
STATE CHEMICALS POLICY: Trends and Profiles

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EXECUTIVE SUMMARY

This report describes recent state legislative and policy efforts to prevent the hazards and risks associated with toxic chemicals, which are often known as “chemicals of concern.” It also highlights state actions and experiences to advance needed reforms of federal chemicals policy.

Key Themes in State Chemicals Policy

Key themes in recent state efforts to address toxic chemicals include:

- States are transitioning from single-chemical solutions to comprehensive and holistic approaches.
- States are using prioritization as a strategy to protect vulnerable populations and to meet regional needs.
- States are embracing environmentally-preferable purchasing policies as a means to reduce toxic chemical use and hazardous waste generation.
- Even as many states move to comprehensive, risk-based systems for chemical management, restrictions on specific hazardous chemicals remains an important policy tool.
- States are embracing product lifecycle management solutions to prevent toxics release, rather than relying exclusively on end-of-pipe cleanup.
- States recognize the need for more information on toxic chemicals, including which chemicals are present in which products, which chemicals are present in people, and exposure levels.

State Examples

The five state toxics policy profiles in this report show a cross-section of the steps that states are taking across the country to address chemicals of concern, as highlighted below.

CALIFORNIA

- California proposed new Safer Consumer Products Regulation in 2012, which addresses a broad range of products and requires manufacturers to report on their use of priority chemicals in products and to replace harmful chemicals with safer alternatives.
- California has adopted legislation to implement the nation’s most ambitious state-level program to monitor toxics levels over time in the human population. The California Environmental Contaminant Biomonitoring Program (CECBP) aims to establish trends in contaminant levels, and assess the effectiveness of the state’s regulatory programs in reducing toxic exposures.

- The state's highly visible labeling law, the Safe Drinking Water and Toxic Enforcement Act (commonly known as Proposition 65), requires warnings to be prominently displayed on products that contain any of a list of more than 700 chemicals known to cause cancer or reproductive toxicity.

MAINE

- Maine developed a comprehensive approach to regulating toxic chemicals in its 2008 Toxic Chemicals in Children's Products law, which introduced a tiered system of chemical prioritization. The law requires manufacturers or distributors of certain consumer products to notify the Department of Environmental Protection if merchandise contains priority chemicals.
- The state has also enacted regulations that restrict the use of specific chemicals, as well as policies to promote product stewardship, pollution prevention, and environmentally-preferable purchasing.

MINNESOTA

- In 2009, with the enactment of the Toxic Free Kids Act, the Minnesota state government developed a comprehensive approach to address toxic chemical risks. This legislation required the state to prioritize chemicals and examine opportunities for reducing priority chemicals. The recommendations from this effort included establishing a policy to promote green chemistry as part of the state's pollution prevention programs.
- The state passed its 1990 Toxic Pollution Prevention Act that requires facilities to prepare pollution prevention plans, established an associated technical assistance program, and enacted laws to restrict the use of specific chemicals.
- Minnesota's environmentally-preferable purchasing requirements apply to state government, but the state also assists local governments with their green procurement programs.

OREGON

- The Oregon Department of Environmental Quality (ODEQ) developed a draft toxics reduction strategy in 2011 that is centered on a list of priority chemicals and a set of actions to reduce their presence in the environment and human health. The strategy and short-term implementation plans were finalized in 2012 and are posted on-line.
- ODEQ maintains a list of priority toxic chemicals that are either persistent or bioaccumulative, and has used this list to prioritize measures and then reduce the presence of these pollutants in Oregon waters.
- The state's public health agency, part of the Oregon Health Authority (OHA), is similarly working toward a more systematic approach to protecting the public's health from exposures to toxics.

WASHINGTON

- The Washington State Department of Ecology reduces toxics exposure by restricting the use of toxics, working with businesses to reduce toxic releases, and cleaning up existing toxic pollution.
- After the enactment of the 2008 Children's Safe Products Act (CSPA), Washington created a list of priority toxic chemicals and has begun collecting information from manufacturers to gain a better understanding of the presence of those chemicals in children's products.
- Washington implemented the nation's first PBT chemical action plans and rulemaking, as well as the 2003 Mercury Education and Reduction Act, and a landmark electronics product stewardship legislation.
- Finally, Washington is one of three states, along with New York and California, which has received federal funding to build capacity to monitor the presence of toxics in human tissues.

WISCONSIN

- Wisconsin's labeling laws include a requirement that baby bottles and children's drink containers be conspicuously labeled as not containing bisphenol-A (BPA), and that products containing hazardous substances be labeled clearly.
- In 2012, the State passed legislation requiring a publically-available list of batteries that have been certified as containing low levels of mercury.
- Biomonitoring of effluent and receiving waters are required for wastewater permit compliance in Wisconsin.
- Wisconsin's pollution prevention program was established in 1989 and promotes reduction in hazardous material usage and waste generation in manufacturing.

Conclusion

This report describes key actions that states are taking to reduce the threat of toxics to the environment and human health; however, there is much work remaining to make sure that products are safe and that people and ecosystems are protected from chemical hazards, especially given the absence of reform of federal chemicals policy.

OVERVIEW AND TRENDS IN STATE ACTIONS TO REDUCE TOXIC EXPOSURES

Across the United States, states have provided leadership in the effort to advance sound chemical management policy for years. In the absence of reform of the 30-year-old federal Toxic Substances Control Act (TSCA), many states have passed chemicals management legislation or regulations, ranging from targeted bans on high-risk chemicals to comprehensive chemical safety laws. States have played a key role in advancing toxics policy reform through advocating for federal reform as well as by serving as laboratories for innovative policies to reduce chemical hazards in our environment and to prevent exposures to harmful chemicals.

In the sections below, we present the following information:

- **Recent history of state action on toxics** at both the federal and state levels, including principles developed by several states working to advance federal chemicals policy reform.
- **A summary table of state chemical policy activities.** This table provides a high-level snapshot of what kinds of policies states are implementing and the number of states that are taking action.
- **Key trends and themes in state chemicals policy.** These trends help show the ways in which policy reform is developing across the country.
- **Five profiles of state activity on toxic chemicals management.** These states represent a cross-section of the wealth of activity that is taking place across the country. These profiles provide a more in-depth understanding of the many ways that states are acting to reduce toxics.

History of State Action on Toxics

States have been leaders in taking action to reduce toxic chemical hazards and exposures for many years. This has included implementation of federal environmental regulations and associated state laws that regulate hazardous wastes and emissions, including the Clean Water Act (CWA), the Clean Air Act (CAA), the Resource Conservation and Recovery Act (RCRA), and Superfund. These efforts have focused on cleaning up and managing hazardous wastes generated by industrial facilities and other sources.

Beginning in the early 1990s, there was a movement in many states to supplement traditional command-and-control regulation focused on reducing pollution at the end of the pipe and shift toward prevention approaches. These approaches represented a shift in thinking toward

solutions that minimized or prevented wastes at the source and benefited industry by making their operations more resource-efficient. Common components of pollution prevention programs included technical assistance for businesses and other voluntary approaches, as well as measures requiring plants to create pollution prevention plans. Under pollution prevention planning laws, plants must track the use of certain chemicals through the production process. These efforts have resulted in significant reductions in releases of harmful chemicals into the environment, but more work is needed. States recognize that gap and have increasingly enacted innovative policies in recent years to reduce chemicals of concern and replace them with safer alternatives.

In 2009, thirteen states organized and developed a set of eight principles to guide the reform of the federal chemical management system under TSCA. The states recognized that federal chemicals policy was insufficient to reduce the presence of harmful chemicals in the environment and human health, and created these principles as a response to that reality. These eight principles provide a useful framework for strategic state toxic policy as well. In 2010, the Environmental Council of the States (ECOS) passed a resolution calling for responsible TSCA reform.¹

STATE PRINCIPLES ON REFORM OF THE TOXIC SUBSTANCES CONTROL ACT

Require Chemical Data Reporting. Chemical and product manufacturers should be required to develop and provide chemical health and safety information, as well as exposure and use data, including the presence of toxic chemicals in products and the associated chemical hazards and risks, to regulators, businesses, and the public.

Demonstrate Chemicals and Products are Safe. Manufacturers should provide the necessary information to regulators to conclude that new and existing chemicals and products in commerce are safe and do not endanger the public or the environment. The public has a right to expect that the products they use are safe.

Prioritize Chemicals of Concern. Government should identify and prioritize chemicals of concern in order to regulate the most problematic chemicals in commerce, and have the authority to take timely action to protect people and the environment. Sufficient resources should be made available to support these actions.

Protect the Most Vulnerable. Chemical regulation should be designed to protect the most vulnerable, including pregnant women and children.

Promote Safer Chemicals and Products. Based on green chemistry principles, manufacturers should be required to assess and identify safer alternatives to problematic chemicals of concern. Government should establish protocols for evaluating potential alternatives to chemicals of concern.

Address Emerging Contaminants. Emerging chemicals of concern, including nanoscale materials, need to be assessed for public and environmental safety before they go into widespread commerce and use.

Strengthen Federal Law and Preserve States' Rights. States acknowledge the need for a strong federal chemical regulation system, while expressly preserving the authority of state and localities to implement measures to manage chemicals of concern.

Fund State Programs. Effective state-federal governance should enhance the role of states in TSCA implementation, promote data and information sharing, and provide sustained funding for state programs. The states are in a unique position to provide innovative, cost-effective solutions for chemicals of concern prioritization, interstate data sharing, and safer alternatives assessments.

¹ The ECOS resolution on TSCA reform is available here: http://www.ecos.org/files/4195_file_Resolution_10_8_TSCA_reform.DOC

In 2011 and 2012, a group of interested states convened to continue collaborative state work to influence federal policy on chemicals of concern. This group, funded by the Bullitt Foundation and coordinated by the Washington State Department of Ecology, submitted comments to Senators James Inhofe and Frank Lautenberg, who had introduced a Safe Chemicals Act that would reform federal toxic chemicals policy.

Even as steps are made at the federal level toward a new nationwide chemicals policy, state policymakers continued to forge ahead in developing solutions to reduce the impact of chemicals of concern on human health and the environment. In the last ten years, the number of state chemical laws has increased dramatically. Toxic chemical reform policies have been passing with broad bipartisan support across the country. Many of the new state chemical laws reflect the same priorities for federal toxics policy as are expressed in the State Principles on Reform of TSCA.

As more states take steps toward comprehensive toxic chemical policies, the effective implementation of these principles helps ensure that toxics use will be reduced, that valuable data and information will be gathered, and that vulnerable populations will be protected from the most harmful chemicals.

Individual State Action

Nearly all states have taken some type of action to prevent or reduce exposures to harmful chemicals. The Lowell Center for Sustainable Production's Chemicals Policy and Science Initiative compiled data about state toxics policies into a searchable database, which is now hosted by the Interstate Chemicals Clearinghouse.² As categorized by the Lowell Center, types of state activities on toxics include:

- **Single Chemical Restrictions.** Policies that ban or severely restrict specific chemicals or uses of chemicals.
- **Alternatives Assessment.** Policies that encourage research to support or establish requirements to replace the use of chemicals of concern with the use of alternatives that have been carefully and methodically evaluated for safety (i.e. substitution).
- **Biomonitoring.** Policies that support assessment of human biologic specimens (blood, urine, breast milk, fat tissue) to characterize the levels of human chemical exposure. Policies that require tracking and monitoring of the links between exposures to chemical/environmental hazards and adverse human health effects.
- **Environmentally Preferable Purchasing.** Policies that require or encourage the purchase of products based on particular environmentally-sensitive attributes (i.e. less toxic chemicals, recycled material content, energy efficiency, etc.).

² The State Chemicals Policy Database is available at: <http://www.newmoa.org/prevention/ic2/projects/chempolicy/>

- **Green Chemistry/Design for the Environment.** Policies that encourage the redesign of chemicals, products, and processes from the outset to reduce or eliminate the use and generation of hazardous substances.
- **Pollution Prevention.** Multi-pollutant, multi-media strategies that reduce pollution and waste at the source and/or encourage changes in production processes, products, and/or raw materials to reduce or avoid the use of hazardous substances or the generation of hazardous byproducts.
- **Prioritization.** Policies that establish a framework for assessing and prioritizing chemicals.
- **Product Stewardship.** Policies that establish an environmental management strategy for minimizing a product's environmental impact throughout all stages of a product's life cycle.
- **Right-to-Know.** Policies that require or encourage the provision of information or disclosures about exposures and health risks associated with chemicals to the general public.

The table below summarizes information on state toxics policies across all 50 states from the State Chemicals Policy Database and from the nonprofit organization Safer States.³ In this table, an “X” shows where a state has enacted a policy in each category and an “O” shows where a state has proposed and/or is considering policy in a given category. Much more information is available in the database.

³ Safer States’ information on state toxics policies is available at: <http://www.saferstates.com>

State Toxics Policy Inventory Summary Table

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X = Enacted O = Proposed

State	Chemical Restrictions									Biomonitoring	Environmentally Preferable Purchasing	Green Chemistry	PBTs	Pollution Prevention	Prioritization	Product Stewardship	Right-to-Know
	BPA	Mercury	Cadmium	Lead	Arsenic	Copper	Phthalates	PBDEs	Flame Retardants								
Alabama	O																
Alaska	O								O					X	O		
Arkansas	O	X												X		X	
Arizona	O													X			
California	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X
Colorado	O										X			X			
Connecticut	X	X	X	X					O		X	X		X	X	X	X
Delaware	X			X										X			
Florida		X	O											X	O	X	O
Georgia	O	X												X			O
Hawaii	O	O	O	O			O	X			X			X		X	
Illinois	X	X	X	X					X	X	X			X	O	X	X
Indiana		X		X							X			X		X	X
Iowa	O	X		O							X			X		X	
Kentucky	O										O			X			
Kansas											X						
Louisiana		X		X							X			X		X	X
Maine	X	X	O	X					X	X	X		X	X	X	X	X
Maryland	X	X	X	X					X	X	X				O	X	X
Massachusetts	X	X	O	X					O		X			X	O	X	X
Michigan		X	O	X							X	X		X	O	X	X
Minnesota	X	X	X	X						X	X	X		X	X	X	X
Mississippi			O	O			O				X						
Missouri	O										O					X	
Montana		X														X	X
Nebraska		X												X			

X = Enacted O = Proposed

State	Chemical Restrictions									Biomonitoring	Environmentally Preferable Purchasing	Green Chemistry	PBTs	Pollution Prevention	Prioritization	Product Stewardship	Right-to-Know
	BPA	Mercury	Cadmium	Lead	Arsenic	Copper	Phthalates	PBDEs	Flame Retardants								
Nevada											X						
New Hampshire		X	X	X										X		X	X
New Jersey	O	X	O	O			O	O	O		X			X		X	X
New Mexico														X		X	
New York	X	X	O	X	X	X	O	X	X	X	X			X	O	X	X
North Carolina	O	X					O		O		X			X		X	X
North Dakota	O										X						X
Oklahoma														X		X	
Ohio	O	X															X
Oregon	O	X	O	X					X	X	X	X	X	X	O	X	X
Pennsylvania	O	X									X			X		X	
Rhode Island	O	X		O					X	X				X		X	X
South Carolina		X								O				X		X	X
South Dakota	O		O														
Tennessee	O	X	O								O			X		X	X
Texas	O													X		X	X
Utah		X														X	X
Vermont	X	X		X			X	X			X			X	O	X	X
Virginia	O	X												X		X	X
Washington	X	X	X	X		X	X	X	O	X	X	X	X	X	O	X	
West Virginia	O													X		X	
Wisconsin	X	X		X					O		X			X		X	
Total Proposed	23	2	11	6	0	0	5	2	7	0	3	0	0	0	10	0	2
Total Enacted	12	31	6	17	2	3	3	12	6	6	25	6	3	37	4	34	25

Sources: Interstate Chemicals Clearinghouse (originally developed by the Lowell Center for Sustainable Production), *State Chemicals Policy Database*, <http://www.newmoa.org/prevention/ic2/projects/chempolicy/>, accessed December 2012, and information about proposed legislation from Safer States, <http://saferstates.org/>.

Key Themes in State Chemicals Policy

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As more states emerge as leaders in reforming chemical management, several key themes are evident across these efforts. These themes are described below.

STATES ARE TRANSITIONING FROM SINGLE-CHEMICAL SOLUTIONS TO COMPREHENSIVE AND HOLISTIC APPROACHES.

States have made great progress in developing and implementing toxics policies. It is clear that states are increasingly trending away from piecemeal approaches toward more comprehensive policies. However, for most states there is still a long way to go to transition toward holistic chemical management. Comprehensive toxics policy has several key elements:⁴

- An integrated approach to management of all chemicals, instead of piecemeal restrictions on specific chemicals.
- A system through which to collect data about toxics use and presence, and a way to make that information publicly available.
- Processes for transitioning chemical use from toxics to safer alternatives.
- The promotion of research and innovation for green chemistry and safer alternatives.

Comprehensive policy is often approached in a *step-wise process*:

- First, states enact policies to collect information, including data on chemicals in products, chemicals in human tissues and the environment, and on what chemicals are most harmful.
- States then prioritize the most harmful chemicals, priority products, and exposures, often creating a list of high-priority chemicals of concern.
- States pursue safer alternatives research and policies that promote the development of those alternatives. This is an essential step in transitioning manufacturers away from toxics.
- Finally, states take action to restrict chemical use based on the priorities. Strategies include single-chemical restrictions or product-specific requirements as well as incentives and programs to encourage or require the use of safer alternatives.

Instead of focusing on end-of-pipe management and individual chemical bans, these states prioritize the chemicals of greatest concern, and some states have begun to take preventive action based on that prioritization.

⁴ The Lowell Center for Sustainable Production's 2009 report, *State Leadership in Formulating and Reforming Chemicals Policy: Actions Taken and Lessons Learned*, provides more information on the components of a comprehensive toxics policy, and is available here: www.chemicalspolicy.org/downloads/StateLeadership.pdf

Examples of states that are embracing holistic approaches to toxic chemical policy include:

- **California** is in the process of passing a Safer Consumer Products regulation, which would include a multi-faceted strategy to identify and prioritize chemicals and products of concern, require manufacturers to research safer alternatives, and transition manufacturers to those alternatives.
- **Maine's** Toxic Chemicals in Children's Products law enabled the state to create a list of priority chemicals, to require manufacturers of children's products to report on their use of priority chemicals, to require specific product manufacturers to research safer alternatives, and to restrict the sale of products containing priority chemicals if safer alternatives are available.
- **Washington's** Children's Safe Products Act required the state to create a list of priority chemicals of concern, and manufacturers of children's products must report on their use of those chemicals.

STATES ARE UTILIZING PRIORITIZATION AND A FOCUS ON EXPOSURES AS STRATEGIES TO PROTECT VULNERABLE POPULATIONS.

As states begin their journey to implement holistic toxics policies, many choose to begin by addressing threats to their most vulnerable populations, typically children, infants, and developing fetuses. For example, these policies often require toxic chemical use reporting by children's product manufacturers. States also focus on vulnerable populations through more targeted approaches, including 23 states that have enacted single-chemical bans and restrictions on the use of specific chemicals in children's products (e.g. restrictions on the use of BPA in baby bottles).

Examples of states with policies to protect vulnerable populations from toxics include:

- Many states have restricted the use of toxic metals in children's jewelry. Cadmium restrictions in children's jewelry are in place in **California, Connecticut, Illinois, Maryland, Minnesota, and Washington.**
- Several states ban the use of bisphenol-A (BPA) in baby bottles and children's sippy cups, including **California, Connecticut, Delaware, Maine, Maryland, Massachusetts, New York, Vermont, Washington, and Wisconsin.** As described above, comprehensive, multi-chemical programs are in place or under consideration in **California, Maine, Minnesota, and Washington** to prioritize chemicals that are a risk to children, collect data on their use in children's products, and take actions to prevent exposures.

STATES ARE EMBRACING ENVIRONMENTALLY-PREFERABLE PURCHASING POLICIES AS A MEANS TO REDUCE TOXIC CHEMICAL USE AND HAZARDOUS WASTE GENERATION.

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Many states are using purchasing policy requirements to help incentivize the transition to safer chemicals, where those alternatives have been identified. States increasingly rely on third-party certifications, such as GreenSeal, EPA's Design for Environment, or ENERGY STAR, to guide state purchasing decisions toward the greenest product. Twenty-five states have policies to encourage or require preferential purchasing of environmentally-friendly alternatives by government agencies.

Examples of environmentally preferable purchasing policies include:

- **California** requires state agencies to give preference to environmentally-cleaner options when purchasing electronics equipment, and requires the Department of General Services to provide information to state agencies and assistance regarding environmentally-preferable purchasing.
- **Colorado** has an executive order that sets goals for environmentally-preferable purchasing at state agencies.
- **Connecticut, New York, and New Jersey** have executive orders that require state agencies to use cleaning products that minimize potential impacts to human health and the environment.
- **Connecticut and Vermont** require environmentally-preferable cleaning products to be used in school buildings.
- **Minnesota** requires public entities to apply principles regarding the reduction of toxicity in waste when purchasing commodities and services.

EVEN AS MANY STATES MOVE TO COMPREHENSIVE, RISK-BASED SYSTEMS FOR CHEMICAL MANAGEMENT, RESTRICTIONS ON CERTAIN HAZARDOUS CHEMICALS REMAINS AN IMPORTANT POLICY TOOL.

While not all states have adopted holistic policies to reduce the use of toxics, most states have proposed or enacted a restriction on at least one chemical, with over half of all states enacting restrictions on mercury, 17 with limits on lead, and 12 with PBDE restrictions. Many of these restrictions are focused on children's products, as described above. States use chemical-specific restrictions to address specific problems, and can help pave the way for a state to adopt a more comprehensive policy. Chemicals (and chemical classes) that states commonly target with chemical-specific policies include bisphenol-A (BPA), mercury, cadmium, lead, arsenic, copper, phthalates, flame retardants, and PBT chemicals.

Example state policies restricting specific chemicals include:

- **California** is one of eleven states that have passed restrictions on the use of BPA. California's Toxin-Free Infants and Toddlers Act bans BPA in bottles and children's cups, and requires manufacturers to use safer alternatives when replacing BPA in containers.

- **Washington** is one of six states that have banned cadmium in certain uses, including children's jewelry and paint. Washington's restriction prohibits cadmium at levels greater than 40 parts per million (ppm) in children's products.
- **Thirty-one states** restrict the use of mercury.

STATES ARE EMBRACING PRODUCT LIFECYCLE MANAGEMENT SOLUTIONS TO PREVENT TOXICS RELEASE, RATHER THAN RELYING EXCLUSIVELY ON END-OF-PIPE CLEANUP.

Several states have enacted policies that target the entire lifecycle of a product. These approaches involve endeavoring to reduce chemicals of concern at all stages of a product's manufacture, distribution, use, and disposal. Policy strategies include green chemistry and green design (i.e., research to develop safer alternatives and product design), pollution prevention planning and technical assistance, requiring manufacturer take-back of products at the end of life, and/or mandating that products be recycled. Thirty-seven states have enacted policies to promote pollution prevention. There is increasing interest from states in exploring green chemistry; California's Green Chemistry Initiative is an example of progress made as a result of this increasing interest. Thirty-four states have passed a variety of forms of product stewardship policies, including six states that have passed policies promoting green chemistry. Most enacted and proposed legislation on product stewardship has focused on electronics waste and mercury-added products.

Example state green chemistry/design and product stewardship policies include:

Pollution Prevention

- **Thirty-seven states** have adopted multi-pollutant prevention policies to reduce chemical pollution at the source. One study found that these state-level pollution prevention policies resulted in a reduction of 28 to 30 percent of total pounds per facility of toxic chemicals released.⁵

Green Chemistry/Design

- **Connecticut** has established a research center within the University of Connecticut to develop clean technology innovations and green chemistry. Research at the Chemical Innovations Institute includes safer alternatives to chemicals of concern and innovative safer chemical technologies.
- **Michigan** has a program that coordinates the efforts of state departments and agencies to promote green chemistry solutions by encouraging research, development, and implementation of innovative chemical technologies; promoting the use of chemical technologies that reduce or eliminate the use of hazardous substances during design, manufacture, and use of products and processes; and encouraging the use of safer chemical alternatives to hazardous substances.

⁵ Benneer, Lori Snyder. "Are Management-Based Regulations Effective? Evidence from State Pollution Prevention Programs." *Journal of Policy Analysis and Management*, vol. 26(2), March 2007. <http://onlinelibrary.wiley.com/doi/10.1002/pam.20250/pdf>

Product Stewardship

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- **Minnesota** is one of several states that require manufacturers of mercury-containing products to be responsible for the cost of collecting the product, to inform purchasers via a label that the product must be recycled and cannot be disposed of into the regular waste stream, and prohibits anyone from placing mercury-containing products into solid waste or water waste disposal systems.
- **New York** requires that electronics manufacturers collect or arrange for the collection and recycling of devices.
- **Wisconsin** is one of several states that require electronic devices to be collected and recycled and not disposed of in landfills.
- **Washington** requires that persons who replace motor vehicle tires replace lead wheel weights with preferred weights that do not contain lead, mercury, cadmium, or any PBTs, and requires that the removed lead weights be recycled.

STATES RECOGNIZE THE NEED FOR MORE INFORMATION ON TOXICS, INCLUDING WHICH CHEMICALS ARE PRESENT IN WHICH PRODUCTS, WHICH CHEMICALS ARE PRESENT IN HUMAN TISSUE, AND EXPOSURE LEVELS.

States recognize that more information will be needed in order to implement comprehensive policies to reduce toxics. That information includes which chemicals are in products, what risks chemicals pose to human health, what chemicals are present in human bodies, and what chemicals are in the environment, among others. Some states are addressing these information gaps by engaging in biomonitoring efforts to gather data over time about toxics in the bodies of residents. Other state approaches to gathering information include requiring product manufacturers to report on their use of chemicals of concern.

Examples of state efforts to gather information include:

- **California** established the nation's first state-level biomonitoring program in 2006, and monitors metals and organic pollutants by systematically collecting and analyzing human tissue specimens from volunteers.
- **California, New York, and Washington** were awarded a total of \$5 million in grants by the Centers for Disease Control and Prevention (CDC) in 2009 to fund state-based laboratory biomonitoring programs.
- **Maine** requires commercial and industrial facilities that use in excess of 1,000 pounds of a priority toxic chemical to report to the state on their use of that chemical.
- **Massachusetts** requires companies that use large quantities of specific chemicals to evaluate and plan for pollution prevention opportunities, implement them if practical, and measure and report their results on an annual basis.
- **Washington** requires the manufacturers of children's products to report their use of priority chemicals of concern.



Conclusion

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States are engaging in a broad array of efforts to reduce the threat of toxics in people and the environment. These efforts are increasing in states across the country, as more toxics legislation gets proposed and then enacted. States are contributing to the national conversation on federal TSCA reform, while also formulating policies at the state level that reflect state priorities for national policy. The five state profiles below provide a closer look at the toxics policies currently embraced by these states.

STATE PROFILES

CALIFORNIA

I. Overview of State Chemicals Policy

California is a leader in state innovation in toxic chemicals management, including accelerating the quest for safer alternatives, biomonitoring contaminants, and warning individuals of potential exposures. In 2008, the state authorized a multi-faceted strategy to reducing toxics in the state, known as the Green Chemistry Initiative. In summer 2012, California's Department of Toxic Substances Control (DTSC) proposed the new Safer Consumer Products Regulation, which addresses a broad range of products and requires manufacturers to replace harmful chemicals with safer alternatives. The enabling statutes, Assembly Bill (AB) 1879⁶ and Senate Bill (SB) 509⁷, enacted in 2008, granted DTSC the authority to regulate toxic chemicals that are used in consumer products. The law is designed to stimulate innovation in the private sector, and provides potential responses to further reduce exposure and hazards.

California has also adopted legislation to implement the nation's most ambitious state-level program to monitor toxics levels in the human population over time. The California Environmental Contaminant Biomonitoring Program (CECBP) aims to establish trends in contaminant levels and assess the effectiveness of the state's regulatory programs in reducing toxic exposures.

The state's highly visible labeling law, the Safe Drinking Water and Toxic Enforcement Act (commonly known as Proposition 65), requires warnings to be prominently displayed on products that contain any of a list of more than 700 chemicals known to cause cancer or reproductive toxicity.

Together, California's toxics laws comprise a diverse approach to managing and reducing the levels of harmful chemicals that impact human health and the environment in the state. These laws and other programs are described in more detail below.

⁶ California Health and Safety Code section 25252–25255, and 25257

⁷ California Health and Safety Code section 25251, 25256, and 25257.1

II. Key Dimensions of State Toxics Strategy

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This section describes how the California's Safer Consumer Products regulation and other chemical policies address several common issues associated with understanding and responding to toxics: chemical prioritization, alternatives assessments, data reporting and confidential business information, human health and environmental data, and pollution prevention.

PRIORITIZATION

California authorized legislation in 2008 to enable DTSC to establish regulations to identify chemicals of concern and prioritize among them. In response to the authorizing legislation, DTSC proposed the Safer Consumer Products regulation in summer 2012. The regulatory proposal calls for four phases of chemical regulation:

- *Chemicals Prioritization.* DTSC identifies and prioritizes chemicals of concern, and establishes a process by which to identify additional chemicals of concern in the future.
- *Products Prioritization.* DTSC evaluates and prioritizes product/chemical combinations to develop a list of "Priority Products" for which alternative analyses must be conducted.
- *Alternatives Assessment.* Product manufacturers notify DTSC when their product is listed as a Priority Product, and conduct research into safer alternatives for chemicals of concern that exist in their products to limit exposures.
- *Regulatory Response.* DTSC imposes various regulatory actions in order to address concerns raised by the alternatives assessment, and to move manufacturers to design safer products.

Identification and prioritization is based on several considerations: the volume of the chemical in commerce in the state, the potential for exposure to the chemical in a product, and potential effects on sensitive subpopulations. The authorizing law⁸ establishes that DTSC should, to the maximum extent feasible, reference available information from other agencies that have undertaken similar chemical prioritization processes.

ALTERNATIVES ASSESSMENT

The proposed Safe Consumer Products regulation authorizes the DTSC to identify and prioritize chemicals and to establish procedures for analyzing alternatives to chemicals of concern. Under the proposed regulation, product manufacturers are responsible for completing an alternatives analysis for Priority Products within 12 months of the product's listing on the Priority Products list. This regulation addresses chemicals of concern in *all* consumer products, not just children's products, making it one of the most far-reaching chemical regulation laws in the United States. The alternatives analysis must include a description of the alternatives chosen, an evaluation and comparison of the Priority Product and its alternatives, identification of comparison factors, identification and description of the alternative selected to replace or modify the Priority

⁸ California Health and Safety Code, section 25252(b)(2)

Product (or a decision to retain the Priority Product), and an implementation plan for the selected alternative.

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CONFIDENTIAL BUSINESS INFORMATION/DATA REPORTING/RIGHT-TO-KNOW

California became a pioneer in establishing the public's right-to-know regarding toxic chemicals in products when it passed Proposition 65. That law aimed to protect public health and state drinking water from chemicals known to cause cancer, birth defects, or other reproductive harm, and to inform citizens about potential exposure threats. Under Proposition 65, the California Environmental Protection Agency (CalEPA) publishes a list of chemicals of concern annually; this list contains over 700 chemicals. That list is one of 24 sources that will be used to compile the new list of chemicals of concern under the Safer Consumer Products regulation. Proposition 65 requires product manufacturers to label products that contain one or more listed chemicals over the level designated by regulation.

California's legislature requires DTSC to compile and make available the information gathered on chemical hazard traits to the public in an online Toxics Information Clearinghouse,⁹ in order to provide access to information on the toxicity of chemicals.

While AB 1879 clarified procedures for handling confidential business information (CBI) for any information submitted under this law, the law made clear that confidential business information exemptions did not apply to hazardous trait submissions for chemicals.¹⁰

BIOMONITORING/HUMAN HEALTH AND ENVIRONMENTAL DATA

The California Environmental Contaminant Biomonitoring Program, established in 2006, was the first state-level Biomonitoring program in the nation. The biomonitoring program, administered by the Department of Health Services (DHS) in collaboration with CalEPA, is designed to track the presence and concentration of designated chemicals in the body tissues of California's human residents.

The program monitors metals and organic pollutants by systematically collecting and analyzing human biological specimens, including blood, urine, and tissue, from a representative sample of California residents. This data is collected over time in order to establish a baseline level and trends over time for toxic chemicals and environmental contaminants. The law also establishes a Scientific Guidance Panel to provide public access to gathered data. The program is required to share summarized results with the public every two years; the first of these data summaries was posted in 2012.¹¹

⁹ California Health and Safety Code, section 25256

¹⁰ California Health and Safety Code, section 25257(f)

¹¹ Biomonitoring data is available from the California Office of Environmental Health Hazard Assessment: <http://oehha.ca.gov/multimedia/biomon/index.html>

POLLUTION PREVENTION

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In 1989, California enacted legislation that required hazardous waste generators to consider source reduction as the preferred method of managing hazardous waste. Hazardous waste generators in the state that produce more than 12,000 kilograms of hazardous waste, or more than 12 kilograms of extremely hazardous waste, must prepare a source reduction evaluation review and plan, a hazardous waste management performance report, and a summary progress report for DTSC. The pollution prevention plans must be reviewed by a third party auditor for completeness.

III. Toxics Reduction Program Components

California's approach to reducing toxic chemicals has, like many states, evolved from chemical- and product-specific restrictions to a more comprehensive set of policies. As mentioned above, DTSC has the authority to impose restrictions on chemicals that are identified as high concern. The DTSC has several options for regulatory response to these chemicals, including requiring that manufacturers make information available to consumers, requirements for end-of-life product stewardship, use restrictions on amount or concentration of chemicals in a product, restrictions on who may purchase or use a product, and sales prohibitions.¹²

Safer Consumer Products Regulation. The Safer Consumer Products regulation, proposed in summer 2012, establish a series of regulatory responses for manufacturers of products containing chemicals of concern. Procedures include product information that must be provided to consumers if the selected alternative product contains a chemical of concern above the accepted threshold, an end-of-life product management program in which the selected alternative product or Priority Product is required to be managed as hazardous waste at end-of-life, potential restrictions on the use of chemicals of concern in a product, product sales prohibitions, requirements that control access to or limit exposures to chemicals through engineering or administrative controls, requirements for manufacturers to research and develop green chemistry procedures toward finding a safer alternative, and other regulatory responses.

Green Chemistry. California's Green Chemistry Initiative explores policy options for green chemistry in the state, working toward the development of consistent means by which to evaluate risk, reduce exposure, encourage less-toxic industrial processes, and identify safer alternatives. The Initiative works to ensure that coordination occurs across state agencies in order to reduce the presence of toxics at the end of a product's life cycle. Recommendations are made utilizing stakeholder involvement through workshops, meetings, and web communications, and solicited input from several state agencies. The passage of AB 1879 and SB 509 was inspired in part by the work and recommendations of the Green Chemistry Initiative. A report that the Initiative produced contained six recommendations to improve state green chemistry policy:

¹² California Health and Safety Code, section 25253(b)

- Expand pollution prevention.
- Develop green chemistry workforce education and training, research and development, and technology transfer.
- Create an online product ingredient network.
- Create an online toxics clearinghouse.
- Accelerate the quest for safer products.
- Move toward a cradle-to-cradle economy.

Chemical-Specific Legislation: California has passed several laws that limit the manufacture, sale, distribution in commerce, and/or disposal of specific toxic chemicals and chemicals in particular products. These laws include restrictions on the following:

- BPA in children’s products
- Toxics in children’s toys
- Toxics in packaging
- Formaldehyde in composite wood
- Lead and cadmium in jewelry
- Phthalates in children’s products
- Lead in water pipes
- Hazardous materials in electronics
- Toxic chemicals in lighting
- Mercury in products
- PBDEs in products

Product Stewardship and Recycling. California has several laws to encourage reuse, recycling, or proper disposal of products containing toxic chemicals. These laws address electronic wastes, cell phones, rechargeable batteries, and other products. The California Integrated Waste Management Board also has a core value that producers assume the responsibility for the safe stewardship of their materials to promote sustainability. By Strategic Directive, the Board is required to foster “cradle-to-cradle” producer responsibility.

Environmentally Preferable Purchasing. California enacted a law in 2002 requiring the state Department of General Services to provide state agencies with information and assistance regarding environmentally-preferable purchasing. State agencies are provided with particular guidance regarding environmentally-preferable purchasing criteria for certain electronic equipment.

Oversight and Scientific Guidance. California’s 2008 chemical laws established a **Green Ribbon Science Panel** of experts provides advice to DTSC on scientific research, chemicals policy, and implementation.

IV. For More Information

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CALIFORNIA CONTACT INDIVIDUALS

- Karl Palmer, California DTSC, Pollution Prevention Branch, Karl.Palmer@dtsc.ca.gov

KEY WEBSITES

- California Department of Toxic Substances Control: <http://www.dtsc.ca.gov/>
- California Green Chemistry Initiative:
http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistryInitiative/upload/GREEN_Chem.pdf
- Green Chemistry and Safer Consumer Products Regulation in California:
<http://www.dtsc.ca.gov/pollutionprevention/greenchemistryinitiative/index.cfm>
- California Biomonitoring Program: <http://www.cdph.ca.gov/programs/Biomonitoring>
- Safe Drinking Water And Toxic Enforcement Act of 1986 (Proposition 65):
<http://www.oehha.org/prop65.html>
- Safer Consumer Product Regulation: <http://www.dtsc.ca.gov/SCPRegulations.cfm>

MAINE

I. Overview of State Toxic Chemicals Policy

Maine developed a comprehensive approach to regulating toxic chemicals in its **2008 Toxic Chemicals in Children's Products law**. This law introduced a tiered system of chemical prioritization to the state, and requires manufacturers or distributors of certain consumer products to provide notification to the Department of Environmental Protection (DEP) if their merchandise contains priority chemicals. The state has also enacted regulations that restrict the use of specific chemicals, as well as policies to promote product stewardship, pollution prevention, and environmentally-preferable purchasing.

II. Key Dimensions of State Toxics Strategy

This section describes how the State of Maine addresses several common issues associated with understanding and responding to toxics: pollution prevention, prioritization, alternatives assessments, and information.

POLLUTION PREVENTION

The Maine Legislature adopted changes, effective July of 2012, to the previous Toxics Use Reduction program. These changes to Maine law direct DEP's program to focus on chemicals with the highest toxicity and their use within the State of Maine. The resulting regulation named five priority toxic chemicals (cadmium, formaldehyde, hexavalent chromium, perchloroethylene, and trichloroethylene) in Department Rule Chapter 81,¹³ which requires commercial and industrial facilities within the State of Maine that use more than 1,000 pounds of any of these five chemicals during any calendar year to annually file a report to the Department beginning in February 2014. The revised program now focuses on the use of these identified chemicals by facilities, rather than the chemical's release, storage, or transport. Additionally, facilities will be required to develop pollution prevention plans similar to past regulation and to actively search for ways to reduce their priority chemical use, as well as to investigate and report on the availability of safer alternatives.¹⁴

¹³ Department Rule Chapter 81 is available at: <http://www.maine.gov/sos/cec/rules/06/096/096c081.doc>

¹⁴ Information on priority toxic chemical reporting and pollution prevention planning is available at: <http://www.maine.gov/sos/cec/rules/06/096/096c082.doc>

PRIORITIZATION

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A central feature of Maine's 2008 Toxic Chemicals in Children's Products law is the state government's authority to designate a list of chemicals of high concern (CHC). A substance may be identified as a CHC if strong, credible scientific evidence has identified the chemical as being a reproductive or developmental toxicant, an endocrine disruptor, or a human carcinogen, and the chemical meets one or more of the following criteria:

- The chemical has been found through biomonitoring studies to be present in human blood, human breast milk, human urine or other bodily tissues or fluids.
- The chemical has been found through sampling and analysis to be present in household dust, indoor air, drinking water or elsewhere in the home environment.
- The chemical has been added to or is present in a consumer product used or present in the home.

A CHC may also be designated as a *Priority Chemical* if both the DEP and the Maine Center for Disease Control, Department of Health and Human Services, have determined such a designation is necessary in order to collect additional information about the use of a chemical in children's products so that the Department may better understand the need for risk management. Maine has listed 49 chemicals as CHCs.

ALTERNATIVES ASSESSMENT

The Toxic Chemicals in Children's Products law authorizes the Board of Environmental Protection (an appointed review board) to adopt rules that restrict the sale of children's products containing a Priority Chemical if there is exposure to the chemical and safer alternatives are available at a comparable cost. The law authorizes the DEP to create rules that require alternatives assessments. For example, DEP has required manufacturers of infant formula and baby food sold in packaging that contains intentionally-added BPA to conduct an alternatives assessment, which must include specific criteria set forth in rule.

DATA REPORTING/RIGHT-TO-KNOW

Under the Toxic Chemicals In Children's Products law, a manufacturer or distributor of children's products for sale in Maine that contain a Priority Chemical must notify the DEP of the identity of the product, the number of units sold or distributed for sale in Maine or nationally, the amount of each Priority Chemical contained in the product, and the intended purpose of the chemical reported in the product. The DEP is may also request additional information from the manufacturer, including the likelihood that the Priority Chemical will be released from the product, information on the extent to which the Priority Chemical is present in the environment or human body, and an assessment of the feasibility and cost of alternatives to the Priority Chemical, as well as, reasons why the Priority Chemical has been chosen for use over available alternatives.

Maine also requires the submission of information about products that contain mercury. Upon request manufacturers of mercury-containing products must provide a certificate of analysis documenting the product's mercury content, and requires mercury-added products to be labeled as such.

CONFIDENTIAL BUSINESS INFORMATION

Information regarding the use of Priority Chemicals in consumer products reported to the DEP in accordance with the applicable priority chemical rule is presumptively public record. Any records submitted to the Department that the submitting party believes are not subject to disclosure under Maine's Freedom of Access Act must be clearly marked as "claimed confidential." Any request to the Department seeking records submitted in accordance with the applicable priority chemical regulation and marked as "claimed confidential" will be processed in accordance with Maine law, specifically 38 MRSA¹⁵ § 1310-B, subsection 2.

III. Toxics Reduction Program Components

Maine's approach to toxic substances includes the authority for the state to take action to reduce chemicals that have been identified as Priority Chemicals, and to reduce the presence of specific chemicals used during the manufacturing process if it occurs within Maine.

Maine's Toxic Chemicals in Children's Products policy authorizes the DEP to take the following actions to reduce the presence of toxics in the state:

- Require manufacturers to report the presence of intentionally-added priority chemicals above *de minimis* in select consumer products.
- Require manufacturers of certain product categories to conduct alternatives analyses.
- Require that safer alternatives be used when they are available at comparable costs.

Chemical-Specific Legislation. Maine has specific policies restricting the use of following substances:

- Bisphenol-A
- Cadmium
- Formaldehyde
- Hexavalent Chromium
- Lead
- Mercury
- Nonylphenol and nonylphenol ethoxylates
- Perchloroethylene

¹⁵ Maine Revised Statutes Annotated (MRSA).

- Polybrominated Diphenyl Ethers (PBDEs), specifically decabrominated diphenyl ether (decaBDE)
- Trichloroethylene

Product Stewardship and Recycling. The DEP reports to the Maine legislature on products that may be appropriately managed under a product stewardship program, and has the authority to identify products as candidates for a product stewardship program. Maine has adopted several laws requiring responsible stewardship of products containing toxic substances. These policies address:

- Mercury auto switches
- Electronic wastes, including computers, monitors and televisions
- Cell phones
- Mercury thermostats
- Mercury-added (fluorescent) lamps, including compact fluorescent lights
- Dry cell mercuric oxide and rechargeable batteries

Environmentally-Preferable Purchasing. Maine's state agencies are required to avoid products and services that contain, use, or release PBTs or carcinogens whenever safer alternatives are available. The Department of Education is required to compile a list of cleaning products that have been third-party certified to be safe and effective, and to develop recommendations for cleaning procedures to reduce the use of toxic chemicals. The Department of Administrative and Financial Services is required to give preference to lamps with the lowest possible mercury content when making purchasing decisions.

IV. For More Information

CONTACT INDIVIDUALS

- Kerri Malinowski , Maine DEP, Safer Chemicals Program, Kerri.Malinowski@maine.gov
- Carole Cifrino, Maine DEP, Product Stewardship Program, Carole.A.Cifrino@maine.gov

KEY WEBSITES

- Maine Safer Chemicals in Children's Products: <http://www.maine.gov/dep/safechem/>

MINNESOTA

I. Overview of State Chemicals Policy

Minnesota's approach to toxics reduction developed incrementally through policies aimed at particular chemical substances or products, but has expanded to address chemicals using more holistic approaches. The state passed a Pollution Prevention Act in 1990 that requires facilities that use Toxic Release Inventory chemicals to prepare pollution prevention plans. It also established an associated technical assistance program (the Minnesota Technical Assistance Program or MnTAP).

Beginning in 1992, the state passed several laws restricting the use of mercury, cadmium, lead and hexavalent chromium in products and packaging or in specific product types (such as lead and cadmium in jewelry or mercury-containing products in schools). Other laws passed in Minnesota ban BPA in children's products and penta- and octabromodiphenyl ether (PBDEs) in products. PBDEs and coal tar-sealcoat are banned from state agency purchasing, and additional environmentally-preferable purchasing requirements apply to state government agencies.

The Minnesota Pollution Control Agency (MPCA) assists local governments with green procurement programs. Local governments have enacted bans on sale and/or use of specific products within their jurisdiction, and state contracts and vendors offering environmentally-preferred products and services are available for use by local governments.

In 2009, with enactment of the Toxic Free Kids Act, the Minnesota state government started to develop a more comprehensive approach to address toxic chemical risks. This legislation required the state to begin a program of chemical prioritization and to produce a report examining opportunities for regulating priority chemicals. The MPCA's recommendations under that legislation include incentives for product design that include green chemistry and engineering considerations.

II. Key Dimensions of State Toxics Strategy

This section describes how the State of Minnesota addresses several common issues associated with understanding and responding to toxics: pollution prevention, prioritization, information, alternatives assessment, and biomonitoring.

POLLUTION PREVENTION

Minnesota enacted legislation in 1990 to encourage pollution prevention throughout the state. Facilities that are required to report to TRI as well as large-quantity hazardous waste generators

must create pollution prevention plans and provide annual progress reports. The state also has an executive order that requires state agencies to reduce their generation of solid and hazardous waste and use of toxic chemicals and resources.

PRIORITIZATION

Minnesota created a system of chemical prioritization with the passage of the **Toxic Free Kids Act** in 2009. This prioritization legislation sets the stage for the state to develop broader chemical policy in the future. Key features of Minnesota's process for identifying priority chemicals are as follows:

- Identification of “**chemicals of high concern**” in children's products and a “**list of priority chemicals.**” The list of high-concern chemicals contained 1,756 chemicals, including 443 high-production-volume chemicals. The state also identified nine priority chemicals (cadmium, lead, formaldehyde, BPA, three phthalates, and two flame retardants) in the first round of priority-setting in 2010, and may add to or subtract from that list whenever a new priority chemical is designated according to the criteria in the statute.
- The list of chemicals of high concern was originally developed based on a similar list that Maine developed. Minnesota excluded some chemical categories from the list of chemicals of high concern, including pharmaceuticals.
- The nine priority chemicals are high-production-volume chemicals that were also found to be present in human body tissues or fluids, in the home environment (e.g., dust or drinking water), and/or in biota or the natural environment.

DATA REPORTING/RIGHT-TO-KNOW

Besides TRI reporting and associated state pollution prevention progress reporting, Minnesota requires “product review reporting” as part of application to the MPCA for approval of new inks, dyes, pigments, paints, or fungicides with listed metals content above 100 ppm. Minnesota does not require manufacturers to report any other use of toxic chemicals in products or other articles, although end-of-life collection programs for fluorescent lamps and electronics can require reporting of total article amounts managed. Labeling is required for products containing mercury, including fluorescent lamps, thermostats, thermometers, and electric switches.

The state also has a community right-to-know program it maintains as part of its pollution prevention management system.¹⁶ Online access is available to a searchable database, called “What's In My Neighborhood,” which lists potentially contaminated sites and environmental permits and registrations.

¹⁶ Information on Minnesota's Community Right-to-Know program is available at <http://www.pca.state.mn.us/index.php/topics/preventing-waste-and-pollution/p2-pollution-prevention/reducing-toxicity/chemicals-in-communities.html>

ALTERNATIVES ASSESSMENT

The Toxic Free Kids Act required the MPCA to provide recommendations to the state legislature by December 2010 on moving to safer alternatives.¹⁷ The MPCA recommended that the state should participate in states' initiatives that support reform of TSCA as well as participate in the **Interstate Chemicals Clearinghouse**.

Minnesota also passed a requirement in 2007 that the Commissioner of the MPCA must review the availability of technically feasible safer alternatives to **PBDEs**. That report was completed in January 2008 and is available online.¹⁸

BIOMONITORING/HUMAN HEALTH AND ENVIRONMENTAL DATA

In 2007, the Minnesota legislature established a pilot environmental health tracking and biomonitoring program. The Commissioner of Health guides the program, which conducts biomonitoring of communities, pregnant women, and minors on a voluntary basis.¹⁹ Since the program's inception, four biomonitoring projects have been completed, and the state is developing a biomonitoring strategic plan.

The Minnesota Department of Health (DOH) has a **Contaminants of Emerging Concern Program** that studies substances that have been released to, found in, or have the potential to enter Minnesota waters (groundwater or surface water) and for which there is no Minnesota human health-based guidance (e.g., drinking water guidance). Examples of substances studied by the program include pharmaceuticals, pesticides, industrial effluents, and personal care products.

III. Toxics Reduction Program Components

Minnesota's tools to reduce toxics in products include product stewardship, environmentally preferable purchasing, green chemistry and engineering, and restrictions on the use of specific chemicals.

Product Stewardship and Recycling. Minnesota law prohibits dumping of **electronic devices** that contain cathode-ray tubes into mixed municipal solid waste. The state also requires manufacturers of video-display devices to annually register and pay a fee to the state, collect and recycle electronic devices, and file a report detailing the results of their collections under the program each year.²⁰ Products that contain **mercury** must be collected and recycled.

¹⁷ The report to the legislature, with recommendations, is available at <http://www.pca.state.mn.us/index.php/view-document.html?gid=15319>.

¹⁸ The report to the legislature on PBDEs, with information on safer alternatives, is available at <http://archive.leg.state.mn.us/docs/2008/mandated/080111.pdf>

¹⁹ Information about Minnesota's Biomonitoring pilot program is available at <http://www.health.state.mn.us/divs/hpcd/tracking/biomonitoring/program.html>

²⁰ Information about Minnesota's Electronics Recycling Act is available at <http://www.pca.state.mn.us/index.php/topics/preventing-waste-and-pollution/product-stewardship/initiatives-in-minnesota/electronics/minnesota-electronics-recycling-act/index.html>

Chemical-Specific Legislation. Minnesota has passed laws restricting the use of the following chemical substances in products sold in the state:

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- Bisphenol-A
- Cadmium
- Hexavalent chromium
- Lead
- Mercury
- PBDEs (penta- and octa)

Environmentally Preferable Purchasing. The recommendations that MPCA provided to the legislature under the Toxic Free Kids Act included a proposal that the state should evaluate the efficacy of adapting existing preferential purchasing initiatives to give preference to products without priority chemicals. The state also requires that equipment, supplies, and other products that do not contain PBDEs be made available to all state agencies, and state agencies must follow purchasing policies that encourage reduction of toxic chemicals.

Green Chemistry and Design. As mentioned above, the Toxic Free Kids Act required MPCA to provide recommendations to the state legislature; those recommendations included providing **incentives** for product design that uses green chemistry.²¹ The recommendations also included the following:

- Establish formal green chemistry policies to help direct the efforts of state agencies, technical assistance programs, and businesses.
- Promote green chemistry and product design through pollution prevention programs, and report on these biennially.
- Allocate at least one FTE of existing staff resources towards green chemistry and design.

In mid-2009, MPCA embarked on a **Green Chemistry and Design (Engineering)** effort. Four focus groups have met to discuss the launch of the initiative, consisting of small and large manufacturers and retailers. The effort has also involved academic interviews, stakeholder meetings, and surveys of retailers and manufacturers. Currently, Green Chemistry and Design Demonstration Projects are underway to explore whether modest grant funding to businesses can successfully assist them in developing green chemistry and design changes to their products.²²

²¹ The report to the legislature, with recommendations, is available at <http://www.pca.state.mn.us/index.php/view-document.html?gid=15319>.

²² Information about Minnesota's Green Chemistry and Design Program is available at <http://www.pca.state.mn.us/index.php/topics/preventing-waste-and-pollution/p2-pollution-prevention/reducing-toxicity/green-chemistry-and-design/index.html>

Grants have been successful in supporting businesses in product changes of their own choosing, and are now underway or in development to test whether grants and outreach can encourage businesses to make changes targeting state priority chemicals (BPA in thermal papers, formaldehyde in building products, nonylphenol ethoxylates in industrial and institutional detergents, coal tar pitch and PAHs in pavement sealcoats). MPCA has offered two rounds of grants to educators to support their development of green chemistry and engineering classroom and lab material to incorporate into chemistry and engineering courses. Areas of research for the Green Chemistry and Design Program have also included:

- Green chemistry activity in other states and jurisdictions.
- Businesses with interest or opportunity in green chemistry.
- Non-governmental organization interest in transforming product chemistries.
- Chemicals information that is already in place or that will be necessary in the future.
- Areas in Minnesota's economy where Priority or High Concern chemicals are in use.

IV. For More Information

CONTACT INDIVIDUALS

- Al Innes, Minnesota Pollution Control Agency, Green Chemistry, alister.innes@state.mn.us
- Cathy O'Dell, Minnesota Pollution Control Agency, Chemicals Policy, catherine.odell@state.mn.us
- Nancy Rice, Minnesota Department of Health, Chemical Prioritization and Contaminants of Emerging Concern, nancy.rice@state.mn.us

KEY WEBSITES

- Minnesota Biomonitoring Program:
<http://www.health.state.mn.us/divs/hpcd/tracking/biomonitoring/program.html>
- Minnesota Toxic Free Kids Act report with recommendations:
<http://www.pca.state.mn.us/index.php/view-document.html?gid=15319>
- Minnesota's Chemicals of High Concern list:
<http://www.health.state.mn.us/divs/eh/hazardous/topics/toxfreekids/highconcern.html>
- Minnesota Green Chemistry and Design:
<http://www.pca.state.mn.us/index.php/topics/preventing-waste-and-pollution/p2-pollution-prevention/reducing-toxicity/green-chemistry-and-design/index.html>

OREGON

I. Overview of State Chemicals Policy

Oregon's approach to managing toxic substances has evolved from a series of legislatively-mandated restrictions on specific substances and chemical uses toward an integrated toxics reduction strategy. The Oregon Department of Environmental Quality (ODEQ) involved the public in developing a strategic approach to reducing toxic chemicals in the environment, drafted in 2011, which is centered on a list of priority chemicals and a set of actions to reduce their presence in the environment and humans. The strategy and short-term implementation plans were finalized in November 2012. ODEQ also maintains a list of priority toxic chemicals that are either persistent or bioaccumulative, and has used that list to prioritize measures to reduce those pollutants in Oregon waters.

The Oregon Health Authority (OHA) is similarly working toward a more systematic approach to protecting the public's health from exposures to toxics. After unsuccessful attempts to pass agency-sponsored legislation to restrict or label products containing substances that pose "a risk to public health and safety as a result of irreversible harm or chronic adverse health effects," OHA is responding to legislative requests and developing a 1–3 year "tactical plan." The plan is designed to maximize progress on the issue and ensure public policies address both acute and chronic human exposures to toxics.

II. Key Dimensions of State Toxics Strategy

This section describes how the State of Oregon addresses several common issues associated with understanding and responding to toxics: pollution prevention, prioritization, information, and alternatives assessment.

POLLUTION PREVENTION

Oregon enacted a law in 1989 that requires TRI-reporting facilities, large-quantity hazardous waste generating facilities, and small-quantity hazardous waste generators to create pollution prevention plans and to submit annual progress reports. ODEQ also has education and technical assistance programs that promote pollution prevention and waste minimization at facilities in Oregon.

PRIORITIZATION

ODEQ underwent a comprehensive effort to construct a **toxics reduction strategy**; the final version of the strategy was completed in November 2012. The strategy focuses on designating and addressing highest-priority toxic chemicals, taking action to reduce toxics at their source, partnering with other agencies and organizations, and measuring the effectiveness of strategy implementation. The focus list of priority chemicals identifies 51 chemicals and chemical classes of concern, and details 25 actions to assess and reduce toxics in the state. The list was not developed from scratch, but began with chemicals already identified as toxic by environmental agencies in other states. It is designed to evolve over time.

In addition, in 2007 the Oregon Legislature directed ODEQ to develop a list of persistent priority pollutants for water quality. This list contains 113 chemicals that are toxic and persistent or bioaccumulative. Oregon's 52 largest municipalities were required to monitor for these chemicals in their wastewater effluent, and develop pollution prevention plans for chemicals detected at concentrations above "initiation levels" established by ODEQ.

DATA REPORTING/RIGHT-TO-KNOW

Oregon has several statutes that require labeling of products that contain hazardous substances, including the following:

- **Hazardous Substances.** Oregon's 1971 Hazardous Substances law requires that substances OHA has declared hazardous must be labeled, or else removed from commerce. Amendments to this statute in 2005 and 2009 banned penta-, octa- and deca-brominated diphenyl ethers in any product above a *de minimis* level.
- **Art and Craft Materials.** Oregon requires that art and craft materials sold in the state that contain toxic substances must be labeled accordingly. The law also prohibits public schools from purchasing art or craft materials containing toxic substances.
- **Mercury in Thermostats and Light Switches.** Thermostats and light switches that contain mercury must be labeled, and must be disposed of uniformly, and information must be publicly available on replacing and recycling motor vehicle mercury-containing light switches.

Community Right-to-Know. In 1985, the Oregon Legislature passed the Oregon Community Right to Know and Protection Act. The purpose of this law is to provide first responders and the public with information about hazardous substances in their response areas and neighborhoods. The law directs the Office of State Fire Marshal to survey business and government facilities for information about the presence of hazardous substances and to collect information about incidents involving hazardous substances.

The new strategy for addressing toxic chemicals recommends that Oregon assess opportunities to increase **information disclosure** for products with focus list constituents, in order to allow for improved assessment and pollution prevention actions. The strategy includes several options for

the state, in coordination with key stakeholders, to consider when evaluating information disclosure needs, including:

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- Sharing priority information needs with EPA independently or in conjunction with other states with similar priorities.
- Collaboratively engaging with manufacturers on information disclosure priorities.
- Mandating disclosure of chemical ingredients for specific priority products.

In addition, OHA's Environmental Public Health Tracking plays an important supporting role in improving the public's information by bringing together data about environmental hazards, human exposures and potentially related health outcomes in Oregon. This effort is part of a national network funded by the federal CDC that now includes 23 states and one large city.

ALTERNATIVES ASSESSMENT

Oregon's new toxics strategy emphasizes the importance of exploring safer alternative to toxic substances. The strategy includes a priority for state agencies to collaborate with other states and EPA through the Interstate Chemicals Clearinghouse (IC2) and other regional efforts to access comprehensive chemical data and resources (including the Green Screen for Safer chemicals and EPA's Design for Environment Program) and develop guidance for conducting alternatives assessments that can be shared with Oregon businesses and public agencies.

III. Toxics Reduction Policy and Program Components

The Oregon Legislature has adopted several restrictions on specific chemical substances and uses. In addition, the state has established policies mandating pollution prevention, and exploring green chemistry recommendations, product stewardship requirements, and environmentally-preferable purchasing programs; most recently, it has drafted a toxics reduction strategy to pursue collaborative efforts to reduce priority toxics. More information about these toxic reduction efforts is below.

Toxics Use and Hazardous Waste Reduction Planning. Oregon's Toxics Use Reduction and Hazardous Waste Reduction Act of 1989 was one of the first laws in the nation to mandate pollution prevention planning. The Act outlines a comprehensive approach to reduce or eliminate toxic chemical use and hazardous waste generation in Oregon businesses and institutional facilities.²³

Advancing Green Chemistry. Oregon's Governor signed an executive order in 2012 that is designed to promote and facilitate investments in green chemistry. In addition to mandating that the state adopt low toxicity product purchasing guidelines and develop an inter-agency toxics reduction strategy, the order also includes the following elements:

²³Information about Oregon's Toxics Use Reduction and Hazardous Waste Reduction Act is available at: <http://www.deq.state.or.us/lq/hw/tuhwr.htm>

- Directs state agencies to work together in selecting two industry sectors to collaborate with in identifying existing green chemistry solutions and research needs.
- In partnership with industry and academic representatives, identify and develop green chemistry incentives and innovation tools.

Product Stewardship and Recycling. Oregon has established several policies requiring responsible stewardship of products that contain toxic substances. These laws include:

- A pilot program for environmentally-sound collection and disposal of paint by manufacturers.
- An Oregon “E-Cycles” Program adopted by the state legislature, mandating the collection and recycling of computers, monitors, and televisions by manufacturers (or supported by manufacturers).²⁴
- A policy managing the disposal of mercury-containing light switches and thermostats.
- Requirements that dentists dispose of materials containing amalgam or mercury in a responsible manner.

Environmentally Preferable Purchasing. Oregon’s environmentally-preferable purchasing policies include:

- A 2012 Governor’s Executive Order that mandates that low toxicity product purchasing guidelines be developed and implemented by state agencies.
- A sustainability leadership team that creates guidance to state agencies to guide purchasing decisions toward sustainable objectives.
- Requirements for state agencies to adopt sustainable facility standard and guidelines.
- Requirements that public schools purchase art and craft materials that do not contain toxic substances (also mentioned above).

Strategy for Toxics Reduction. The new strategy that Oregon developed to reduce toxic substances encompasses a series of recommended potential toxics reduction actions, which were developed in conjunction with public workshops and stakeholder meetings to generate toxics reduction ideas for potential inclusion in the strategy. ODEQ’s toxics reduction strategy recommendations emphasize partnership and collaboration, and are divided into these four categories:

- Improving integration and prioritization of toxics reduction activities.
- Enhancing effectiveness of existing toxics reduction efforts.
- Addressing identified toxics reduction needs.
- Assessing and characterizing toxics in Oregon.

²⁴ Information about Oregon’s E-Cycles program is available at: <http://www.deq.state.or.us/lq/ecycle/index.htm>

Chemical-Specific Legislation: Oregon has passed policies restricting the following chemical substances:

- Lead
- Mercury
- PBDEs
- PBTs

IV. For More Information

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KEY WEBSITES

- Oregon Priority Persistent Water Pollutants: <http://www.deq.state.or.us/wq/sb737/>
- Oregon DEQ Toxics Reduction Strategy : <http://www.deq.state.or.us/toxics/>
- Oregon Toxics Use and Hazardous Waste Reduction Program: <http://www.deq.state.or.us/lq/hw/tuhwr.htm>
- OHA Toxic Substances in our Environment Webpage: <http://public.health.oregon.gov/healthyenvironments/environmentalexposures/toxicsubstances/pages/index.aspx>
- Oregon Environmental Public Health Tracking: <https://epht.oregon.gov/index.aspx>

WASHINGTON

I. Overview of State Chemicals Policy

Washington's approach to toxic chemicals has grown from efforts to restrict specific chemicals in products into a multifaceted strategy, and is continuing to evolve. The Washington State Department of Ecology (Ecology) works to reduce toxic threats by restricting the use of toxic chemicals, working with businesses to reduce toxic releases to the environment, and cleaning up existing toxic pollution. Ecology's Reducing Toxic Threats initiative is a strategy focused on prevention as the smartest, most cost effective, and healthiest way to protect people and the environment. Tools that the state uses to implement those strategies include adopting chemical bans, encouraging safer alternatives, promoting green chemistry, and offering technical assistance to businesses for pollution prevention. Washington State has had a long-term commitment to state chemicals policy through its implementation of the nation's first PBT action plan and rulemaking, passage of the 2003 Mercury Education and Reduction Act, and landmark electronics product stewardship legislation. In 2012, the legislature passed the Better Brakes legislation that has led to a new global standard for the reduction of asbestos, copper, and other metals in brake pads.

After the enactment of the 2008 **Children's Safe Products Act (CSPA)**, Washington created a list of priority chemicals of concern and has begun collecting information from manufacturers in order to gain a better understanding of the presence of those chemicals in children's products. The data gathered on chemical use under the CSPA could serve as a basis for future policies to reduce toxic substances in the state. Washington is also one of only a few states that have received federal funding to build capacity to monitor the presence of toxics in human tissues.

II. Key Dimensions of State Toxics Strategy

This section describes how the State of Washington addresses several common issues associated with understanding and responding to toxics: pollution prevention, prioritization, information, alternatives assessment, and biomonitoring.

POLLUTION PREVENTION

Washington's waste reduction law, enacted in 1988, requires TRI-reporting facilities and large-quantity hazardous waste generating facilities to prepare a plan to voluntarily reduce their use of hazardous substances and their generation of hazardous wastes. These facilities must submit annual progress reports on their performance against these plans. Washington also has

educational and technical assistance programs that promote pollution prevention and waste minimization at facilities in the state.

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PRIORITIZATION

Under CSPA, Ecology and the Washington State Department of Health (DOH) are responsible for **identifying high priority chemicals** that are of high concern for children. The Reporting List of Chemicals of High Concern to Children lists 66 chemicals and is available online.²⁵ Chemicals on the list are toxic to humans, and are either found in children's products or documented to be present in human tissue (e.g., blood, breast milk, etc.).

Based on the state's PBT rule, Washington also developed a priority list of chemicals that are **persistent, bioaccumulative, and toxic**. Ecology establishes criteria for selecting PBTs for chemical action plans to reduce exposures to those contaminants.

DATA REPORTING/RIGHT-TO-KNOW

CSPA requires manufacturers of children's products (including cups, baby products, toys, clothes, shampoos, and other personal care products) to **report the presence of chemicals of high concern for children** that are in their products, with reporting beginning in 2012. The data that manufacturers report on those chemicals are available online. The data reported under the CSPA will be used by policymakers to determine what, if any, actions are needed to reduce toxic chemicals to protect consumers.

Washington also has laws that require labeling of products that contain mercury.²⁶

ALTERNATIVES ASSESSMENT

The **Toxic Metals Prevention Project** is a joint effort between the Ecology and Washington's businesses that participate in pollution prevention planning. The project's goal is to identify safer alternatives to toxic metals. As the project progresses, businesses will be able to seek technical assistance through this program. This effort has initially focused on identifying safer alternatives to mercury, lead, and cadmium.²⁷

Under a 2007 law, Ecology and DOH conducted an alternatives assessment to identify safer alternatives before laws restricting the use of certain **flame retardants** took effect. After that research revealed that safer alternatives are available, the law restricted the sale of televisions, computers, and residential upholstered furniture containing deca-PBDE.²⁸

²⁵ The Reporting List of Chemicals of High Concern to Children is available at <http://www.ecy.wa.gov/programs/swfa/cspa/chcc.html>

²⁶ Information about Washington's Mercury Law is available at http://www.ecy.wa.gov/mercury/mercury_laws_mera.html

²⁷ Information about Washington's Toxic Metals Prevention Project is available at http://www.ecy.wa.gov/programs/hwtr/p2/metals_project.html

²⁸ The Ecology and DOH report on safer alternatives to PBDEs is available at <https://fortress.wa.gov/ecy/publications/publications/0907041.pdf>

Ecology, in partnership with the Interstate Chemicals Clearinghouse, initiated a multi-state effort to develop guidance for chemical alternatives assessment.²⁹ The guidance is structured using a modular approach. It consists of 10 modules that assess a number of topics including hazard, exposure, cost and availability, performance, life-cycle concerns, etc. The intent behind the guidance is to be flexible enough to meet a wide range of needs by organizations that have very different resources and expertise. It is also intended to be flexible enough to meet a wide range of evaluation needs, as no one method will work in every situation.

The guidance document also includes a Decision Module that pulls together all of the individual modules and provides a range of recommended approaches designed to address a variety of needs, from a minimum approach to a preferred assessment with greater requirements.

BIOMONITORING/HUMAN HEALTH AND ENVIRONMENTAL DATA

Biomonitoring. Washington is one of three states (along with California and New York) that received a federal grant from CDC in 2009 to conduct a laboratory biomonitoring program. Washington DOH is measuring chemicals in the blood, urine, and other tissues of Washington residents, for both average risk and high-risk populations, through the **Washington Environmental Biomonitoring Survey (WEBS) project**.³⁰ The goals of the project include comparing the Washington biomonitoring data to national exposure levels, and using the information to reduce exposures. In the first two years, the Department tested urine samples and drinking water for the following substances:

- Arsenic (including testing in areas with high naturally occurring arsenic in drinking water)
- Pyrethroid and organophosphate pesticide metabolites
- Other metals

In years three through five of the grant (September 2011–August 2014), DOH plans to survey other environmental chemicals and collect other types of samples (e.g., blood and hair). An Advisory Committee provides guidance on the project.

Environmental data. The quantity, sources, and pathways of toxic chemicals in Puget Sound have been studied since 2006, through a collaborative effort between Ecology, the Puget Sound Partnership, and other state and federal agencies.³¹ The Puget Sound toxic loading study provides a picture of the toxics entering the environment through multiple pathways—both from point sources such as industrial facilities and wastewater treatment plants and from non-point sources including vehicles, developed areas, and agricultural areas. The loading study focused on 17 toxic chemicals, including metals, pesticides, PBTs, and others; it did not include

²⁹ Information on Alternatives Assessment Guidance is available at <http://www.ecy.wa.gov/programs/hwtr/ChemAlternatives/altAssessment.html>

³⁰ For more information about the WEBS project, see <http://www.doh.wa.gov/DataandStatisticalReports/EnvironmentalHealth/Biomonitoring.aspx>.

³¹ For more information about the Puget Sound toxic loading study, see <http://www.ecy.wa.gov/programs/wq/pstoxics>.

pharmaceuticals.³² Ecology also conducts ongoing monitoring of toxics in waters across the state, and is developing a toxics reduction strategy for the Columbia River.

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III. Toxics Reduction Program Components

Washington's approach to reducing the presence of toxic chemicals in the environment and human bodies is rooted in identifying chemicals of concern, banning specific chemicals of concern when safer alternatives are available, and promoting green chemistry. The Children's Safe Products Act is primarily focused on information gathering as an approach to making products safer. This law does not contain measures to prohibit manufacturers from selling products that contain priority chemicals. However, the data gathered as a result of that legislation sets a path that could enable future policies to reduce toxics in the state.

Engaging stakeholders is critically important in the development of comprehensive chemicals policies. For example, several of the recent bills passed in Washington State involved global companies as well as regional stakeholders. It is interesting to note that state legislation can have national or global impacts on the market. For example, CSPA served as a model for national legislation under the Consumer Product Safety Improvement Act of 2008 related to children's toys. CSPA's collaborative rulemaking process also resulted in the creation of a new international testing standard for children's products. The Better Brakes legislation resulted in a new global environmental standard for brake material.

Product Stewardship and Recycling. Washington has enacted the following policies to require product stewardship:

- Producers of lights that contain mercury and are sold for residential use must fully finance and participate in a product stewardship program for that product. Producers, wholesalers, and retailers are prevented from selling mercury-containing products unless they are participating in a product stewardship program approved by Ecology.
- All government, commercial, industrial, and retail facilities and office buildings must recycle their mercury-containing lights at the end of their life.
- Mercury-containing lights, lead wheel weights, and fluorescent lamps must be recycled.
- Manufacturers of electronic products must participate in a plan to implement and finance the collection, transportation, and recycling of those products. Manufacturers must pay Ecology a fee to cover the costs of administering this recycling program.
- The state has an education program that distributes public information about properly disposing of mercury-containing products.

³² The list of chemicals studied included: arsenic, cadmium, copper, lead, mercury, and zinc; polycyclic aromatic hydrocarbons (PAHs); flame retardants such as PBDEs; phthalates; petroleum-based contaminants; PCBs and DDT; triclopyr, a pesticide commonly used in urban areas; and nonylphenol, a compound often found when commercial detergents breakdown.

Environmentally-Preferable Purchasing. Under the state's persistent toxic chemicals program, the Washington Department of General Administration's Office of State Procurement makes available for purchase and use by state agencies equipment and supplies that do not contain persistent, toxic chemicals unless there is no feasible alternative.

- All state agencies are required to establish sustainability objectives and prepare a biennial Sustainability Plan, including purchasing of environmentally preferable products.
- The purchase of bulk elemental mercury or chemical mercury compounds for use in a primary or secondary classroom is prohibited.

Green Chemistry. The Washington State Green Chemistry Roundtable is a partnership of Washington State University, Ecology, the State Department of Commerce, Boeing, the Northwest Pollution Prevention Resource Center, and the Bullitt Foundation. The Roundtable works to advance efforts in green chemistry understanding and emerging technologies in the state. In fall 2012, the group produced a *Roadmap for Establishing a Green Chemistry Program in Washington State*, which details a plan to create awareness and capacity, build a green chemistry program, and sustain the program over a five-year period from inception.³³

Chemical-Specific Legislation. Washington has passed laws restricting the following chemical substances:

- Mercury in thermometers, manometers, thermostats, and automotive switches
- PBDE flame retardants
- Lead wheel weights
- Coal tar sealants
- BPA in baby bottles and cups
- Copper in brake pads and boat paint

The state also has a program to reduce PBTs through the use of chemical action plans (CAPs), which are comprehensive plans that identify, characterize, and evaluate all uses and releases of a specific PBT, and identify a set of recommendations to reduce or phase out the use of these chemicals. Ecology has completed CAPs for mercury, PBDEs, polycyclic aromatic hydrocarbons (PAHs), and lead.

³³ The Roadmap for Establishing a Green Chemistry Program in Washington State is available at: <https://fortress.wa.gov/ecy/publications/publications/1204009.pdf>

IV. For More Information

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- Blaine Rhodes, DOH, Biomonitoring Principal Investigator, blaine.rhodes@doh.wa.gov
- Alex Stone, Ecology, Alternatives Assessment Guidance, alex.stone@ecy.wa.gov
- Ken Zarker, Ecology, Green Chemistry, ken.zarker@ecy.wa.gov

KEY WEBSITES

- Washington Department of Ecology's Reducing Toxic Threats webpage:
<http://www.ecy.wa.gov/toxics/index.htm>
- Washington Department of Health's Contaminants webpage:
<http://www.doh.wa.gov/CommunityandEnvironment/Contaminants.aspx>
- Washington Department of Health's Protect Kids from Toxic Chemicals webpage:
<http://www.doh.wa.gov/YouandYourFamily/InfantsChildrenandTeens/ProtectKidsfromToxicChemicals.aspx>
- Washington Environmental Biomonitoring Survey webpage:
<http://www.doh.wa.gov/DataandStatisticalReports/EnvironmentalHealth/Biomonitoring.aspx>

WISCONSIN

I. Overview of State Toxic Chemicals Policy

Wisconsin's Department of Health Services (DHS) and Department of Natural Resources (DNR) administer the State's policies on toxic chemicals. The State's approach includes labeling laws and public education about toxic chemicals, product stewardship requirements for electronic devices, green purchasing requirements for State agencies, and laws that restrict the use of specific chemicals.

II. Key Dimensions of State Toxics Strategy

This section describes how the State of Wisconsin responds to toxics through labeling, right-to-know laws, and biomonitoring.

DATA REPORTING/RIGHT-TO-KNOW

Aside from these labeling and notification requirements for selected bisphenol-A (BPA) and mercury-containing products, Wisconsin does not have policies requiring manufactures to report data about chemicals produced or used in products.

Wisconsin's **labeling** laws include a requirement that baby bottles and children's drink containers be conspicuously labeled as not containing BPA, and that products containing hazardous substances be labeled clearly.

In 2012, the State passed legislation requiring a publicly-available list of batteries that have been certified as containing low levels of mercury.

The State works to educate the public about toxic chemicals through fact sheets available online and other means. These fact sheets provide basic information about each chemical's health effects, exposure pathways, and any regulatory standards. ***The Departments of Health Services (DHS), Natural Resources (DNR), and Agriculture, Trade, and Consumer Protection (DATCP) all have fact sheets that*** are available online.³⁴ The Landscape Pesticide Advance Notification Registry allows residents to be notified before pesticides are applied on properties near their homes.³⁵ Wisconsin also has a Clean Sweep program that provides financial assistance to localities for collecting hazardous chemicals such as pesticides, mercury, lead paint, and

³⁴ For example, Wisconsin Department of Health Services' toxic chemical fact sheets and related information are available at: <http://www.dhs.wisconsin.gov/eh/>

³⁵ Information about the Landscape Pesticide Advance Notification Registry is available at: <http://datcpservices.wisconsin.gov/landreg/index.jsp>

prescription drugs, which originate from residences, businesses that generate small amounts of hazardous wastes and farms.³⁶

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BIOMONITORING

For Wisconsin wastewater permit compliance, biomonitoring (whole effluent toxicity tests) of effluent and receiving waters are required. Whole effluent toxicity (WET) tests are used, in addition to chemical-specific testing, to measure, predict, and control the discharge of materials that may be harmful to aquatic life.

The Wildlife Contaminants Program with the WDNRs Bureau of Wildlife Management does not follow a specific protocol in terms of wildlife contaminant monitoring. However, the program does routinely monitor contaminants in various wildlife species depending on contaminant of interest, species of interest, or availability of funding. Compounds that are routinely (but not exclusively) analyzed in any given receptor or species include mercury, lead, other metals, organochlorines, brominated compounds, and fluorinated compounds. Examples of species sampled by the program include river otter, bald eagles, common loons, cormorants, small mammals, song birds, and waterfowl among others.

Wisconsin's fish consumption advisory program is a joint initiative between the Departments of Health Services and Natural Resources. Fish tissue samples, from Wisconsin's inland waters and the Great Lakes are analyzed for contaminants to determine fish consumption advice, as well as being indicators of clean-up efficiency and pollution control efforts. This program began in 1970 with PCB and mercury testing. The program has since expanded to include pesticides, dioxins/furans and emerging chemicals of concern.

III. Toxics Reduction Program Components

Wisconsin's approach to reducing toxic chemicals includes product stewardship and recycling, environmentally preferable purchasing, and policies to restrict the use of specific chemicals.

Product Stewardship and Recycling:

Wisconsin Act 50 requires manufacturers of electronic devices to register with the Department of Natural Resources (DNR) and collect and recycle electronic devices that they sell. Retailers must provide information to purchasers on how electronic devices can be recycled. The disposal of electronic devices in landfills is prohibited. **Environmentally Preferable Purchasing: Executive Order 145 mandates that** State facilities are required to follow sustainable building operation guidelines, which include green cleaning practices, green purchasing, and pollution prevention.

The pollution prevention program in WI began in 1989 (WI statute 299.13) promotes reduction in hazardous material usage and waste generation in manufacturing (intent), and also recommended educational priorities to the University of Wisconsin-Extension for the center,

³⁶ Information about the Clean Sweep program is available at: http://datcp.wi.gov/Environment/Clean_Sweep/index.aspx

considering volume and toxicity of hazardous substances, toxic pollutants and hazardous waste produced, lack of compliance with environmental standards, potential for pollution prevention, and projected shortfalls in hazardous waste treatment or disposal facilities under the capacity assurance plan (this was the genesis of SHWEC, which was created in 1990).

Education to reduce toxics use: The University of Wisconsin has numerous educational programs on reducing or eliminating toxics such as PAHs, pesticides, mercury, etc.

Chemical-Specific Legislation: Wisconsin has passed laws restricting the following chemical substances:

- BPA in baby bottles and cups
- Mercury in thermometers, manometers, certain measuring instruments, and household items
- Lead, mercury or hexavalent chromium in packaging material
- Zinc air button cell batteries

IV. For More Information

CONTACT INDIVIDUALS

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KEY WEBSITES:

- Wisconsin DHS Toxic Chemical Fact Sheets: <http://www.dhs.wisconsin.gov/eh/chemfs/index.htm>
- Wisconsin DNR Air Toxics and Mercury: <http://dnr.wi.gov/topic/airquality/toxics.html>