

*California Green
Chemistry Program*

**Green Ribbon Science Panel
Agenda Item #3**

April 29, 2009

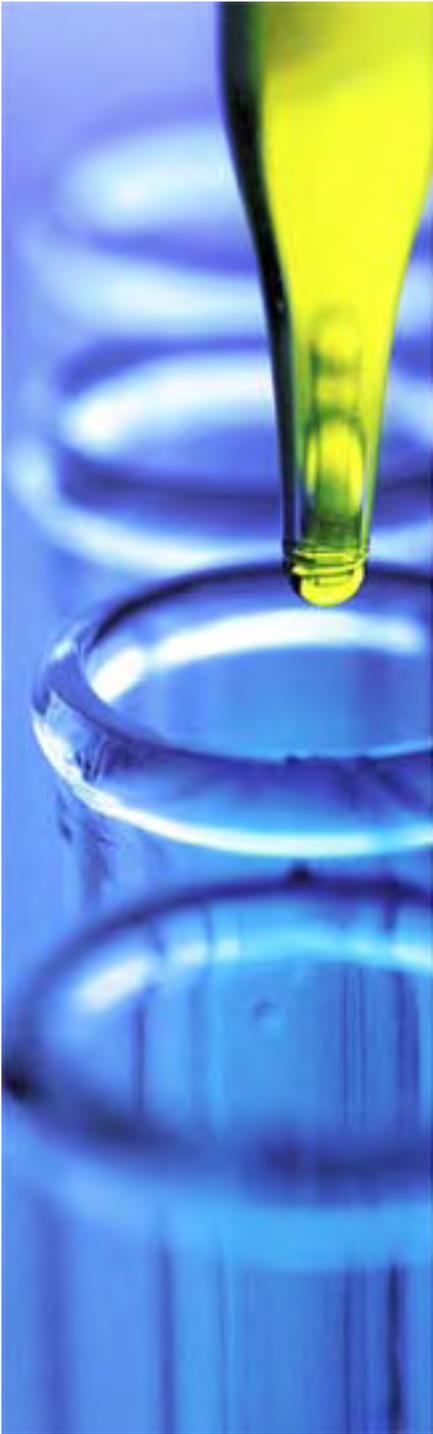
Donald Owen, Jr., P.E.

Department of Toxic Substances Control
California Environmental Protection Agency



OVERVIEW

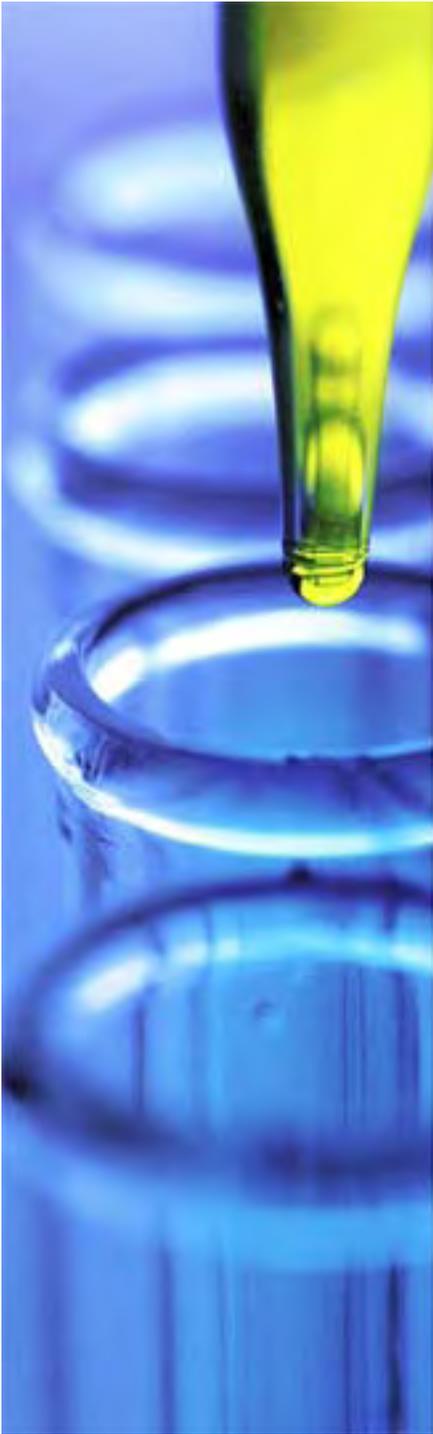
- *Final Report*
- *Two New Statutes*
- *Brainstorming*
- *Draft Straw Rule*
- *Questions for the Panel*



FINAL REPORT

Six Policy Recommendations

1. **Expand Pollution Prevention**
2. **Develop Green Chemistry Workforce, Education, Research, and Tech Transfer**
3. **Create Online Product Ingredient Network**
4. **Create Online Toxics Clearinghouse**
5. **Accelerate Quest for Safer Alternatives**
6. **Move Toward Cradle-to-cradle Economy**



Green Chemistry

Two California laws

- **Chapter 559**
(Assembly Bill 1879): develop framework for addressing chemicals of concern, evaluating alternatives, and moving toward safer consumer products
- **Chapter 560**
(Senate Bill 509): increase information about toxicity and other “end-points” for chemicals via an online portal

Brainstorming

- **Wiki for Ideas for Draft Rule**
- **Informal Workshops**
- **Consultation**
- **Green Ribbon Panel Advice**
- **Formal Rulemaking**

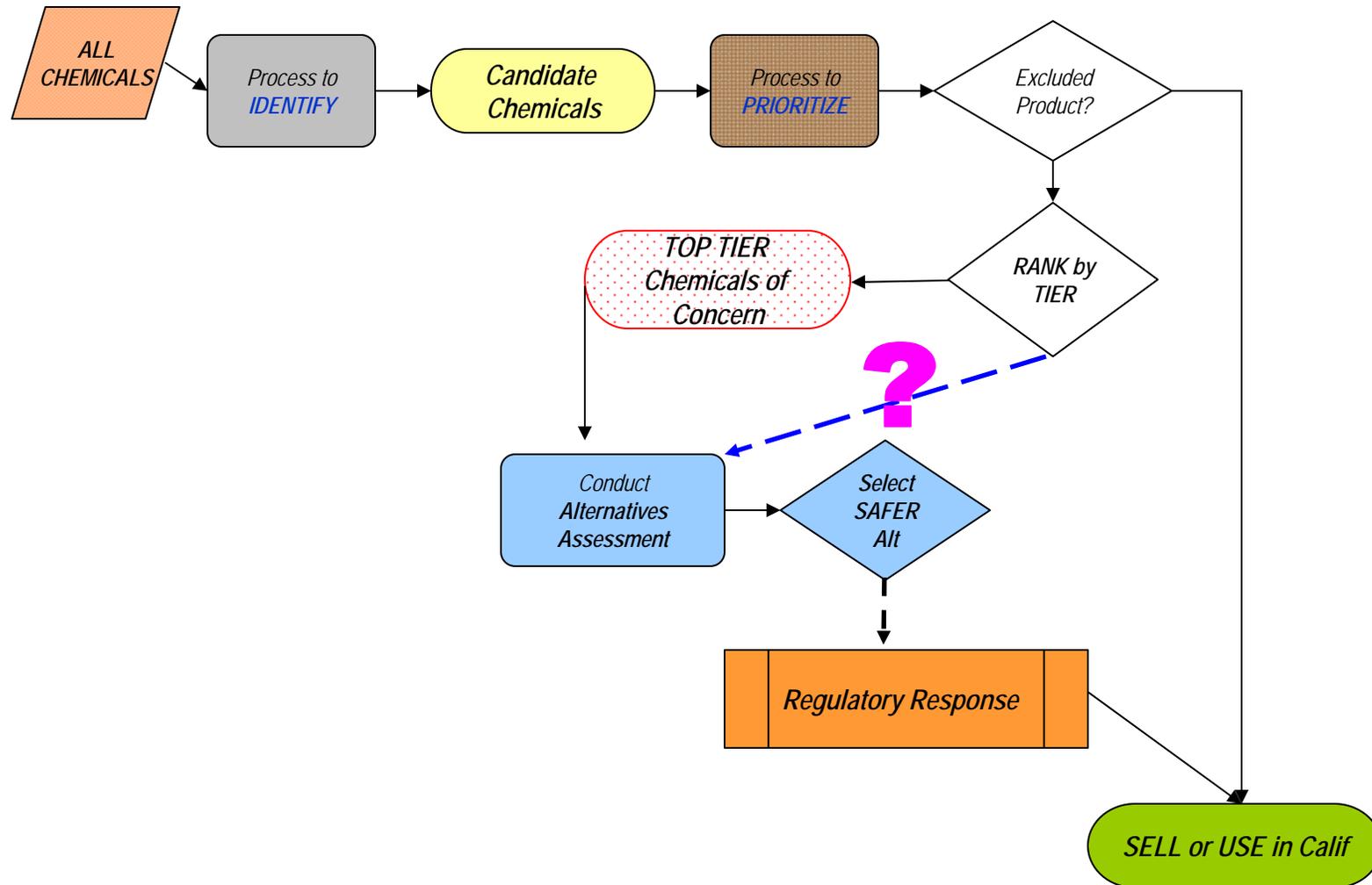
Slide 5

DTSC1

Department of Toxic Substances Control, 4/27/2009

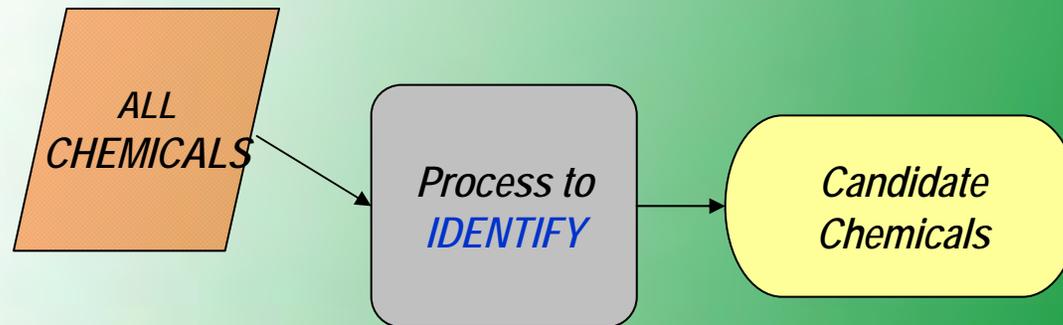
Safer Alternatives

Rough Draft Flow Concept



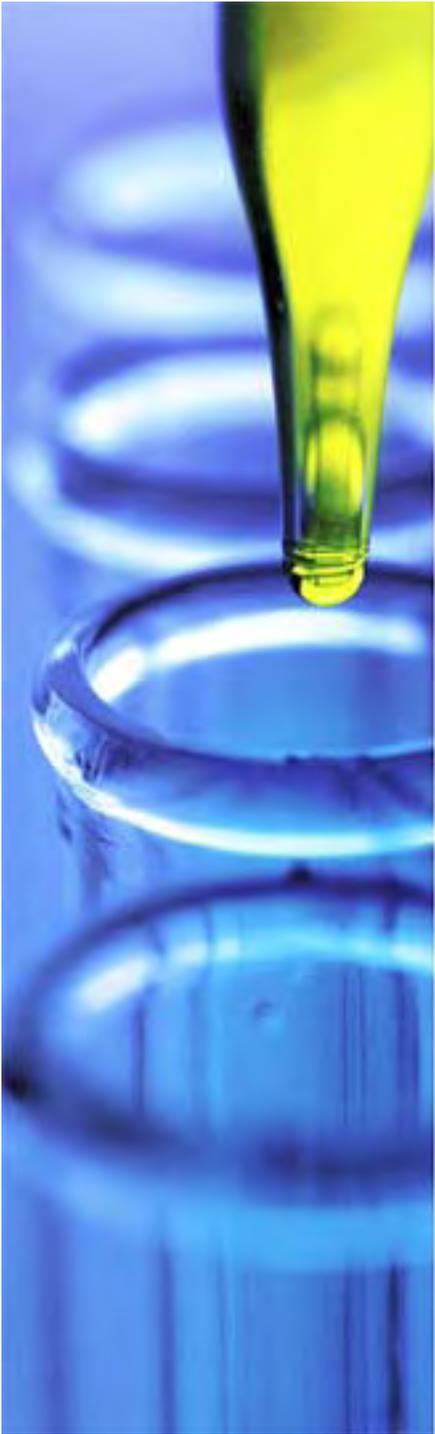
Safer Alternatives

Step 1: Process to Identify Chemicals



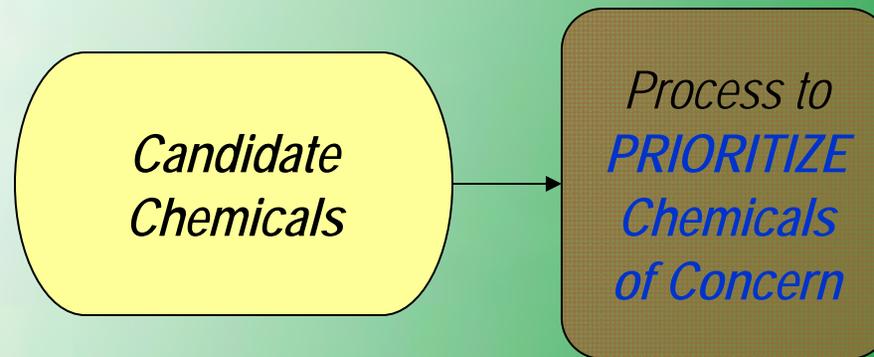
State adopts a process, which sets criteria for identification:

- *Hazard end-points (CMR, PBT, etc.)*
- *Authoritative bodies*
- *Both knowns and unknowns*
- *Existing and new chemicals*
- *Use proxy methods*
- *Other criteria ?*



Safer Alternatives

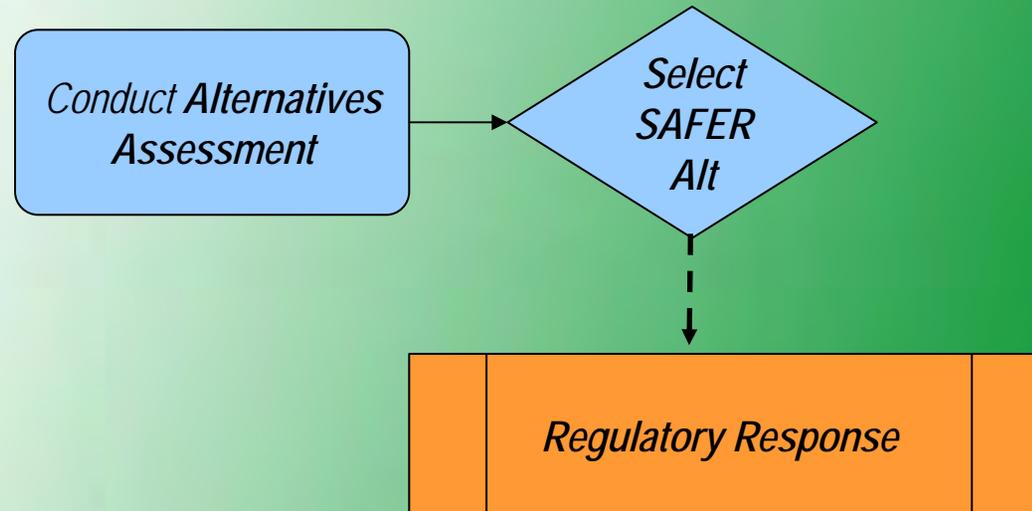
Step 2: Process to Prioritize Chemicals of Concern



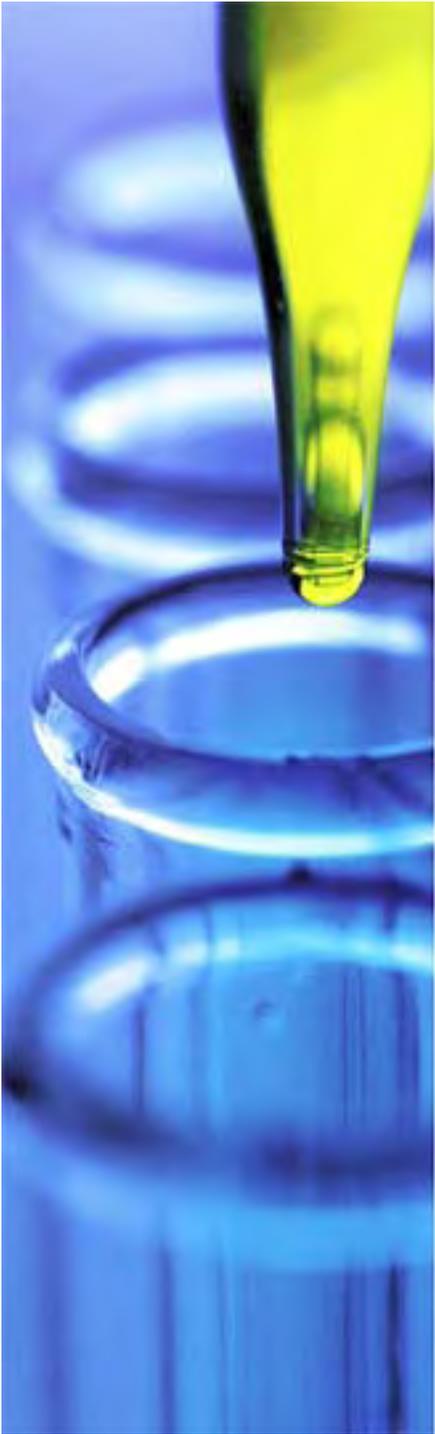
State adopts a process, and sets criteria, which divides the candidate chemical universe into tiers.

Safer Alternatives

Step 3: Evaluate Alternatives Applying Lifecycle (to Product)



Manufacturer evaluates feasible alternatives using appropriate methodology/tools. Compares alternatives and generates analysis which guides selection and any necessary regulatory response(s).



Safer Alternatives

Step 4: Regulatory Response

	REGULATORY RESPONSE:	
	<ul style="list-style-type: none">• <i>Monitor</i>• <i>Label</i>• <i>Restrict or condition use</i>• <i>Conduct research</i>• <i>Require end-of-life management</i>• <i>Other ?</i>	

- *Monitor*
- *Label*
- *Restrict or condition use*
- *Conduct research*
- *Require end-of-life management*
- *Other ?*

Which condition(s), in alternatives analysis, lead to which response(s)?