

Work Group Meeting for Brake Cleaner, Floor Wax Stripper, Automotive Windshield Washer Fluid (Type "A" Areas), Windshield Washer Additive, and Body Repair Products (other than coatings)

June 11, 2019



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Work Group Outline

Category Order: Brake Cleaner, Floor Wax Stripper, Automotive Windshield Washer Fluid (Type "A" Areas), Windshield Washer Additive, and Body Repair Products

For Each Category Presented

- Category Definition
- Category Overview
 - Companies
 - Products
 - VOC Content
 - Product Weighted Maximum Incremental Reactivity (PWMIR)
 - Total Organic Gas Maximum Incremental Reactivity (TOG MIR)
- Product Groups
- VOC Breakdown
- Possible VOC Thresholds
 - Regulatory Pathways
- Discussion and Questions

What's Next?

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**Email questions during the meeting to:
josh.berghouse@arb.ca.gov**

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Brake Cleaner

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Brake Cleaner

“Brake Cleaner” means a cleaning product designed or labeled to remove oil, grease, brake fluid, brake pad material or dirt from motor vehicle brake mechanisms.

Regulatory History:

- 1995 VOC Limit: 50%
- 2002 VOC Limit: 45%
- 2008 VOC Limit: 20%
- 2010 VOC Limit: 10%
- 2001: Subject to Air Toxics Control Measure (Title 17, Section 93111) prohibiting methylene chloride, perchloroethylene and trichloroethylene in automotive repair products.

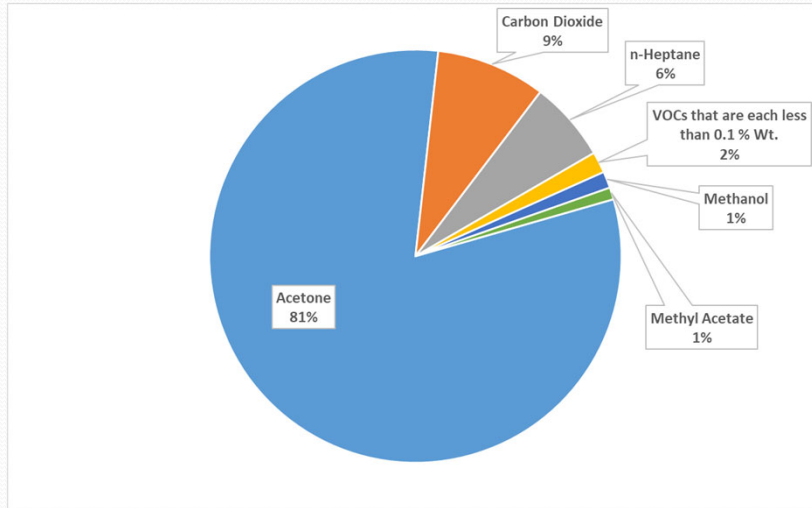
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Category Overview Brake Cleaner

Number of Companies	• 41
Number of Products	• 120
VOC Emissions (tpd)	• 0.89
Category VOC Range	• 0-45%
Sales Weighted Average VOC	• 8.73%
PWMIR	• 0.40
TOG MIR	• 0.44

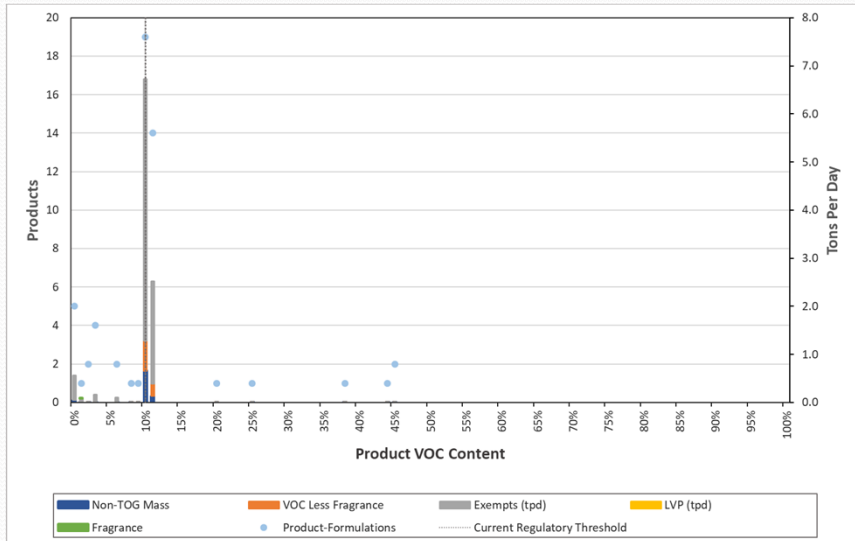
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Brake Cleaner Speciation Breakdown



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Brake Cleaner VOC Content Histogram



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Brake Cleaner Example VOC Thresholds

Possible VOC Limit	1%	3%	5%
VOC Tons Per Day Reduced	0.77	0.60	0.43
Complying Market Share (Product-Formulations)	11%	22%	22%
Complying Market Share (Mass)	6%	8%	8%

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Discussion & Questions

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Floor Wax Stripper

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Floor Wax Stripper Category Overview

- Category is currently regulated for post-dilution VOC content at two levels
 - “Light or medium build-up of polish”: 3% by weight or less
 - “Heavy build-up of polish”: 12% by weight or less
- 266 unique products in 2015 survey
 - 136 product-formulations
- 9.00 tpd product sales
 - 1.34 tpd VOC, 1.73 tpd TOG, 7.94 tpd OFP

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Category Overview Floor Wax Stripper

Number of Companies	• 47
Number of Products	• 266
VOC Emissions (tpd)	• 1.34
Category VOC Range	• 0-70%
Sales Weighted Average VOC	• 14.87%
PWMIR	• 0.88
TOG MIR	• 4.60

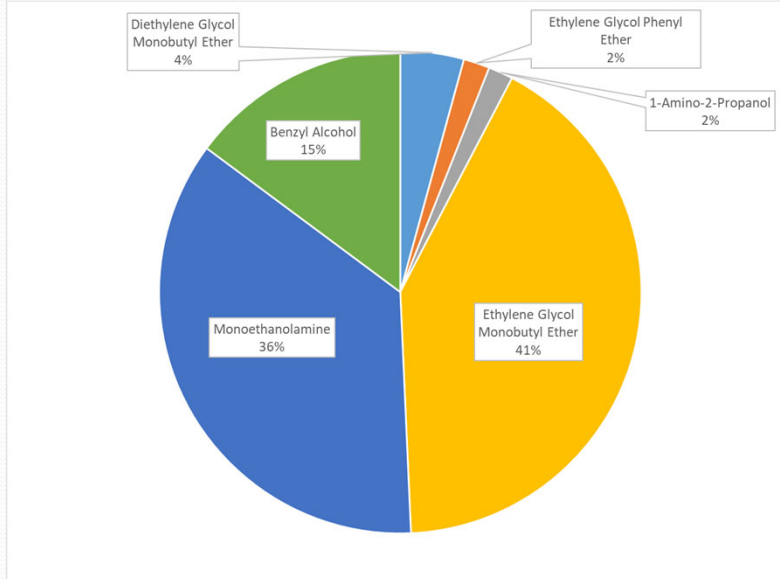
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Floor Wax Stripper Category Overview

- Average PWMIR of 0.88
 - 49% of product sales and 48% of product-formulations are above 0.9 PWMIR
- High MIR LVP species are used in some formulations which makes traditional VOC reduction strategies ineffective
 - Benzyl Alcohol: MIR 5.11
 - Ethylene Glycol Phenyl Ether: MIR 4.49

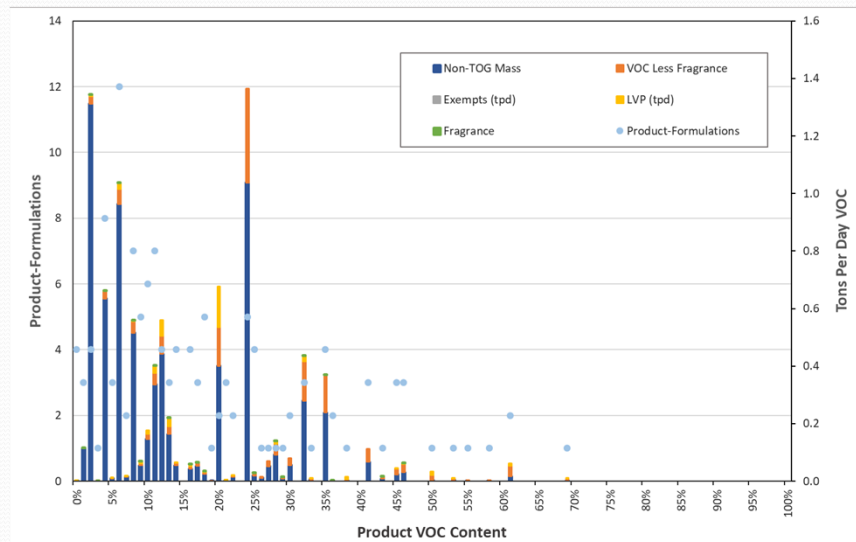
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Floor Wax Stripper TOG



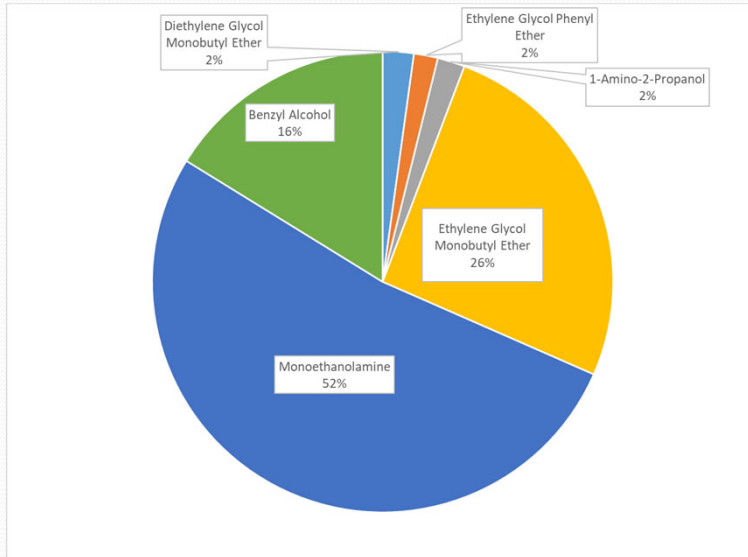
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Floor Wax Stripper VOC Histogram



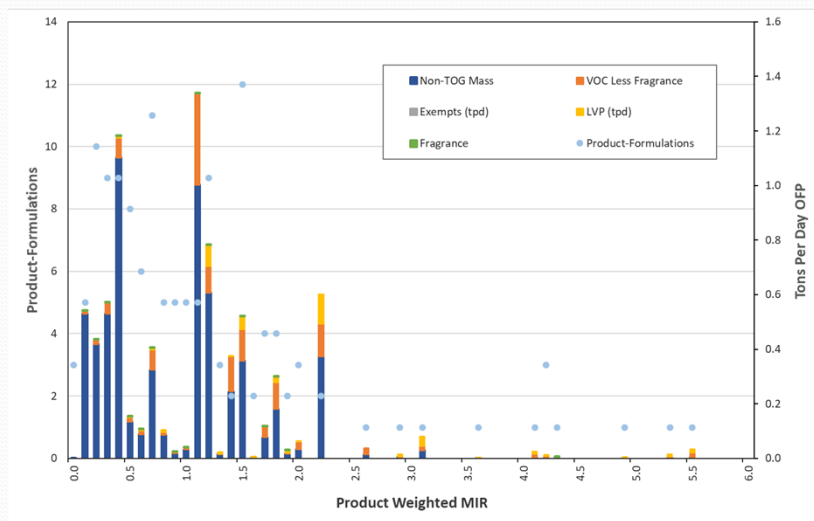
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Floor Wax Stripper OFP



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Floor Wax Stripper Reactivity Histogram



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Floor Wax Stripper Product Claims

- Label review shows high variability in PWMIR between products with similar claims

	Product #1	Product #2
Product VOC %	24%	20%
As-Sold PWMIR	1.01	2.13
Dilution Claim (Heavy)	1:4 (hot water)	1:4 (cool water)
Dilution Claim (Light)	1:8 (hot water)	1:8 (cool water)
Substrate Intended	vinyl composition, rubber, asphalt-tile, terrazzo, concrete and no-wax vinyl	vinyl composition, vinyl, vinyl asbestos
Substrate Not Recommended	marble, wood, natural stone	marble, wood, linoleum, rubber, painted
Soak Time	5-8 Minutes	5-10 minutes
Hand Scrub?	Yes	Yes
Machine Scrub?	Yes	Yes

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Discussion & Questions

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Automotive Windshield Washer Fluid (Type "A" Areas) and Windshield Washer Additive

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Automotive Windshield Washer Fluids

“Automotive Windshield Washer Fluid” means any liquid dilutable or premixed product that is designed or labeled for use in a motor vehicle windshield washer fluid system either as an anti-freeze or for the purpose of cleaning, washing, bug removal, or wetting the windshield(s).

“Dilutable” means any product sold either in a container with a capacity of 10 gallons or more, or a container with a capacity of one quart or less.

“Type “A” Area” means areas in the state of California where higher VOC-containing washer fluids may be sold.

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Automotive Windshield Washer Fluids

Type "A" Area Regulatory History:

- 1993 VOC Limit: 35%
- 2008 VOC Limit: 25%
- July 1, 2013: Type "A" Areas updated

Dilutable products must be labeled to comply with the VOC limit applicable to the area where it could be used.

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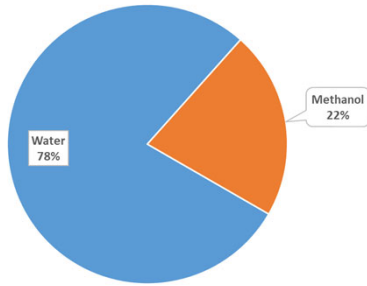
Category Overview Automotive Windshield Washer Fluids

Automotive Windshield Washer Fluid (Type "A" Areas)		Windshield Washer Additive	
Number of Companies	• 7	Number of Companies	• 20
Number of Products	• 35	Number of Products	• 53
VOC Emissions (tpd)	• 3.95	VOC Emissions (tpd)	• 1.14
Category VOC Range	• 8-61%	Category VOC Range	• 0-100%
Sales Weighted Average VOC	• 21.73%	Sales Weighted Average VOC	• 26.99%
PWMIR	• 0.15	PWMIR	• 0.19
TOG MIR	• 0.67	TOG MIR	• 0.71

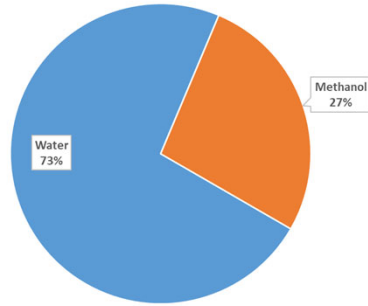
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Speciation Breakdown

Automotive Windshield Washer Fluid
(Type "A" Areas)

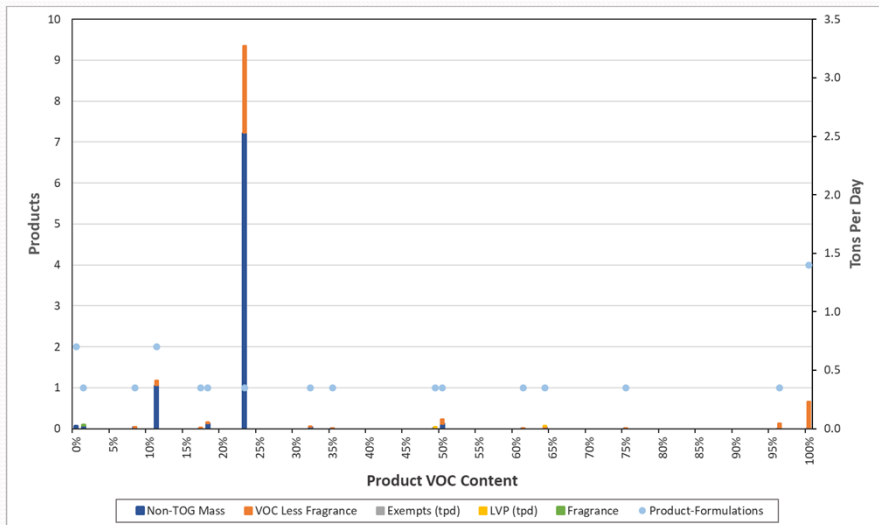


Windshield Washer Fluid Additive



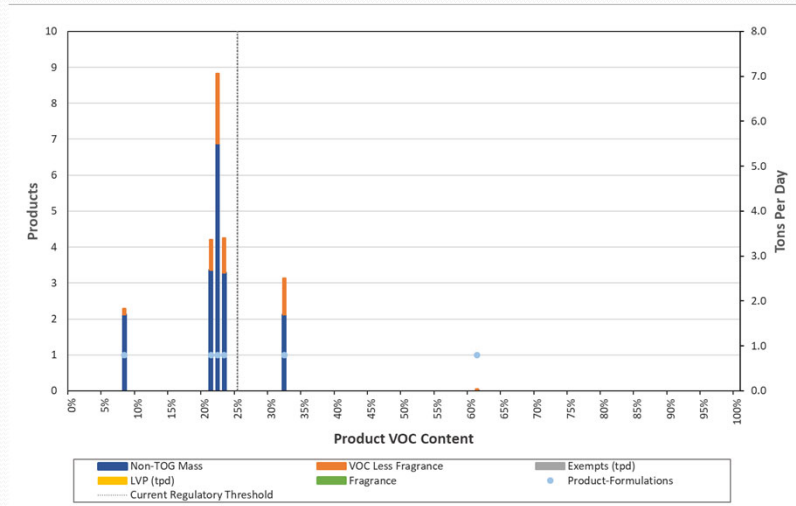
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Windshield Washer Fluid Additive VOC Content Histogram



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Automotive Windshield Washer Fluid (Type "A" Areas) VOC Content Histogram



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Discussion & Questions

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Body Repair Products (other than coatings)

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Body Repair Products (other than coatings)

“Body Repair Products” are not currently defined in the Consumer Products Regulation. The California Bureau of Automotive Repair regulations define an Auto body repair shop as “an automotive repair dealer who performs repairs or reconstruction of automobile or truck bodies, structures, or frames.” (16 CCR § 3303 Div 1, Ch 1, Article 1 (k))

For the purposes of this discussion, we will define “Body Repair Products” as “products used to perform repairs or reconstruction of automobile or truck bodies, structures, or frames” other than coatings.

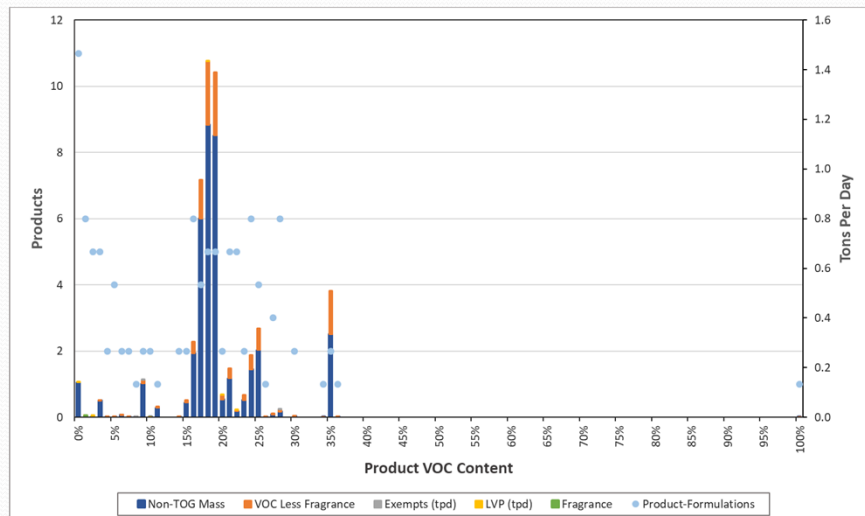
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Category Overview Body Repair Products

Number of Companies	• 17
Number of Products	• 438
VOC Emissions (tpd)	• 1.16
Category VOC Range	• 0-100%
Sales Weighted Average VOC	• 18.82%
PWMIR	• 0.33
TOG MIR	• 1.76

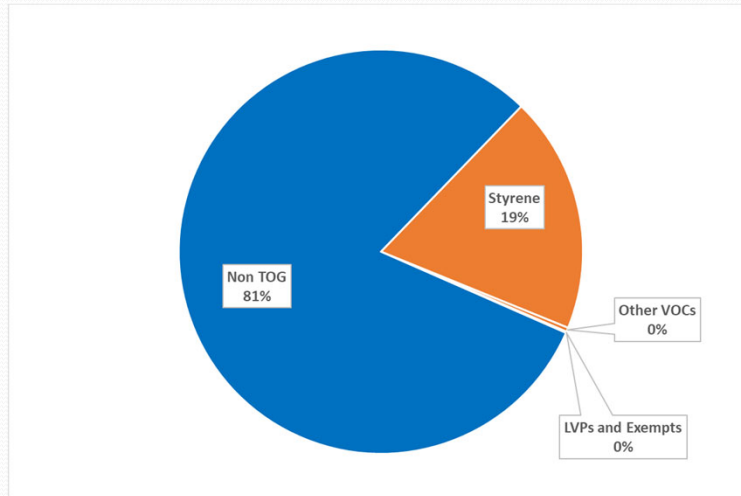
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Body Repair Products VOC Content Histogram



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Body Repair Products Speciation Breakdown



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Discussion & Questions

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What's Next?

- Summer 2019: Continue topic-specific work groups
- Ongoing: Meet with interested stakeholders
- Fall 2019: Public workshop to identify and quantify emissions benefits of regulatory options
- Late 2019/Early 2020: Additional public workshops as needed
- Late 2020: Proposed regulatory amendments for Board consideration

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