

Draft Stage 1 Alternative Analysis 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

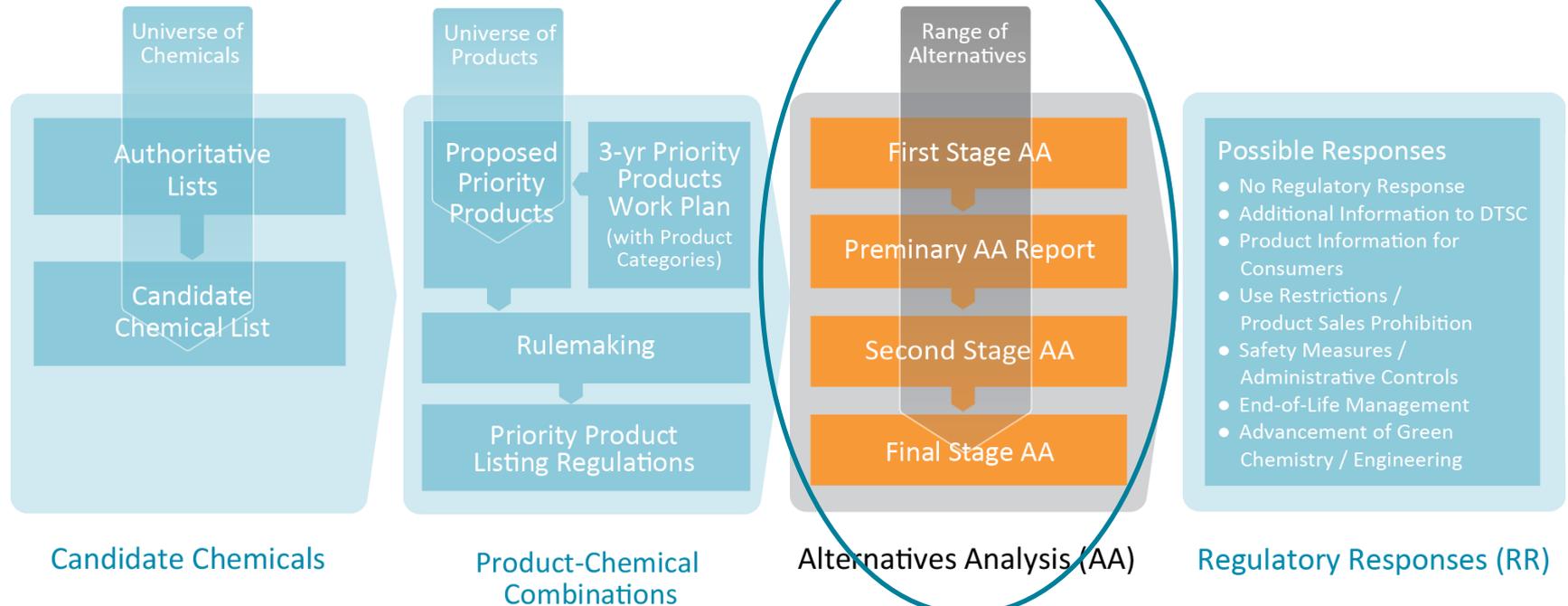
GO TO CalSAFER ▶

Comments due November 16, 2015



SCP Regulations: Four-Step Process

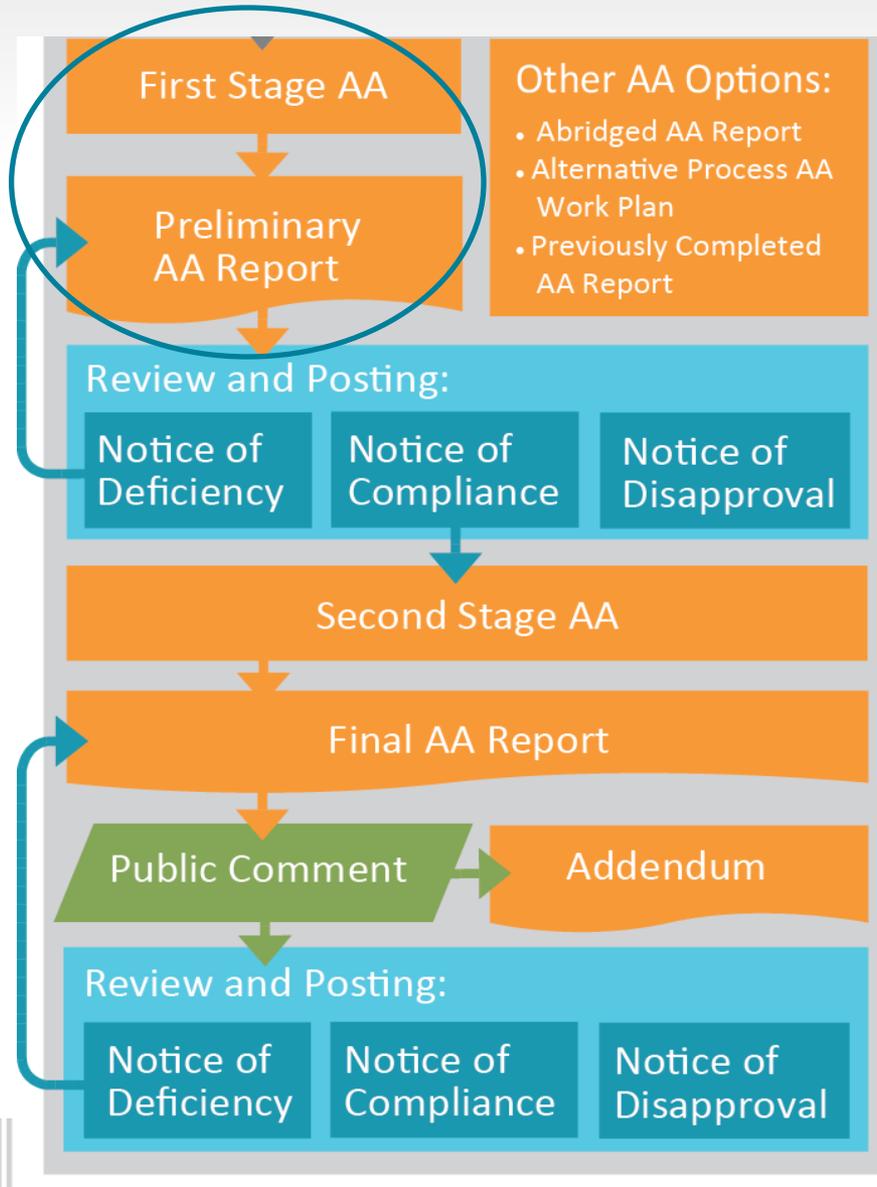
California Code of Regulations, title 22
Chapter 55. Safer Consumer Products
sections 69501 through 69510



Alternatives Analysis:
Article 5
section 69505



Alternatives Analysis

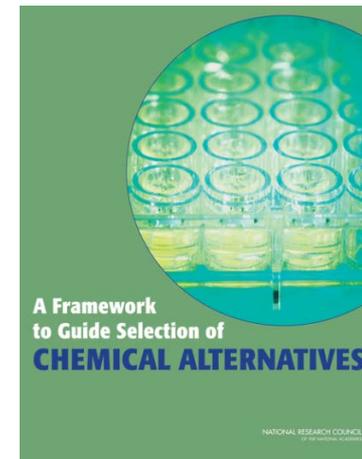
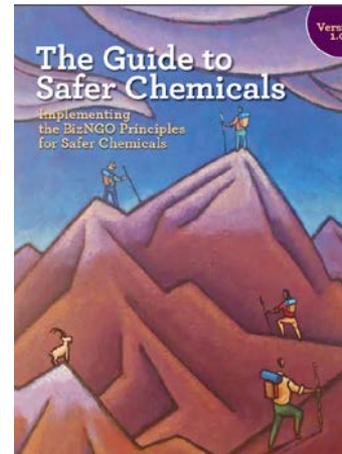
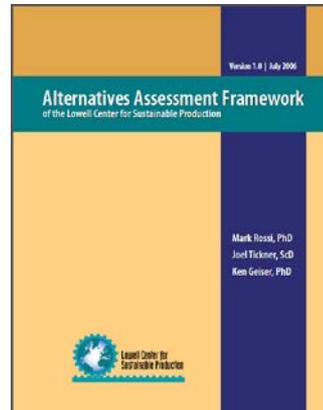
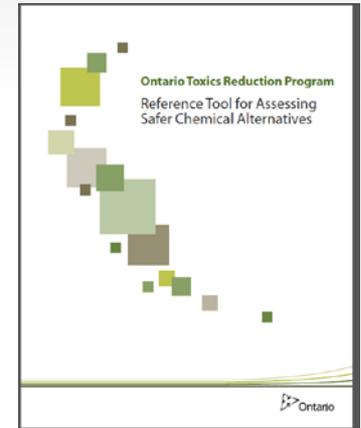
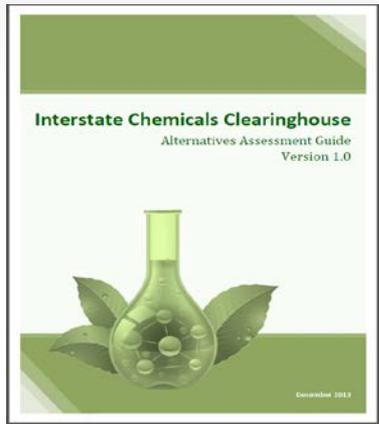


About the Guide...

The Guide IS:	The Guide IS NOT:
Guidance	Regulation
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
- Mandatory Life Cycle Consideration
- Not Limited to Chemical Substitution
- No Requirement to Generate New Data
- Economic Impacts
 - Public Health and Environmental Costs
 - Costs to Government and Non-Profit Organizations



How the 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 the 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



How the Guide is Organized

		CHAPTERS	
FIRST STAGE	Identify product function, performance, legal requirements		
	Identify role of COC	2	
	Identify alternatives		
	Data collection/research: ■ available information ■ available tools to determine potential impacts	4	Identify relevant factors: 3
	Impact Assessment		
	Initial evaluation and chemical screening	5	
	Preliminary AA Report preparation	1	
SECOND STAGE	Stage 2 evaluation of function, performance	2	Information Needs and Transparency: 9
	Exposure assessment	6	
	Life Cycle impact assessment	7	
	Economic analysis	8	
	Comparison and selection	10	
	Final AA Report preparation	1	



How the Guide is Organized

ND STAGE	Stage 2 evaluation of function, performance	2	Identify relevant factors: 3	Information
	Exposure assessment	6		
	Life Cycle impact assessment	7		



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

- Defined in regulations as:
 - Material contribution to impacts and
 - Material difference among alternatives
- Pertinent to the AA



Factors to Consider 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
	Adverse ecological impacts ¹⁰	Nitrogen oxides
		Particulate matter ⁷
		Stratospheric ozone depletion substances ⁸
		Sulfur oxides
	Adverse soil quality impacts ¹¹	Tropospheric ozone forming compounds ⁹
		on aquatic, avian or terrestrial animal, plant organisms, or microbes
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		



Identifying Relevant Factors

- Available Information
- Priority Product Listing

- Life Cycle Segments
- Exposure Pathways

- Iterative Process
- Conceptual Model



Chapter 4: Impact Assessments

- Gather Data
- Some Comparative Tools
- Appendix: Tools and Methods for Chemical Hazard Assessment



Chapter 5: Screening Alternatives

Screening Approaches

- Compare impacts
- Identify trade-offs
- Keep marginal alternatives
- Document rationale



Comments and Questions

Suggestions for changes

- Resources
- Examples

Highlighted comments

- Consumer acceptance
- Definition of relevant factors

