THE RED LIST A Case for Healthy Building Products

Richard V. Piacentini, Executive Director Phipps Conservatory and Botanical Gardens

The Center for Sustainable Landscapes – December 2012 One of the Greenest Building in the World







Envisions a Society that is Culturally Rich, Socially Just, and is Ecologically Restorative

MATERIALS

RED LIST







There are temporary exceptions for numerous Red List items due to current limitations in the materials economy. Refer to the v3.1 Materials Petal Handbook for complete and up-to-date listings.

The project cannot contain any of the following Red List materials or chemicals:23

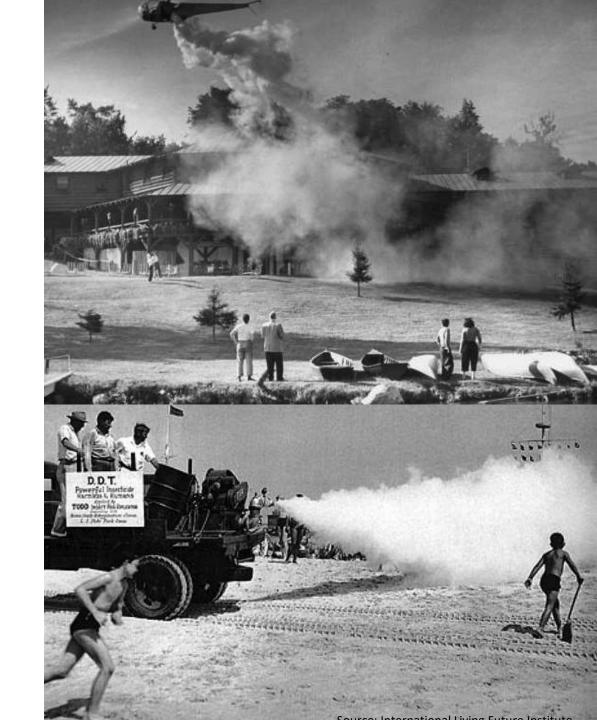
- Alkylphenols
- Asbestos
- · Bisphenol A (BPA)
- Cadmium
- Chlorinated Polyethylene and Chlorosulfonated Polyethylene
- · Chlorobenzenes
- · Chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (HCFCs)
- · Chloroprene (Neoprene)
- Chromium VI
- Chlorinated Polyvinyl Chloride (CPVC)
- · Formaldehyde (added)
- Halogenated Flame Retardants (HFRs)
- · Lead (added)
- Mercury
- Polychlorinated Biphenyls (PCBs)
- Perfluorinated Compounds (PFCs)
- · Phthalates
- Polyvinyl Chloride (PVC)
- · Polyvinylidene Chloride (PVDC)
- · Short Chain Chlorinated Paraffins
- · Wood treatments containing Creosote, Arsenic or Pentachlorophenol
- Volatile Organic Compounds (VOCs) in wet-applied products 34
- 23. A link to the list of CAS registry numbers that correspond with each Red List item is available in the v3.1 Materials Petal Handbook.
- 24 Wet-applied products (coatings, adhesives, sealants) must not exceed specific VOC levels. Refer to the v3.1 Materials Petal Handbook for details.







AWARENESS EQUALS CHANGE





83,000 chemicals in the EPA inventory

Toxic Substances Control Act (TSCA):

In 1976, 62,000 existing chemicals "grandfathered in"

Of these, only 200 have been inventoried

Only 5 of these chemicals have been partially restricted:

Asbestos

PCBs

Dioxins

CFCs

Hexavalent Chromium





Center for Sustainable Landscapes

One of the Greenest Buildings in the World

























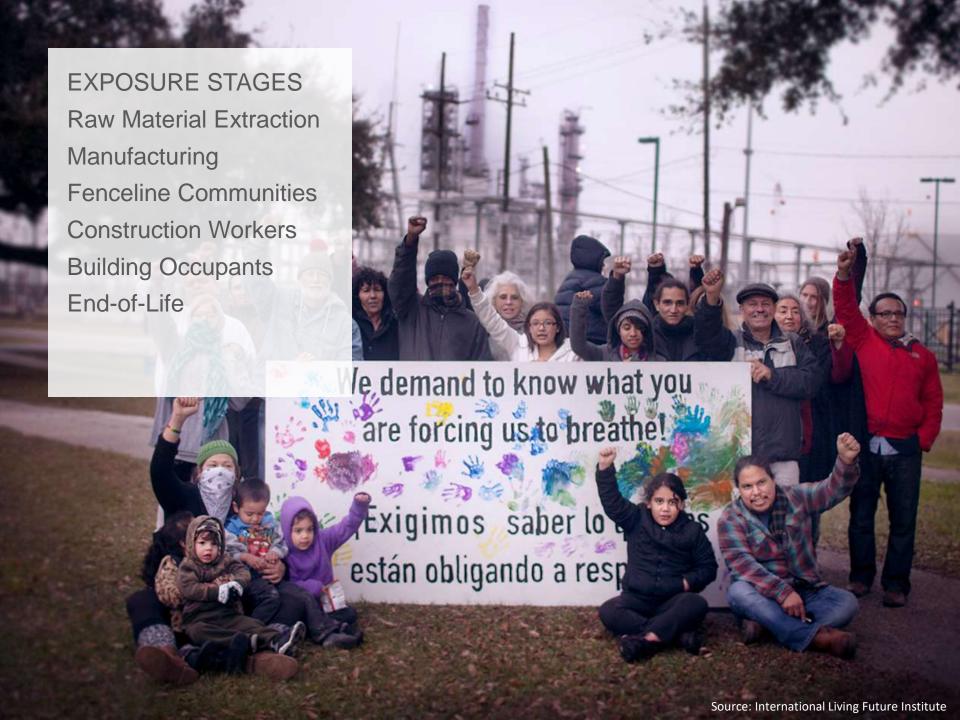


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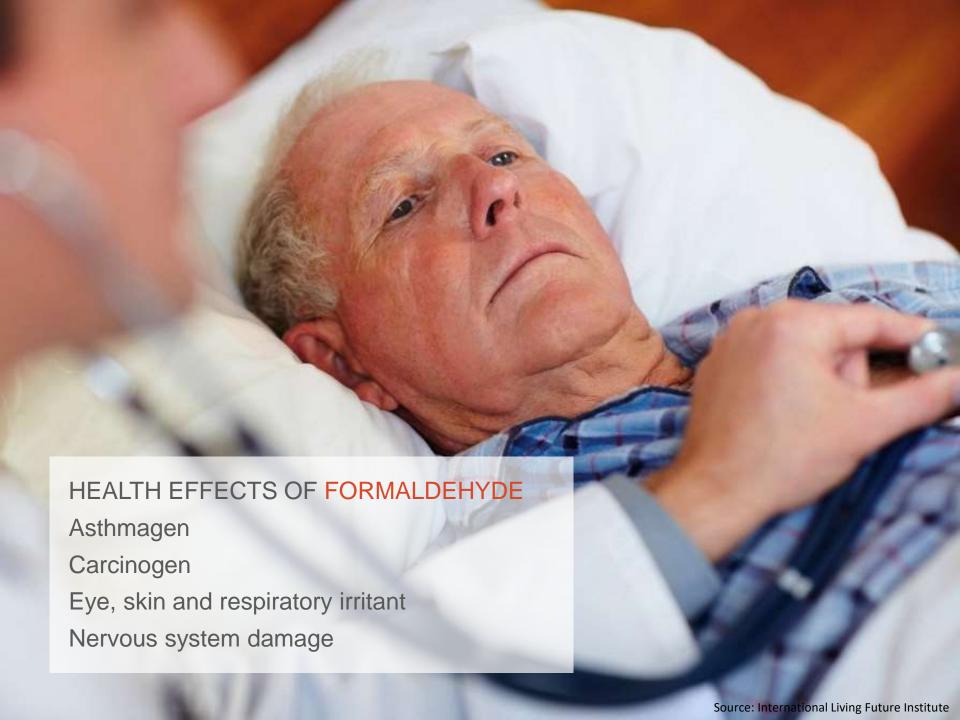
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MERCURY

FOUND IN:

Wiring & switches

Electronic equipment

Lighting (CFLs)

Paint

Batteries

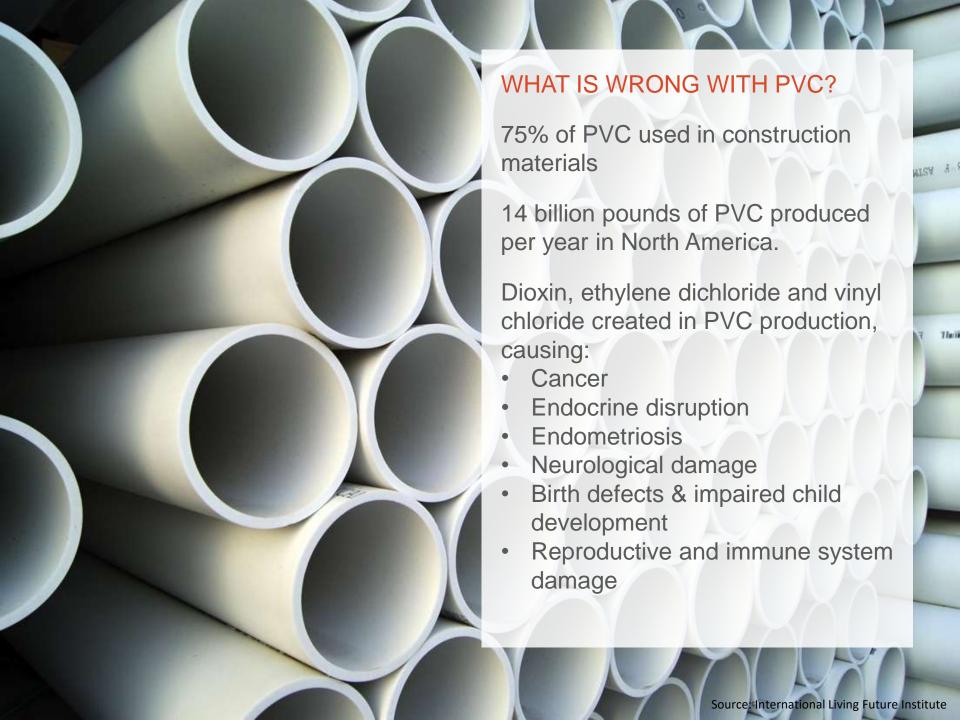
Fossil fuel combustion

HEALTH EFFECTS:

Impaired neurological development

Memory loss

Kidney damage and respiratory failure (high exposure)





FLAME RETARDANTS

Flame retardants like polybrominated diphenyl ethers have been linked to cancer, fertility issues and lower IQs in children

2012 Chicago Tribune article found chemicals used provided no meaningful protection against the start or spread of fire



VOLATILE ORGANIC COMPOUNDS (VOCs)

FOUND IN:

Paint

Furniture

Carpet

Adhesives

Sealants

HEALTH EFFECTS:

Headaches

Memory impairment

Respiratory, allergic, and immune impairments in children



BPA

FOUND IN:

Clear plastic containers
Grouts and sealants
Fluid applied flooring

HEALTH EFFECTS:

Prostate cancer
Breast cancer
Reproductive failure

NOTE:

90% of baby umbilical cords have BPA. Reproductive failure reported in Chinese male factory workers





THE PRECAUTIONARY PRINCIPLE

The following depicts some examples of the time lag between health and environmental risk identification and regulatory action.

| Element | Risk Identified | Regulatory Action Taken | Time Delay |
|--|--------------------|--|------------|
| Lead (Paint) | 1949 | 1970 | 21 years |
| Lead (Gasoline) | 1920 | 1986 | 66 years |
| Dichloro-Diphenyl- Trichloroethane (DDT) | 1962 | Worldwide agricultural ban in 1978 | 16 years |
| Asbestos (VAT) | 1970 | 1989 | 19 years |
| PVC w/ DEHP, DBP, BBP, DINP, DIDP, DNOP | 2003 | California bans the use of these six plasticizers in children's toys in 2007 | ? |





Declare.





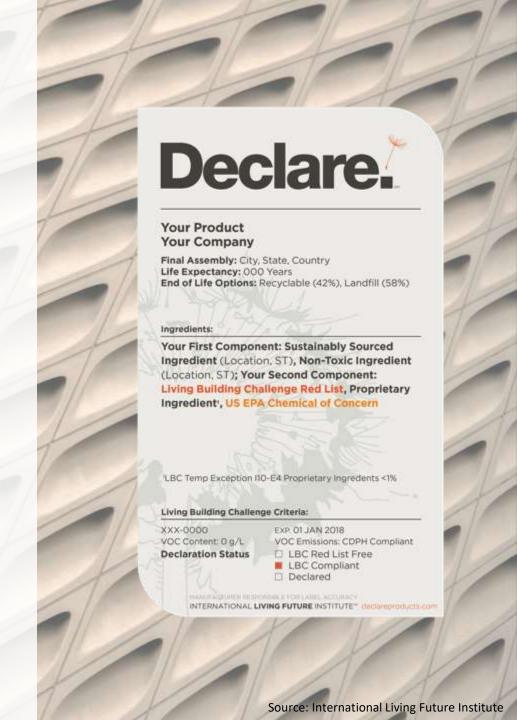
What is Declare?

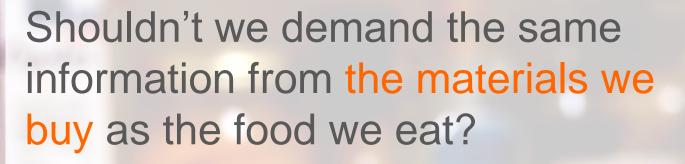
An ingredients label for building products

An endeavor to increase transparency in the materials marketplace

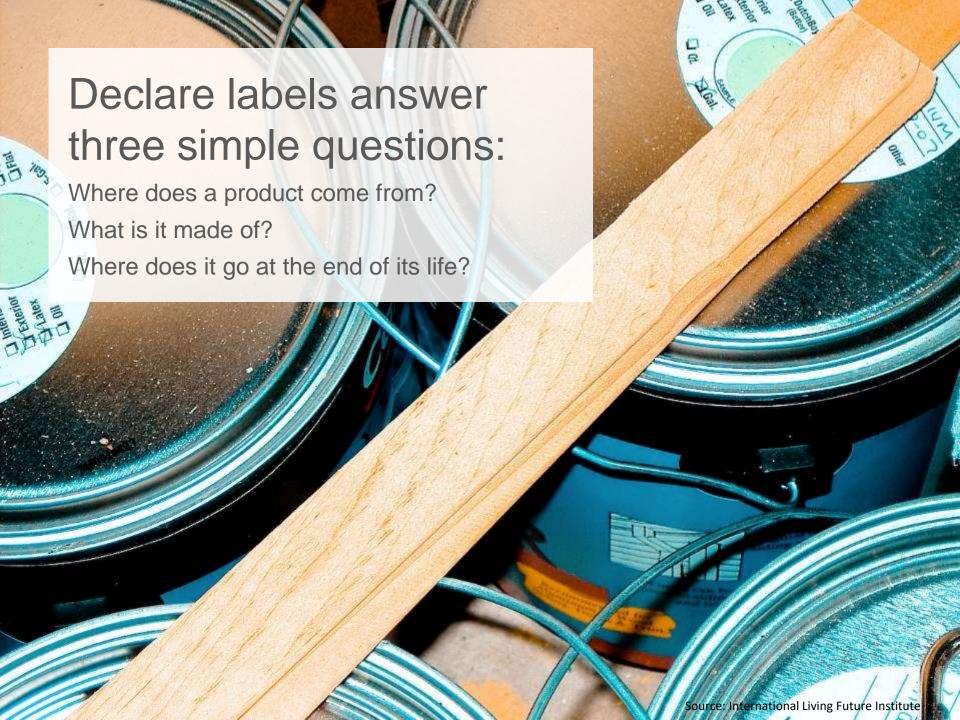
An opportunity for manufacturers to join the restorative building movement

A support resource for Living Building Challenge project teams











Source: International Living Future Institute

Four Different Paradigms for Interacting with the World

| Extractive | Less Bad | Do Good | Regenerative |
|------------|-------------------------------------|-------------------------|------------------------------|
| About Me | About Us Inter- connectedness | About Us Reciprocity | About Us System |
| Fragments | Fragments Stabilize them | Fragments Improve them | Whole Source: Carol Sanford |

