy Activities in California

- **Green Chemistry Initiative** - In 2002, the California State Legislature requested a study on chemical policy in the state of California. This resulted in a report titled "Green Chemistry in California: A Framework for Leadership in Chemicals Policy and Innovation" produced by Michael P. Wilson and the California Policy Research Center at the University of California (Wilson et al, 2006). This in turn led to the California Green Chemistry Initiative spearheaded by the California Department of Toxic Substances Control. The goal of the initiative is to fundamentally change the way California manages its chemicals and waste.

The report identifies the three policy goals for a modern, comprehensive chemicals policy:

- 1) Close the Data Gap: Ensure that chemical producers generate, distribute and communicate information on chemical toxicity, ecotoxicity, uses and other key data.
- 2) Close the Safety Gap: Strengthen government tools for identifying, prioritizing and mitigating chemical hazards.
- 3) Close the Technology Gap: Support research, development, technical assistance, entrepreneurial activity, and education in green chemistry science and technology.

An additional gap in the understanding of current chemical policies in California, as well as Washington and Oregon, is the cost of these policies to our local government agencies. Existing chemical policies result in many costs that are borne by local government agencies including: treating waste water that contains toxic chemicals; costs to manage products and materials upon disposal that contain toxic and hazardous components at transfer stations, landfills and incinerators; costs to recycle or manage products that contain toxic components; costs to local health departments to treat people with chronic exposure to products and materials that contain toxic chemicals, etc.

Chemical Policy Activities in Oregon

- **Oregon Chemical Policy Roundtable** - A group of governments and nongovernmental organizations have formed the Oregon Chemical Policy Roundtable that works in coalition and seeks to identify, develop, evaluate, and disseminate key chemical research and policy questions, as well as identify and craft innovative ideas for executive and legislative actions that support new chemical policies and toxics reduction in the state. Also in Oregon, the Governor's Inter-Agency Task Force on Toxics, an outgrowth of meeting the Governor's natural resource advisor held with NGOs on toxic chemicals, will focus on toxics policy changes and priorities, and identifying overlapping responsibilities and opportunities related to toxics. The City of Portland and Multnomah County have passed chemical policy resolutions. An interim legislative taskforce has also been set up to focus on children's health and pesticides
- **Northwest Chemical Policy Symposium** - On June 4, 2007, the Northwest Chapter of the North American Hazardous Materials Management Association (NAHMMA) hosted a Northwest Chemicals Policy Symposium in Troutdale, OR. This symposium helped generate interest in solving chemical policy challenges at a Northwest regional level. NAHMMA has plans on continuing efforts, such as this symposium, to bring regional chemical policy stakeholders together at the same table.

Chemical Policy Activities in Washington

- **Department of Ecology Beyond Waste Plan** - In 2004 the Washington Beyond Waste Plan was adopted. It contains three initiatives for creating a broader vision of solid and hazardous waste avoidance and management. This includes recommendations which are:

“intended to accelerate progress toward eliminating the risks associated with products containing hazardous substances. Specifically, this effort encompasses products and substances used at the household level and in relatively small quantities by businesses.” (WDOE, 2004).

Integral to many of the recommendations is reliance on partnering activities between government, industry and NGOs. Finding collaborative ways to share responsibility for solutions to problem wastes through corporate responsibility and **product stewardship opportunities** is one of the key strategies. The Beyond Waste Plan calls for reliance on principles and strategies that go beyond the traditional solid waste planning for disposal including:

- Increase the focus on waste prevention. Toxic substances should be eliminated wherever possible.
- Choose activities with the goal of creating the least damaging ecological footprint possible.
- Change the mindset, as individuals and as a society, from the idea that waste is “normal” or “necessary.” Raise public awareness about toxic materials in everyday products and their effects on human health and the environment.
- Work with product designers and manufacturers to encourage the development of product lines that conserve energy and water and eliminate unnecessary materials and waste in production. In addition, work with designers and manufacturers to produce products that are least or non-toxic, reusable where possible, and highly recyclable.

- Whenever possible, remove barriers that would stand in the way of reducing wastes and reducing the use of toxics.

In practice these principles and strategies are being implemented in concert with the recommendations for the first 5 years of the 30 year plan. Other initiatives in the Beyond Waste Plan include an industrial initiative that includes the research and promotion of sustainability in product development including the use of alternative products based on their lower toxicity, recyclability, reusability, water consumption, energy use, as well as wastes resulting from manufacturing processes and end use.

The plan will also focus on reducing small-volume hazardous materials and wastes by accelerating progress toward eliminating risks associated with products containing hazardous substances, particularly small quantities of hazardous waste generated by households and businesses. This initiative specifically calls for product stewardship solutions in some of its recommendations.

- **Persistent Bioaccumulative Toxins (PBT) Rule** - The PBT Rule became effective February 13, 2006 (WAC 173-333) and establishes the process and procedures for the Department of Ecology to address PBTs. The PBT rule takes a chemical-by-chemical approach to regulating a specific list of chemicals by developing a Chemical Action Plan (CAP) that identifies, characterizes and evaluates uses and releases of a specific PBT, a group of PBTs, or metals of concern and recommends actions to protect human health or the environment (WSL, 2006).

PBTs are substances that are both naturally occurring and man-made substances that build up in the food chain and can affect human health and reproduction. These toxins travel long distances in the atmosphere, move readily from land to air and water, and do not break down easily. PBTs are produced from a wide variety of sources, including vehicles powered by internal combustion engines, pharmaceuticals, some household appliances, and the presence (due to historical use) of pesticides and PCBs in sediments and tissues.

As part of the PBT rule, Ecology developed a list of these substances to be addressed through the development of CAPs. Each CAP takes several years from research through completion and additional legislation is needed to enact regulatory changes or bans.

Ecology and the Department of Health have completed a CAP for mercury and polybrominated diphenyl ether flame retardants. Ecology is currently working on a CAP for lead. A draft lead CAP is expected by the Spring of 2008. In the meantime, the Washington Toxics Coalition is formulating recommendations to take to the legislature concerning the presence and use of lead in support of concerns raised over the recall of millions of lead contaminated toys throughout the US over the past few months.

- **Washington Polybrominated Diphenyl Ethers (PBDEs) Law** - In 2007 landmark, first-in-the-nation legislation was passed to phase out the use of polybrominated diphenyl ethers (PBDEs) including Deca (WSL, 2007). PBDEs are flame retardants used in consumer products. PBDEs persist in the environment and accumulate in living organisms, and toxicological testing indicates these chemicals may cause liver toxicity, thyroid toxicity, and neurodevelopmental toxicity. Importantly, this bill defined an alternative assessment process for identifying safer, reasonable, and effective alternatives by the state departments of Ecology and Health, and fire safety officials.
- **Local Hazardous Waste Management Program in King County (LHWMP)** - Beginning in 2007, LHWMP launched a new strategic plan. Components of the plan include:
 - Participating in the establishment of a regional chemical review program by the end of 2009; and
 - Participating in the passing of a Washington State Toxics Use Reduction Act and establishing a new Toxics Use Reduction Institute by 2010 as a research/business assistance component of that legislation.

In working towards these objectives, LHWMP has begun work on the “Cities and County Chemical Sustainability and Policy Report” to identify the local costs associated with existing chemical policies. LHWMP has also allocated staffing toward the promotion and adoption of the precautionary principle within various county agencies.

- **Washington State Public Health Association (WSPHA)** - In 2006, the WSPHA adopted a resolution endorsing the **Precautionary Principle** as a public health tool for preventing harm from persistent bioaccumulative toxic chemicals (PBTs) (WSPHA1, 2006). The Precautionary Principle (PP) holds that those who produce goods should be responsible for ensuring they are healthy for the population (Gilbert, 2006). The key components of the precautionary principle are:
 1. Establish goals and objectives.
 2. Take preventive action even in the face of uncertainty.
 3. Shift the burden of responsibility for establishing safety and efficacy to the proponents of an activity.
 4. Explore a wide range of alternative actions when harmful outcomes are suspected.
 5. Encourage public participation in decision making.

In 2006, the WSPHA adopted a resolution on “Supporting Safer Chemicals Policies to Benefit Human and Environmental Health”. The resolution called for safer chemical policies to achieve the phase out of hazardous chemicals, including persistent bioaccumulative toxic chemicals, as well as support for research and development, including ‘green chemistry’ approaches (WSPHA2, 2006).

In 2007, both the WSPHA and the Washington State Medical Association (WSMA) passed resolutions that identified the inadequacies of existing chemicals regulations and called for reform: “Supporting Federal and Washington State action to implement a comprehensive chemicals policy to improve and protect public health” (WSPHA, 2007).

- **Registration, Evaluation, and Authorisation of Chemicals (REACH) Training** - In 2006, training was offered to Washington businesses and government staff on the European Union’s Registration, Evaluation, and Authorisation of Chemicals (REACH) and Sustainable Chemicals Management (see the following section on European Chemical Policy Activities for a description of REACH). The training was presented by the Lowell Center for Sustainable Production and was sponsored by a number of local government agencies and NGOs.

National Chemical Policy Activities

- **Lowell Center Chemical Policy Dialogue** - Currently the Lowell Center for Sustainable Production (University of Massachusetts Lowell) hosts the Lowell Center State Chemical Policy Dialogue. This monthly conference call on a variety of chemical policy topics has participants from around the United States. One topic of particular note is a proposal from the Lowell Center to establish an Interstate Clearinghouse on Chemicals (IC2). The clearinghouse would provide a mechanism for collaboration and information sharing among states undertaking industrial chemicals management policy initiatives.
- **National Pollution Prevention Roundtable (NPPR) P2 Policy and Integration Committee** - A national conference call hosted by a NPPR committee which aims to influence proposed and implemented regulatory issues that affect pollution prevention, especially as they affect state and local programs in environmental/regulatory and non-regulatory pollution prevention agencies. Participants are mostly from government with some participation from business and NGOs. Recent discussions have focused on chemical policy, green chemistry, and the Global Harmonization System of Classification and Labeling of Chemicals (GHS).
- **State Alliance for Federal Reform of Chemicals Policy (SAFER)** - SAFER is an alliance of NGOs in eight states: Washington, Maine, Massachusetts, New York, California, Michigan, Minnesota and Connecticut. The NGO coalitions in these states share resources and strategies to promote state-level legislation to remove harmful chemicals from commerce and promote the use of

safer alternatives. The Subcommittee will hear updates on SAFER activities through Washington's Toxic-Free Legacy Coalition, a broad-based alliance of organizations working to eliminate persistent toxic chemicals and promote safer alternatives (TFLC, 2007).

European Chemical Policy Activities

- The **Registration, Evaluation, and Authorisation of Chemicals (REACH)** is a new European Community Regulation on chemicals and their safe use (EU, 2007). The new law entered into force on 1 June 2007. The aim of REACH is to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. REACH requires businesses which manufacturer or sell products within the European Union to conduct risk assessments for their products and provide basic toxicity information on the impacts their chemicals and products have upon human health and the environment. Currently in the US under regulations such as TSCA, the onus is place on government to prove a chemical poses a threat before action can be taken. This has proven very difficult to do. Under REACH, a business is required to provide information on the risks their chemicals and products pose before they can be sold or manufactured in the EU. The catch phrase often used to summarize REACH is 'No data, no market.' REACH has revolutionized the approach to chemical regulation.

It is likely that many companies doing business in Europe will be affected by the requirements of the REACH directive. Manufacturers and importers will be required to gather information on the properties of their chemical substances, which will allow their safe handling, and to register the information in a central database run by the European Chemicals Agency in Helsinki. The Agency will act as the central point in the REACH system: it will manage the databases necessary to operate the system, co-ordinate the in-depth evaluation of suspicious chemicals and run a public database in which consumers and professionals can find hazard information. REACH also may provide the opportunity to share data with other governments and their representatives. The Regulation also calls for the progressive substitution of the most dangerous chemicals when suitable alternatives have been identified (ECHA, 2007).

Canadian Chemical Policy Activities

- Canada reauthorized in 1999 the Canadian Environmental Protection Act (CEPA 1999). As a cornerstone of the Government of Canada's environmental legislation, CEPA 1999 is aimed at preventing pollution and protecting the environment and human health. One of CEPA 1999's major thrusts is the prevention and management of risks posed by harmful substances. As well, CEPA 1999 provides for the assessment and/or management of the environmental and human health impacts of new and existing substances. Under this regulation, the Government of Canada has conducted an in-depth assessment of the 23,000 existing chemicals and all new substances. These chemicals have been prioritized to determine which are most likely to negatively impact human health and the environment. These chemicals of concern are evaluated and chemicals for which insufficient toxicity information exist are identified. Businesses are then notified of this data gap and are required to conduct toxicity testing to provide the necessary information. The Government of Canada has established an extensive database and has made all of its findings available on the web (CEPA 2007).

Private Chemical Policy Activities

A number of businesses are already producing healthier products that yield better environmental and economic impacts. Six case studies of companies making innovative products while eliminating toxics are described in "Healthy Business Strategies for Transforming the Toxic Chemical Economy", a 2006 report by Clean Production Action (Greiner et al, 2006).

- **Dolphin Software** - The private sector is developing tools to help industry manage the use of chemicals. It is often difficult to determine safer alternatives to commonly used toxic chemicals. Dolphin Software with corporate headquarters in Lake Oswego, Oregon has developed tools that can help businesses look up Materials Safety Data Sheets (MSDS) and purchasing records to compare the ingredient make-up and select chemicals and products that are safer for human health

and the environment. Products that do not meet certain “green” standards can be removed from their purchasing lists. The software tools also plot ingredients on an axis and chart out a “green zone” that indicate products that are safer. The software also allows companies to measure toxicity versus cost for each product to find affordable solutions (Dolphin Software, Inc., 2007).

- **The GreenBlue Institute** - GreenBlue Institute has developed Green Screen for Safer Chemicals, a hazard-based screening method tool that is designed to inform decision makers about the risks posed by chemicals and to advance development of green chemistry. The institute has also been involved in developing CleanGredients, a database which lists surfactants that meet established health and environmental criteria. Formulators can select surfactants from the list for development of green products (GreenBlue Institute, 2007).

The NWPSC Position

The NWPSC believes that whoever designs, produces, sells, or uses a product should take responsibility for minimizing the product's environmental and health impacts throughout all stages of the products' life cycle. The greatest responsibility lies with whoever has the most ability to affect the lifecycle environmental impacts of the product. Therefore, the designer and producer are responsible for creating products that are safer for the environment and human health.

Where no alternatives to toxic components and ingredients exist, the producer is responsible for assisting in the management of the product at the end of life. Product stewardship and chemical policy reform go hand-in-hand. Policies that promote the use and development of safer alternatives to toxic chemicals and that restrict the use of toxic chemicals result in safer products and remove barriers to reuse and recycling of materials.

Goals

1. The goal of the Chemical Policy Subcommittee is to support policies that:
 - a. restrict the use of certain hazardous and toxic chemicals and materials.
 - b. require that all chemical and material manufacturers evaluate and report the environmental and human health hazards of these chemicals and materials to a regulatory body for registration and approval or denial prior to production and sale.
 - c. require that producers disclose all chemicals used in their manufacturing processes and products.
 - d. require that producers provide clear and uniform environmental, health hazard and safety information to sellers, for all materials and products, which can then be provided to their customers in an audience-appropriate format.
 - e. promote, or are consistent with, the precautionary principle to protect health and the environment.
 - f. if a product containing a toxic chemical is designed for disposal, require the producer to be responsible, either physically or financially, for the end-of-life management of that product.
2. The Chemical Policy Subcommittee will identify strategies that promote chemical policy reform efforts at the state, regional and national levels.

Proposed Solution/Recommendations

Potential actions for the Chemical Policy Subcommittee are still being discussed. Below is a list of proposed actions and projected completion dates.

1. Develop a Report on the Current Chemicals Policy in Washington and Oregon

- The Oregon Department of Environmental Quality will develop a report to assess the impacts and costs of the current chemicals regulatory system and will recommend policy actions. The report would build upon Mike Wilson’s “Green Chemistry in California: A Framework for Leadership in Chemicals Policy and Innovation” report.
- The Washington State Department of Ecology is exploring similar options and analysis.

Agency Responsible: Oregon Department of Environmental Quality and Washington Department of Ecology

2. Develop the LHWMP “Cities and County Chemical Sustainability and Policy Report”

- LHWMP is developing a report that will analyze the costs (environmental, health, social, and government operational) of current chemical policies on the residents, businesses and local governments in King County.
- The government operational costs would include at a minimum: wastewater treatment, solid and hazardous waste management, water supply, public health, and environmental quality.

Timeline:

- 2008 Q1: Complete report outline, methodology, and literature review
- 2008 Q2: Data for report is defined and acquired
- 2008 Q3: Data analyzed
- 2008 Q4: Report written
- 2009 Q1: Report finalized

Agency Responsible: Local Hazardous Waste Management Program in King County

3. Support Chemical Policy Reform Legislation and Policies

- Track initiatives and activities on chemicals policy reform led by the State Alliance for Federal Reform of Chemicals Policy (SAFER), the Toxic-Free Legacy Coalition of Washington <http://www.toxicfreelegacy.org/>, the Oregon Center for Environmental Health <http://www.oregon-health.org/>, the Oregon Environmental Council <http://www.oeonline.org/>, and other NGOs.
- Support modernization and reform of federal chemicals policies.
- Support policies at the local and state level that eliminate or reduce the use of toxic chemicals in manufacturing processes and consumer products and that promote the use of safer alternatives.

Agency Responsible: All Subcommittee Agencies as appropriate

4. Promote the Precautionary Principle

- The precautionary principle holds that those who produce goods should be responsible for ensuring they are healthy for the population. Expand recognition of the precautionary principle at city, county and state levels. Support adoption and application of the precautionary principle and green purchasing by local government agencies. Support local training efforts.

Agency Responsible: All Subcommittee Agencies as appropriate

5. Support Business Partnerships and Technical Assistance

- Support the establishment of a Toxics Use Reduction Institute (TURI) in the Northwest region to research, develop, and promote safer alternatives; encourage sustainable product design; and provide technical assistance to businesses and industries. Encourage funding of the institute by industries who currently use toxic chemicals and materials.

Agency Responsible: Local Hazardous Waste Management Program in King County, Washington Toxics Coalition

6. Create Regional Multi-Agency Committee on Chemical Policy Reform

- Help facilitate establishment of a regional multi-agency committee on chemical policy reform and have a seat on this committee.

Agency Responsible: Oregon Department of Environmental Quality and Washington Department of Ecology

7. Analyze and Monitor the European Union REACH Directive and, where possible, coordinate activities

- Determine the effects that the Registration, Evaluation, Authorisation and Restriction of Chemical (REACH) Directive will have on Northwest companies doing business in Europe.
- Analyze how to capitalize on the information that will be available from REACH about businesses' chemical inventories and use of chemicals.
- Evaluate the need for educating Northwest businesses regarding REACH.
- Monitor implementation of REACH in the European Union and learn from their experiences.
- Establish data sharing agreement with the European Chemical Agency so states in the Northwest have access to all data submitted by businesses under REACH

Agency Responsible: Washington Department of Ecology.

8. Monitor activities under the Canadian Environmental Protection Act (CEPA 1999) and, where possible, coordinate activities

- Determine the effects that CEPA 1999 will have on Northwest companies doing business in Europe.
- Establish data sharing agreement with the Canadian Government so states in the Northwest have access to all data submitted by businesses under CEPA 1999.

Agency Responsible: Washington Department of Ecology

9. Participate on the Lowell Center for Sustainable Production State Chemical Policy Dialogue

- Support creation of an Interstate Clearinghouse on Chemicals (IC2)

Agency Responsible: Local Hazardous Waste Management Program in King County

10. Create a Chemical Policy Webpage on NWPSC Site

- Create a page that contains this Issue Paper as well as relevant documents and resources.

Agency Responsible: King County Solid Waste Division

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