

Public Workshop for Proposed Amendments to the Consumer Products Regulation

November 7, 2019
9:00am-12:00pm



Presentation Outline

- ❖ Overview and Background
- ❖ Emission Inventory and Regulatory Development
- ❖ Draft Proposal
- ❖ Ongoing Work
- ❖ Next Steps

Overview and Background

- ❖ California Clean Air Act requires CARB to regulate consumer products
 - ❖ Achieve the maximum feasible volatile organic compound (VOC) reduction from consumer products
 - ❖ Regulations must be technologically and commercially feasible
 - ❖ Must not eliminate a product form
- ❖ 30+ year history of CARB-stakeholder collaboration
 - ❖ Manufacturer innovation has enabled progressively lower-emission products
 - ❖ More needed to meet California's air quality mandates

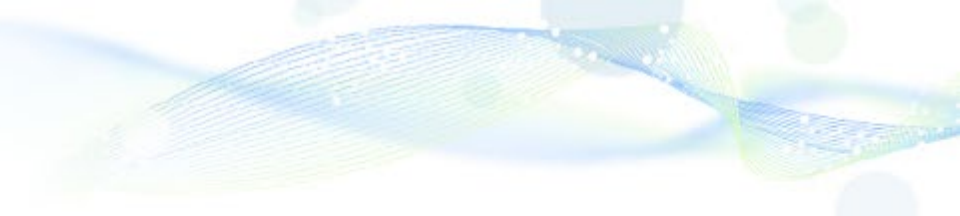
VOC Reduction Targets

❖ South Coast Air Basin SIP Commitment

- 1-2 tons per day (tpd) by 2023
→ *Equivalent to 2.4 - 4.8 tpd Statewide*
- 4-5 tpd by 2031
→ *Equivalent to 9.5 - 11.9 tpd Statewide*

❖ Statewide SIP Commitment: 8-10 tpd by 2031

❖ 2031 targets inclusive of (not in addition to) 2023 targets



Technical Basis for Rulemaking

❖ 2013 - 2015 Consumer & Commercial Products Survey

- Approximately one million products from 1500 manufacturers
- Comprehensive sales and formulation data for over 400 product categories
- Over 6 million product ingredients

❖ Consumer Product Survey data summaries at: <https://ww3.arb.ca.gov/consprod/survey/survey.htm>

Survey Data Update: Fragrance

- ❖ Longstanding assumption that ‘fragrance’ ingredient is 100% VOC
- ❖ New data provides basis for refined assumptions:
 - ❖ 35 Terpene-Dominated Categories:
Fragrance = 100% VOC, MIR = 4.04
 - ❖ All Other Survey Categories:
Fragrance = 25% VOC/75% LVP-VOC,
MIR = 2.80
- ❖ More information available at:
https://ww3.arb.ca.gov/consprod/regact/webinar_9202019_adav3.pdf

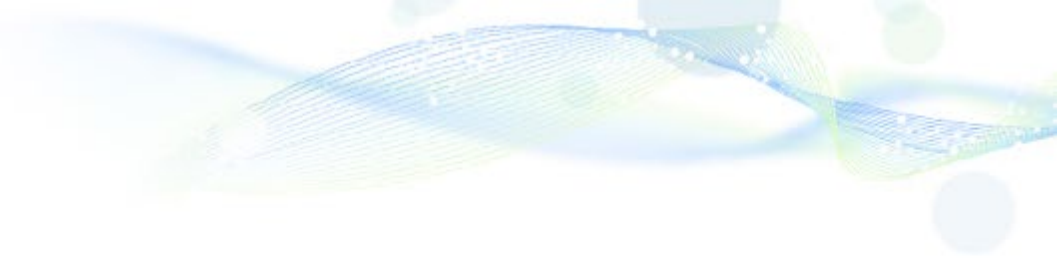


Emission Inventory Development

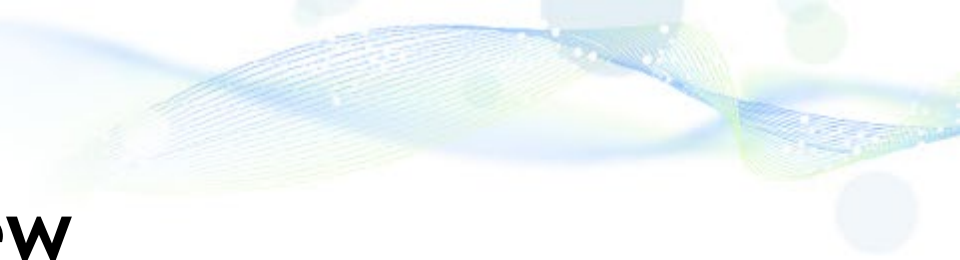
- ❖ 2015 Survey data market adjusted
 - ❖ No Rinse Shampoo by 25%
 - ❖ All other categories by 10%
- ❖ Propose updating Personal Care Product growth surrogate to '*Real Disposable Personal Income*' to more accurately reflect sector growth
 - ❖ Approximately 2.2% annual growth
 - ❖ Methodologies for other categories remain unchanged
- ❖ Fragrance speciation updates, market adjustments, and growth factor updates are reflected in today's draft proposal

Regulatory Development Thus Far

April 12, 2019	1st Public Workshop: Identified 49 Priority Categories
May - July	Eleven work group meetings to evaluate 49 initial priority survey categories. Eliminated 32 categories from further evaluation.
September - October	Three work group meetings to evaluate most promising remaining 17 survey categories, fragrance, HFC-152a.
July 17 and October 4	Two Regulatory Definition Work Group meetings
November 7, 2019	2nd Public Workshop: Draft Proposed Strategies



Draft Proposal



Draft Proposal Overview

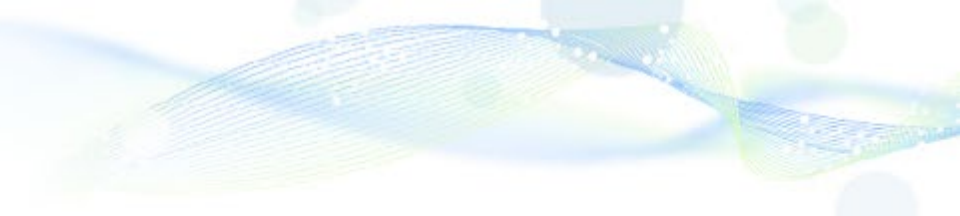
- ❖ Meets reduction targets for both 2023 and 2031
 - ❖ Manual Aerosol Air Freshener
 - ❖ Hair Finishing Spray
 - ❖ No Rinse Shampoo
 - ❖ Personal Fragrance Products (20% or Less Fragrance)
 - ❖ Aerosol Crawling Bug Insecticide
 - ❖ Charcoal Lighter Material
 - ❖ 2% Fragrance Exemption
- ❖ Open to discussion of other approaches
- ❖ <https://ww2.arb.ca.gov/our-work/programs/consumer-products-program>

Manual Aerosol Air Freshener

- ❖ Currently regulated as two categories:
single and double phase
- ❖ Single phase includes both manual and automatic products: Subject to 30% VOC standard
 - ❖ Manual product sales weighted average (SWA) VOC content: 5.5%
 - ❖ Automatic product SWA VOC: 38.6%
- ❖ Double phase subject to 20% VOC standard
 - ❖ 2015 survey SWA VOC content: 19.3%
- ❖ 2.7 tpd VOC emissions for manual products

Manual Aerosol Air Freshener Draft Proposal

- ❖ Combine single and double phase aerosol air freshener into a “Manual Aerosol Air Freshener” category
 - ❖ A new category for automatic products would also be created and be subject to a 30% VOC standard
- ❖ By January 1, 2023:
 - ❖ VOC standard of 10% by weight
 - ❖ VOC reductions: 1.0 tpd
- ❖ By January 1, 2027:
 - ❖ VOC standard of 5% by weight
 - ❖ VOC reductions: 1.8 tpd
- ❖ Reformulation strategies likely to include propellant substitution

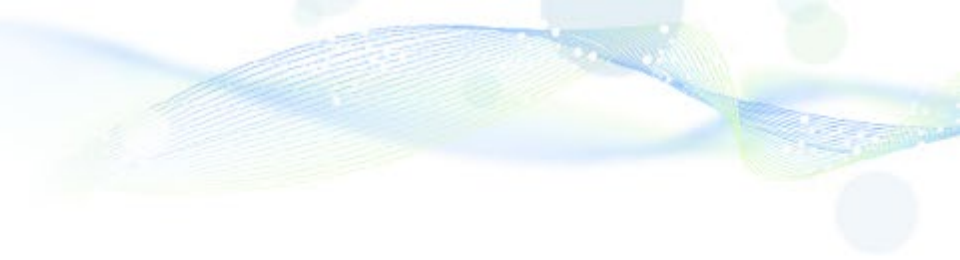


Hair Finishing Spray

- ❖ Single category that consists of multiple subtypes
 - ❖ 152a/ethanol aerosol; SWA VOC content: 54.4%
 - ❖ Dimethyl ether/ethanol/water aerosol;
 - ❖ SWA VOC content: 53.6%
 - ❖ Ethanol/water non-aerosol pump spray;
SWA VOC content: 52.5%
- ❖ All types subject to 55% VOC standard
- ❖ 11.5 tpd VOC emissions

Hair Finishing Spray Draft Proposal

- ❖ By January 1, 2023:
 - ❖ VOC standard of 50% by weight
 - ❖ VOC reductions: 1.1 tpd
- ❖ By January 1, 2027:
 - ❖ VOC standard of 45% by weight
 - ❖ VOC reductions: 2.7 tpd
- ❖ Reformulation strategies would likely be subtype dependent
- ❖ Also considering clarifying the distinction between Hair Styling Product and Hair Finishing Spray



No Rinse Shampoo

- ❖ No VOC standard established
- ❖ Rapidly growing product category
- ❖ Primarily hydrocarbon propellant, ethanol, and dry material
- ❖ SWA VOC content: 81.2%
- ❖ 1.3 tpd VOC emissions



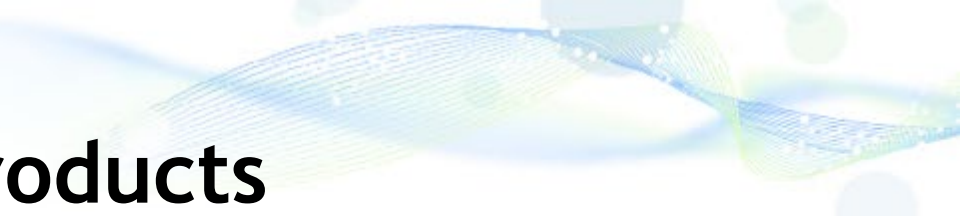
No Rinse Shampoo Draft Proposal

- ❖ By January 1, 2023:
 - ❖ VOC standard of 50% by weight
 - ❖ VOC reductions: 0.7 tpd
- ❖ By January 1, 2027:
 - ❖ VOC standard of 45% by weight
 - ❖ VOC reductions: 0.9 tpd
- ❖ Reformulation strategies would likely involve propellant substitution
- ❖ Proposal includes other similar products like dry conditioners and foams



Personal Fragrance Products (20% or Less Fragrance)

- ❖ Includes several consumer products survey categories
 - ❖ Deodorant body spray
 - ❖ Aftershave
 - ❖ General Personal Fragrance Products
- ❖ Combined SWA VOC content: 69.0%
- ❖ Subject to 75% VOC standard
 - ❖ Fragrance content up to 20% by weight is exempt
- ❖ 13.5 tpd VOC emissions



Personal Fragrance Products (20% or Less Fragrance) Draft Proposal

- ❖ By January 1, 2023:
 - ❖ VOC standard of 65% by weight
 - ❖ VOC reductions: 1.7 tpd
- ❖ By January 1, 2027:
 - ❖ VOC standard of 50% by weight
 - ❖ VOC reductions: 5.8 tpd
- ❖ Reformulation strategies would likely depend on product form
 - ❖ Propellant substitution
 - ❖ Replacement with non-VOC compounds



Aerosol Crawling Bug Insecticide

- ❖ Currently subject to 15% VOC standard
- ❖ SWA VOC content: 12.2%
- ❖ Primarily water, hydrocarbon propellant, and hydrocarbon solvent and dry material
- ❖ 1.6 tpd VOC emissions

Aerosol Crawling Bug Insecticide Draft Proposal

❖ By January 1, 2023:

- ❖ VOC standard of 10% by weight
- ❖ VOC reductions: 0.4 tpd

❖ By January 1, 2027:

- ❖ VOC standard of 6% by weight
- ❖ VOC reductions: 0.9 tpd

❖ Reformulation strategies likely to include solvent and propellant substitution

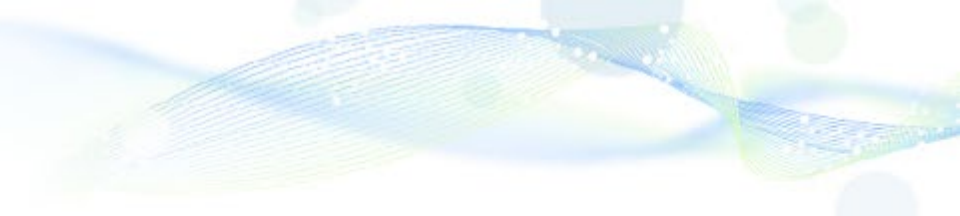
Charcoal Lighter Material

- ❖ Products must meet certification requirements
 - ❖ SCAQMD Rule 1174 Ignition Method Compliance Testing Protocol
 - ❖ Emissions rate standard: 0.020 lbs VOC/start
- ❖ Includes both liquid lighter fluid and impregnated briquettes
 - ❖ Average briquette emission rate: 0.0117 lbs VOC/start
 - ❖ Average fluid product emission rate: 0.0173 lbs VOC/start
- ❖ 2.2 tpd VOC emissions (1.9 tpd from liquid fluid)
- ❖ Emissions for certified fluid products were lower than survey reported products



Charcoal Lighter Material Draft Proposal

- ❖ New certification standard of 0.014 lbs VOC/start
- ❖ By January 1, 2023
 - ❖ New products must comply with standard
- ❖ By January 1, 2027
 - ❖ All products must comply with standard
 - ❖ VOC reductions: 0.4 tpd
- ❖ May encourage shift to more efficient combustion strategies and plant-based formulations



Two Percent Fragrance Exemption Utilization

- ❖ 2015 Survey Data indicates that most products would be unaffected by fragrance exemption elimination
 - ❖ 74.3% of regulated products not using exemption
 - ❖ 82.3% of regulated product mass not using exemption
- ❖ Fragrance in products utilizing the 2% exemption resulted in 0.3 tpd of VOC emissions
- ❖ Full utilization of the exemption would result in over three tpd of VOC emissions

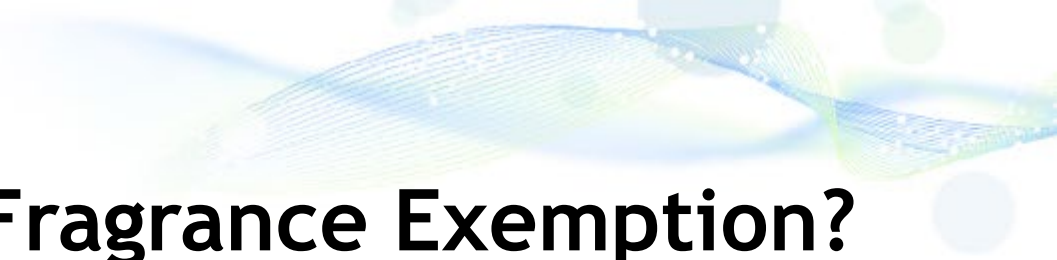
Two Percent Fragrance Exemption Draft Proposal

- ❖ By January 1, 2027: Sunset the 2% exemption
 - ❖ Fragrance components that are VOCs would count toward the VOC content of the product
 - ❖ VOC reduction from all categories: 0.33 tpd
 - ❖ Evaluating need to maintain, but reduce, exemption for general purpose cleaner and degreaser categories
- ❖ Affirm that monoterpenes in cleaning product categories do not meet the definition of fragrance
- ❖ Product reformulation strategies would be contingent on the formulation's VOC content
 - ❖ Most product formulations unaffected



Why Sunset the 2% Fragrance Exemption?

1. Lock in Emission Reductions: Ensure 3+ tpd VOC emissions don't occur in the future
2. Reduced Need: Latest technical data indicates that most fragrance ingredients are LVP-VOCs
3. Enhance Clarity: Reduce conflicting interpretations regarding fragrance exemption applicability
4. Simplify Compliance Determinations: Eliminate need to identify and quantify fragrance ingredients for compliance purposes



Why Sunset the 2% Fragrance Exemption?

5. Program Equity: Treat all smog-forming VOCs equally regardless of function
6. Encourage Transparency: May encourage increased disclosure of fragrance constituents
7. Consider Public Health: Acknowledge increasing concerns of fragrance-sensitive stakeholders

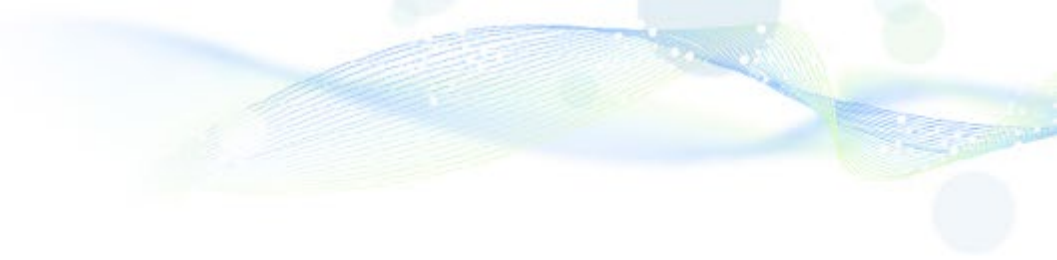
Draft Proposal Summary

Category	Existing VOC Standard	Effective Date: Jan 1, 2023		Effective Date: Jan 1, 2027	
		Draft Proposed VOC Standard	VOC Reductions (2023 tpd)	Draft Proposed VOC Standard	VOC Reductions (2031 tpd)
Manual Aerosol Air Freshener	20% or 30%	10%	1.0	5%	1.8
Hair Finishing Spray	55%	50%	1.1	45%	2.7
No Rinse Shampoo	NA	50%	0.7	45%	0.9
Personal Fragrance Products (≤ 20% Fragrance)	75%	65%	1.7	50%	5.8
Crawling Bug Insecticide (aerosol)	15%	10%	0.4	6%	0.9
Charcoal Lighter Material	0.020 lbs./start	0.014 lbs/start ¹	--	0.014 lbs./start	0.4
Sunset 2% Fragrance Exemption	2% of product mass exempted	--	--	0% exempted	0.3
			5.0		12.8

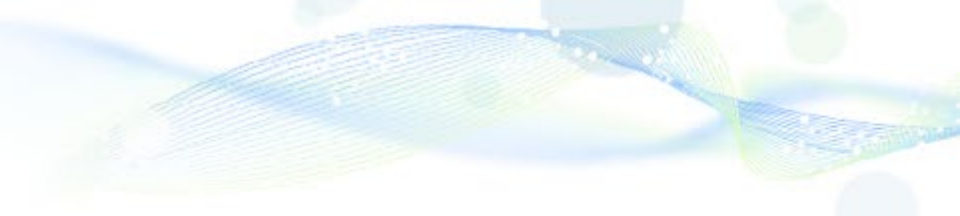
1 - Applies to new products only.

Candidates for Subsequent Rulemaking (if needed to meet 2031 targets)

- ❖ Floor Wax Stripper
- ❖ Aerosol Cooking Spray
- ❖ Laundry Detergent/Liquid Fabric Softener
- ❖ Anti-microbial Dry Hand Wash (Hand Sanitizer)
- ❖ Aerosol Sunscreen
- ❖ Mouthwash/Rinse
- ❖ Automatic Air Fresheners
- ❖ Antiperspirants and Deodorants
- ❖ Glass Cleaner (nonaerosol)
- ❖ Other categories are possible

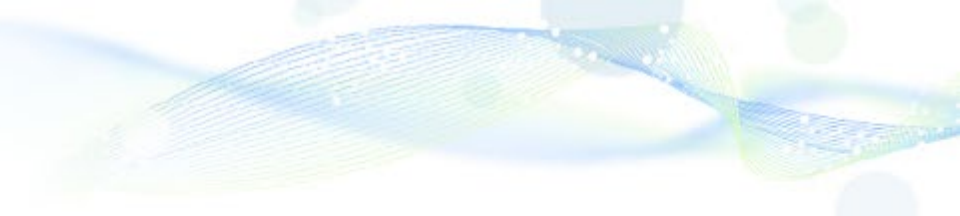


Other Ongoing Work



Toxic Compounds

- ❖ Evaluate potential for proposed measures to increase Toxic Air Contaminant (TAC) emissions
 - ❖ May propose strategies to ensure no TAC increase, including extending Consumer Product Regulation toxics prohibitions to categories subject to this rulemaking
- ❖ Consider prohibition of MeCl in Paint Stripper
- ❖ Continue to collaborate with the California Department of Toxic Substances Control Safer Consumer Products Program



Greenhouse Gases

- ❖ Potential for some proposed measures to increase near-term use of HFC-152a
- ❖ Evaluating strategies to accelerate development of zero-emission alternatives, including:
 - ❖ Near-term: Examine how compressed gas volume compares to hydrocarbon propellant utilization in aerosol products
 - ❖ Long-term: Prohibit HFCs in regulated categories by 2035, when feasible

Potential Reactivity-Based Approaches

- ❖ Considering reactivity standards for mass-based categories
- ❖ Takes into account ozone forming potential of products
- ❖ Reactivity limits can provide flexibility for regulatory compliance
- ❖ Future reactivity limits dependent on industry development of test method procedures



Regulatory Definitions Workgroup

- ❖ Purpose: Update existing regulatory definitions to improve program implementation
- ❖ Propose focusing current amendments on:
 - ❖ Industrial and Institutional Product
 - ❖ General Purpose Degreaser
 - ❖ Energized Electrical Cleaner
 - ❖ Energized Electronic Cleaner
- ❖ Definitions for categories targeted for VOC reductions to be discussed separately

Other Potential Regulatory Updates

- ❖ Reflect existing high-GWP HFC prohibitions in Consumer Product Regulation, Table 94509(n)(1)
- ❖ Amend Table of Maximum Incremental Reactivity Values
- ❖ Refine IPE and ACP eligibility requirements
- ❖ Updates to Method 310

Next Steps

Late 2019	Publish updated final survey data summaries, update consumer product emission inventory
Early 2020	Additional work group meetings: • Specific to proposed regulatory categories • Regulatory definitions • Fragrance exemption • Other topics as needed
Spring 2020	Third public workshop: Refined draft regulatory proposal, draft regulatory language. Additional workshop if needed
Ongoing	Meet individually with interested stakeholders
Late 2020	Board consideration of proposed regulatory amendments.

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❖ General Questions and Comments: csmrprod@arb.ca.gov

❖ Bulletin signup

- ❖ <https://public.govdelivery.com/accounts/CARB/subscriber/new>
- ❖ Enter your email and check “Consumer Products Program”



Discussion & Questions

- ❖ What are your thoughts regarding the draft proposal?
- ❖ What are the pros and cons of reactivity standards?
- ❖ Are there “Candidates for Subsequent Rulemaking” from slide 28 that should be prioritized?
- ❖ Do you have suggestions regarding the proposed “Other Ongoing Work” (slides 29 - 34)?
- ❖ Please provide feedback by November 27 to:
csmrprod@arb.ca.gov