



Draft Stage 1 Alternatives Analysis Guide



Department of Toxic Substances Control



Cal/EPA

Welcome!

Reminder - Regulations vs. guidance

Helpful Information and resources

Decision making – storytelling

Not a linear process

Please give us feedback



About the Webinar

Introduce the Guide

Solicit comments for the Guide



<http://www.dtsc.ca.gov/SCP>

SCP's Draft Stage 1 Alternatives Analysis (AA) Guide

Join DTSC for a webinar
to learn more about
the AA Guide

[GET WEBINAR INFO!](#) ▶



View the AA Guide
in CalSAFER and Provide Comments

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Draft Stage 1 Alternatives Analysis Guide

Action:

The Department of Toxic Substances Control is seeking public comments on the Draft Stage 1 Alternatives Analysis Guide.

Summary:

California's Safer Consumer Products (SCP) program challenges product designers and manufacturers to reduce toxic chemicals in their products. The SCP regulations establish innovative approaches for responsible entities to identify, evaluate, and adopt better alternatives. The SCP approach requires an Alternatives Analysis (AA) that considers important impacts throughout the product's life cycle and follows up with specific actions to make the product safer. The Department prepared the Draft Stage 1 Alternatives Analysis Guide to help responsible entities conduct a first stage AA to meet the regulatory requirements. Public comments are specifically requested to provide the names of tools, methods, approaches, and data sources not already mentioned, as well as examples for steps and approaches to complete an AA.

Documents:

You may make comments on document(s) shown below by clicking on the corresponding "Submit" button.

Submit a comment

Submit a General Comment

Title

[Draft-Stage1-AA-Guide](#)

Submitted By

DTSC

Status

Open

Comment Period

September 24, 2015 to
November 16, 2015 11:59AM PST

Document Type

AA Report

Comments Published

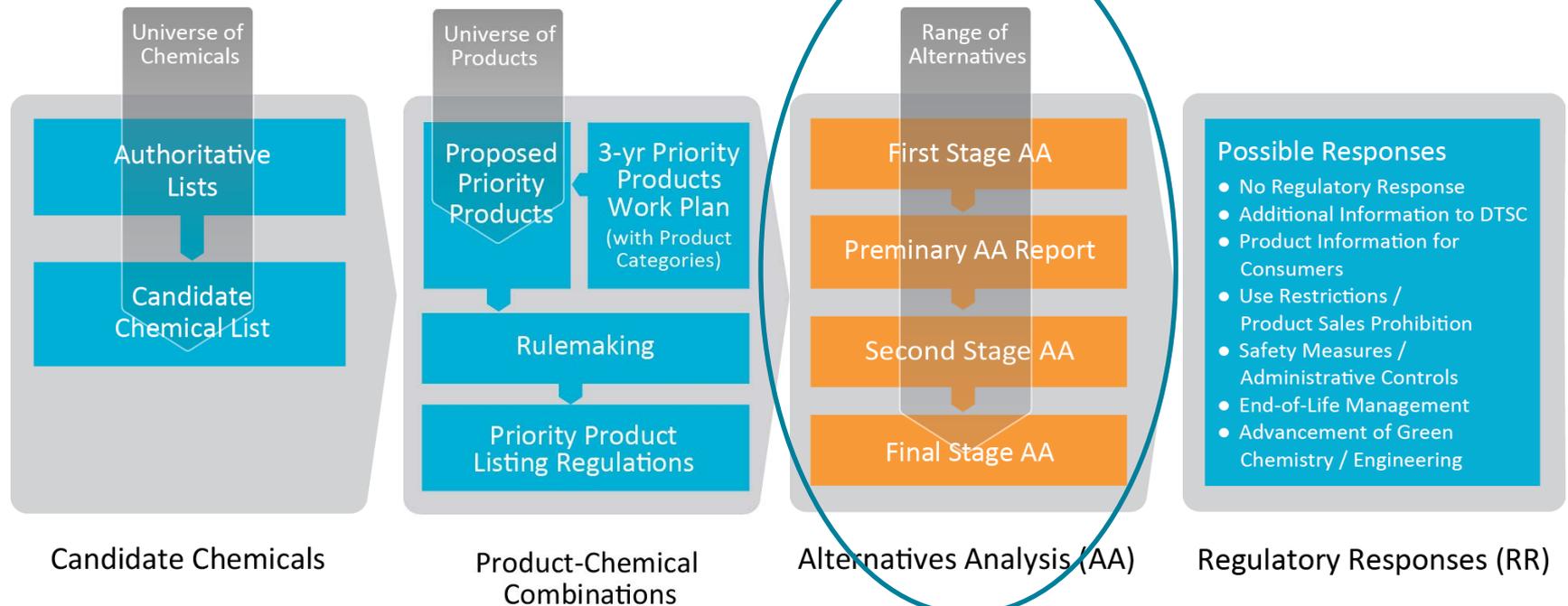
[View Comments \(0\)](#)

Supporting Documents



SCP Regulations: Four-Step Framework

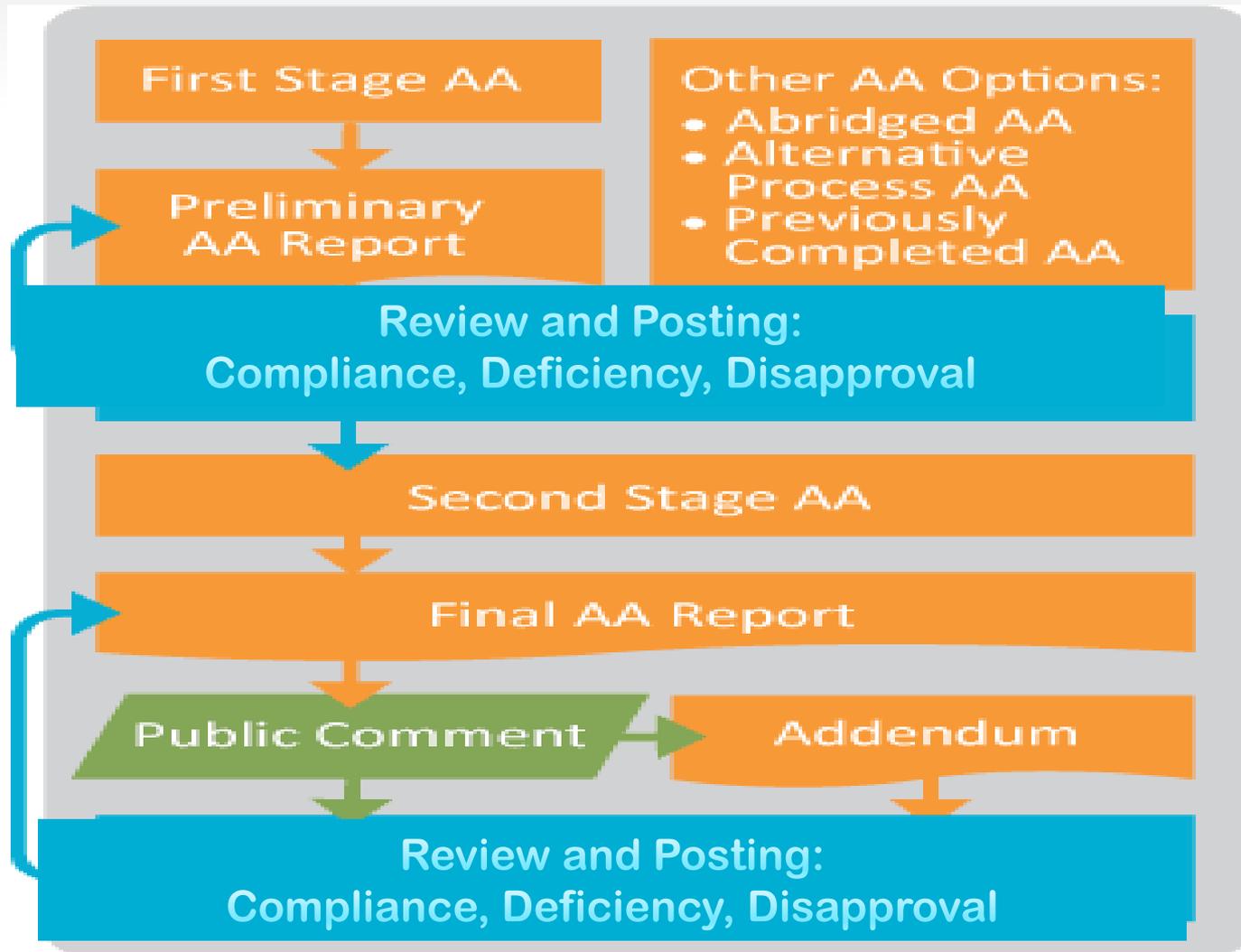
California Code of Regulations, title 22
Chapter 55. Safer Consumer Products
sections 69501 through 69510



Alternatives Analysis:
Article 5
section 69505



Alternatives Analysis Process

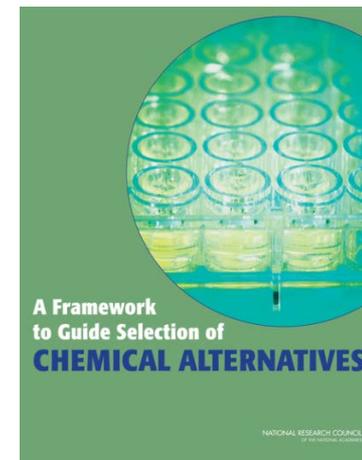
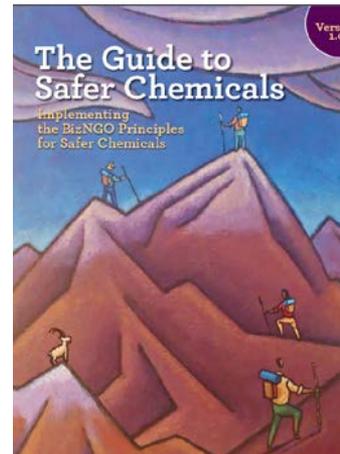
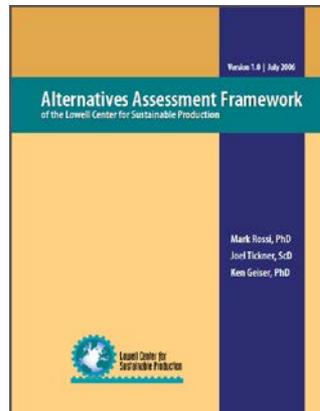
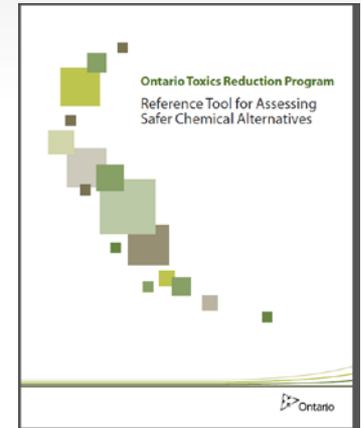
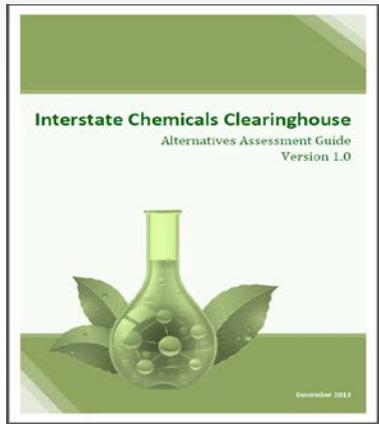


About the Guide...

The Guide IS:	The Guide IS NOT:
Guidance	Regulations
Dynamic	Static
Multi-purpose for multiple audiences	Meant to be used solely as a step-by-step guide
A menu of options	A checklist



About the Guide...



Differences between SCP and Other AA Frameworks

Specific list of relevant factors

Economic Impacts

- Public Health and Environmental Costs
- Costs to Government and Non-Profit Organizations

Mandatory Life Cycle Consideration

Not Limited to Chemical Substitution

No Requirement to Generate New Data



How Guide is Organized

- First Stage AA

Chapter 1 – AA Framework

Chapter 2 – Product Requirements and
Alternatives

Chapter 3 – Relevant Factors

Chapter 4 – Impact Assessments

Chapter 5 – Screening Alternatives

Screening Analysis



How Guide is Organized

- Second Stage AA

.....Under development

Chapter 6 – Exposure Assessment

Chapter 7 – Life Cycle Impact Assessment

Chapter 8 – Economic Analysis

Chapter 9 – Information Needs and
Transparency

Chapter 10 – Alternatives Comparison

Chapter 11 – Review and Evaluation of AA Reports

In-Depth Analysis



Chapter 1: AA Framework

Two-stage AA Process

Other Compliance Options

Appendix: Required Information for AA Reports



Chapter 2: Product Requirements

Function and Performance

Legal Requirements

Role of Chemical of Concern

Identifying alternatives

Appendix: Data Sources for Identification of Alternatives



Example: Identifying Product Requirements and Alternatives

Product: Paint and varnish removers with Chemical X

Product Function: To remove paint or varnish from a particular substrate such as wood or metal, to restore the substrate to its original condition, or to prepare it for new paint or varnish.

Chemical X Function: Dissolves paint by bonding to the chemical, causing it to separate from the substrate.

Performance: Amount of coating removed based on stripping time; condition of substrate after coating removal

Legal: None

Alternative products: *Should achieve the same function as the Priority Product.*

- *Chemical Substitute: Alternative chemical is likely to be another solvent.*
- *Alternative Product Design: Sand paper, blasting media, heat guns*



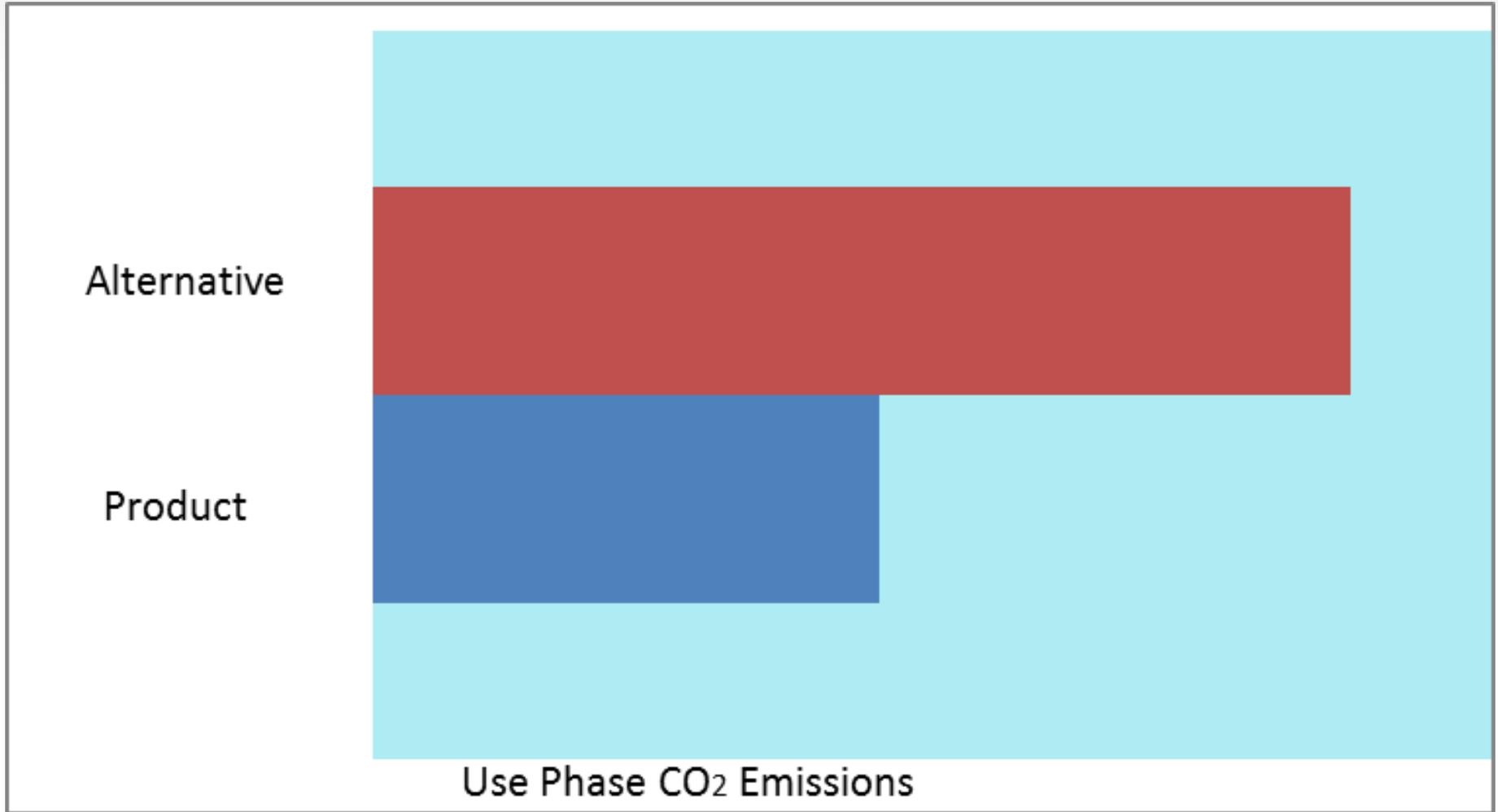
Chapter 3: Relevant Factors

Makes material contribution

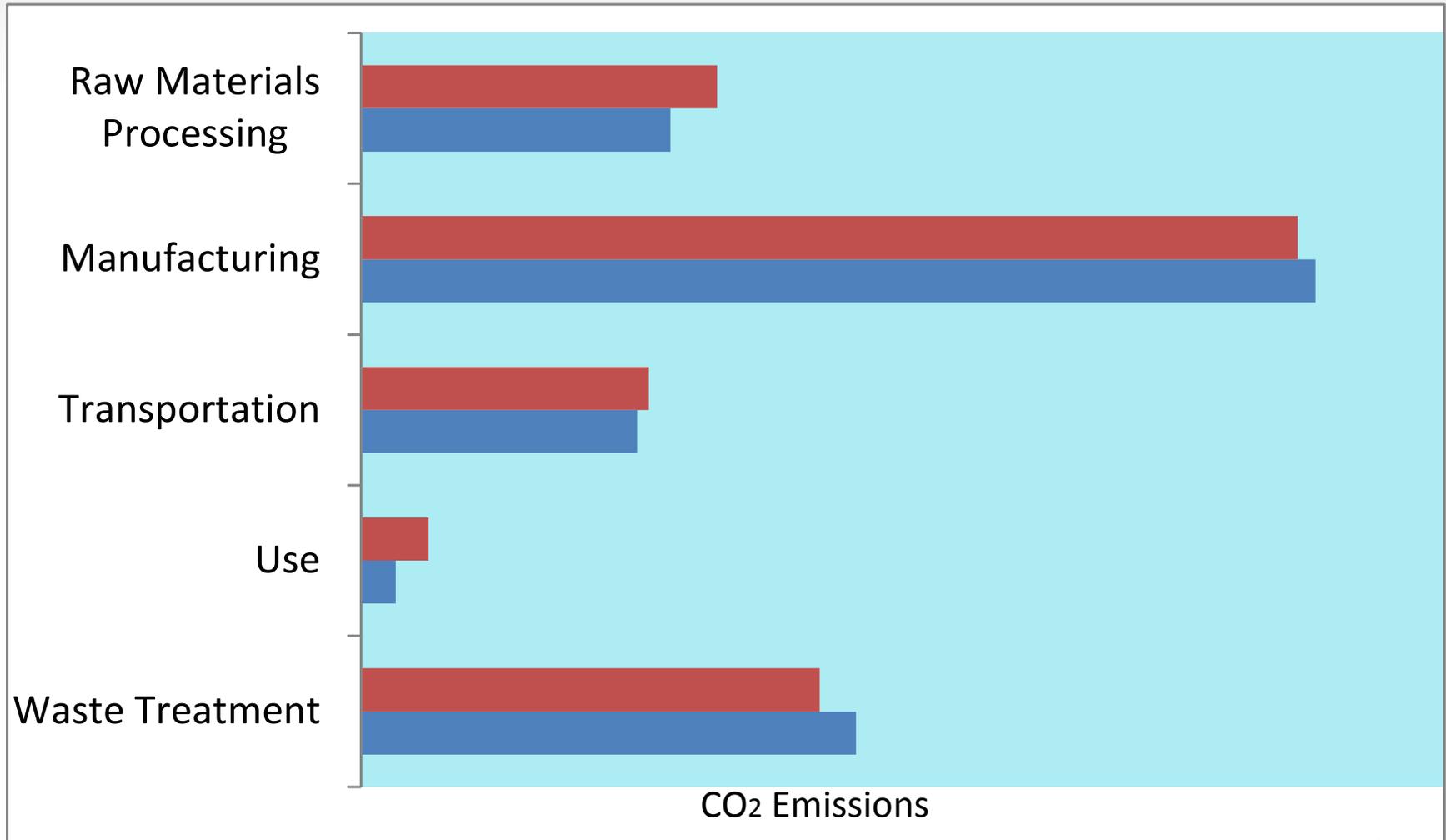
Material difference



Relevant Factors Example



Relevant Factors Example



Factors to be Considered for Relevance:

Adverse environmental impacts

Adverse public health impacts

Adverse waste and end-of-life effects

Environmental fate

Materials and resource consumption impacts

Physical chemical hazards

Physicochemical properties

Associated exposure pathways and life cycle segments



Factor Sub-category	Factors	Subfactors
Adverse environmental impacts ²	Adverse air quality impacts ³	California Toxic Air Contaminants ⁴
		Carbon dioxide
		Hydrofluorocarbons
		Methane
		Nitrogen trifluoride
		Nitrous oxide
		Perfluorocarbons
		Sulfur hexafluoride
		Other global warming potential gases ⁵
		Greenhouse gases ⁵
	Nitrogen oxides	
	Particulate matter ⁷	
	Stratospheric ozone depletion substances ⁸	
	Sulfur oxides	
	Tropospheric ozone forming compounds ⁹	
	Adverse ecological impacts ¹⁰	on aquatic, avian or terrestrial animal, plant organisms, or microbes
	Adverse soil quality impacts ¹¹	on aquatic and terrestrial ecosystems
	Adverse water quality impacts ¹²	Compaction or other structure changes
Erosion		
Loss of organic matter		
Soil sealing		
Increase in biological oxygen demand		
Increase in chemical oxygen demand		
Increase in temperature		
Increase in total dissolved solids		
Introduction/Increase in California CWA priority pollutants ¹³		
Introduction/ Increase in California CWA pollutants ¹⁴		
Introduction/ Increase in chemicals with MCLs ¹⁵		
Introduction/Increase in chemicals with Notification Levels ¹⁶		
Introduction/Increase in chemicals with public health goals for drinking water under California		



Relevant Factors to Consider In Second Stage

- Adverse Impacts and Multimedia Life Cycle Impacts
- Product Function and Performance
- Economic Impacts



Approaches to Relevant Factors Identification

Life Cycle Thinking

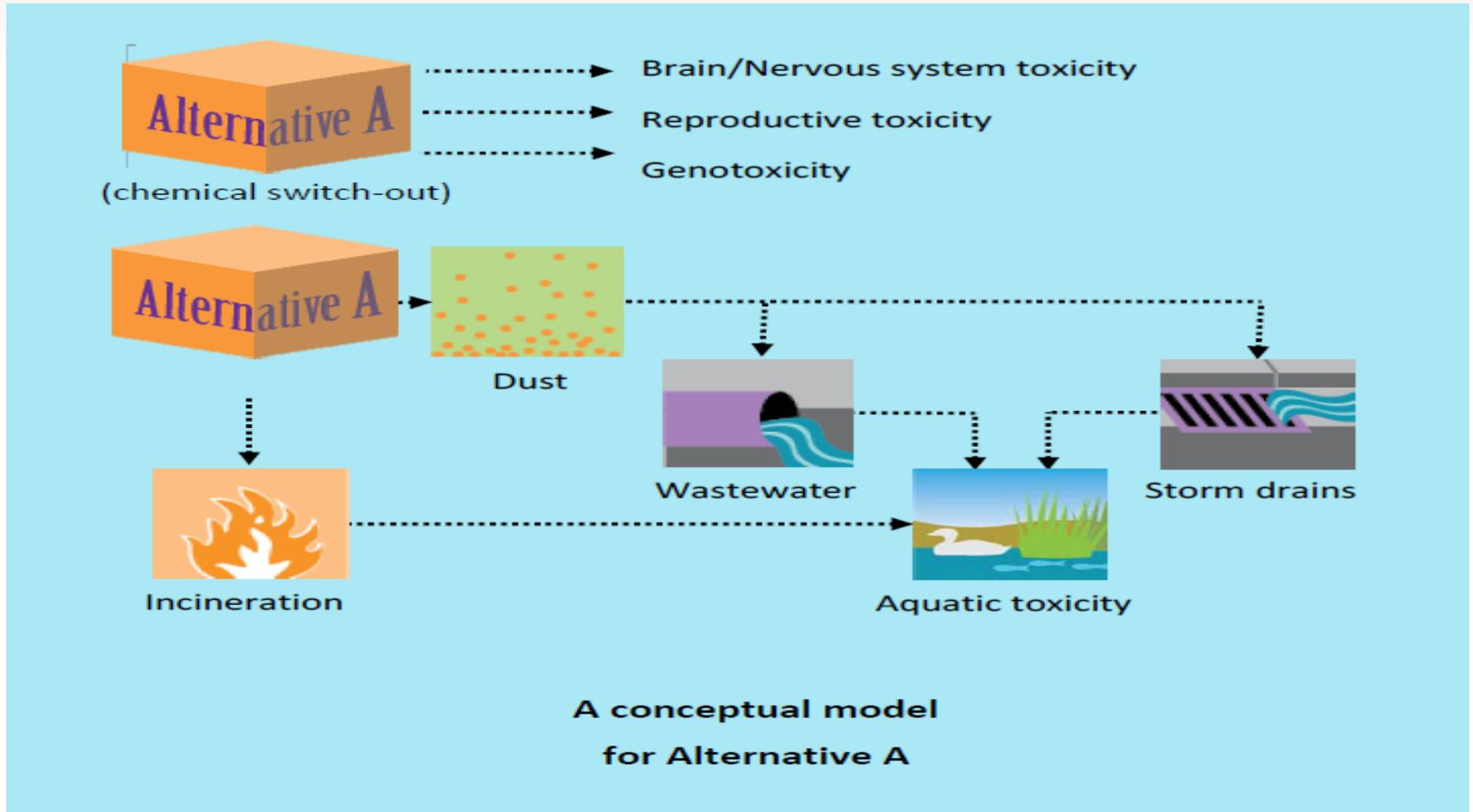
Iterative Process

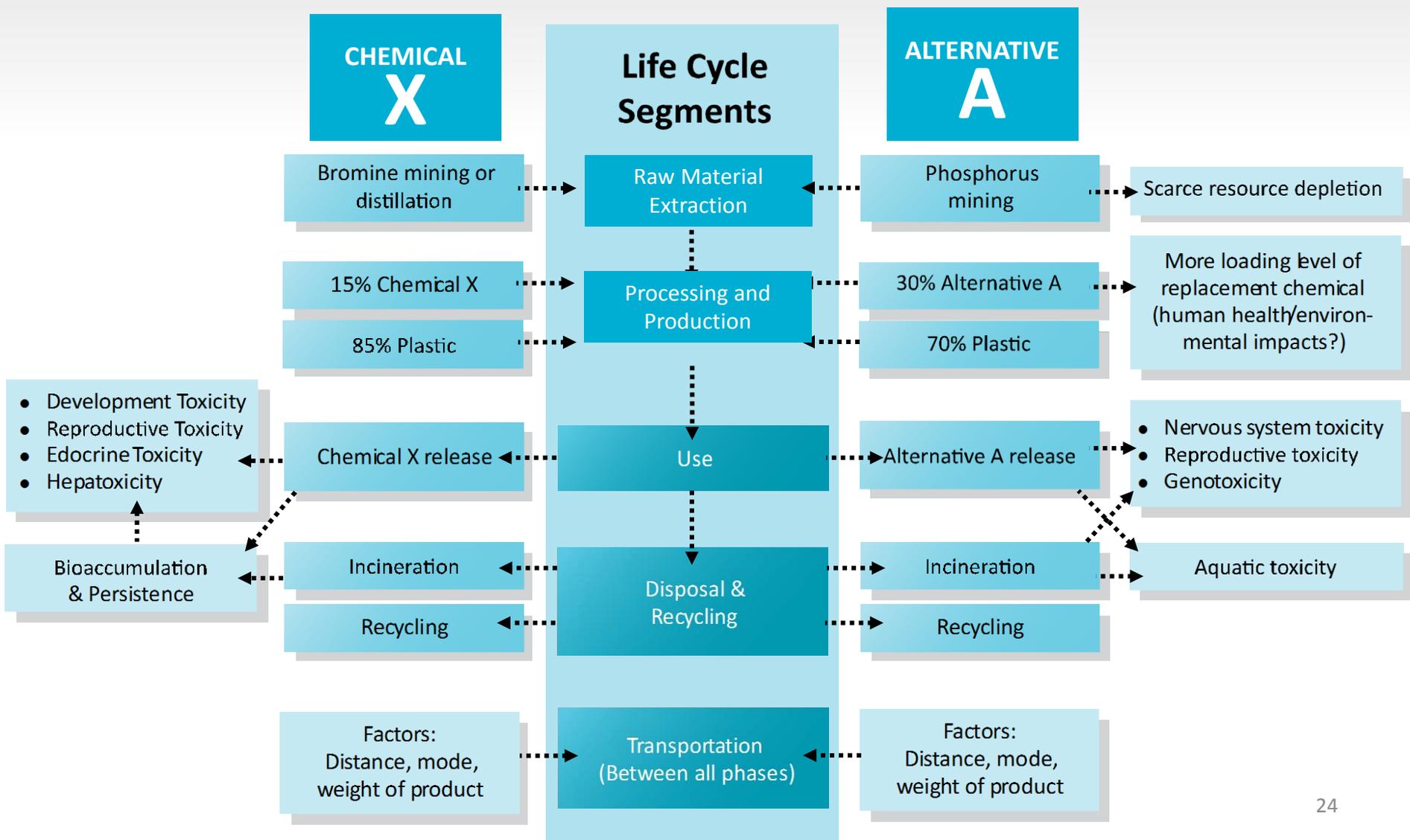
Exposure Pathways

Conceptual Model



Conceptual Model – Identification of Relevant Factors





Example for Displaying Results of Life Cycle Screening Analysis

Chemical Name	Raw material extraction	Resource inputs and consumption	Intermediate material processes	Manufacture	Packaging	Transportation	Distribution	Use	Operation and maintenance	Waste generation and management	Reuse and recycling	EOL disposal
Public health impact												
Air quality												
Soil quality												
Water quality												
Ecological Impacts												
Waste and EOL												



Chapter 4: Impact Assessments

Data Gathering

Comparative Tools

Appendix: Tools and Methods for Chemical
Hazard Assessment



Chapter 5: Screening Alternatives

Screening Approaches

- Consider screening goals
- Compare impacts
- Identify trade-offs
- Reserve marginal alternatives
- Document rationale



Example of Comparison Approach

	Group I Human					Group II & II Human								Ecotox		Fate		Physical		
	C	M	R	D	E	AT	ST		N		Sn S	SnR	IrS	IrE	AA	CA	P	B	RX	F
							Single	repeated	Single	repeated										
Chemical X	Red				Yellow	Yellow	Dark Red	Red	Dark Red	Dark Red	Light Green		Red	Red	Yellow	Light Green	Dark Red	Teal	Light Green	Light Green
Alternative 1	Light Green	Light Green	Light Green	Yellow	White	Yellow	Light Green	Light Green	Yellow	Red	Red	Light Green	Light Green	Red	Light Green	Light Green	Teal	Teal	Light Green	Light Green
Alternative 2	Light Green	Light Green	Light Green	Light Green	White	Light Green	Light Green	Red	White	Light Green	Light Green	White	Yellow	Red	Light Green	Light Green	Teal	Teal	Light Green	Yellow
Alternative 3	Light Green	Light Green	Light Green	Light Green	White	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Yellow	Yellow	Light Green	Light Green	Light Green	Teal	Light Green	Yellow
Alternative 4	Light Green	Yellow	Yellow	Yellow	White	Light Green	Yellow	Yellow	Yellow	Light Green	Light Green	White	Yellow	Red	Light Green	Light Green	Yellow	Teal	Light Green	Red
Alternative 5	Light Green	Light Green	Light Green	Yellow	Yellow	Light Green	Yellow	Yellow	Yellow	White	Light Green	Light Green	Light Green	Yellow	Yellow	Light Green	Teal	Teal	Yellow	Light Green



Summary

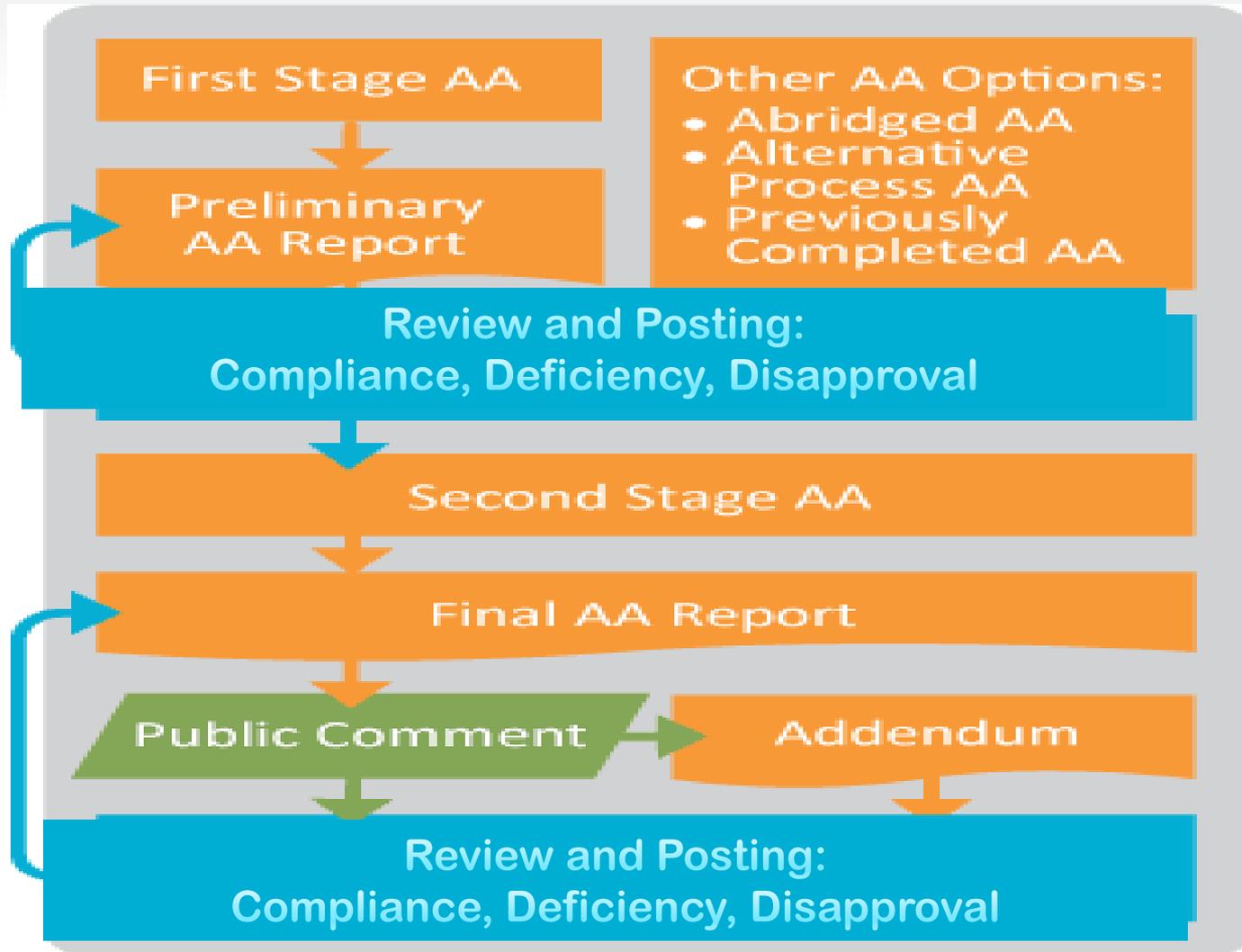
Menu of Approaches

Iterative

Preliminary AA Report and Work Plan



Alternatives Analysis Process



Confidential Business Information

Submitted through CalSAFER secure system

Two Copies of AA Report:

- Redacted
- Full (including CBI)

Supporting information

CBI claims subject to review



DTSC wants your feedback

Guide is for you!

Tools, approaches, methods, data sources

Additional examples

Clarity

Comments through CalSAFER by November 16, 2015

<https://calsafer.dtsc.ca.gov/Comments/PackageDetail.aspx?PID=11741>



Next Steps

Draft Stage 2 AA:

Spring 2016

Webinar for Draft Stage 2 AA

TBD



Thank You!

