

Seeing the Red List

Avoiding Unintended Consequences In Selecting Green Building Products

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Run of show

- Project orientation
- Understanding different “Red Lists”
 - Competing Red Lists because of different priorities
 - Any red list will require blinders of some sort – compromises/exceptions
- Why we should meet the challenge
 - Our environment
 - Our health
 - Responsibility to the future
- Why we chose to meet the challenge
 - Part of a larger building rating system
- How we at IES conduct material research

Three LBC 2.1 Projects



Class of 1966 Environmental Center

Williams College, Williamstown MA
Black River Design, Architects
Offices, classroom, kitchen, library
7,000 SF



Kern Center

Hampshire College, Amherst MA
Bruner/Cott Architects & Planners
Admissions, gallery, coffee bar, store
15,000 SF



Hitchcock Center for the Environment

Amherst MA
Design Lab Architects
Interpretive exhibits, learning spaces, offices
8,500 SF

Class of 1966 Environmental Center



Class of 1966 Environmental Center

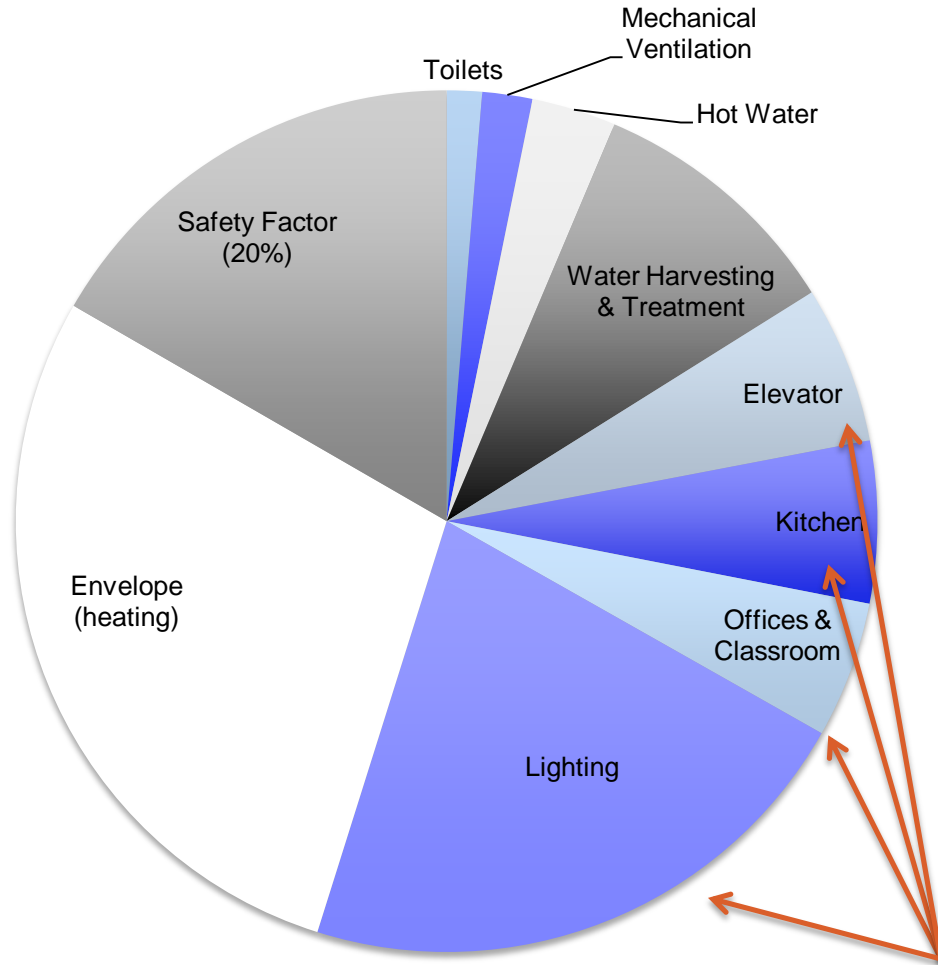


Class of 1966 Environmental Center



Net Zero Energy

Class of 66 Environmental Center
Energy Consumption Estimate by End Use kWh/yr



Loads

kWh/yr

Toilets	718
Mechanical Ventilation	1,025
Hot Water	1,729
Water Harvesting	5,302
Elevator	3,218
Kitchen	3,315
Office & Classroom	2,792
Lighting	11,810
Envelope (heating)	15,529
SubTotal	45,437
Safety Factor, 20%	9,087
Building-mounted PV	32,423
Garden Array	22,476

Behavior Driven Energy Consumption

Class of 1966 Environmental Center



Class of 1966 Environmental Center



Class of 1966 Environmental Center



Class of 1966 Environmental Center



Kern Center



Kern Center

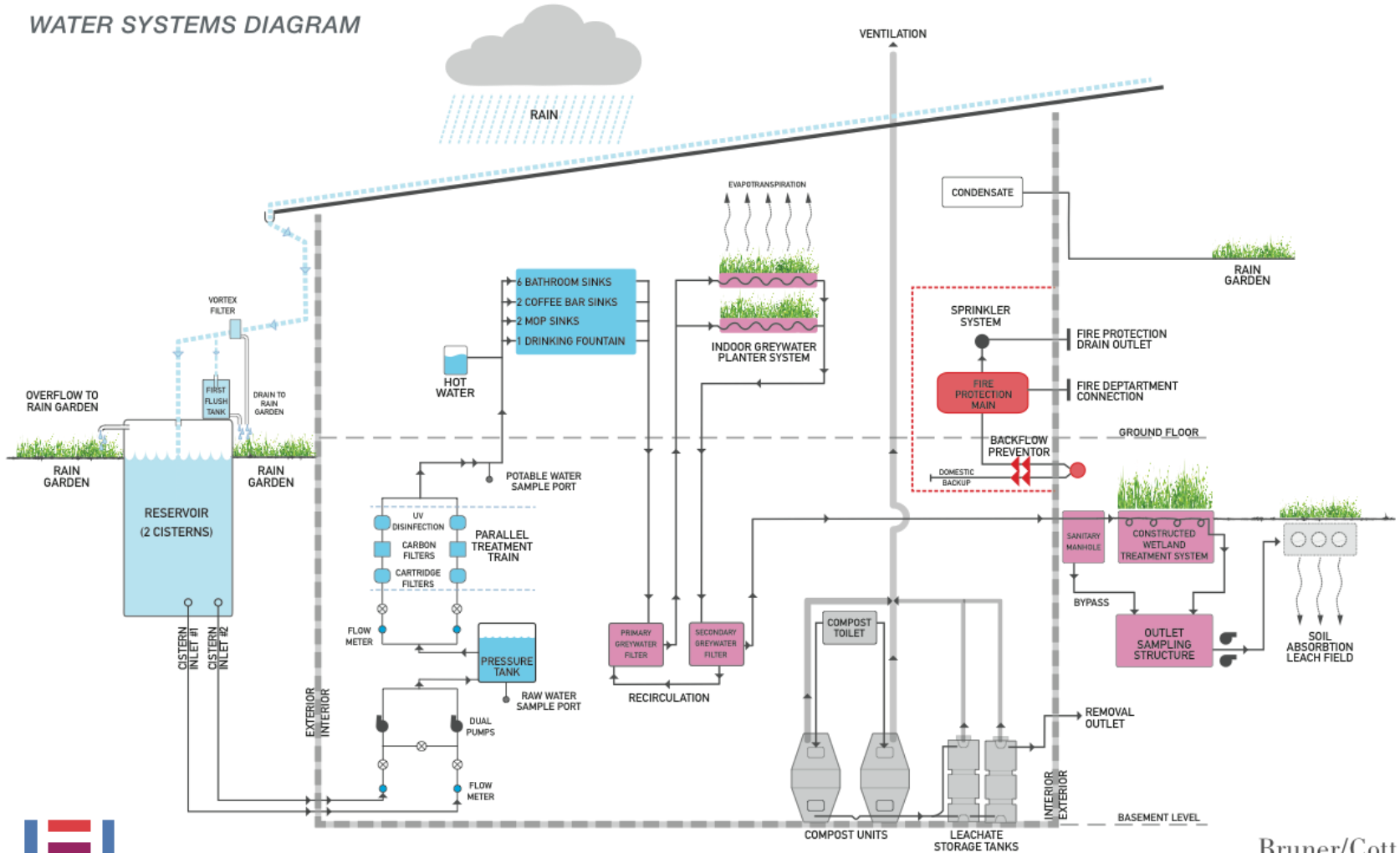


Kern Center

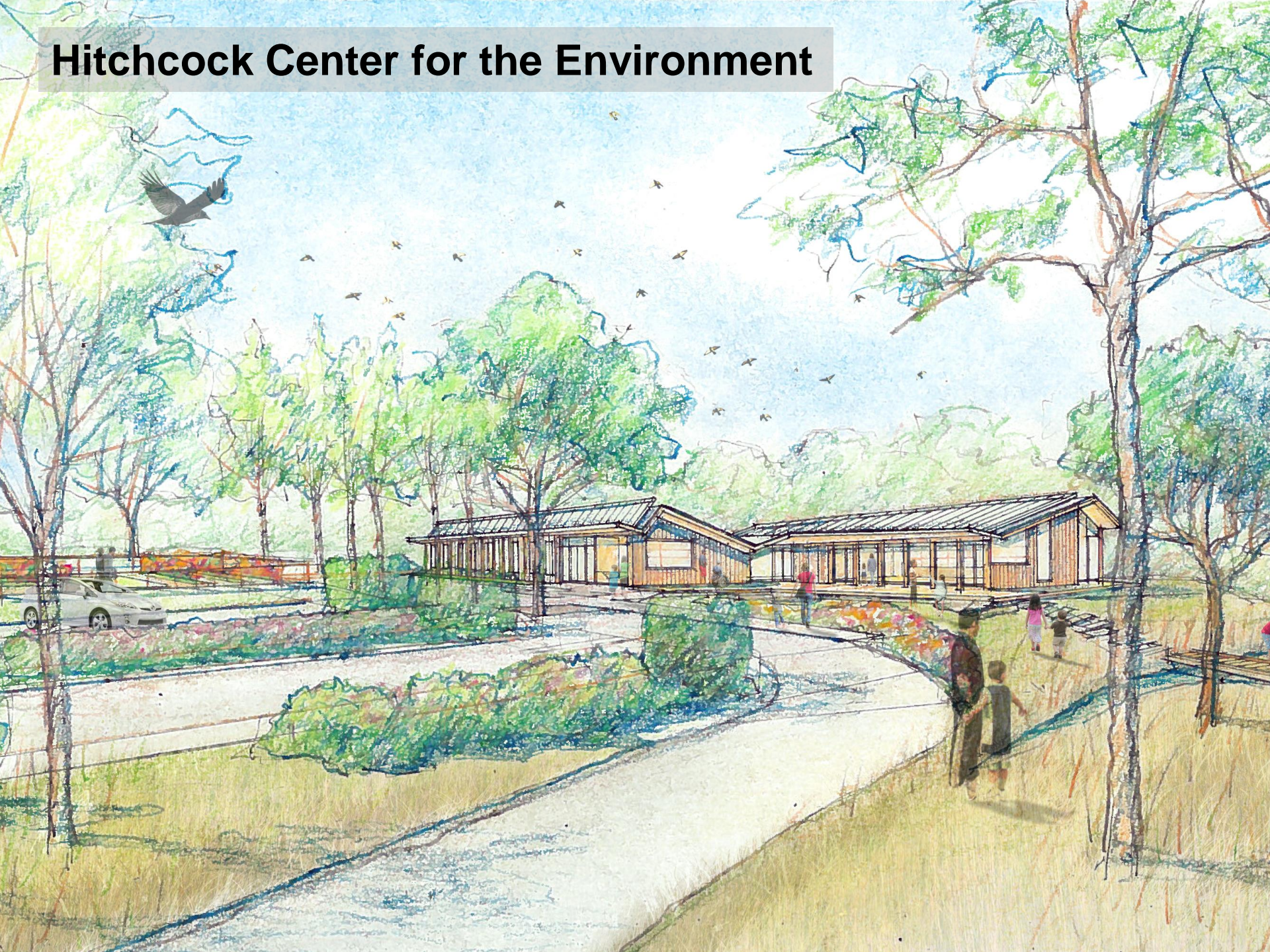


Net Zero Water

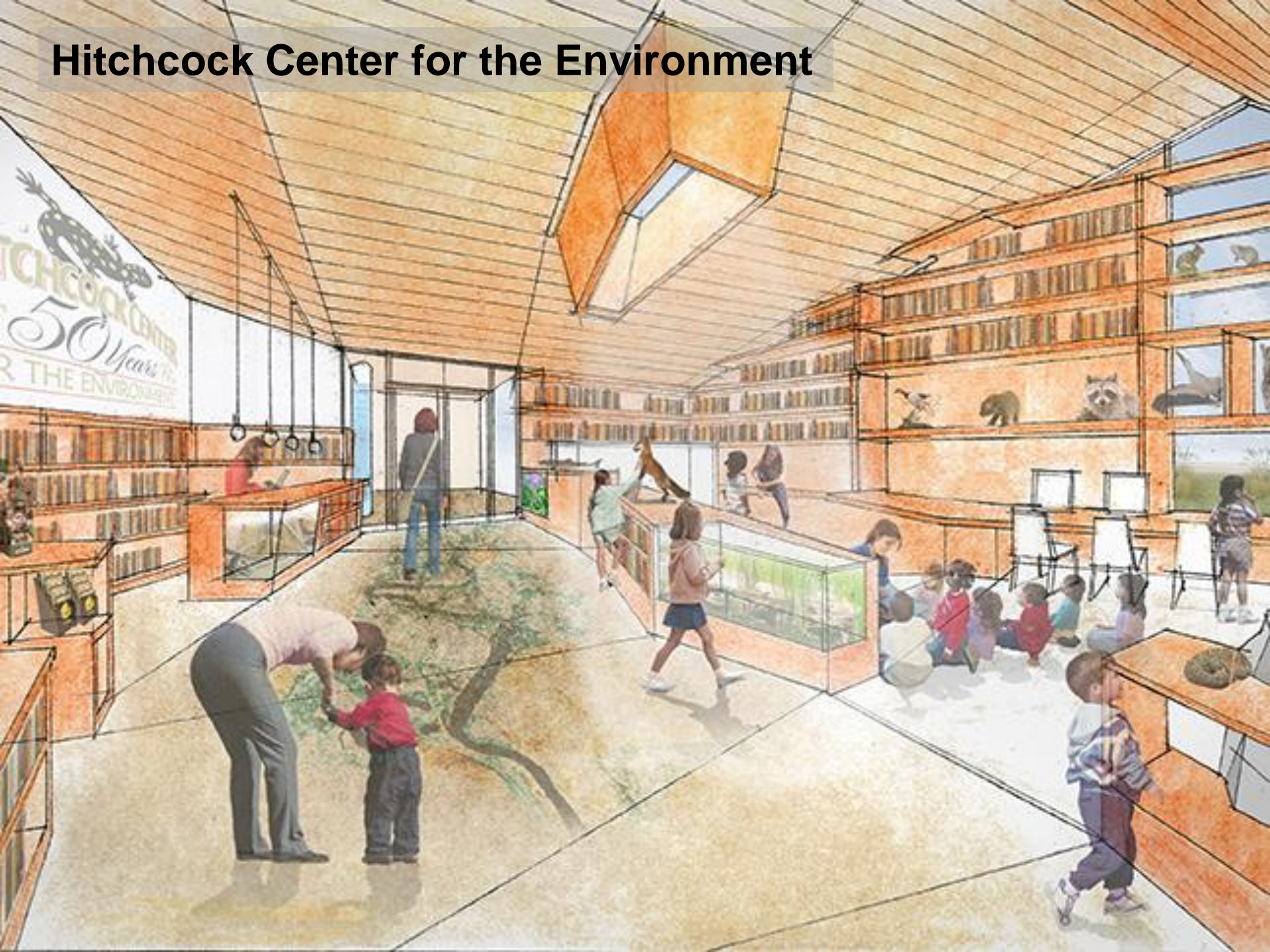
WATER SYSTEMS DIAGRAM



Hitchcock Center for the Environment



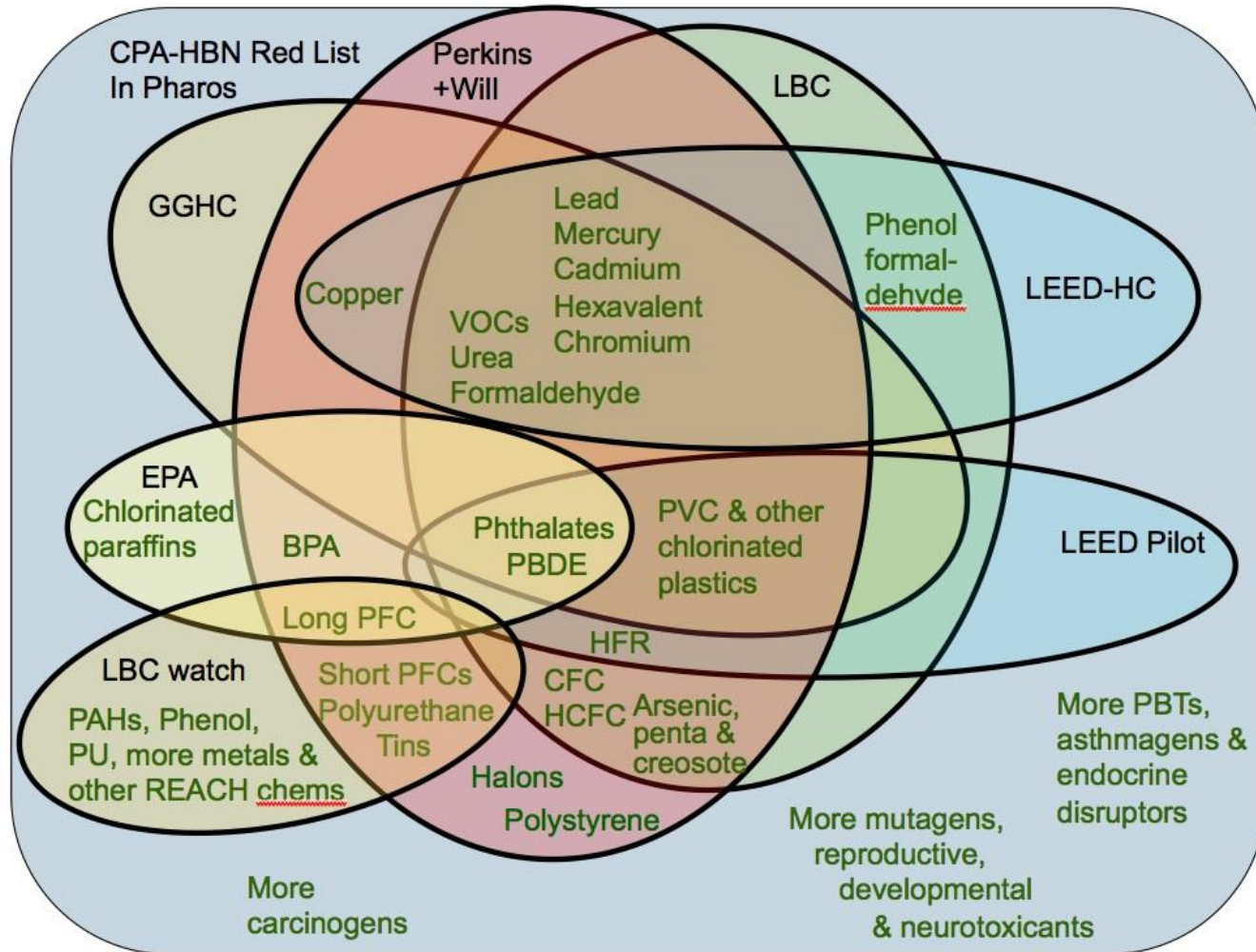
Hitchcock Center for the Environment



Hitchcock Center for the Environment



Which list to honor?

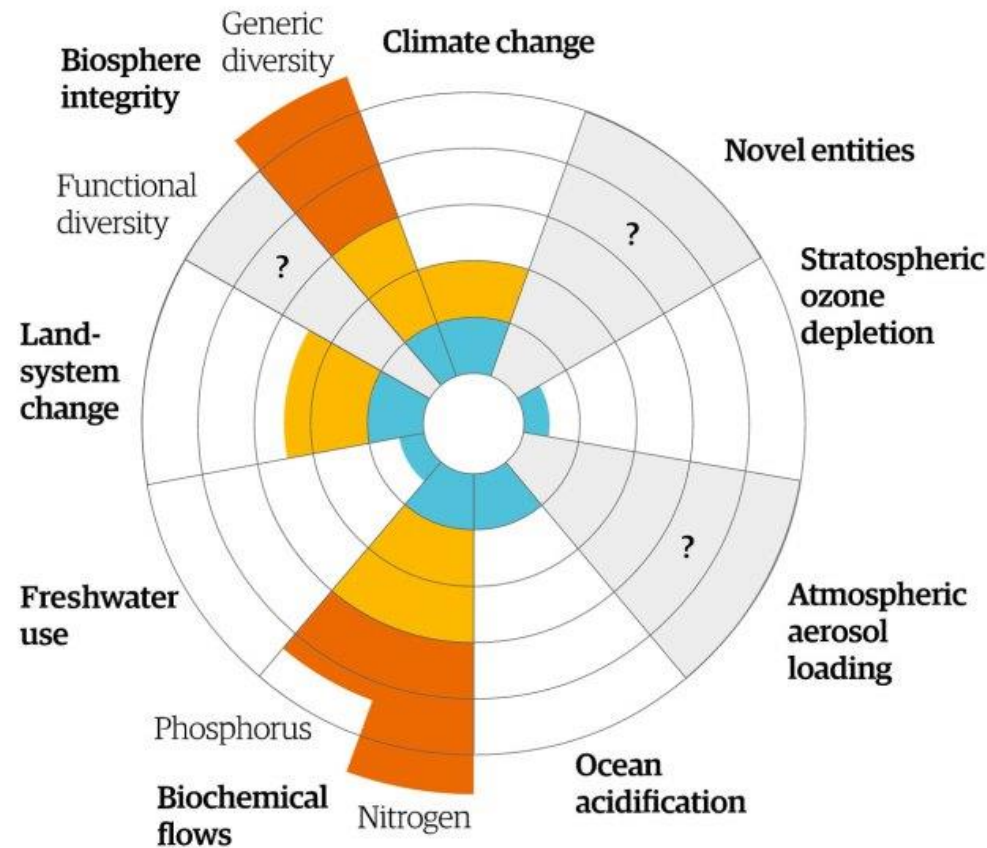
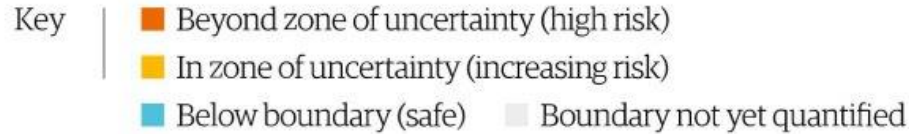


& More beyond!

Courtesy of Healthy Building Network

Can you balance all the factors in 1 project?

Planetary boundaries



Protection against which harm?

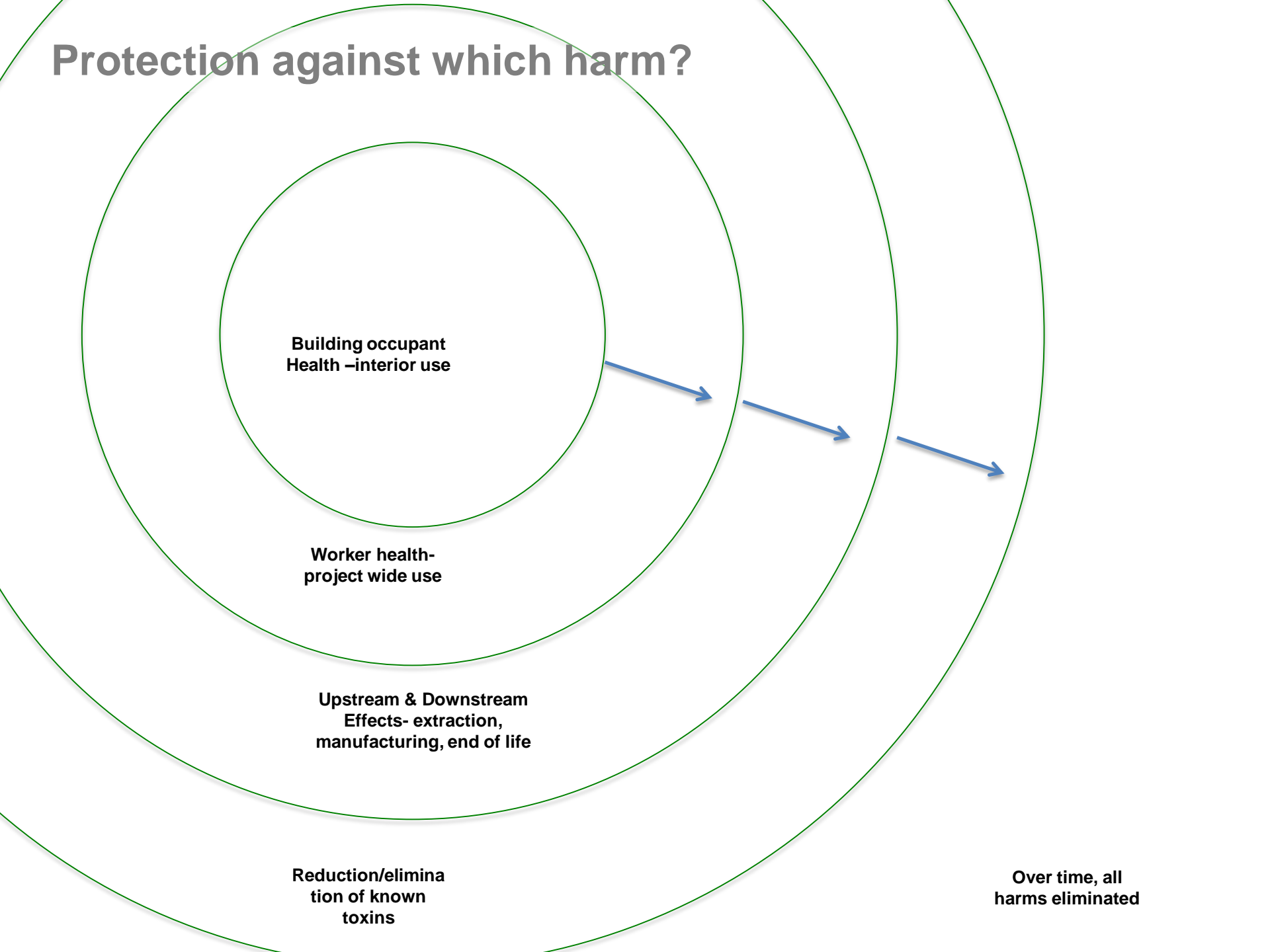
**Building occupant
Health –interior use**

**Worker health-
project wide use**

**Upstream & Downstream
Effects- extraction,
manufacturing, end of life**

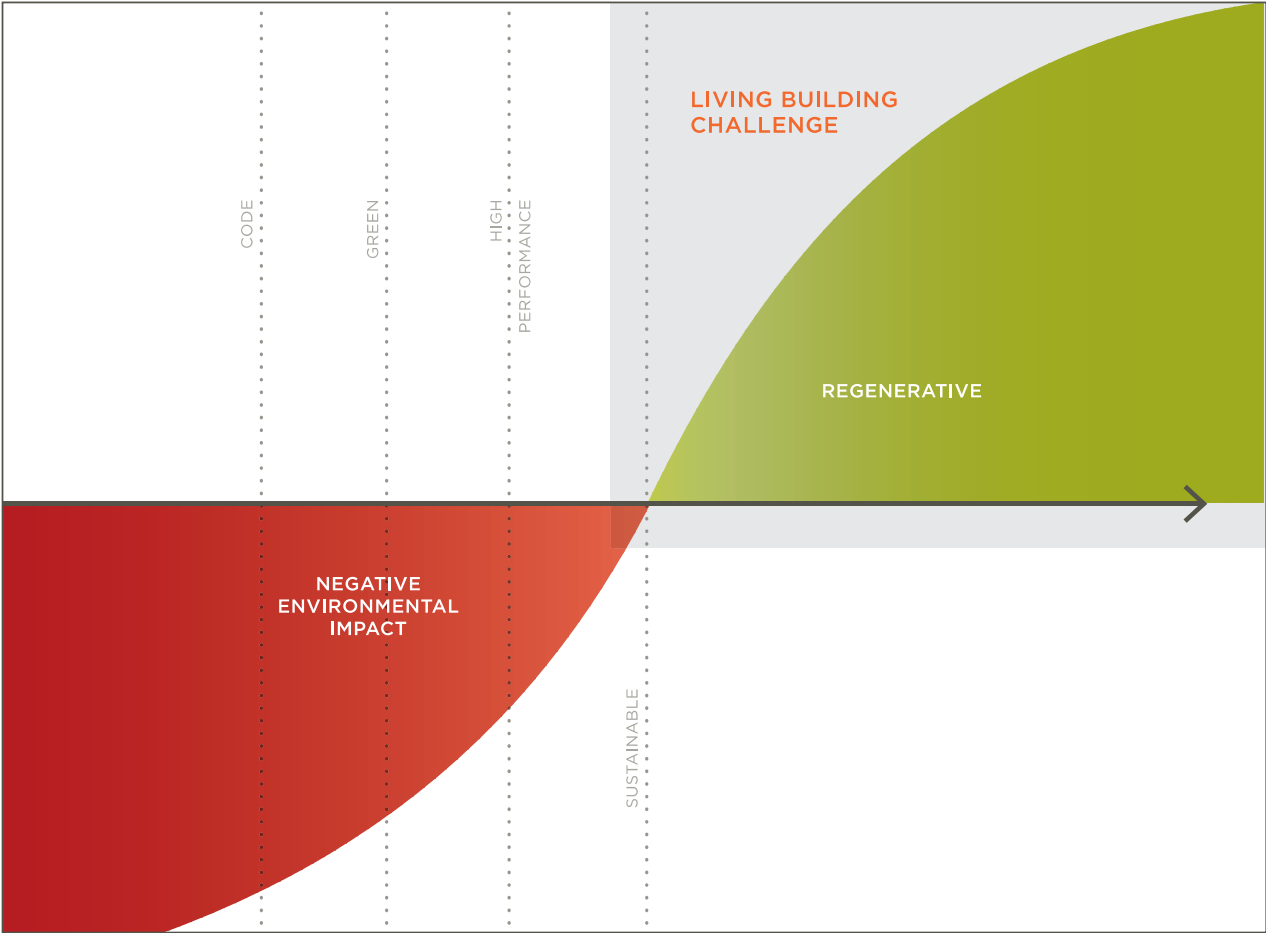
**Reduction/elimina
tion of known
toxins**

**Over time, all
harms eliminated**



SETTING THE IDEAL AS THE INDICATOR OF SUCCESS

THE LIVING BUILDING CHALLENGE IS A PHILOSOPHY, CERTIFICATION AND ADVOCACY TOOL FOR PROJECTS TO MOVE BEYOND MERELY BEING LESS BAD AND TO BECOME TRULY REGENERATIVE.



Challenges we face in avoiding Red Listed products

Standard factors don't go away...

Cost

Performance

Code compliance

Durability

Appearance

Sourcing distance



LBC Red List

Red List Ingredient	Likely to be found in...
Asbestos	illegal
Cadmium	NiCd on-board backup batteries / contacts and switches / PVC stabilizer in wire insulation / Paint / Batteries
Chlorinated Polyethylene and Chlorosulfonated Polyethylene	Foam
Chloroprene (Neoprene)	HVAC seals / Plumbing gaskets / Weatherproofing gaskets
Chlorofluorocarbons (CFCs)	illegal
Formaldehyde (added)	Adhesives & Sealants / phenol-formaldehyde used as a substrate for printed circuit boards / phenol formaldehyde in glulam beams OK / Ubiquitous
Halogenated Flame Retardants	Polybrominate used in plastic cases and cables / Foams / Treated fabrics
Hydrochlorofluorocarbons (HCFCs)	Foam blowing agents
Lead (added)	Electronics: solder and interconnect / Plumbing fittings / Brass / Door hardware / low levels allowed in plumbing
Mercury	Printed circuit boards / Fluorescent lamps
Petrochemical Fertilizers and Pesticides	Site soils / Paints
Phthalates	Adhesive & Sealants / Epoxies / Many plastics
Polyvinyl Chloride (PVC)	Plumbing and ventilation pipe / Wiring / Alternative pipe: HDPE (high-density polyethylene), ABS (acrylonitrile butadiene styrene), concrete, ductile iron, stainless steel, clay, copper, aluminum, brass
Wood treatments containing Creosote, Arsenic or Pentachlorophenol	Rare but still in some older pressure treated lumber

Growing the Red List

LBC 2.1

- **Asbestos**
- **Cadmium**
- **Chlorinated Polyethylene and Chlorosulfonated Polyethylene**
- **Chloroprene (Neoprene)**
- **Chlorofluorocarbons (CFCs)**
- **Formaldehyde (added)**
- **Halogenated Flame Retardants**
- **Hydrochlorofluorocarbons (HCFCs)**
- **Lead (added)**
- **Mercury**
- **Petrochemical Fertilizers and Pesticides**
- **Phthalates**
- **Polyvinyl Chloride (PVC)**
- **Wood treatments containing Creosote, Arsenic or Pentachlorophenol**

LBC 3.0

- ***Alkylphenols***
- ***Bisphenol A (BPA)***
- ***Chlorobenzenes***
- ***Hydrochlorofluorocarbons (HCFCs)***
- ***Chromium VI***
- ***Chlorinated Polyvinyl Chloride (CPVC)***
- ***Polychlorinated Biphenyls (PCBs)***
- ***Perfluorinated Compounds (PFCs)***
- ***Polyvinylidene Chloride (PVDC)***
- ***Short Chain Chlorinated Paraffins***

CAS Registry Numbers for the Living Building Challenge Red List

[NOTE: PETROCHEMICAL FERTILIZERS + PESTICIDES ARE EXCLUDED FROM THIS COLLECTION]

CAS RN	NAME	
1332-21-4	ASBESTOS	
CADMIUM	7440-43-9	CADMIUM
	2420-98-6	CADMIUM 2-ETHYLHEXANOATE
	543-90-8	CADMIUM ACETATE
	5743-04-4	CADMIUM ACETATE, DIHYDRATE
	7789-42-6	CADMIUM BROMIDE
	513-78-0	CADMIUM CARBONATE
	7790-78-5	CADMIUM CHLORIDE, 2.5 HYDRATE
	10108-64-2	CADMIUM CHLORIDE, ANHYDROUS
	542-83-6	CADMIUM CYANIDE
	7790-79-6	CADMIUM FLUORIDE
	17010-21-8	CADMIUM HEXAFLUOROSILICATE
	7790-80-9	CADMIUM IODIDE
	10022-68-1	CADMIUM NITRATE, 4-HYDRATE
	1306-19-0	CADMIUM OXIDE
	2223-93-0	CADMIUM STEARATE
	10124-36-4	CADMIUM SULFATE, ANHYDROUS
	7790-84-3	CADMIUM SULFATE, HYDRATE
1306-23-6	CADMIUM SULFIDE	
63231-66-3	CHLORINATED POLYETHYLENE (CPE)	
64754-90-1	CHLORINATED POLYETHYLENE (CPE, TYRIN)	
68037-39-8	CHLOROSULFINATED POLYETHYLENE	
CHLOROFLUOROCARBONS (CFCs)	76-11-9	1,1,1,2-TETRACHLOR-2,2-DIFLUOROETHANE (CFC-112A)
	374-07-2	1,1,1,2-TETRAFLURO-2,2-DICHLOROETHANE (CFC-114A)
	2268-46-4	1,1,1,3-TETRACHLORO-2,2,3,3-TETRAFLUOROPROPANE (CFC-214cb)
	76-12-0	1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE (CFC-112)
	76-13-1	1,1,2-TRICHLOROTRIFLUOROETHANE (CFC-113)
	1652-81-9	1,1,3-TRICHLORO-1,2,2,3,3-PENTAFLUOROPROPANE (CFC-215)
	76-18-6	2-CCHLORO-1,1,1,2,3,3,3-HEPTAFLUOROPROPANE (CFC-217ba)
	353-59-3	BROMOCHLORODIFLUOROMETHANE (CFC-12B1)
	75-63-8	BROMOTRIFLUOROMETHANE (CFC-13B1)
	422-86-6	CHLOROHEPTAFLUOROPROPANE (CFC-217)
	76-15-3	CHLOROPENTAFLUROETHANE (CFC-115)
	75-72-9	CHLOROTRIFLUOROMETHANE (CFC-13)
	75-71-8	DICHLORODIFLUOROMETHANE (CFC-12)

Materials & How to Approach Them



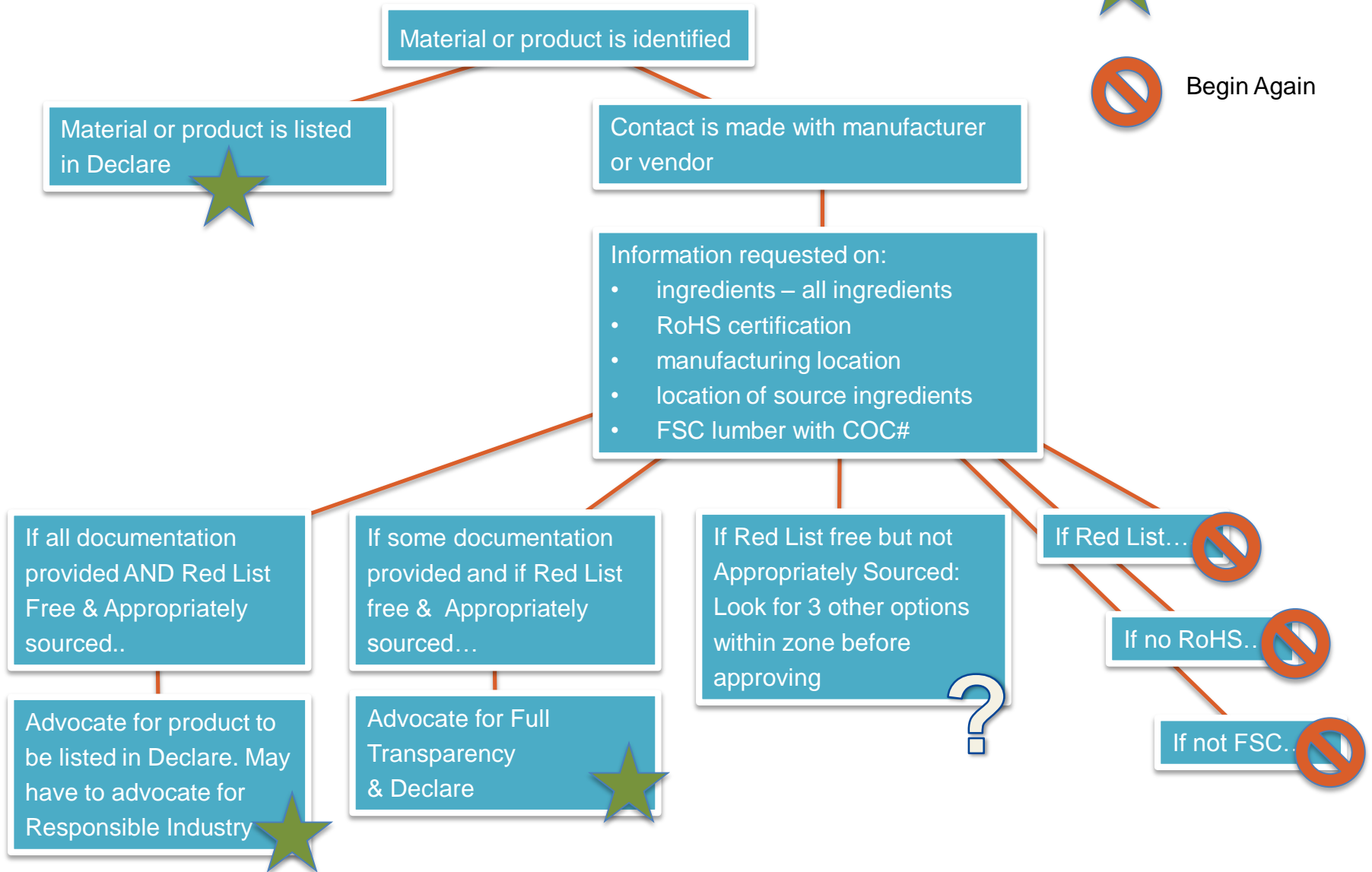
VanDusen Botanical Garden
Visitor Center, Vancouver, BC
Photo: Nic Lehoux / Courtesy: Perkins+Will

Process & Roles

Everyone: education, consciousness, then...

- Owner:** Chose a Green Building Standard
- Architect:** Favor simpler palette, rewrite typical specs
- Engineers:** Reexamine system choices
- Vetting Team:** Press for preliminary product list, get to work
- Builder:** Engage early, leave time for dead ends

Material research is iterative



Scope of the Red List challenge

For Kellogg House, we vetted:

425+ named products

800+ sub-components

600+ CAS numbers

We reviewed:

350+ submittals

Using Existing Resources... cautiously

Green Wizard
Declare
shared lists
LBC Dialogue

Look for clues

RoHS
Cradle to Cradle
EPD/HPDs

green wizard
The Building Product Management Software

Dashboard Projects Library Search

Product Search Eligible for LEED v4 Request Center

Your search criteria:
Keywords: door
Product Attributes: • Living Building Challenge Red List Free / Compliant
Source / Usage:

Refine your search + New search

Showing 1 - 5 of 5 products.

Filter your search results

Selected Products: Compare Add to: -

Trio E
Cece Door
08 13 00 Metal Doors

Location Information Provided Eligible for LEED v4 Consideration: **Met EPD Opt 1** **Met SRS Opt 2**

Preconsumer Recycled Content	6.8%	Postconsumer Recycled Content	53.7%
Actual VOC Content	--	Rapidly Renewable Content (% by weight)	--
Salvaged or Reused Material Content	--	Lifecycle Impact data available	No
Red List Chemicals	None		

Certifications / Labels / Declarations Supporting Documents

Provided by Manufacturer
View Details Find Similar

DECLARE LABEL EXPLANATION

Select a division to refine your listing: - Any -

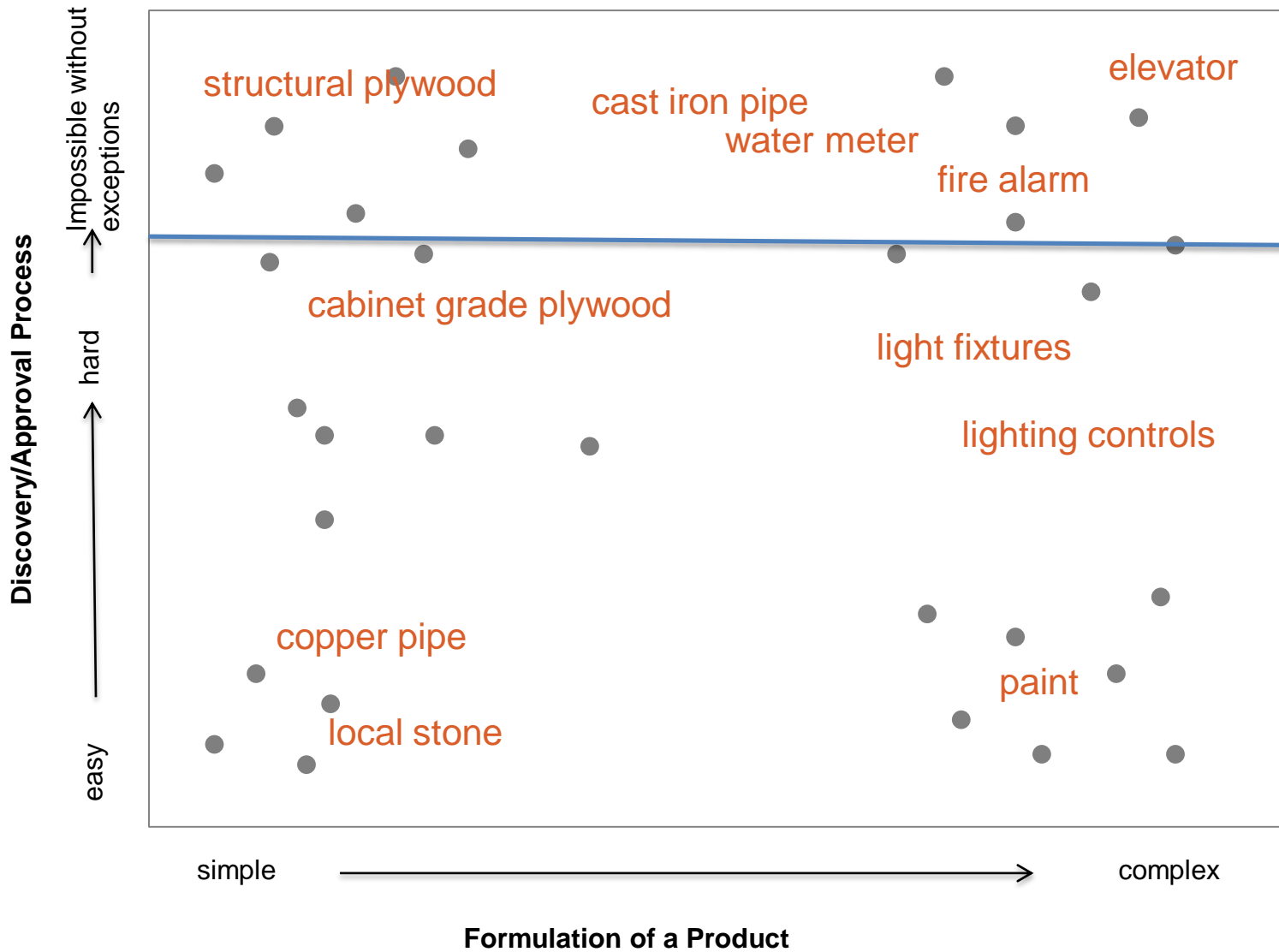
Select a State/Province: [input field]

Search: door


Apply Reset

Declare ID	Product Name	CSI Master Format Division	Manufacturer Name	City	State/Province	Country	LBC Red List Status
ASA-1001	Trio-E Steel Stiffened Hollow Metal Door	Division 8 - Doors and Windows	Assa Abloy	Milan	TN	USA	Red List Compliant

Materials



Product Research



STEGO INDUSTRIES, LLC
SECOND INDUSTRIES, LLC
26 Avenida Fabricante, Suite 01
San Clemente, CA 92672
EMERGENCY PHONE 1877-464-7834

MATERIAL SAFETY DATA SHEET Date Prepared: 1/13/2012 Revision No. 2.0 Page 1 of 3

IDENTIFICATION

PRODUCT: Stego Mastic

CHEMICAL FAMILIES:
A. Bitumen / Asphalt
B. Synthetic Rubber
C. Fatty Acids
D. Polymers

CHEMICAL NAME & SYNONYMS: Asphalt Emulsion

HAZARDS: No evidence of serious health hazards exists.

CARCINOGENIC INGREDIENTS: Bitumen

IARC: None

WARNING STATEMENTS

Avoid prolonged or frequent skin contact, as the presence of emulsifying and de-emulsifying agents during application may irritate the skin.

PHYSICAL DATA

APPEARANCE: Brown to Black

SPECIFIC GRAVITY: (H₂O = 1): 1.028(S) 1.034(R) 1.13(T)

SOLUBILITY IN WATER: Insoluble

VOC CONTENT: 13.96 g/L

VAPOR PRESSURE: Not applicable, non-volatile material

VAPOR DENSITY: Not applicable, non-volatile material

BOILING POINT: Not applicable, non-volatile material

EVAPORATION RATE: Not applicable, non-volatile material

FIRE AND EXPLOSION HAZARDS

Bitumen emulsions are water-based products and as such will not burn. In cases of fire in the vicinity of drums, cool with water.

REACTIVITY DATA

Contact with strong oxidizing agents may create gelling and water condensation.

HEALTH HAZARD INFORMATION

EXPOSURE LIMITS: Avoid prolonged or frequent skin contact.

ROUTES OF ENTRY:
A. Inhalation: YES
B. Skin: YES
C. Ingestion: YES

SIGNS & SYMPTOMS OF EXPOSURE: Eye and skin irritation

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Eye and skin irritation

PHYSIOLOGICAL EFFECTS SUMMARY

ACUTE: Skin irritation and rash


CHRONIC: Dermatitis

FIRST AID PROCEDURES

INGESTION: Do not induce vomiting. GET MEDICAL ATTENTION.

EYES: Flush with water.

SKIN: Wash with soap and water.



STEGO MASTIC MATERIAL SAFETY DATA SHEET
Date Prepared: 1/13/2012 Revision No. 2.0 Page 2 of 3

PROTECTION AND CONTROL MEASURES

RESPIRATORY PROTECTION: None required

VENTILATION: Local exhaust recommended

PROTECTIVE GLOVES: Any rubber glove

EYE PROTECTION: Goggles or safety glasses

OTHER PROTECTION: None required

WORK / HYGIENIC PRACTICES: None required


FILL AND DISPOSAL PROCEDURES

SPILL: Use sponges or mops to put liquid in container. Allow water to evaporate from container. Solids are non-toxic.

WASTED DISPOSAL: Dispose solids in usual trash.

HANDLING AND STORING: Avoid freezing at temperatures over 100°F

NOTE: Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of law or regulation. It is the user's responsibility to determine for local the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.



STEGO MASTIC MATERIAL SAFETY DATA SHEET
Date Prepared: 1/13/2012 Revision No. 2.0 Page 3 of 3

What is in this product? MSDS doesn't reveal anything

Product Research

ONE COMPONENT POLYURETHANE FOAM RENEWABLE CONTENT (Includes Strawfoam, Gunfoam, and Polystyrene Construction Adhesive)

MSDS # A16152

Issue Date: June 2008 Last Rev: June 28, 2012

MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Chemical Product

One-Component Polyurethane Foam Sealant Renewable Content

Manufacturer

FOMO PRODUCTS, INC.
P. O. Box 1078
Norton, Ohio 44203

Emergency Overview

Product Information: 1-800-321-5585 (Monday-Friday 8:00am- 5:00pm EST). In Ohio and outside the United States call (330) 753-4585
Transportation Emergency: CHEMTREC 1-800-424-9300 (24 hours). One-Component Polyurethane Foam Renewable Content is registered by the manufacturer, FOMO PRODUCTS, INC.
International Transportation Emergency: CHEMTREC (703) 527-3887

Product is a liquid urethane prepolymer mixture that is packaged under pressure (Flammable Compressed Gas). Containers should not be heated above 120°F (49°C) to avoid excessive pressure build-up.

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER! Extremely Flammable. Vapors may cause a flash fire. May cause eye, skin, nose, throat and respiratory tract irritation. May cause an allergic skin reaction. Harmful if inhaled. Contents under pressure, storage temperature should not exceed 120°F (49°C) in order to avoid excessive pressure build up and possible container rupture. Vapor reduces oxygen available for breathing. May cause lung injury. Respiratory sensitizer. May cause central nervous system effects. May cause liver damage. Toxic gases/fumes may be given off during burning.

Potential Health Effects

The primary adverse health effects of this product are related to the individual components that make-up the mixture: polymeric isocyanate (pMDI) component, tris (1-chloro-2-propyl) phosphate and the liquefied petroleum gas (hydrocarbon, HC) component. These products should be used in a well ventilated area to avoid exceeding the exposure limits of these components (listed in Section 8 of this MSDS). If used indoors, mechanical ventilation or exhaust should be provided during use and until product is cured (see Section 8).

Entry Route; Effects of Overexposure

Inhalation: Vapors may irritate mucous membranes with tightness in chest, coughing, wheezing, or allergic asthma-like sensitivity. Extensive overexposure can lead to respiratory symptoms such as asthma and pulmonary edema (fluid in the lungs). These diseases may be aggravated by prolonged exposure. Excessive exposure may cause irritation to upper respiratory tract and lungs. Overexposure to the Hydrocarbon Gas Mixture may cause lightheadedness, headaches, or lethargy. Persons with cardiac arrhythmia are more susceptible to increased medical risk from severe exposure. In poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Tris (1-chloro-2-propyl) phosphate is a

POLYURETHANE FOAM SEALANT Renewable Content ISSUE DATE: June 2008 LAST REV: June 2012 PAGE 2 OF 7

weak cholinesterase inhibitor. Excessive overexposure may result in these symptoms: salivation, sweating, headache, nausea, muscle twitching, incoordination, diarrhea, blurred vision, abdominal cramps, tears, tremor, and chest discomfort.

Eyes: May cause eye irritation. Foam contact can cause physical damage due to its adhesive characteristics. Vapors may cause slight temporary corneal injury.

Skin: May cause localized irritation, reddening or swelling. Prolonged or repeated exposure may lead to sensitization. May cause an allergic reaction. Prolonged skin exposure is unlikely to result in absorption of harmful amounts. Foam will stick to the skin causing irritation upon removal. (See section 8 for PPE guidelines).

Ingestion: May cause irritation of mucous membranes in the mouth and digestive tract. Small amounts swallowed as a result of normal handling are not likely to cause injury; swallowing large amounts may cause injury.

If accidental contact occurs, follow the appropriate first aid procedure described in Section 4 of this MSDS.

3. COMPOSITION

Chemical Name (common names)	CAS Number	Percentage
Urethane Pre-Polymer Blend (Using Non-Hazardous Proprietary Polyol Blend)	Not Available	60 to 100 percent
4,4' Diphenylmethane diisocyanate (MDI)	101-68-8	5 to 10 percent
Higher Oligomers of MDI (pMDI)	9016-87-9	5 to 10 percent
Tris (1-chloro-2-propyl) phosphate	13674-84-5	5 to 10 percent
Isobutane	75-28-5	5 to 10 percent
Dimethyl ether	115-10-6	5 to 10 percent
Propane	74-98-6	1 to 5 percent

(NOTE: See Section 8 of this MSDS for Exposure Guidelines)

(NOTE: See Section 11 of this MSDS for Toxicological Information- LC₅₀ and LD₅₀)

4. FIRST AID

Inhalation: If breathing difficulty is experienced, move to area free of exposure. Provide fresh air. If necessary, provide oxygen or artificial respiration by trained personnel and obtain medical attention. Persons receiving significant exposure should be observed for 24-48 hours for signs of respiratory distress.

Eye Contact: Immediately flush with clean water for at least 15 minutes and obtain medical attention. If the person is wearing contact lenses, flush initially for 5 minutes, remove lenses and then flush for an additional 15 minutes. Contact a physician.

Skin Contact: Use a rag to remove liquid from skin and remove contaminated clothing. May cause mild irritation or temporary darkening of skin. Persistent washing with soap and water will eventually remove all residues. If irritation persists, obtain medical attention.

Ingestion: Drink 1 to 3 glasses of water and seek immediate medical attention. Do not induce vomiting. Never give anything orally to an unconscious person.

Chemical Abstracts Service #

Range of %s, = 100?

Proprietary Ingredients

What else is in this product?

Complex Products

ELEVATOR PARTS						
			% of total	Material	LBC Exception	LBC Exception type
01 Car Slings and Platform						
Flooring	35	[(lb) Weight of Flooring in Car Slings and Platform Assembly]	0.55%	Plywood GP	I11-E11/2009	Composite Sheet Goods: Added phenol/ formaldehyde only
Guide Rail Lubricators	20	[(lb) Weight of Guide Rail Lubricators in Car Slings and Platform Assembly]	0.32%	Wicking Material	I11-E3/2010	Small Components
Post	303	[(lb) Weight of Post in Car Slings and Platform Assembly]	4.79%	Hot Rolled Steel	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
Aluminum	80	[(lb) Weight of Aluminum in Guide Shoe Assembly]	1.26%	Aluminum Alloy A-380	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
Hot Rolled Steel	712	[(lb) Weight of HRS in Platform]	11.25%	Hot Rolled Steel	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
04 Entrances						
Sill Support Angles	19	[(lb) Weight of Sill Support Angles(s) in Entrances]	0.30%	Hot Rolled Steel	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
Doors	440	[(lb) Weight of Doors(s) in Entrances]	6.95%	Cold Rolled Steel	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
Dust Covers	10	[(lb) Weight of Dust Cover(s) in Entrances]	0.16%	Sheet metal Steel	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
Frames	520	[(lb) Weight of Frame(s) in Entrances]	8.22%	Cold Rolled Steel	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
Sills	19	[(lb) Weight of Sills(s) in Entrances]	0.30%	aluminum (purchased)	I11-E16/1/2010	Unintentional Trace Amounts: Galvanized Metals/ Recycled Steel
05 Jack						
Casing 2S Twinpost Jack	275	[(lb) Weight of Casing in 2S-Twinpost Jack]	4.35%	DOM Tubing		
Plunger 2S Twinpost Jack	275	[(lb) Weight of Plunger in 2S-Twinpost Jack]	4.35%	DOM Tubing		
07 Controller						
Product weight	130	total weight of product in lb	2.05%	controller galvanized steel	I11-E3/2010	Small Components
12 Power Unit						
Isolation Couplings	1	[(lb) Weight of Isolation Couplings in Assembled Power Unit]	0.02%		I11-E3/2010	Small Components
Oil Lines	185	[(lb) Weight of Oil Lines in Assembled Power Unit]	2.92%	ASTM A53 Schedule 40 Grade B		

Communicate with Manufacturers

integrated
ecostrategy

Dear: Ms. Miller

Integrated Eco Strategy is part of a team working on the Kellogg Environmental Center at Williams College in Williamstown, Massachusetts, an exciting project pursuing certification by the International Living Building Institute's Living Building Challenge.

The Living Building Challenge is a rigorous performance standard that aims to certify top-performing green building projects. Unlike other rating systems, which rely on the selection of green building traits from a menu of choices, the Living Building Challenge requires the attainment of *all* performance criteria within the Standard. Failure to achieve even one of the Imperatives means the project cannot achieve 'Living' status. To learn more about the Living Building Challenge, visit www.ilbi.org.

The Standard requires that projects screen all material and product choices to exclude a suite of substances that pose immediate and long-term threats to human and environmental health. This "Red List" is updated and expanded in response to the latest environmental health science.

Our project design team is considering specifying Thyssen Krupp Elevator on a current Living Building Challenge project. Before specifying we must first determine if the Thyssen Krupp Elevator meets the Living Building Challenge requirement that the product does not contain any Red Listed materials or chemicals. Therefore we are requesting a complete product ingredient list to demonstrate no Red List chemicals are present. It is not sufficient for your firm to simply state that none of these chemical compounds are present in the material.

Spreadsheet

Product/Status	CS MASTER FORMATS NUMBER	LBC Division based on Material	MANUFACTURER	PRODUCT NAME (and type)	MANUFACTURER'S LOCATION	Zone	RADIUS (miles)	MANUFACTURER'S CONTACT	MANUFACTURER'S EMAIL (need for Advocacy Letters)	CONTENT'S PRIMARY INGREDIENTS	SOURCE INGREDIENTS TRACKED?	SOURCE INGREDIENTS %	SOURCE INGREDIENT(S) LOCATION(S)	SOURCE INGREDIENTS DISTANCE FROM MNFR (miles)	REDLIST (list ingredients with none or 0% onsite)	RESPONSIBLES (CS Certified with COC or salvaged, or onsite)	Completed MSDS	Manuf. Ingredient List	Incomplete MSDS (Proprietary Ingredient)	11-0 Due Diligence Documentation (Red List)
LBC Compliant	033000	Concrete Finishing Systems	Vexcon Chemicals, Distributed by J.H. Harris & Sons	P/D Harris SuperAIM VOC	Philadelphia, PA	1	11mi	888-839-2661, techservice@vexcon.com		PETROLEUM DISTILLATES, PEETROLEUM HYDROCARBON			n/a	n/a	no	n/a	yes		yes	
LBC Compliant	033000	Concrete Finishing Systems	PNA Construction Technologies	Hydra Cure 16 Single Use Wet Curing Covers	Greensboro, NC	5	1307mi	800-542-0214, Sue Woodridge Vice President, Operations		Polyester, Rayon, Polyethylene Film, PPHot melt Polymer	no				no	n/a			yes	
LBC Compliant	033000	Concrete Finishing Systems	BayDill Company	Recote Release Agent	Chicopee, MA	1	11mi	James Britta, 413.737.7728		Petroleum	no				no	n/a	yes (letter confirms 100%)			
LBC Compliant	033000	Concrete Finishing Systems	Grace	Ador Engineering Sewell Hydrophilic Waterstop Strip	Cambridge, MA	1	11mi	James Falconer, 571.232.5723		unknown, proprietary	no				no	n/a			yes (Red List from manufacturer)	
LBC Compliant	033000	Misc. Hardware	Prime Source Building Products	Bar Tie"	n/a					iron	no				no	n/a	yes			
LBC Compliant	033000	Wood, Plastic, Composites	Valley Concrete	Salvaged Wood Forms	n/a	n/a		Dennis Shockro, 413.648.9182x104		wood	no				n/a		n/a			
LBC Compliant	033000	Concrete	Construction Services	Interior Slab Concrete Mix Design	Wilbraham, MA	1	11mi	Ralph Dids, 413.949.0507		cement	yes	slag cement, concrete sand, gravel, rocks, water	St. Constant, Quebec, CA; Baltimore MD, Sunderland MA, Northampton MA, Northampton MA	298 (furtherst)	no	n/a	yes			
LBC Compliant	033000	Concrete	Construction Services	Site Wall Concrete Mix Design	Wilbraham, MA	1	11mi	Ralph Dids, 413.949.0507		cement	yes	slag cement, concrete sand, gravel, water	St. Constant, Quebec, CA; Baltimore MD, Sunderland MA, Northampton MA, Northampton MA	298 (furtherst)	no	n/a	yes			
LBC Compliant	033000	Concrete	Construction Services	Exterior Slab Concrete Mix Design	Wilbraham, MA	1	11mi	Ralph Dids, 413.949.0507		cement	yes	slag cement, concrete sand, gravel, water	St. Constant, Quebec, CA; Baltimore MD, Sunderland MA, Northampton MA, Northampton MA	298 (furtherst)	no	n/a	yes			
LBC Compliant	033000	Metals	Nucor Corporation	Bar and Structural Steel Products, Steel Reinforcing	Auburn, NY	1	11mi	Jim Biernat, 315.258.4288, biernat@nucor.com		steel	no	Steel	Erawfordville, IN; Hickman, RI; Huger, SC; Decatur, AL	n/a	no	n/a	yes		yes	
LBC Compliant	033000	Metals	Nucor Corporation	Merchant and Rebar Steel Reinforcing (Bar Steel)	Auburn, NY	1	11mi	Jane Tirrell, 413.512.2123	need	iron	no				no	n/a				
LBC Compliant	033000	Concrete	Lafarge	Lafarge Portland Cement	St. Constant, Quebec	1	11mi	Brian Barry, 503.767.2159		cement	yes	slag cement, concrete sand, gravel, rock, potable water	St. Constant, Quebec, CA; Baltimore MD, Sunderland MA, Amherst MA, Northampton MA, Northampton MA	298 (furtherst)	no	n/a	yes			
LBC Compliant	033000	Concrete Finishing Systems	Lafarge	Lafarge Slag Cement	Baltimore, MD	1	11mi	Brian Barry, 503.767.2159		slag	no			n/a	no	n/a	yes			
LBC Compliant	033000	Concrete	Delta Sand & Gravel	Concrete Sand, 3/4" & Gravel, Stone, 3/4" & 8" Trap Rock	Northampton MA or Springfield MA	1	11mi	Ralph Dids, 413.949.0507		stone	yes	sand, stone, rock	Amherst MA or Sunderland MA	20mi			yes			
LBC Compliant	033000	Concrete Finishing Systems	Precast Specialties Corp	AEA-14 Air Entraining admixture, Misc Concrete High Range Water Reducing Admixture	Abington, MA	1	11mi	(781)-878-7220	n/a	Concrete	yes	Concrete	Fairless Hills, PA	210mi	no	n/a	yes			
LBC Compliant	033000	Concrete Finishing Systems	L.E. Weed & Son	L.E. Weed Precast TerraCrete	Newport, NH	1	11mi	Alan Phillips, leweedandson@verizon.net, 603.863.1540		cement, aggregate, water	yes	cement, aggregate	Boston, MA	111mi.	no	n/a	yes			
LBC Compliant	033000	Concrete Finishing Systems	Clemente Fine Concrete & ASFS Chemical Company	Concrete Mix Designs	320 Hubbard Ave, Dalton, MA	1	11mi	John Clemente, 499-4941, Clemente@FaneRichards.com, 75000 BASF		Portland Cement, Sand, Gravel, Water, Flyash, Admixtures	yes	Sum of Constituents	Lehigh Cement Union, Bridge, MD, USA	396	no	n/a			yes (See Submit all Documents)	

Database

File Edit View Insert Records Scripts Help

Records: 1 | 5 Total (Unsorted) | Show All | New Record | Delete Record | Find | Sort

Layout: Project | View As: [Grid]

Project Layout

Vetted Product List

Pre-Vetted Product List

ProjectID: 1
 Project Name: Vetted Product List
 Project Zip Code: []

Enter New Product

Filters:
 CSI Division: 00-All
 LBC Compliant: Yes No Blank
 LBCVersionFind: 2.1 Found

Choose Project: Hitchcock
 Distance From Zip Code: 01002

Goto Project | Copy Selected Products

Product Name	CSI Division	LBC Compliant	Product Status	LBC Version	Zone	Red List?	FSC Resp. Ind.	Declared	Select	Distance	Zone
Pipe & Fittings	22	Yes	LBC Compliant	2.1	5	none			Details	665	3
1006A UND Plain CV	33	Yes	LBC Compliant	2.1	5	none			Details	1,451	4
155WC Offset Lavatory Grid Strainer	22	Yes	LBC Compliant	2.1	5	none			Details	73	1
1600 System 1	08 Openings Ex	Yes	LBC Compliant	2.1	5	PVC, other?			Details	225	1
1900 Operable Door Grille	23	Yes	LBC Compliant	2.1	5	none			Details	2,530	5
2008Z UND Frame	33	Yes	LBC Compliant	2.1	5	none			Details	1,451	4
201-AL8XKABCP Manual and Metering Faucets	22	Yes	LBC Compliant	2.1	5	none			Details	790	3
48" Precase Concrete Catch Basin Extended Ba	33	Yes	LBC Compliant	2.1	5	none			Details	33	1
500 Gallon Vertical bulk storage tank, TC4676IC	22	Yes	LBC Compliant	2.1	5	none			Details	264	1
5520MS UND DNW GR	33	Yes	LBC Compliant	2.1	5	none			Details	1,451	4
5523Z UND FLG3 FR	33	Yes	LBC Compliant	2.1	5	none			Details	1,451	4
5524Z UND FLG4 FR	33	Yes	LBC Compliant	2.1	5	none			Details	1,451	4

LBC & Materials Advocacy

The logo for Integrated Eco Strategy, featuring the words "integrated" and "ecostrategy" in a green, lowercase, sans-serif font. The text is positioned to the left of a dashed grey arc that curves upwards and to the right.

integrated
ecostrategy

[Date]

VIA EMAIL

Dear [NAME OF CEO OF CORPORATION]:

Integrated Eco Strategy (IES), LLC, is part of a team working on the R.W. Kern Center, a gateway building at Hampshire College in Amherst, MA. This project is pursuing certification by the International Living Future Institute's Living Building Challenge program. Living Building Challenge is a rigorous performance standard that aims to certify top-performing green building projects. Currently, projects totaling over 9 million square feet are pursuing the "Living" designation. To learn more about the Living Building Challenge, visit <http://www.living-future.org>.

In addition to the project at Hampshire College, IES has two other Living Building Challenge projects, where we provide guidance for the specification, purchase, and installation of approximately \$20 million dollars in building materials annually. The Standard requires that we screen all material and product choices to exclude a suite of substances that pose immediate and long-term threats to human and environmental health. This "Red List" is updated and expanded in response to the latest environmental health science. The list applied to our project is included at the end of this letter.

[NAME OF MANUFACTURER'S PRODUCT] has been determined to not meet the Living Building Challenge requirements due to your reluctance to share the list of all, including proprietary, ingredients in the product.

However, the Living Building Challenge has granted a temporary exception for the use of [NAME OF MANUFACTURER'S PRODUCT] on our project, due to the fact that no other compliant products are currently available as substitutions. We are writing this letter to inform you that, given the potential for Red List ingredients in products that are not fully disclosed, our purchase of this product does not constitute an endorsement of your practices. We hope that you will reconsider your decision not to divulge the proprietary ingredients.

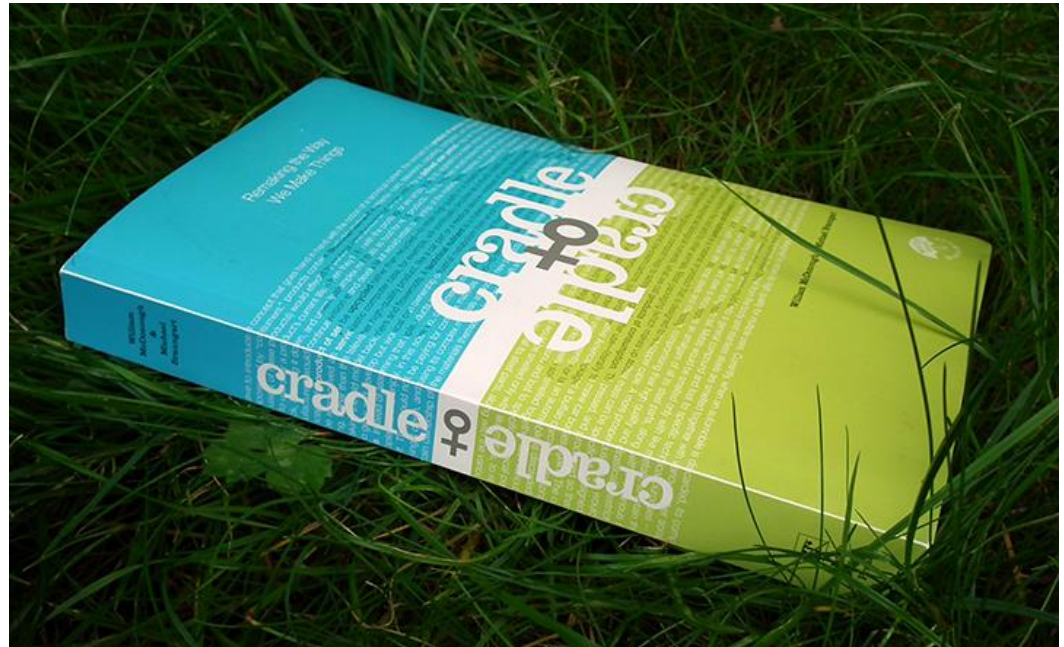
Transparency is a vital element of a sustainable marketplace. As a global community, the only way we can transform into a truly sustainable society is through open communication and honest information sharing. In recognition of such commitment and leadership, we urge you to consider joining Declare.

Declare products enjoy preferential access to Living Building projects: every Living Building must contain at least one Declare product per 500 square meters

Integrated Eco Strategy
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integratedecostrategy.com

World Market Still Getting Ready

- LBC projects will change the world market.
- Until we change the world, we will have to approve and use products with Red List content



LBC Exceptions

Table 1. Established Exceptions by Red List Materials/Chemicals

MATERIALS/ CHEMICALS	EXCEPTION		NOTES
Asbestos	NA		
Cadmium	I11-E16 11/2012	Galvanized metal	
Chlorinated & Chlorosulfonated Polyethylene	I11-E6 11/2009	HDPE and LDPE	Footnote 43 of the Standard. See Clarifications.
Chlorofluorocarbons (CFCs)	NA		
Chloroprene (Neoprene)	I11-E3 4/2010	Hydrotech vegetated roof system	Flex-Flash parts are Small Components
Formaldehyde	I11-E10 8/2008	Glulam beams	Phenol formaldehyde is allowed
	I11-E11 1/2009	SIPS panels	Phenol formaldehyde allowed in the OSB
	I11-E11 1/2009	Composite wood sheet goods	Phenol formaldehyde allowed in structural composite wood sheet goods
Halogenated Flame Retardants	I11-E12 9/2010	Spray foam insulation	Other options are available in some areas
	I11-E12 9/2010	SIPS	
	I11-E12 9/2010	Rigid insulation	
	NA		Boron is allowed
	I11-E19 11/2011	Motorized window shades	
Hydrochlorofluorocarbons (HCFCs)	I11-E14 10/2012	Tenant Improvements	When <25% of existing chiller floor area
Lead: added	I11-E7 2/2009	Solar battery systems	
	I11-E8 1/2009	Door Hardware	
	I11-E9 1/2009	Paint	If “no intentionally added lead”
	I11-E16 11/2010	Recycled Steel	
	I11-E16 11/2010	Galvanized metal	If not intentionally added for finish
	I11-E16 11/2010	Gypsum Wall Board	Traces of cadmium, mercury or lead are allowed

Thank you

Further questions?

Charley Stevenson

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