

## IC2 State Priority Chemicals Resource – Source List Descriptions

### California’s Proposition 65 Program

California’s Proposition 65, also known as the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted as a ballot initiative in November 1986. The Proposition was intended by its authors to protect California citizens and the State’s drinking water sources from chemicals known to cause cancer, birth defects or other reproductive harm, and to inform citizens about exposures to such chemicals. This list, which must be updated at least once a year, has grown to include approximately 800 chemicals since it was first published in 1987.

The list contains a wide range of naturally occurring and synthetic chemicals that are known to cause cancer or birth defects or other reproductive harm. These chemicals include additives or ingredients in pesticides, common household products, food, drugs, dyes, or solvents, as well as chemicals used in manufacturing and construction, or byproducts of chemical processes.

There are four main ways for a chemical to be added to the Proposition 65 list, as noted below:

1. A chemical can be listed if either of two independent committees of scientists and health professionals – the [Carcinogen Identification Committee \(CIC\)](#) and the [Developmental and Reproductive Toxicant \(DART\) Identification Committee](#) – finds that the chemical has been clearly shown to cause cancer or birth defects or other reproductive harm. The committees base their decisions on the most current scientific information available and consider comments from the public before making their decisions.
2. A chemical can be listed if any of the following organizations, designated as an “authoritative body” by the CIC or DART Identification Committee, identify it as causing cancer or birth defects or other reproductive harm: [U.S. Environmental Protection Agency](#), [U.S. Food and Drug Administration \(U.S. FDA\)](#), [National Institute for Occupational Safety and Health](#), [National Toxicology Program](#), and [International Agency for Research on Cancer](#).
3. A chemical can be listed if an agency of the state or federal government, such as the U.S. FDA, requires that it be labeled or identified as causing cancer or birth defects or other reproductive harm.
4. A chemical is required to be listed if it meets certain scientific criteria and is identified in the [California Labor Code](#) as causing cancer or birth defects or other reproductive harm.

The current list of chemicals was published in May 2011 is available at:  
[http://oehha.ca.gov/prop65/prop65\\_list/files/P65single052011.pdf](http://oehha.ca.gov/prop65/prop65_list/files/P65single052011.pdf).

### Canadian Environmental Protection Act Domestic Substances List – Persistent, Bioaccumulative, and Inherently Toxic Chemicals

The Canadian Environmental Protection Act of 1999 requires screening assessments of substances listed on the Domestic Substances List (DSL) to determine whether they are toxic or capable of becoming toxic. Under the Act, a substance is defined as “toxic” if it is entering or may enter the environment in a quantity or concentration or under conditions that;

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- Have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- Constitute or may constitute a danger to the environment on which life depends; or
- Constitute or may constitute a danger in Canada to human life or health.

This determination consists of integrating the assessment of known or potential exposure of a substance with known or potential adverse effects on the environment. The exposure assessment consists of evaluating any known environmental concentrations of a substance, as well as predicting environmental concentrations of a substance from releases resulting from its production, processing, uses and disposal, and its environmental fate evaluated on the basis of intrinsic physical/chemical properties, environmental mobility, and its persistence.

The DSL is aimed at preventing pollution and protecting human health and the environment. It includes substances that were, between January 1, 1984, and December 31, 1986, in Canadian commerce, used for manufacturing purposes, or manufactured in or imported into Canada in a quantity of 100 kg or more in any calendar year. The list has since been amended and currently contains approximately 23,000 substances. Types of substances include: simple organic chemicals, pigments, organo-metallic compounds, surfactants, polymers, metal elements, metal salts and other inorganic substances, products of biotechnology, as well as substances that are of Unknown or Variable Composition, complex reaction products, or Biological materials (UVCB).

Note: only those chemicals identified in this list as Persistent, Bioaccumulative, and Inherently Toxic (P,B,iT) are included in this Database. To request an electronic copy of the *Guidance Manual for the Ecological Categorization of Organic and Inorganic Substances on Canada's Domestic Substances List (DSL)*, which describes the environmental aspects of the categorization and information on what chemicals are included in the P,B.iT list, email: [existing.substances.existantes@ec.gc.ca](mailto:existing.substances.existantes@ec.gc.ca).

Health Canada is responsible for the development of criteria for “inherently Toxic” to humans. For more information on these chemicals, please visit their website at: [www.hc-sc.gc.ca/ewh-semt/contaminants/existsub/index\\_e.html](http://www.hc-sc.gc.ca/ewh-semt/contaminants/existsub/index_e.html).

### EPA Integrated Risk Information System

EPA's Integrated Risk Information System (IRIS) is a human health assessment program that evaluates risk information on effects that may result from exposure to environmental contaminants. The IRIS database contains more than 540 chemical substances with information on human health effects that may result from exposure to these substances in the environment, based on the following categories:

- Non-cancer effects: Oral reference doses (RfDs) and inhalation reference concentrations (RfCs) for effects known or assumed to be produced through a nonlinear mode of action.
- Cancer effects: Descriptors that characterize the weight of evidence for human carcinogenicity, oral slope factors, and oral and inhalation risks for carcinogenic effects.

EPA develops a list of substances for IRIS assessment development on an annual basis. Substances are selected based on one or more of the following factors:

- Potential public health impact;

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- EPA statutory, regulatory, or program-specific implementation needs;
- Availability of new scientific information or methodology that might significantly change the current IRIS information;
- Interest to other governmental agencies or the public; and
- Availability of other scientific assessment documents that could serve as a basis for an IRIS assessment.

IRIS is prepared and maintained by the EPA's National Center for Environmental Assessment (NCEA) within the Office of Research and Development (ORD).

A complete list of IRIS substances is available at:

<http://cfpub.epa.gov/ncea/iris/index.cfm?fuseaction=iris.showSubstanceList>.

### **EPA National Waste Minimization Program - Priority Chemicals**

EPA's National Waste Minimization Program focuses on reducing 31 Priority Chemicals found in our nation's products and wastes by finding ways to eliminate or substantially reduce their use in production. If these chemicals cannot easily be eliminated or reduced at the source, the focus turns to recovering or recycling them. The current list includes 28 organic chemicals and 3 metals and their compounds. This list replaces the list of 53 chemicals EPA identified in its 1998 Federal Register, *Notice of Availability: Draft RCRA Waste Minimization Persistent, Bioaccumulative and Toxic (PBT) Chemical List*.

The 28 organic chemicals included in the list were selected following an Agency-wide expert review of scientific information available on them. EPA experts reviewed scientific information made available to the public in 1998 and scientific information received from responses to the 1998 Notice of Availability. Based on its review, EPA concluded that 27 organic chemicals are persistent, bioaccumulative, and toxic (PBT). They are currently being generated in industrial waste and are found in soil, sediment, ground water, surface water, air, and plant, animal, and human tissue as a result of past and present releases. Even when released in very small amounts, they accumulate and can cause environmental problems. Many of these organics are difficult to clean up once they get into the environment, resulting in costly clean-up efforts. Polychlorinated biphenyls (PCBs) were added in 2004 because of their chemical properties.

The three listed metals, cadmium, lead, and mercury and their compounds are known to occur frequently in regulated industrial wastes and often trigger the Resource Conservation and Recovery Act (RCRA)'s Toxicity Characteristic criteria, and therefore, must be managed under RCRA hazardous waste regulations.

The 31 priority chemicals are included in a table, available at:

[www.epa.gov/osw/hazard/wastemin/priority.htm](http://www.epa.gov/osw/hazard/wastemin/priority.htm).

### **EPA Persistent, Bioaccumulative, and Toxic (PBT) Chemicals Program - Priority PBT Chemicals**

EPA established a Persistent Bioaccumulative and Toxic (PBT) Chemical program to reduce risks to human health and the environment from existing and future exposures to priority PBT chemicals. This program is composed of several technical experts from EPA program offices is

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intended to increase coordination among EPA national and regional programs with the aim of overcoming the remaining challenges in addressing these priority PBT pollutants. As part of this effort, EPA identified 12 high priority PBTs which require immediate action.

PBT pollutants are chemicals that are toxic, persist in the environment and bioaccumulate in food chains and, thus, pose risks to human health and ecosystems. The biggest concerns about PBTs are that they transfer rather easily among air, water, and land, and span boundaries of programs, geography, and generations. This strategy characterizes PBT chemicals as those that partition primarily to water, sediment, or soil, and are not removed at rates adequate to prevent their bioaccumulation in aquatic or terrestrial species.

Although the PBT program is no longer active, EPA has archived this listing of PBT priority chemicals and other relevant information for reference. For a complete list of priority PBT chemicals addressed under the PBT initiative, as well as their chemical profile fact sheets and action plans, visit: [www.epa.gov/pbt/pubs/cheminfo.htm](http://www.epa.gov/pbt/pubs/cheminfo.htm).

### **EPA Toxics Release Inventory Program - Persistent, Bioaccumulative, and Toxic (PBT) Chemicals**

EPA's Toxics Release Inventory (TRI) is a database that contains detailed information on nearly 650 chemicals and chemical categories that over 23,000 industrial and other facilities manage through disposal or other releases, recycling, energy recovery, or treatment. The data are collected from industries including manufacturing, metal and coal mining, electric utilities, commercial hazardous waste treatment, and other industrial sectors.

The goal of the TRI Program is to provide communities with information about toxic chemical releases and waste management activities and to support informed decision making at all levels by industry, government, non-governmental organizations, and the public. Section 313 of the Emergency Planning and Community Right to Know Act (EPCRA) of 1986 was enacted to facilitate emergency planning, to minimize the effects of potential toxic chemical accidents, and to provide the public with information on releases of toxic chemicals in their communities. The Pollution Prevention Act (PPA) of 1990 mandates collection of data on toxic chemicals that are treated, recycled, and combusted for energy recovery. Together, these laws require facilities in certain industries, which manufacture, process, or use toxic chemicals above specified amounts, to report annually on disposal or other releases and other waste management activities related to these chemicals. EPA maintains this information in a national TRI database, available at: [www.epa.gov/tri](http://www.epa.gov/tri).

In October 1999, EPA published two final rules that lowered the TRI reporting thresholds for certain persistent bioaccumulative toxic (PBT) chemicals and added certain other PBT chemicals to the TRI list of toxic chemicals. These PBT chemicals are of particular concern not only because they are toxic but also because they remain in the environment for long periods of time, are not readily destroyed, and build up or accumulate in body tissue.

There are 16 PBT chemicals and 4 PBT chemical compound categories which are subject to reporting under the EPCRA section 313. The following list contains the names, identification

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numbers, and reporting thresholds for each:

[www.epa.gov/tri/trichemicals/pbt%20chemicals/pbt\\_chem\\_list.htm](http://www.epa.gov/tri/trichemicals/pbt%20chemicals/pbt_chem_list.htm).

### **EPA Voluntary Children's Chemical Exposure Program**

EPA established the Voluntary Children's Chemical Exposure Program (VCCEP) in December 2000 to evaluate the potential risks to children from exposure to certain chemicals. The list identifies 23 chemicals that have a serious potential impact on the health of children. The listed chemicals were selected based on data that indicated that exposure to humans had occurred and the chemicals are present in the environment. The monitoring data used to identify chemicals with evidence of human exposure included samples from human blood, breast milk, and exhaled breath. Presence in the environment was established by monitoring data indicating presence in indoor air or presence in drinking water as an unregulated contaminant.

EPA has asked that manufacturers of these chemicals voluntarily provide information on their toxicity impacts to human health and specifically children's health so the risks they pose can be quantified. To date, 35 companies and 10 consortia have volunteered to sponsor 20 out of the 23 listed chemicals. Under this program, EPA collects three tiers of increasingly detailed information about the chemical, as noted below:

- Tier 1 includes data on acute toxicity; repeated dose toxicity with reproductive and developmental toxicity screens; bacterial reverse mutation assay; and *in vitro* or *in vivo* chromosomal aberrations or *in vivo* micronucleus tests.
- Tier 2 includes data on sub-chronic toxicity; prenatal developmental toxicity; reproductive and fertility effects; immunotoxicity; *in vivo* chromosomal aberrations or *in vivo* micronucleus tests; and metabolism and pharmacokinetics.
- Tier 3 includes data on neurotoxicity screening battery; carcinogenicity; and developmental neurotoxicity.

In addition, EPA requests that exposure information be submitted to determine the likely extent of children's exposure to the VCCEP chemicals. Exposure information needed for this evaluation program includes population groups exposed, sources of exposure, as well as frequencies, levels, and routes of exposure.

A listing of VCCEP chemicals, the companies/consortia that have volunteered to sponsor them, and the chemical's status, is available at: [www.epa.gov/opptintr/vccep/pubs/chemmain.html](http://www.epa.gov/opptintr/vccep/pubs/chemmain.html).

### **European Commission - Directive on Dangerous Substances**

The European Union's Directive on Dangerous Substances was first introduced in 1967 to protect public health, in particular the health of workers handling dangerous substances. The law includes provisions on the classification, packaging and labeling of dangerous substances, which are chemicals or substances classified as carcinogenic, mutagenic, or having reproductive toxic effects.

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Since it was adopted in 1967, the Directive has regularly been updated to take into account the latest scientific and technical progress so as to ensure the highest level of protection for individuals and the environment. This also ensures that the internal market functions most efficiently. The amendments to the directive enable newly identified hazardous materials to be added to the list of dangerous substances.

One of the most important amendments to the directive was the 6<sup>th</sup> amendment in 1979, which included measures to protect the environment from the dangerous effects of substances. It also introduced a notification system for new substances using the “European List of Notified Chemical Substances,” (ELINCS), and required existing substances (reported on the market before September 18, 1981) to be published on the “European Inventory of Existing Commercial Chemical Substances” (EINECS) list.

The 7<sup>th</sup> amendment, issued in 1992, introduced risk assessments to be carried out for new substances. It also introduced the concept of “sole representative” in the notification system and added the Safety Data Sheet as a hazard communication facility for the professional user.

The most recent amendments in 2009 – known as the 30<sup>th</sup> and 31<sup>st</sup> Adaptation to Technical Progress (ATP) – introduce or modify the European Union’s harmonized classification and labeling requirements for more than 800 and 600 substances respectively.

In January 2009, the current classification and labeling system began the process of being replaced by a new law known as the “Regulation on the Classification, Labeling, and Packaging of Substances and Mixtures.” This regulation incorporates the classification criteria and labeling rules agreed under the United Nation’s “[Globally Harmonized System of Classification and Labeling of Chemicals](#)” (GHS). It introduces new classification criteria, hazard symbols (e.g., red-framed hazard pictograms), and labeling phrases that include signal words, hazard and precautionary statements. Following this transitional period, the Directive on Dangerous Substances will be formally repealed in June 2015.

### **European Commission - Existing Substances Registration List**

The European Chemicals Agency (ECHA) maintains an online public database with information on chemical substances, in accordance with the [Registration, Evaluation, Authorization, and Restriction of Chemical Substances \(REACH\) Regulation](#), of June 2007. The goal is to improve the protection of human health and the environment through better and earlier identification of the intrinsic properties of chemical substances. Manufacturers and importers are required to gather information on the properties of their chemical substances, which will allow their safe handling, and to register the information in the ECHA database.

As of July 2011, the database contains 4,263 records with a variety of information on the substances which companies manufacture or import, including their hazardous properties, their classification and labeling, and how to use the substances safely.

Users can search the ECHA database for information on registered substances by visiting: <http://apps.echa.europa.eu/registered/registered-sub.aspx>.



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### European Commission Endocrine Disruptors

The European Commission adopted the “Community Strategy for Endocrine Disruptors” in December 1999 to address potential threats from endocrine disruptors to humans and the environment. It defines an endocrine disruptor as “an exogenous substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or (sub)populations.” It includes a range of substances suspected of interfering with the hormone systems of humans and wildlife, and focuses on man-made substances including chemicals and synthetic hormones, which may harm health and cause cancer, behavioral changes, and/or reproductive abnormalities.

The objectives of the strategy are to identify the problem of endocrine disruption, its causes and consequences and to identify appropriate policy action in order to respond quickly and effectively to the problem. It recognizes the need for further research, international cooperation, communication to the public and appropriate policy action and identifies actions in the short- (1-2 years), medium- (2-4 years), and long- (4+ years) term to meet these requirements.

One of the short-term actions was to develop a priority list of suspected endocrine disruptors. The list was developed based on an independent review and consultations with stakeholders and the Commission Scientific Committees. Endocrine disruptors were evaluated based on four major categories, as described below:

- Category 1 - evidence of endocrine disruption activity (194 chemicals);
- Category 2 - some in vitro evidence of biological activity related to endocrine disruption (125 chemicals);
- Category 3A - no data available on wildlife relevant and/or mammal relevant endocrine effects (23 chemicals); and
- Category 3B - some data available but evidence is insufficient for identification (85 chemicals).

The complete list of ED substances and associated documentation is available for download at: [http://ec.europa.eu/environment/endocrine/strategy/substances\\_en.htm#priority\\_list](http://ec.europa.eu/environment/endocrine/strategy/substances_en.htm#priority_list).

### European Union - Persistent, Bioaccumulative and Toxic Chemicals

In June 2001, the European Commission initiated an interim strategy to address persistent, bioaccumulative, and toxic (PBT) chemicals and very persistent and very bioaccumulative (vPvB) chemicals. For these substances a “safe” concentration in the environment cannot be established with sufficient reliability. Key steps of this interim strategy and their current status are noted below:

1. Develop PBT and vPvB criteria and testing strategies;
  - This step was implemented by the revision of the *Technical Guidance Document*, but it was recognized that further development is still needed. Currently, existing substances undergoing risk assessment under the Council Regulation (EEC) 793/93 are subject to the PBT-assessment in the frame of the marine risk assessment.

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2. Identify potential PBT or vPvB substances using screening data and screening estimation techniques (QSARs) for substances for which relevant data is missing;
  - This step was completed by European Chemicals Bureau (ECB) in 2002. The results of the screening are documented in the report, *Identification of potential PBTs or vPvBs among the IUCLID high production volume chemicals*. In total, 93 substances were identified to fulfill the screening criteria and a substance on one of the ESR Priority Lists was added to the list. However, the list was not completed in the first screening and validity of most of the test data used for screening has not been independently evaluated.
3. Verify PBT or vPvB properties by additional testing using the available legislative possibilities under Regulation (EC) 793/93 and Directive 67/548/EEC;
  - To implement this step, a sub-group on identification of PBT and vPvB substances was established under the TC NES with the task to perform a case-by-case evaluation of the identified potential PBTs/vPvBs and to give recommendations on the most appropriate follow-up actions.
4. Evaluate qualitatively, the sources, major emissions and pathways to the environment to establish the most appropriate and effective measures to minimize exposure to man and the environment; and
5. Implement the necessary measures into Community legislation.

The list can be found in the European Chemical Substances Information System (ESIS) database, which identifies 127 “PBT” and “vPvB” chemicals, and is available at:  
<http://esis.jrc.ec.europa.eu/index.php?PGM=pbt>.

### European Union - Substances of Very High Concern

The European Union’s list of substances of very high concern (SVHC) includes chemicals and substances that may have very serious and often irreversible effects on humans and the environment. SVHC include those substances that are:

- Carcinogenic, mutagenic, or toxic to reproduction (CMR) classified in Category 1 or 2 in accordance with the [Classification, Labeling, and Packaging \(CLP\) of chemical substances and mixtures Regulation](#);
- Persistent, Bioaccumulative, and Toxic (PBT) or very Persistent and very Bioaccumulative (vPvB) according to the criteria in Annex XIII of the [Registration, Evaluation, Authorization, and Restriction of Chemical Substances \(REACH\) Regulation](#); and/or
- Identified, on a case-by-case basis, from scientific evidence as causing probable serious effects to humans or the environment of an equivalent level of concern as those above (e.g. endocrine disrupters).



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Member States Competent Authorities or the European Chemicals Agency (ECHA), on a request by the European Commission, may prepare Annex XV dossiers for the identification of substances of very high concern. The outcome of this identification procedure is a list of substances (i.e., Candidate List), which are considered candidates for prioritization and eventual inclusion in Annex XIV of REACH. Annex XIV contains the List of Substances Subject to Authorization (i.e., Authorization List). Once included in that Annex, these substances cannot be placed on the market or used after an effective date, unless the company is granted an authorization. For more information on how chemicals are identified as substances of very high concern, see the following guidance document, at:

[http://guidance.echa.europa.eu/docs/guidance\\_document/svhc\\_en.pdf](http://guidance.echa.europa.eu/docs/guidance_document/svhc_en.pdf).

There are currently 53 substances identified on the Candidate List, available at:

[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp).

### **European Union - very Persistent and very Bioaccumulative (vPvB) Substances**

*SEE: European Union – Persistent, Bioaccumulative and Toxic Chemicals*

### **Grandjean and Landrigan Neurotoxins**

Two well-known toxicological researchers, Dr. Philippe Grandjean and Dr. Phillip J. Landrigan, conducted a detailed evaluation of potential neurotoxins and endocrine disruptors. They published their findings in 2006 in an online article, “Developmental Neurotoxicity of Industrial Chemicals,” in *The Lancet*.

In this document, the researchers identified 201 industrial chemicals that have caused neurotoxic effects in humans. This list is based on data from the [Hazardous Substances Database \(HSDB\)](#) of the U.S. National Library of Medicine, the [Integrated Risk Information System \(IRIS\)](#) of the U.S. Environmental Protection Agency (EPA), and fact sheets by the [U.S. Agency for Toxic Substances and Disease Registry \(ATSDR\)](#).

For more information on the identification process, as well as a list of all potential neurotoxins identified through this research, see:

<http://reach-compliance.eu/english/documents/studies/neurotoxicity/PGrandjean-PjLandrigan.pdf>.

### **International Agency for Research of Cancer**

The International Agency for Research on Cancer (IARC) is part of the World Health Organization (WHO) of the United Nations. IARC’s mission is to coordinate and conduct research on the causes of human cancer, the mechanisms of carcinogenesis, and to develop scientific strategies for cancer control. The Agency is involved in both epidemiological and laboratory research and disseminates scientific information through publications, meetings, courses, and fellowships.

The IARC publishes monographs which identify carcinogenic chemicals according to four main groups, as listed below:

- Group 1 - carcinogenic to humans;
- Group 2A - probably carcinogenic to humans;
- Group 2B - possibly carcinogenic to humans;

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- Group 3 - not classifiable as to its carcinogenicity to humans; and
- Group 4 - probably not carcinogenic to humans.

These monographs identify substances and environmental factors that can increase the risk of human cancer. They include chemicals, complex mixtures, occupational exposures, physical agents, biological agents, and lifestyle factors. Since 1971, more than 900 agents have been evaluated, of which more than 400 have been identified as carcinogenic (Group 1), probably carcinogenic (Group 2A), or possibly carcinogenic (Group 2B) to humans.

For access to the monographs, visit: [www.iarc.fr/en/publications/list/monographs/](http://www.iarc.fr/en/publications/list/monographs/).

### National Toxicology Program

The National Toxicology Program (NTP) is an interagency program managed by the U.S. Department of Health and Human Services (DHHS) whose mission is to evaluate agents of public health concern by developing and applying tools of modern toxicology and molecular biology. The NTP identifies chemicals which pose a threat to human reproduction and which are known or suspected carcinogens. Two NTP programs are described in further detail below:

1. [Center for the Evaluation of Risks to Human Reproduction \(CERHR\)](#) – Established in 1998 to serve as an environmental health resource to the public and regulatory and health agencies, CERHR publishes monographs that assess evidence that environmental chemicals, physical substances, or mixtures may cause adverse effects on reproduction and development and provide opinion on whether these substances are hazardous for humans. Through this process, the CEHR has identified 40 chemicals of concern. Note: this program is now referred to as the NTP Office of Health Assessment and Translation (OHAT).
2. [Report on Carcinogens \(RoC\)](#) – This informational scientific and public health document, first ordered by Congress in 1978, identifies and discusses agents, substances, mixtures, or exposure circumstances that may pose a hazard to human health by virtue of their carcinogenicity. The RoC includes two categories of carcinogenic compounds:
  - Category A - chemicals “known to be human carcinogens”; and
  - Category B - chemicals “reasonably anticipated to be human carcinogens”.

The RoC is published biennially and each edition of the report is cumulative and consists of substances newly reviewed in addition to those listed in previous editions. The most recent report, the *12<sup>th</sup> Report on Carcinogens* was released on June 10, 2011 is available for download at: <http://ntp.niehs.nih.gov/?objectid=035E57E7-BDD9-2D9B-AFB9D1CAD8D09C1>.

### Oregon Persistent Priority Pollutants List

Oregon’s Priority Persistent Pollutant (P<sup>3</sup>) list is directed by Senate Bill 737, which sets specific guidelines for Oregon Department of Environmental Quality (DEQ) to follow in compiling a prioritized list of persistent pollutants, as well as identifying sources of these pollutants and opportunities to reduce their discharge to water.

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To create this list, DEQ convened a science workgroup of experts in the fields of fate and transport, hydrology, human health, aquatic life, and wildlife toxicology. This group provided advice on the toxicity, persistence, and bioaccumulation characteristics of more than 2,000 chemicals. DEQ also coordinated extensively with other state and federal agencies, tribal nations, outside experts, stakeholders, interested parties, and the general public.

DEQ's Final P<sup>3</sup> List identifies 118 toxic pollutants that persist in the environment and/or accumulate in animals. All of the pollutants on the list have potential to cause harm to aquatic life if they get into the water and thereby have the potential to pose a threat to Oregon's waters. Some are known carcinogens, and others disrupt endocrine functions. The list includes both well-studied pollutants that people have worked for a long time to reduce, and those for which little information exists. The list is divided into two tiers, as noted below:

1. Tier 1: Persistent Pollutants - any substance that is toxic and either persists in the environment or accumulates in the tissues of humans, fish, wildlife, or plants; there are 69 pollutants included in this category.
2. Tier 2: Legacy Persistent Pollutants - refers to a pollutant, the use of which has been banned or restricted for several years, that remains at detectable levels in sediment and tissue samples; there are 49 pollutants included in this category.

The full list of 118 P<sup>3</sup> substances, including technical details about the reasons they were listed, is available at: [www.deq.state.or.us/wq/SB737/docs/P3LTechnicalDetailsFinal.pdf](http://www.deq.state.or.us/wq/SB737/docs/P3LTechnicalDetailsFinal.pdf).

For more information about Oregon DEQ's Final P<sup>3</sup> list, visit: [www.deq.state.or.us/wq/SB737/docs/P3LrepExecutiveSum.pdf](http://www.deq.state.or.us/wq/SB737/docs/P3LrepExecutiveSum.pdf).

For information about potential local, regional, and global sources of persistent pollutants that may contribute to water pollution and measures to reduce the presence of these pollutants in Oregon waters, visit: [www.deq.state.or.us/wq/SB737/docs/LegRpExecSummary20100601.pdf](http://www.deq.state.or.us/wq/SB737/docs/LegRpExecSummary20100601.pdf).

### Oslo-Paris Commission

The Oslo-Paris Commission (OSPAR) was originally formed in 1972 to control dumping of waste into the North Sea. It is a consortium of 15 European Countries and the European Community whose mission is to protect the marine environment of the North-East Atlantic. OSPAR has expanded over the years to include land based and production sources of potential pollution to the North-East Atlantic. The 1992 OSPAR Convention is the current instrument guiding international cooperation to meet these objectives.

OSPAR identified chemicals of concern to the North-East Atlantic. The first list contained 310 chemicals/chemical groups of possible concern, consisting mainly of persistent, bioaccumulative, and toxic (PBT) chemicals, as well as a few endocrine disruptors. OSPAR further identified a shorter list of 50 chemicals/chemical groups which require priority action. The two lists are described in further detail below:

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1. [OSPAR List of Substances of Possible Concern](#) – This list was adopted in 2002. It is a dynamic working list and is regularly revised as new information becomes available. As of 2009, there were 315 substances that might merit action by OSPAR due to their persistency, liability to bioaccumulate, and toxicity or other equivalent concern. Some of these substances are also included in the List of Chemicals for Priority Action.
2. [OSPAR List of Chemicals for Priority Action](#) – This list was adopted in 2002 and revised several times, leading to the delisting of some chemicals. As of 2009, there were 42 substances or groups of substances on this list.

The most recent List of Chemicals for Priority Action is available at:

[www.ospar.org/html\\_documents/ospar/html/04-12e\\_list\\_of\\_chemicals\\_for\\_priority\\_action.doc](http://www.ospar.org/html_documents/ospar/html/04-12e_list_of_chemicals_for_priority_action.doc).

### Washington State PBT Program

In 2006, the Washington State Department of Ecology (DoE) adopted regulations specific to persistent, bioaccumulative, and toxic (PBT) chemicals. The goal of the program is to reduce and phase-out the use, release, and exposure to PBTs in Washington State in order to reduce and eliminate threats to human health and the environment. PBTs were chosen as the focus because:

- They remain in the environment for a long time without breaking down (persist).
- Animals and people accumulate PBTs in their bodies. As these chemicals move up the food chain, they increase in concentration, and linger for generations in people and the environment (bioaccumulate).
- Exposure to PBTs has been linked to a wide range of toxic effects in fish, wildlife, and humans, including effects on the nervous system, reproductive and developmental problems, immune-response suppression, cancer, and endocrine disruption (toxic).
- They can travel long distances and generally move easily between air, water and land, spanning boundaries of programs, geography, and generations.

The legislation requires DoE to issue one Chemical Action Plan (CAP) each year, until all of the PBTs are assessed. The CAP is a comprehensive plan that identifies, characterizes, and evaluates all uses and releases of a specific chemical of concern and recommends actions to protect human health and the environment. In addition, DoE is required to prioritize PBTs and to address first those that pose the greatest threat to human health and the environment.

Washington DoE has identified 27 PBTs, including 25 organic chemicals or chemical groups, and 2 metals of concern. It includes 75 unique chemicals with individual Chemical Abstracts Service (CAS) registry numbers.

The PBT list is available at: [www.ecy.wa.gov/programs/swfa/pbt/list.html](http://www.ecy.wa.gov/programs/swfa/pbt/list.html).