

DEQ Integrated Toxics Reduction Strategy

Toxic Chemicals Focus List Webinar

July 28, 2020

Toxics Reduction Strategy Background

- Creates a framework to organize Department of Environmental Quality work across all media.
- Complements and supports ongoing toxics work in air, land and water programs.
- Describes actions DEQ and partners will take to reduce toxics in Oregon's environment.
- Provides a vision for addressing toxics at all stages of the life cycle.

Strategy Guiding Principles

- Building on success
 - Effective communication
- Environmental justice
 - Engaging communities
- Integrated approach
 - Implementation partnerships

Toxics Reduction Strategy Actions

**Complement
Core Work**

**Integrated
Strategic
Approach**

Partnerships

**Source
Reduction**

Strategy Actions

Toxics Focus List Update

- What is this list and how is it used?
 - Originally developed for the 2012 Strategy
 - Helps direct Strategy actions
 - Identifies Agency-wide toxics reduction priorities
- Considerations in updating the Focus List
 - More emphasis on public health
 - Removed irrelevant or duplicative lists

Toxics Focus List Criteria



- Three or more (of ten) program priority lists
- Across two or more environmental media
- Media types include:
 - Air, Land, Water
 - Consumer and Commercial Products (CCP)

Lists Used to Inform Toxics Focus List

Water Quality

DEQ Lists

- Priority Persistent Pollutants (SB 737)
- Water Quality Standards - Impairments
- Surface Water Toxics Monitoring
- Drinking Water Program

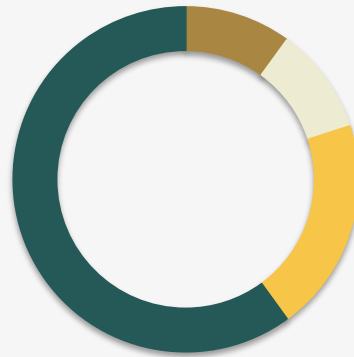
Columbia River Toxics
Reduction
Partnership

Oregon Inter-agency Pesticide
Management Team

Pesticides of High and Moderate
Concern for Water

Air Quality

DEQ non-point, mobile pollutants and
CAO program pollutants (prelim. priorities)



Consumer Care Products

Toxics-Free Kids Act's
High Priority Chemicals of
Concern For Children's Health

Land Quality

DEQ Environmental Cleanup Program
DEQ Hazardous Waste Program



Changes to Chemicals on the Focus List

- 14 chemicals added to the Focus List
 - Per- and Polyfluoroalkyl substances, or PFAS, and 4 other chemicals used to make common products
 - 4 additional metals
 - 3 additional volatile organic compounds, or VOCs
 - 2 flame retardants
- 5 chemicals removed from the Focus List
 - 2 current use pesticides, detected infrequently in water
 - 2 legacy pesticides
 - 1 VOC

Chemical Category	Updated DEQ Toxics Focus List Chemicals (2019)				
Combustion and Petroleum By-Products	Polycyclic Aromatic Hydrocarbons (PAHs)	Dioxins and Furans	Naphthalenes		
Consumer Product Constituents	Phthalates	Triclosan	4-Nonyphenol (and Nonyphenol Ethoxylates)	Bisphenol A	DEET
	Per- and Polyfluoroalkyl Substances (PFAS)	Phenol	Octylphenol, 4-tert-	Ethinylestradiol, 17a-	Vinyl Chloride
Current-Use Pesticides	Diazinon	Chlorpyrifos	Atrazine	Trifluralin	Chlorothalonil
	Malathion	Permethrin	Carbaryl	Pentachlorophenol	Diuron
	Glyphosate	2,4-D	Propoxur (Baygon)	Pendamethalin	
Flame Retardants and Industrial Intermediates	Polybrominated Diphenyl Ethers (PBDEs)	Polychlorinated Biphenyls (PCBs)	Tris (2-chloroethyl) Phosphate (TCEP)	Tris (dichloroisopropyl) phosphate (TDCP)	Ammonia
Legacy Pesticides	Dieldrin	DDT (and metabolites)	Chlordane (and metabolites)	Aldrin	Methoxychlor
	Heptachlor (and Heptachlor epoxide)	Hexachlorocyclohexane, alpha- (alpha-BHC), beta- (beta-BHC), gamma- (Lindane)	Hexachlorobenzene		
Metals	Mercury (and methylmercury)	Copper	Cadmium	Chromium	Arsenic
	Lead	Nickel	Manganese	Silver	Beryllium
	Cobalt	Bis (tributyltin) Oxide	Zinc		
Volatile Organic Compounds (VOCs)	Tetrachloroethylene (Perc)	Benzene	Ethylbenzene	Trichloroethylene	Dichlorobenzene, 1,4- (Dichlorobenzene-p)
	Toluene	Formaldehyde	Acetaldehyde	Styrene	Xylenes

New Focus List Chemical Highlight

Chemical

Per- and Polyfluoroalkyl substances (PFAS)

Uses

Cookware; food packaging; stain repellents for rugs and cloth-covered furniture; firefighting foam

Sources of exposure

- Airports and military installations (fire foam)
- Manufacturing and processing plants
 - Fume suppressants for chrome plating
 - Paper coating
- Consumer waste disposal

Pathways to environment

- Groundwater leaching
- Surface water runoff
- Landfills (groundwater and surface water discharges)
- Wastewater treatment plants (surface water discharges)
- Air deposition



New Focus List Chemical Highlight

Chemical

Tris (2-chloroethyl)
Phosphate (TCEP)

Uses

Flame-retardant;
plasticizer in PVC;
polyurethane;
polyesters

Sources of exposure

- Abrasion of treated materials such as carpets, rubber, foam, etc.

Tris
(dichloroisopropyl)
Phosphate (TDCP)

Flame-retardant;
pesticides; nerve
gases; plasticizer;
building materials

- Ambient air
- Drinking water
- Dermal contact

New Focus List Chemical Highlight

Chemical

Acetaldehyde

Uses

Building materials; laminate, linoleum; wood varnished materials; particle board; chipboard furniture

Sources of exposure

- Workplaces and other indoor building spaces
- Ambient air
- Drinking water

Styrene

Insulation; plastic pipes; fiberglass; automobile parts; food containers

- Indoor building spaces
- Automobile exhaust
- Ambient air



Ongoing Efforts

- Reducing toxics in state and local government purchasing
 - Maintenance, repair and operations contract (2018)
 - Office furniture – DAS and Oregon Corrections Enterprises (on-going)
 - New opportunities: carpet, apparel

Focus List Chemicals:

Flame retardants,
PFAS, Triclosan,
VOCs, Vinyl
chloride

Ongoing Efforts

- Advancing transition to safer chemicals and products
 - Interstate collaboration on assessing alternatives to PFAS in food packaging
 - Identifying air toxics pollution prevention opportunities
 - Transitioning to fluorine-free firefighting foams

**Focus List
Chemicals:**
PFAS, VOCs,
Metals

New Strategy Actions

- **Assessing diesel particulate matter emissions and impacts.**

- Identifying emissions factors
- Neighborhood monitoring
- Community engagement

**Focus List
Chemicals:**

PAHs, VOCs,
Metals

- **Building demand for clean diesel engines.**

- Coordinating with Portland area local governments on Clean Air Construction collaborative that established construction procurement standard.
- Four phases to project:
 - Standard development for non-road diesel equipment
 - Community feedback, standard refinement and adoption
 - Program design and prep for 2021 phase-in of standard
 - Implementation by 2021



Advancing Long-Term Strategy Goals

- New opportunities to incorporate environmental justice into Oregon Pesticide Stewardship Partnerships program
 - Development of program strategic plan that will include EJ considerations
 - Formation of new stakeholder advisory group with environmental justice interests represented

Focus List Chemicals:

Current use pesticides



Thank You Team Toxics

Team Members

- **Team Lead:** Kevin Masterson
- **Hazardous Waste:** Lisa Cox
- **Laboratory:** Nikki Marz
- **Water Quality:** Paula Calvert and Tim Ruby
- **Materials Management:** Pete Pasterz
- **Air Quality:** Susan MacMillan and Meenakshi Rao
- **Clean Up:** Patricia Atkins
- **Communications:** Jennifer Flynt
- **Eastern Region:** Greg Svelund
- **Project Manager:** Dan Brown

Governance Team

- **Sponsor:** Leah Feldon
- **Air Quality:** Michael Orman
- **Land Quality:** Lydia Emer
- **Water Quality:** Tiffany Yelton-Bram
- **Communications:** Jennifer Flynt
- **Laboratory:** Lori Pillsbury
- **Regional Perspective:** Linda Hayes-Gorman
- **Office of Policy and Analysis:** Abby Boudouris



Questions or Feedback?

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