



DTSCs Use of Chemicals of Emerging Concern (CEC) Monitoring Data to Regulate Consumer Products

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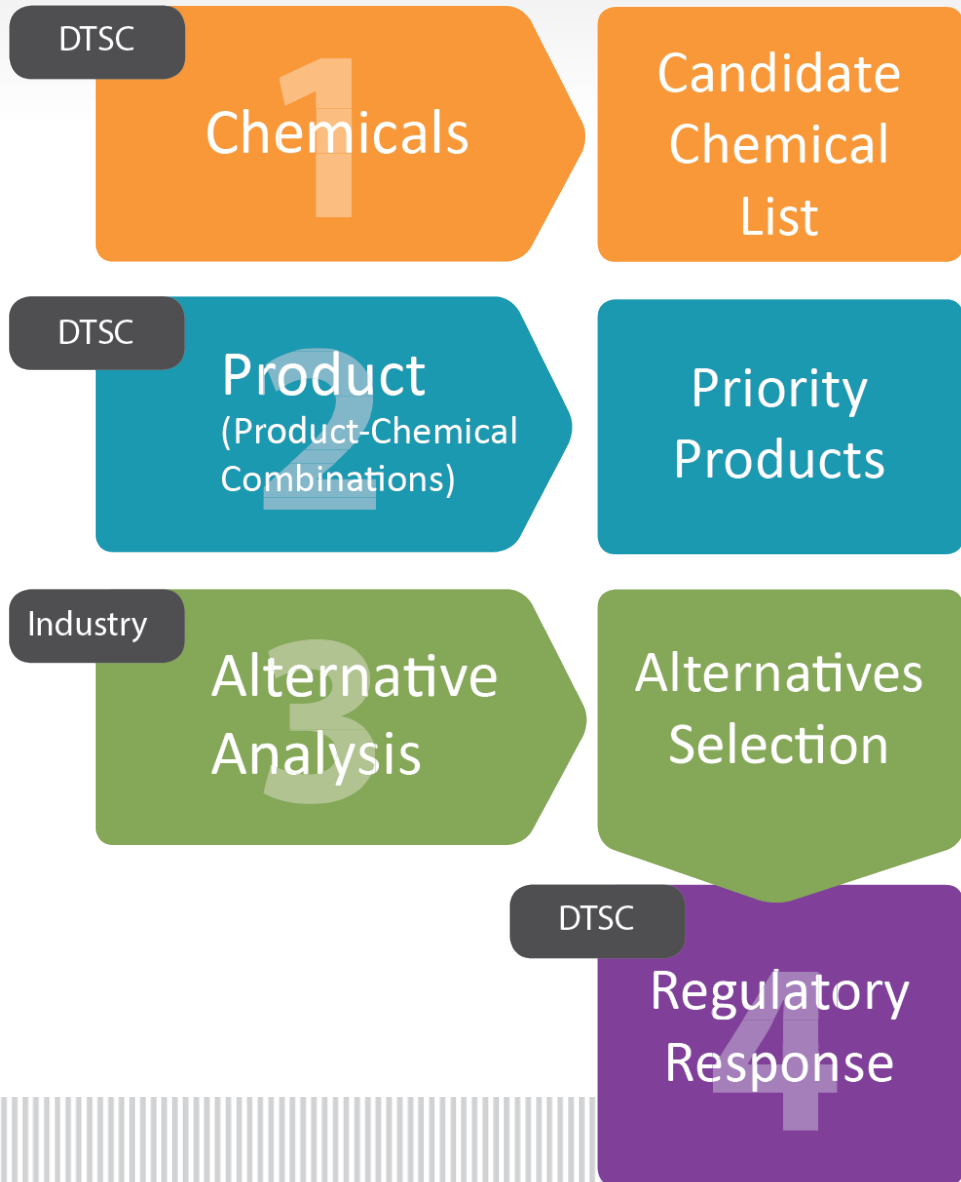
Cal/EPA

Background

- Green Chemistry law (2008)
- Safer Consumer Products regulation (2013)



How it Works: The SCP Regulations (2013)



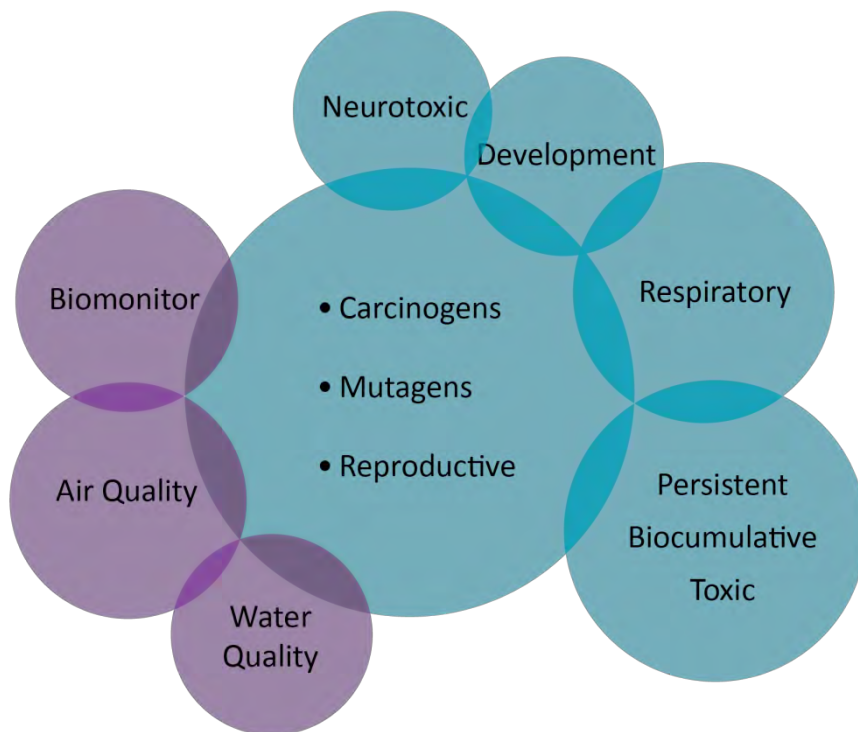
The Framework

- Hazard reduction vs. risk management
- Manufacturer uses Life Cycle Thinking
- Avoid Regrettable Substitution



Candidate Chemicals

23 Authoritative Lists referenced



Such as:

- 303(c) and 303(d)
- CA Maximum Contaminant Levels
- CA Notification Levels
- Several PBT lists
- OSPAR Priority Action Part A

Total Count: ~2,300 chemicals + PFASs

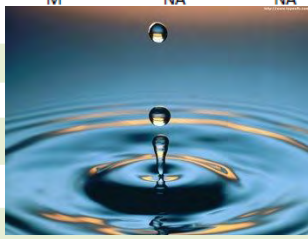
Water Quality Count: 232



Examples of Chemicals on the CC List

Compound	Scenario 1 - Inland Waterbody Aqueous (Tables 6.1 & 6.6)	Scenario 2 - Embayment Aqueous (Table 6.2)	WWTP Effluent	FW Stream - Stormwater (Aqueous and Sediment)*	Scenario 2 - Embayment Sediment (Table 6.3)	Scenario 3 - Marine Sediment (Table 6.4)	Tissue (Table 6.5)
Bis(2-ethylhexyl) phthalate	NA	NA	M-O	NA	NA	M(3.8)	NA
Bisphenol A	M(8.7)						
Bifenthrin	M(21)						
Butylbenzyl phthalate	NA						
Permethrin	M(46)						
Chlorpyrifos	M(38)						
Estrone	M(12)						
Ibuprofen	M(10)						
17-beta estradiol	M(4.2)						
Galaxolide (HHCB)	M(4.0)	M(4.0)	M-E/F	M	NA	NA	NA
Diclofenac	M(2.3)	NA	M-F				NA
p-Nonylphenol	NA	NA	M-O				NA
PBDE -47 and 99	NA	NA	M-E/F/O				M(850)
PFOS	NA	NA	M-E/F/O				M(1.8)
Triclosan	M(2.0)	NA	M-F				NA

Monitoring Strategies for Chemicals of Emerging Concern (CECs) in California's Aquatic Ecosystems
Recommendations of a Science Advisory Panel



- Bis(2-ethylhexyl) phthalate ✓
- Bisphenol A ✓
- Bifenthrin
- Butylbenzyl phthalate ✓
- Permethrin
- Chlorpyrifos
- Estrone
- Ibuprofen
- 17-beta estradiol
- Galaxolide (HHCB) ✗
- Diclofenac
- p-Nonylphenol ✓
- PBDE -47 and 99 ✓
- PFOS ✓
- Triclosan ✓



Picking Products: Key Prioritization Principles

- Potential **exposure** to the Candidate Chemicals in the product

AND

- Potential for exposures to contribute to or cause **significant or widespread adverse impacts to** human health or **the environment**



25 General Considerations

- Adverse Impacts
 - Hazard Traits
 - Environmental Fate, harmful degradation products
- Exposure Potential
 - Potential life cycle exposure
 - Frequency, extent, and duration of exposure
- Adverse waste and End-of-Life effects
 - Effects to treatment facilities





Priority Product Work Plan

Three Year Work Plan | 2015 - 2017

SAFER CONSUMER PRODUCTS BRANCH

DEPARTMENT OF TOXIC SUBSTANCES CONTROL



Work Plan

Policy Priorities

- Aquatic impacts
- Clear exposure
 - *Biomonitoring*
 - *Indoor air*
 - *Direct exposure to products*
- Sensitive Subpopulations
(children, workers in CA)

Resulting Product Categories

- Personal Care Products
- Building
- Cleaning
- Clothing
- Fishing/Angling equipment
- Furnishings
- Office (consumable materials)



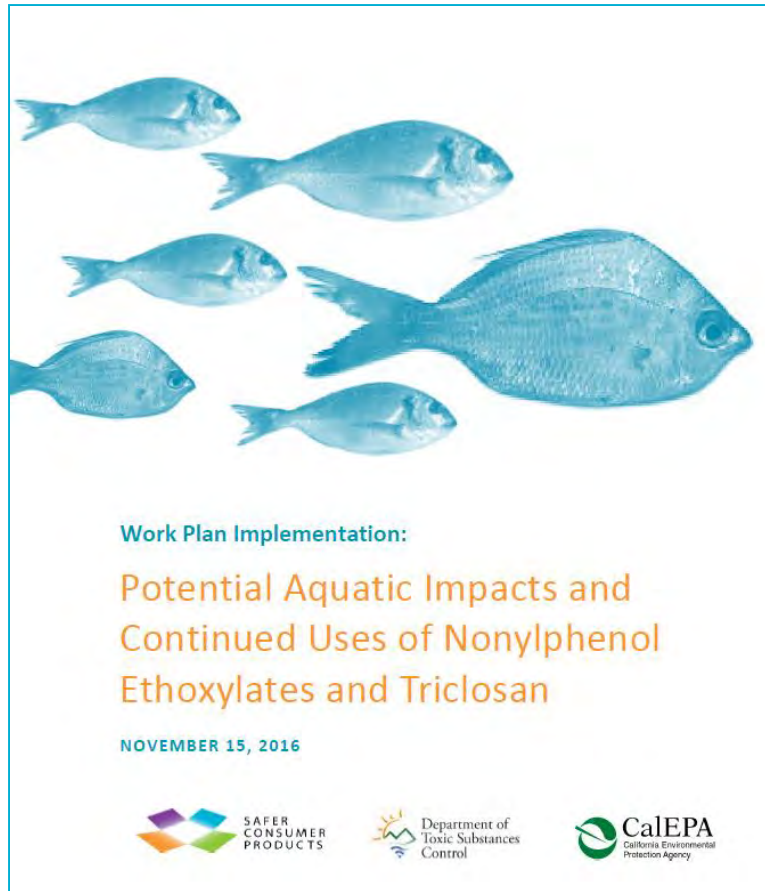


Aquatic impacts

- Data sources to id chemicals,
 - European Commission PBT chemicals
 - Science Advisory Panel (Monitoring strategies for CECs in aquatic ecosystems)
 - SFEI Chemicals of Emerging Concern program
 - Palo Alto WWTP Pollution Prevention plan
 - USGS CEC monitoring studies
 - Peer review literature reviews






Current research with Aquatic Impacts



Work Plan Implementation:

Potential Aquatic Impacts and Continued Uses of Nonylphenol Ethoxylates and Triclosan

NOVEMBER 15, 2016

 SAFER CONSUMER PRODUCTS  Department of Toxic Substances Control  CalEPA
California Environmental Protection Agency



Work Plan Implementation:

Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) in Carpets, Rugs, Indoor Upholstered Furniture, and their Care and Treatment Products

NOVEMBER 15, 2016

 SAFER CONSUMER PRODUCTS  Department of Toxic Substances Control  CalEPA
California Environmental Protection Agency

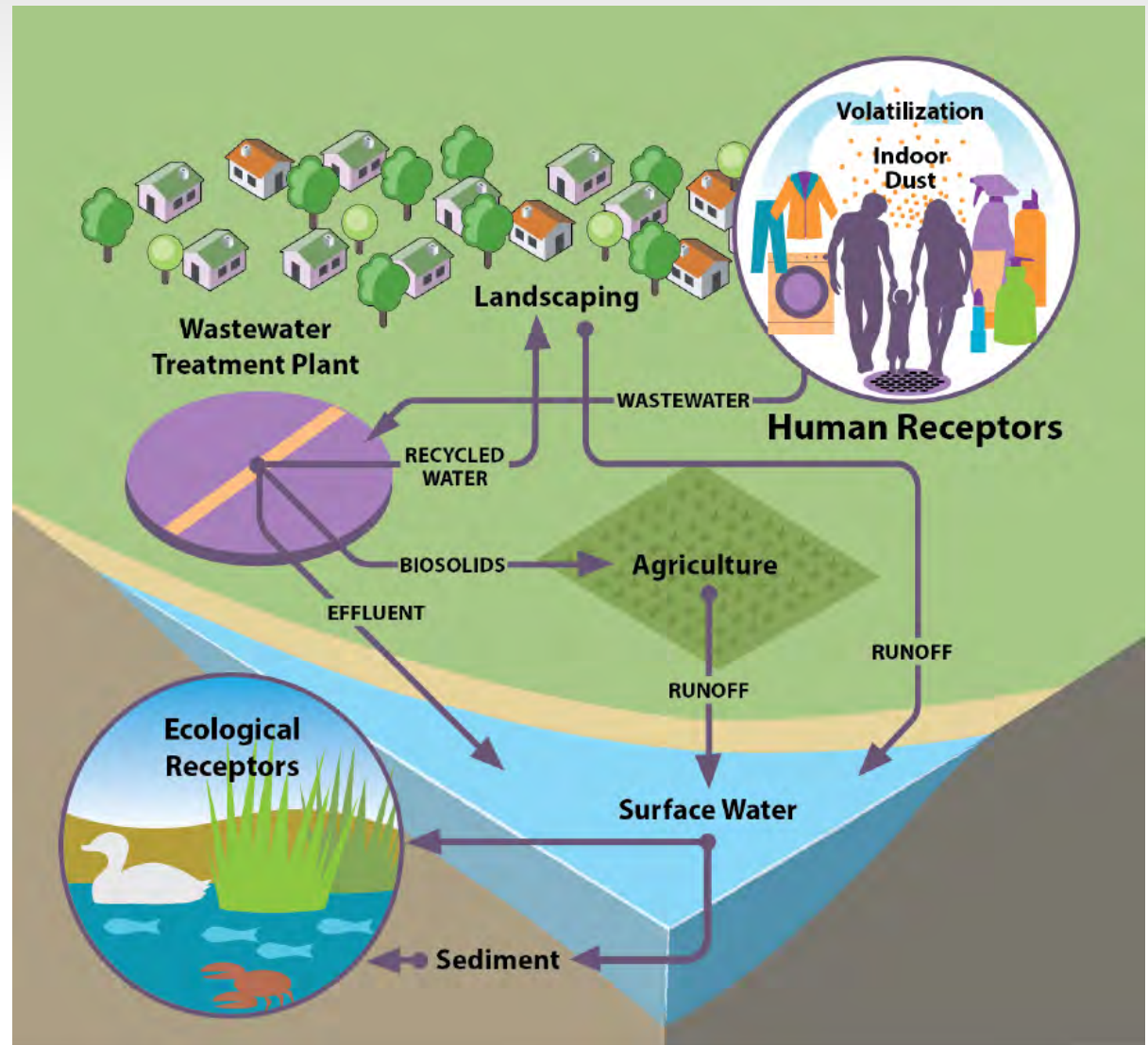


Potential Aquatic Impacts from NPEs

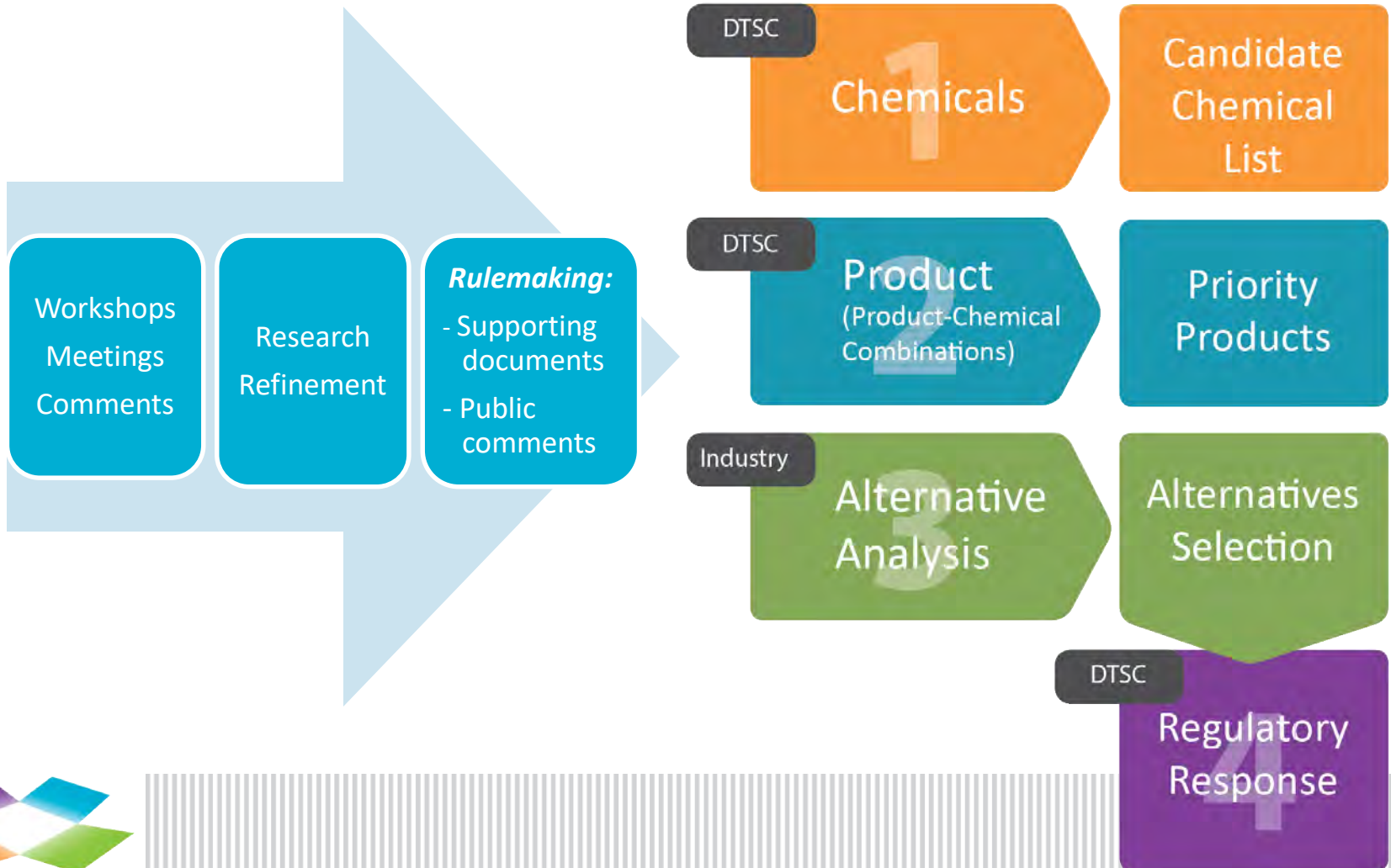
- Identified by Science Advisory Panel, SFEI
- Degrades to NP and impairs wildlife growth and reproduction
- Monitoring data from SFEI, SCCWRP, USGS
- Consumer product uses: laundry detergents, cleaners, clothing, toilet paper



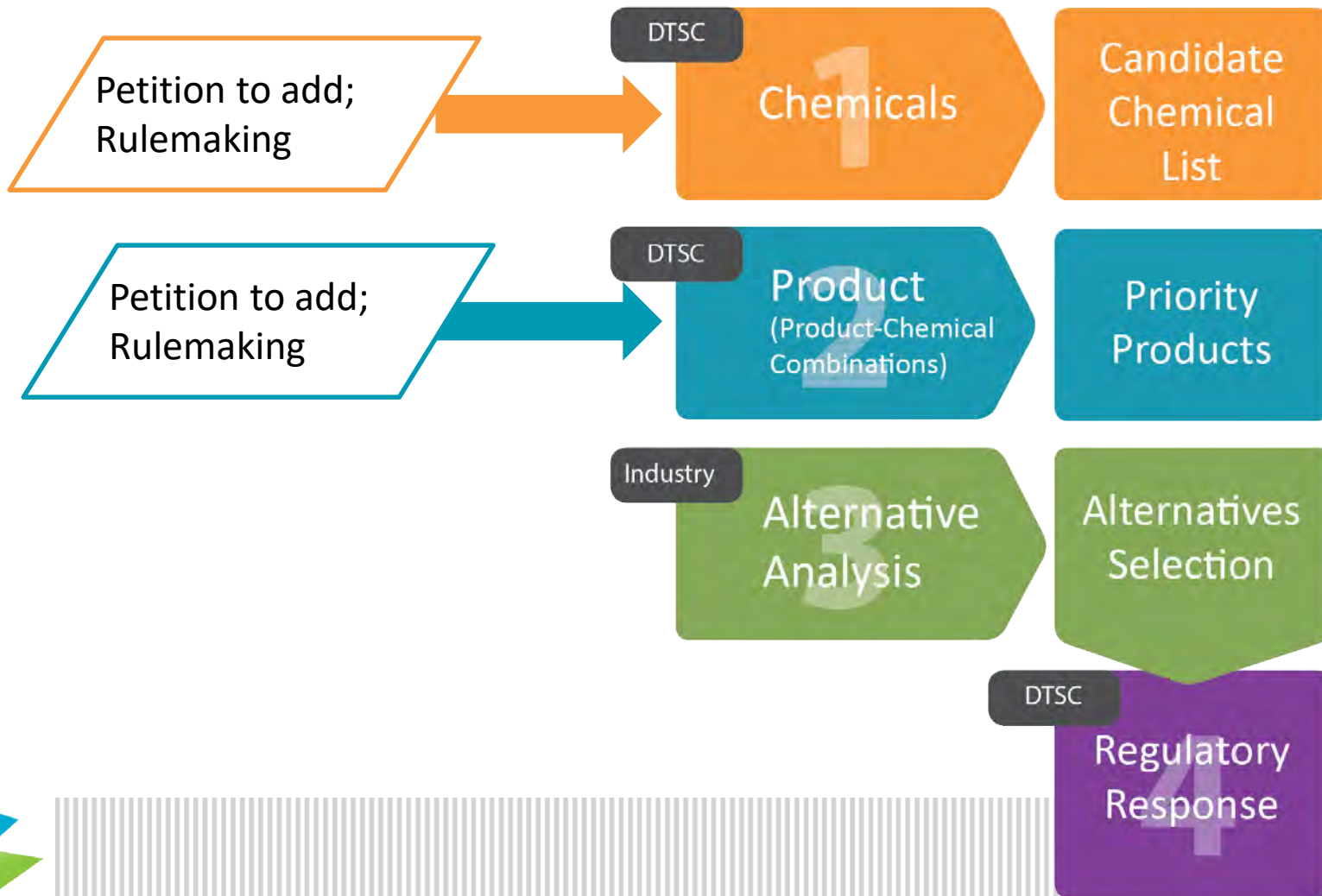
- Monitoring data helps conceptual model of impacted media



Adopting Priority Products

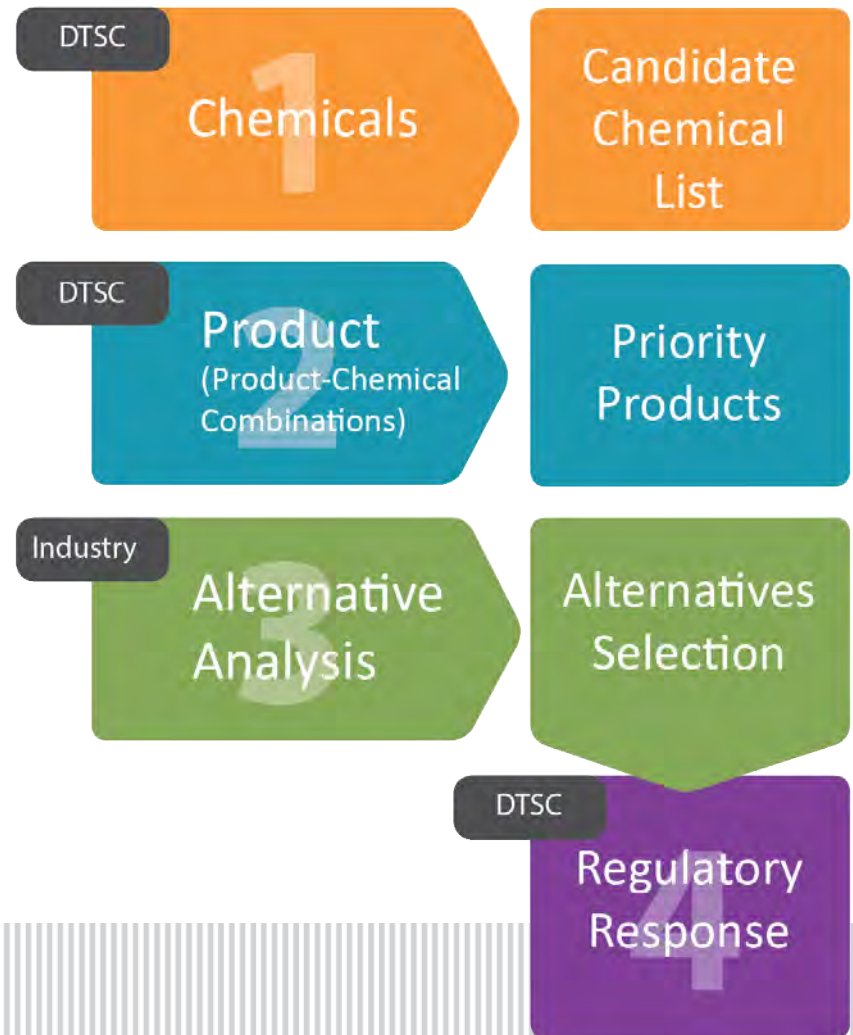


Petitions can add Candidate Chemicals or Priority Products



Implications for Priority Products

- SCP asks manufacturers to consider:
 - Is it necessary?
 - Is there a safer alternative?
- Manufacturer discloses info on:
 - replacement chemicals,
 - their hazards



SCP Addresses Source Control

- Reduce CECs from consumer products more effective than treatment
 - Improved water quality for aquatic biota
 - Improved end-of-life impacts
 - Fewer CECs in recycled water/potable reuse, biosolids



SCP Data Needs

- Recent data on presence of chemicals in:
 - Aquatic environments (surface water, groundwater, sediment, biota)
 - WWTPs and recycled water
- Source identification
- Prioritization for California
 - Chemical trends
 - Emerging concerns

THE PULSE
CONTAMINANTS OF EMERGING CONCERN
OF THE BAY



Input During SCP Process

- Comment periods and workshops for:
 - Priority Product Work Plans
 - Product or chemical evaluations
 - Priority Product Regulations
 - Final Alternatives Analyses
 - Draft Regulatory Responses



www.calsafer.dtsc.ca.gov

- Petitions: Chemical, Priority Product



Thank you

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

(home page)

<http://Bit.ly/scpupdates>

(listserv)

<https://calsafer.dtsc.ca.gov>

(petitions, comments, Candidate Chemical search)

