



Tools and Strategies for Cleaning Safer


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Tools and Strategies for Cleaning Safer: Outline

- Tackling Oregon's SB 737 PPP List (Tier 1) – A Systemic, Supply Chain Challenge:
 - Influencers: Policy and Values
 - Gatekeepers: Procurement/Retailers
 - Chemical Choosers: Product Manufacturers
 - Users: Consumers, Businesses, Institutions
- Examples of Initiatives – Opportunities to Leverage the System
- Who are the Right Partners?




Clean Production Action
www.cleanproduction.org

Designing and delivering strategic solutions for green chemicals, sustainable materials and environmentally preferable products




Embarking on The Path to Greener Chemical Inventories

Aim for the Top
Develop new, greener chemical products and processes; prefer chemical products that are fully assessed and that have life cycle benefits and low hazard

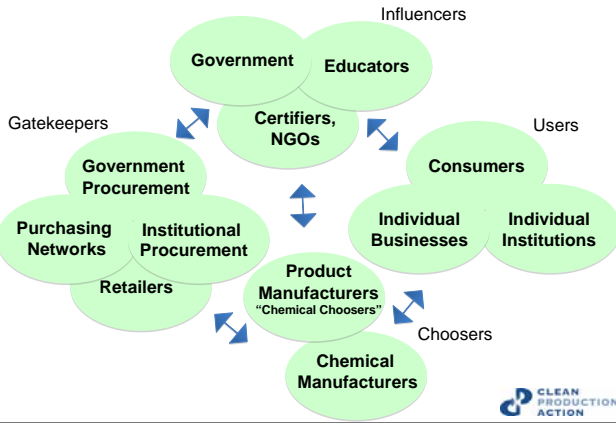
Practice Informed Substitution
Process of continual improvement toward more data and better understanding of what is green and sustainable

Bring up the Bottom
Screen all chemicals against criteria for adverse impacts to human health and the environment to move away from the use of the most hazardous chemicals

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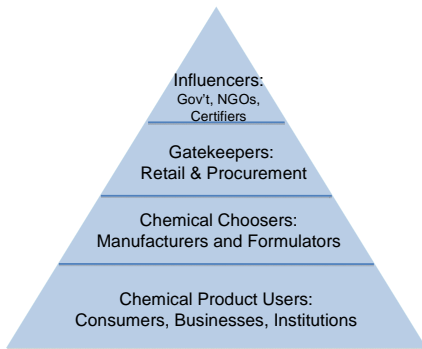


Oregon SB 737 Tier 1 PPPs: A Supply Chain Challenge



Influencers: Values and Policy

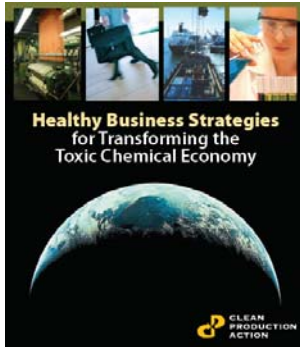
Leveraging Existing Initiatives



Legislation, Regulations and Executive Orders

- E.g. Executive Order 13101
 - Need clear signals and some traction

NGO Initiatives



How can businesses transition from the toxic to the green chemical economy?



Endorsers – Guiding Principles for Chemical Policy

| Overview | Businesses | Health Care Organizations | To address the concerns of... |
|---|---|---|-------------------------------|
| Guiding Principles for Chemical Policy | Construction Specialties, Inc. Corporate Express a Staples Company | Catholic Healthcare West Corixa, Inc. | |
| Endorsement List | Earthbound Farm Green Harvest Technologies Hempix, Inc. JSP | Health Care Without Harm Kaiser Permanente Practice Greenhealth Premier, Inc. | |
| Endorsement Forum | | | |
| Sustainable Materials | JDS Method Pure Strategies Q Connection Seventh Generation Sustainable Research Group True Textiles, Inc. Whole Foods | NCDs Breast Cancer Fund Center for Environmental Health Center for Health Environment and Justice ChemSec Clean New York Clean Production Action Clean Water Action Commonweal Ecology Center Electronic Take Back Coalition Environmental Health Fund Environmental Health Strategy Center Healthy Building Network Institute for Agriculture and Trade Policy Natural Resources Defense Council Washington Toxics Coalition Women's Voices for the Earth | |
| Participants | | | |
| Resource | | | |
| Resources | | | |
| | Investors All You Sow Boston Common Asset Management, LLC Dominican Sisters of Hope General Council, Adrian Dominican Sisters Safina Investment Management Inc. Henry Investment Program Northwest Coalition for Responsible Investment Rose Foundation for Communities and the Environment Sisters of Mercy, Regional Community of St. Elizabeth's, St. Louis | | |



Guiding Principles for Chemicals Policy



1. Know and disclose product chemistry
2. Assess and avoid hazards
3. Commit to continuous improvement
4. Support public policies and industry standards

Endorsed by over ~50 leading businesses, health care organizations, investors and NGOs... and growing

www.busngoworkgroup.org



Green Screen for Safer Chemicals

http://www.cleanproduction.org/library/cpa-fact%20grscreen_Jan09_final.pdf

- Defines path to greener, safer chemicals
- 4 Benchmarks from “red” to “green”
- Hazard-based assessment of chemicals
- Users -- states and businesses to id safer alternatives to toxic chemicals



Product Certifiers: Sources of Environmentally Preferable Chemical Products

- Government
 - USEPA DfE Partnership
 - <http://www.epa.gov/dfe/pubs/projects/formulat/index.htm>
- Private Certifications
 - MBDC Cradle-to-Cradle Certification
 - <http://www.c2ccertified.com/>
- Ecolabels
 - **Ecologo (TerraChoice)**, based in Canada
 - <http://www.ecologo.org/> (for more information on products and standards)
 - **Green Seal**, based in US
 - <http://www.greenseal.org/> (for more information on products and standards)









DfE Formulator Program*

*Identifies Safer Products
Based on Hazard Criteria
Applies Informed Substitution*


- Cleaning products
 - Household
 - Industrial and Institutional
 - Direct release, car-wash, boat wash, graffiti removers, etc...
- Biological-based Products
 - Holding tank treatments
 - Bioremediation products
- Deicers
- Aircraft conversion coatings
- Industrial Coatings
- Inks
- Odor Removal
- Field Paint
- Tire balancing liquid

*http://www.epa.gov/dfe/pubs/projects/formulat/dfe_criteria_for_cleaning_products6-7-09.pdf




Some SB 737 Priority Pollutant Chemicals in Household Products (Focus on Cleaning)

| | |
|--|--|
| Detergent metabolites (3) <ul style="list-style-type: none"> • NP • 4-NP • 4-t- octylphenol | Preservatives (5) <ul style="list-style-type: none"> • Heptachloronaphthalene • Hexachloronaphthalene • Trichloronaphthalene • Tetrachloronaphthalene • Pentachloronaphthalene |
| Fragrances (8) <ul style="list-style-type: none"> • Tonalide • Musk tetralin • Musk ketone • Musk indane • Musk tibetene • Musk xylene • Galaxolide • Musk ambrette | Anti-stain coatings (4) <ul style="list-style-type: none"> • Perfluorodecanoic acid • Perfluoroundecanoic acid • Perfluorododecanoic acid • Perfluorooctane sulfonamide |
| Disinfectant (3) <ul style="list-style-type: none"> • Heptachlor • Triclosan • 2,5-dichlorophenol | Phthalates (7) <ul style="list-style-type: none"> • Di-n-octyl phthalate • Di-iso-nonyl phthalate • Bis-2-ethyl hexyl phthalate • Di-2-ethyl-hexyl phthalate • Di-cyclohexyl • Di n-hexyl phthalate • Di-iso decyl phthalate |

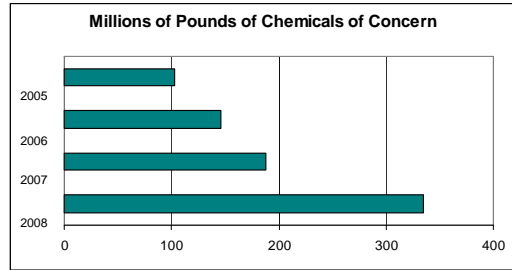


DfE Review

- 1) Review every ingredient by functional use class
 - To promote green chemistry
 - To understand toxicity
 - Literature
 - Analogous chemicals – SAR
- 2) Review formulation as a whole
 - Synergistic effects
 - pH
 - Performance testing
- 3) Informed Substitution as needed
- 4) Partnership Agreement to use DfE logo

DfE Safer Product Labeling Program



DfE is on track to reduce the use of more than 560 million pounds of chemicals of concern in 2009



Retailer Initiatives: Wal-Mart's Publicly Stated Sustainability Goals

- **Zero Waste**
 - **100% Renewable Energy**
 - **Safe and Sustainable Products**
- Wal-Mart has developed a broad sustainability index
 - There are 13 networks developing sustainability initiatives including:
 - Greenhouse gas
 - Packaging
 - Alternative fuels
 - Wood & paper
 - China
 - Agriculture and seafood
 - Sustainable buildings
 - Textiles
 - Alternative fuels
 - Jewelry
 - Logistics
 - Electronics
 - Waste
 - **Chemical intensive products**



Gatekeepers: Procurement and Retailers



Wal-Mart's Principles for Preferred Chemical Intensive Products

Safe Products for Mother, Child, and the Environment

➢ *When we suspect that an ingredient in a product or the product itself is capable of causing harm to human health and the environment, we will act to find better alternatives.*

➢ *A screening tool has been developed via a multi-stakeholder working group to identify and score products containing the following:*

- CMRs
- Endocrine disruptors
- PBTs
- vPvBs
- Chemicals identified on Wal-Mart's "grey list"
- And a "watch list" for use to flag potential emerging concerns

➢ *Full ingredient disclosure and scoring through a 3rd party (The WERCs) to protect confidential formulation info; Buyers see results.*

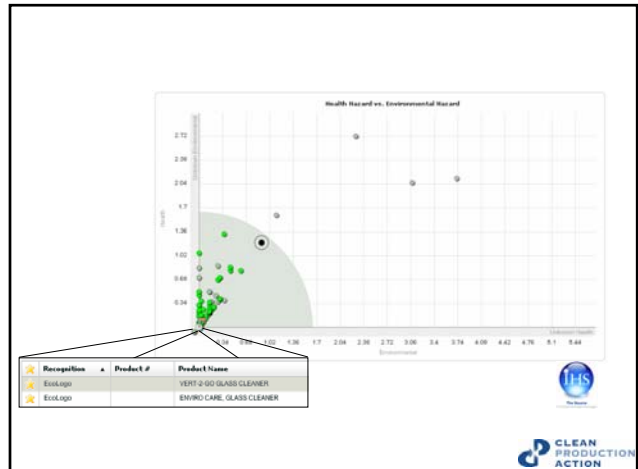
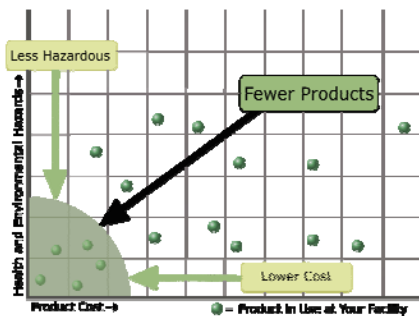


Wal-Mart's Buyers Screening Tool

- In line with Wal-Mart's sustainability initiatives, the screening tool will assist the buyers with a easy to use yet powerful tool that will allow buyers to make more informed decisions in selecting products
 - Reduce inherent hazard of products sold
 - Reduce hazardous waste
- The screening tool (pilot) screens chemical constituents in similar products against known hazards
- Products are scored based on hazard weightings and concentration in the product. Current point system:
 - CMRs (10 for known and probable; 5 for suspected)
 - Endocrine disruptors (1)
 - PBTs (10)
 - vPvBs (10)
 - Chemicals identified on Wal-Mart's "grey list" (10)
- Scoring is used to trigger a request for more information or to prefer a lower hazard alternative



Example Screening Tools: IHS Dolphin ECO Tool Accelerating Environmentally Preferable Purchasing




Product Manufacturers



Design for the Environment (DfE)

You are here: [Home](#) > [U.S. EPA](#) > [The News](#) > [Clean](#) > [Solutions, Projects & Tools](#) > [DfE](#) > [Partnerships for a Greener Future](#) > Safer Detergents Stewardship Initiative

Safer Detergents Stewardship Initiative (SDSI)



SDSI Recognition Ceremony Photo
The SDSI Recognition Ceremony was held on November 19, 2008 in the Ronald Reagan Building and International Trade Center in Washington, DC. [Click here to view photos.](#)

Safer Detergents Stewardship Initiative

What is the Safer Detergents Stewardship Initiative?

Through the Safer Detergents Stewardship Initiative (SDSI), EPA's Design for the Environment (DfE) Program recognizes environmental leaders who voluntarily commit to the use of safer surfactants. Safer surfactants are surfactants that break down quickly to non-polluting compounds and help protect aquatic life in both fresh and salt water. Nonylphenol ethoxylates, commonly referred to as NPEs, are an example of a surfactant class that does not meet the definition of a safer surfactant.

The Design for the Environment Program has identified safer alternative surfactants through partnerships with industry and environmental advocates. These safer alternatives are comparable in cost and are readily available. ClearGredients™ is a source of safer surfactants and can be found at www.ClearGredients.com. [SDSI Brochure](#)

One-page [fact sheet on SDSI \(PDF\)](#) | [FAQ](#) | [About SDSI](#)

What is the Recognition?

Champion is the highest level of recognition offered under SDSI. At this level, the participant is invited to an awards ceremony, is listed on the EPA SDSI Web site as a Champion, and may use a special logo in their literature to help explain their participation in the program. The Partner category provides recognition of significant accomplishment towards the use of safer surfactants. Partners will be listed on the EPA SDSI Web site and may be granted recognition as Champions in the future.

Who is Eligible for Recognition?

EPA's DfE Program recognizes businesses engaged in the production or use of surfactants, as well as those involved in the purchase or distribution of products containing surfactants. Others, including not-for-profit organizations, may qualify through actively encouraging the use of safer surfactants.

How do I Apply for Recognition?

An [application for recognition \(PDF\)](#) | [FAQ](#) | [About SDSI](#) is available for download. Be sure you have version 7 or 8 of Adobe Reader to fill out and save a copy of the form. The application includes the criteria for Champion and Partner status.

The review process is closed at this time. If you wish to submit an application, DfE will keep it on file and contact you if the recognition process opens in the future.

1/9

US EPA DfE Safer Detergent Stewardship Initiative (SDSI) Program



www.epa.gov/dfe/pubs/projects/formulat/sdsi.htm



US EPA Safer Pesticides Pilot

- PPDC Work Group on Comparative Safety Statements or Logos for Pesticide Product Labeling
- OPP and OPPTS DfE agreed to work together to determine the feasibility of allowing products that have passed the DfE review to submit a label amendment to OPP in order to place the DfE logo on pesticide products.



Tools and Strategies



Identifying Safer Ingredients for Use in Cleaning Products (www.cleangredients.org)

CleanGredients is an online resource of information on cleaning product ingredients and their characteristics* to:

- help **formulators** identify ingredients that may be useful for green product formulation
- provide opportunity for **raw material suppliers** to showcase their ingredients with especially positive environmental and/or human health and safety attributes

* By *characteristics* we mean functional properties such as critical micelle concentration, physical properties such as biodegradability, and associated human and environmental health toxicological information.



 **cleangredients**TM
the online resource for green formulation

a project of 

sponsored by      

Users-
Individual Consumers, Businesses and
Institutions





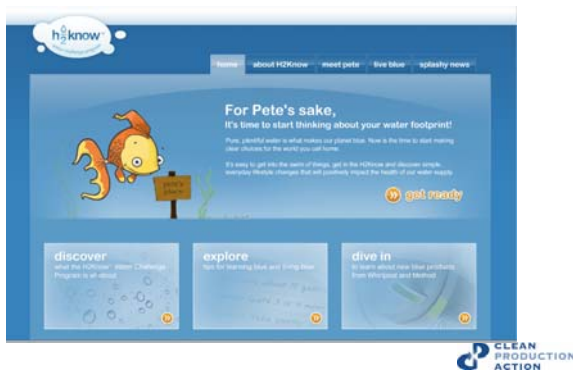
Who are the Right Partners?

- Identifying environmentally preferable products
- Influencing product design
- Influencing consumer choice and consumer behavior



H2Know to Measure Your Water Footprint: Quantity and Quality

(sponsored by Method Home and Whirlpool www.h2know.org)



Who are the Right Partners? Influencers

- Work with DfE, ecolabels and other appropriate certifiers to allow manufacturers to certify that products contain no SB 737 Priority Pollutants for products sold in OR
 - Confirm that already covered by existing criteria, OR
 - Supplement existing criteria with additional certification option
- Engage with EPA DfE on pilot for safer pesticides program
- Engage with EPA DfE on other products of interest to POTWs (e.g. wipes)
- Engage local NGOs to help get out the word and create partnerships with businesses
 - Oregon Environmental Council
 - Zero Waste Alliance; Green Gain Program
- Consider recommending legislation to strengthen procurement initiatives and perhaps restrictions on government use of PPPs
- Engage with OR universities to provide tools for green chemistry and cradle-to-cradle design



Who are the Right Partners? Gatekeepers: Procurement and Retailers

- Notify the Wal-Mart CIP Network about the the Priority Pollutant list
 - Can it be integrated into the Wal-Mart screening and scoring tool?
- Ask the same of other large OR retailers (Target, Sears, Home Depot, etc.) who are embarking on a similar path
- Work with IHS Dolphin and The WERCs to integrate the Priority Pollutant list into their screening tools.
 - The OR SB 737 PPP List is already being integrated by IHS Dolphin
- Build screening criteria into government procurement
- Build screening criteria into institutional procurement (schools and hospitals)



Who are the Right Partners? Users -- Individual Consumers, Businesses and Institutions

- Educate with simple messages
 - **Know what is in the products you are buying!**
 - Avoid unnecessary antimicrobials
 - Avoid fragrances or buy DfE recognized products
 - Avoid lead wheel weights
 - Buy DfE and ecolabeled products
- Engage marketing experts
 - Partner with Dara O'Rourke of Good Guide to ensure that products containing OR Priority Pollutants receive a negative score
 - Partner with Adam Lowry of Method to align H2Know with SB 737 objectives
- Engage in a State-wide SDSI Challenge to address APEs/NPEs or a broader SDSI-like challenge that addresses all SB 737 PPPs

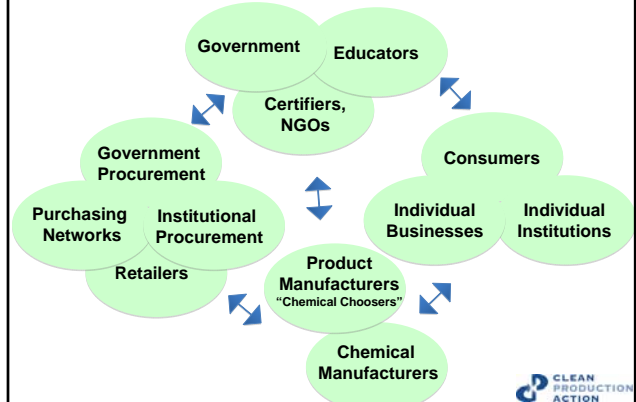


Who are the Right Partners? Choosers: Product Manufacturers

- Contact Zero Waste Alliance to see how the Green Gain Program might be applied to help companies screen their inventories for SB 737 Priority Pollutants
- Create a voluntary statewide partnership or awards program to recognize companies that eliminate the use and generation of APEs (SDSI) or better yet, SB 737 PPPs
- Review fragrance chemicals against the IFRA standard (self regulation) to see which of the PPPs are permitted, restricted and/or banned; talk with RIFM re Tier 2 chemicals (e.g. musk tibetene); Prohibited chemicals should not be found. See IFRA standard at: (<http://www.ifraorg.org/>)



Oregon SB 737: Leveraging Change through Multi-Partnerships



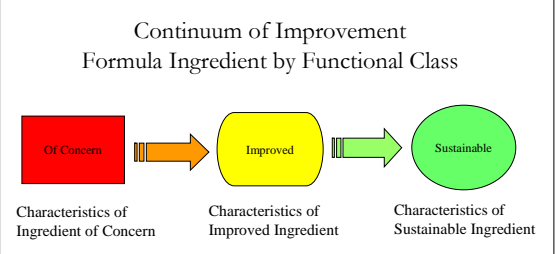



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Continuous Improvement: As innovation occurs, continuum may shift

Continuum of Improvement
Formula Ingredient by Functional Class


END



Green Chemistry – Reducing Risk by Reducing Hazard

Command & Control

- Warning labels
 - How to use it
 - How not to use it
- Regulations
- Chemical bans



OR

Benign by Design

- Green Chemistry
- Continual improvement

