



***CALIFORNIA
GREEN CHEMISTRY
INITIATIVE***

CCLHO/CCDEH Conference

**California Environmental Protection Agency
Department of Toxic Substances Control
May 2, 2008**



What is Green Chemistry?

- **The consideration of public health and environmental effects of chemicals—during the design of products and processes**
- **A fundamentally new approach to environmental protection**

Old Approach: Cradle to Grave

- 20th Century—Single Medium (air, water, land)
- For the past 40 years, we have focused on end-of-pipe or after product use
 - *Discharges*
 - *Emissions*
 - *Wastes*



New Approach: Cradle to Cradle

- **21th Century—Multi-media, life-cycle**
- **Through design and innovation, reduce the use of harmful chemicals, generate less waste, and use less energy**



The Beginning



April 2007

Secretary Adams announced the Green Chemistry Initiative and encouraged all stakeholders to participate and contribute their ideas.

Initiative Timeline

Options
deadline

Recommendation
deadline

2007

2008

A M J J A S O N D J F M A M J J

Collect ideas
and comments

Compile options

Submit report on
options

Evaluate options

*Submit
Recommendations*

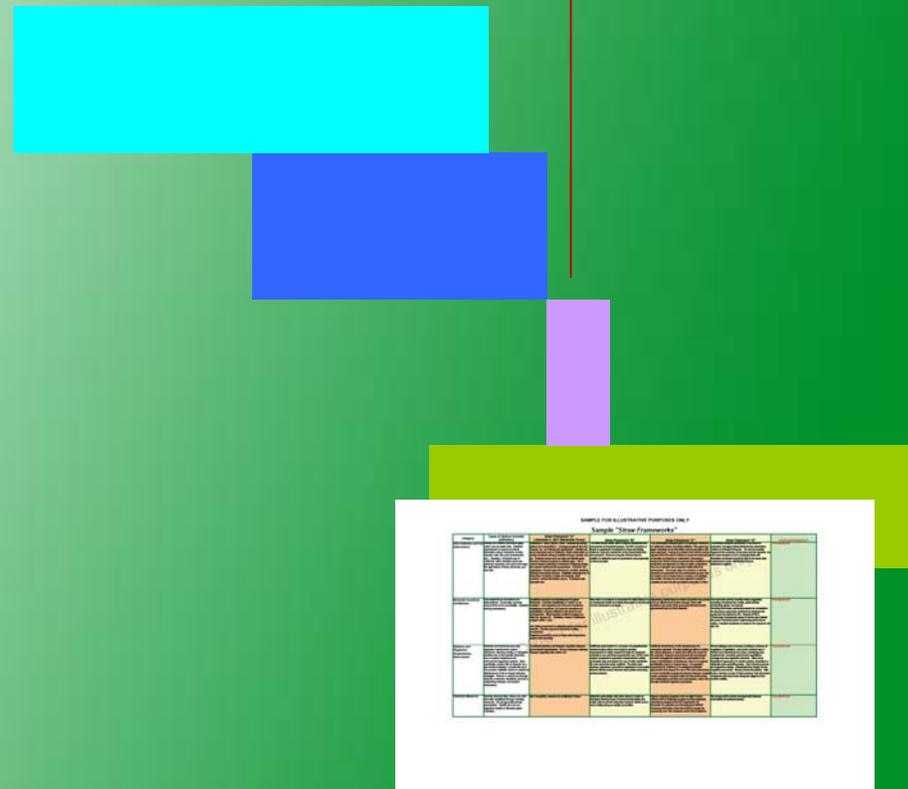


TABLE FOR ILLUSTRATIVE PURPOSES ONLY
Sample "Issue Framework"

Issue	Issue Description	Impact	Options	Recommendations
Issue 1
Issue 2
Issue 3
Issue 4
Issue 5

PHASE 1: Listening

April through December 2007

✓ Conversation with California

- 57,000 blog hits
- 411+ pages of ideas

Green Chemistry
Information Exchange

✓ Symposia and Meetings

- Green Chemistry I, II, and III Symposia
- Nanotechnology I and II Symposia
- Biomonitoring Symposium
- OEHHA Green Chemistry Conference

✓ Phase 1 Options Report

- 818 options
- 8 chapters
- 37 "grey box" options

✓ Key Elements

- 6 "first steps"





PHASE 2: Analysis

January through June 2008

- ◆ **Objective: evaluate policy alternatives and recommend a framework for California**
- ◆ **Process**
 - Public
 - Inclusive
 - Transparent
 - Effective
- ◆ **Participants**
 - Government
 - Academia
 - Environmental groups
 - Community Groups
 - Industry, Business, and Labor groups
 - Public
- ◆ **Deliverable: *“Recommendations Report” to the Secretary and Governor—by July 1, 2008***

Science Advisory Panel



Chair: John Warner, Ph.D.



Vice Chair: John Balmes, M.D.



- About two dozen of the nation's top scientists and engineers have agreed to serve on the Green Chemistry Science Advisory Panel.
- The panel will assist us on technical matters and advise us on the "state of the science" for transition to Green Chemistry and Engineering



Key Elements

Inter-departmental teams are convening to define current baseline and develop implementation plans for these “first steps” actions:

- *Include Green Chemistry principles in the Environment and Education Initiative*
- *Train a new generation of scientists, engineers, and technical works*
- *Account for chemical toxicity and impacts in governmental procurement decisions*
- *Expand California's pollution prevention program*
- *Strengthen consumer protection enforcement*
- *Empower consumers to make informed choices*
- *Forge strategic partnerships and disseminate information on toxic chemicals*



Potential Framework Options

- Analysis of the options presented in Phase One
- Product Stewardship and Extended Producer Responsibility ideas were presented in Phase One
- **But How?**
- **The challenge in Phase Two:**
 - How?
 - By whom?
 - When?
 - Who pays?
 - Etc.



Please Join Us!

Please visit the “blog” and submit your implementation ideas soon.

Browse and comment at:

www.dtsc.ca.gov

(Green Chemistry tab)