

Public Workshop  
March 26, 2025, 2:00 p.m.

# Proposed Amended Rule 223 – Requirements For Confined Animal Facilities\*

\*Rule title revised from:

Rule 223 – Emission Reduction Permits for Large Confined Animal Facilities

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# South Coast AQMD



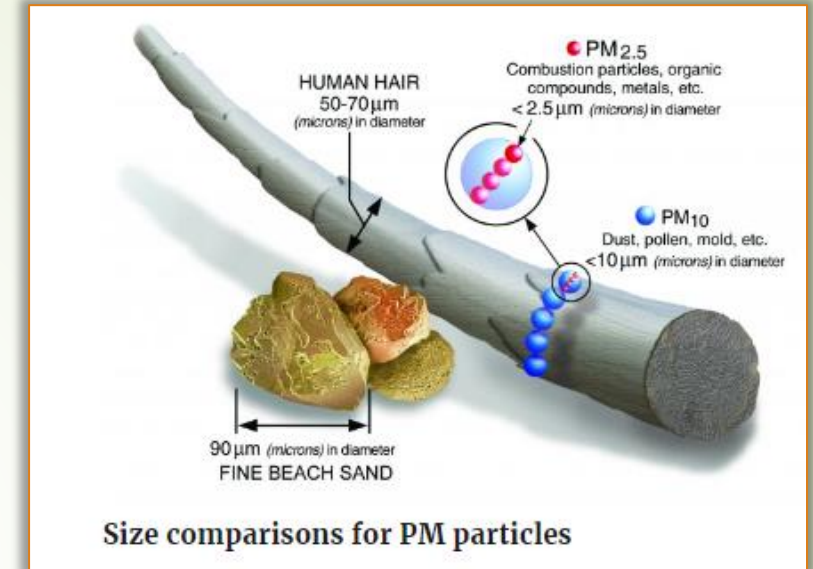
- Local air pollution control agency
  - 10,743 square miles
  - 17 million residents
  - Largest of the 35 local air agencies in California and in the U.S.
  
- Roles and Responsibilities
  - Administer over \$200 million of incentive and grant funding annually
  - Develop and implement plans to meet national air quality standards
  - Permit and inspect about 28,400 affected businesses and communities
  - Regulate emissions from stationary sources



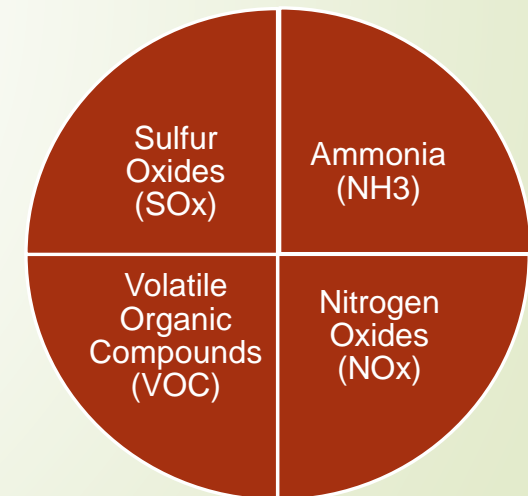
# Federal Clean Air Act Requirements for PM<sub>2.5</sub>

# PM2.5 Background

- ▶ Particulate matter (PM) are small, inhalable particles found in the air
  - ▶ PM2.5 is particulate matter  $\leq 2.5 \mu\text{m}$  in diameter
  - ▶ Linked to adverse cardiovascular and respiratory health effects including premature death, asthma, and lung cancer
- ▶ Sources of PM2.5 include:
  - ▶ Direct emissions - smoke, dust, diesel soot
  - ▶ Secondary formation - formed from reactions of precursor pollutants in the atmosphere



Size comparisons for PM particles



PM<sub>2.5</sub> Precursor Pollutants

# PM2.5 National Ambient Air Quality Standards

- Four National Ambient Air Quality Standards have been promulgated for PM2.5 by the U.S.
- Areas not meeting the PM2.5 standards (based on ambient air quality data) are designated as nonattainment areas based on exceedance level:

**Moderate**



**Serious**

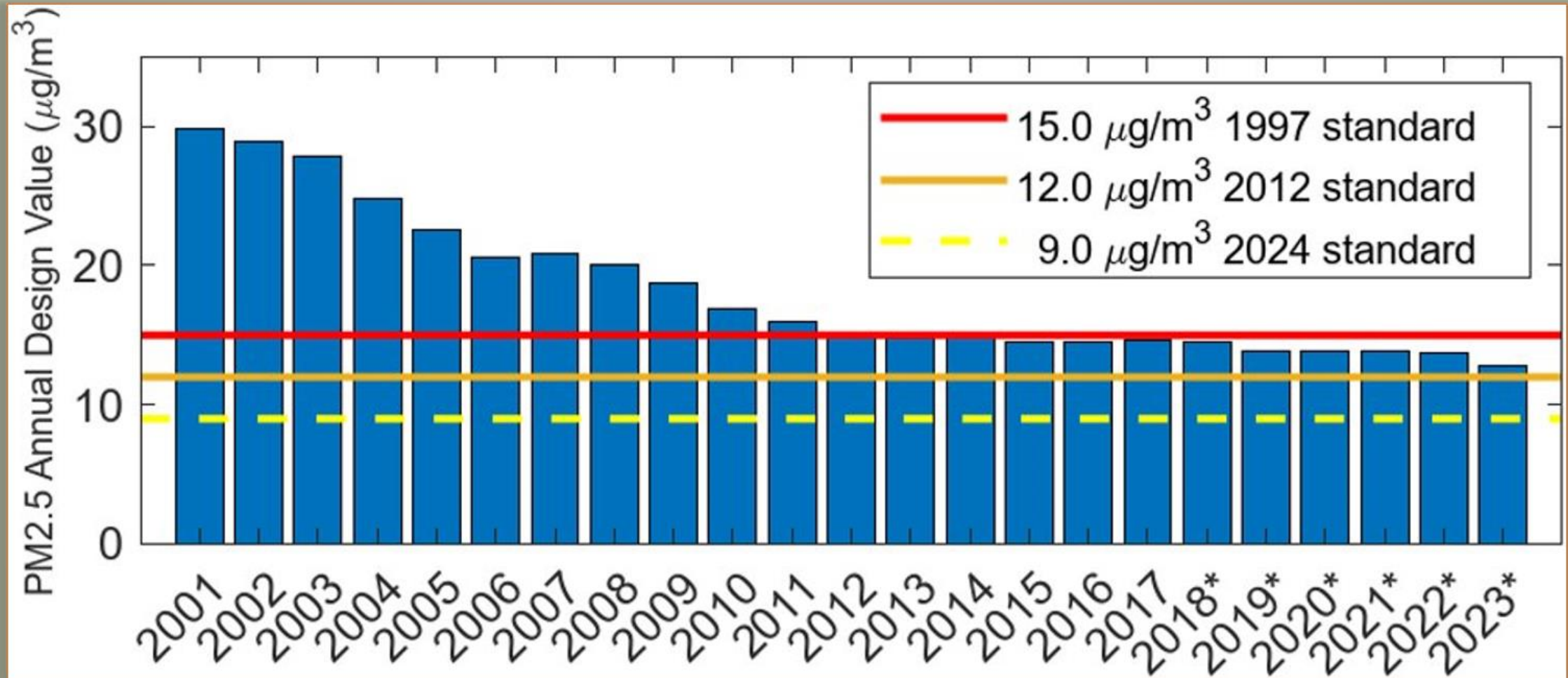
- Attainment deadlines are established based on classification, with more time provided for areas with worse air quality

NAAQS Year	NAAQS Level	Averaging Time	South Coast Air Basin Classification
1997	65 µg/m <sup>3</sup>	24-Hour	Attainment
	15 µg/m <sup>3</sup>	Annual	Attainment
2006	35 µg/m <sup>3</sup>	24-Hour	<b>Serious Nonattainment*</b>
2012	12 µg/m <sup>3</sup>	Annual	<b>Serious Nonattainment</b>
2024	9 µg/m <sup>3</sup>	Annual	Designations expected in 2026

\* Attainment expected based on preliminary data for 2023



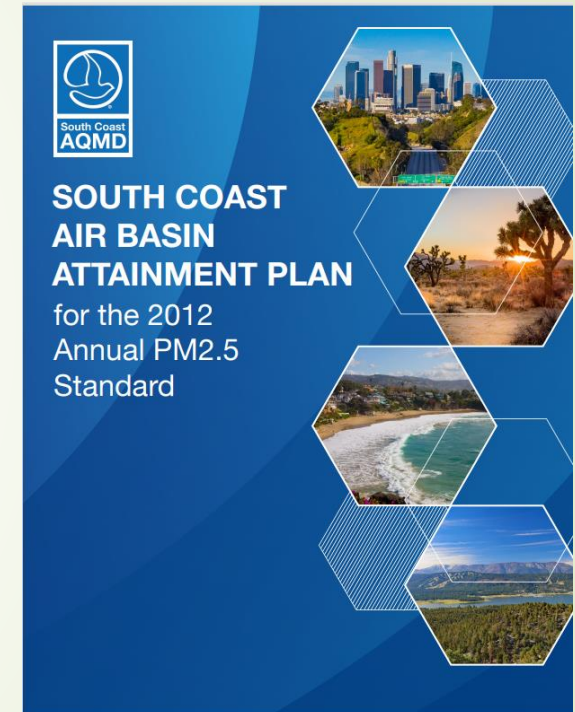
## Annual PM2.5 Trend



\* Data likely to be approved as exceptional events by U.S. were removed

# 2024 PM2.5 Attainment Plan

- The region does not meet the 2012 annual PM2.5 national ambient air quality standards (NAAQS) by the original attainment deadline of December 31, 2025
- To meet federal Clean Air Act requirements, a revised attainment plan (PM2.5 Attainment Plan) was prepared and submitted in 2024 seeking an extension on the attainment date from 2025 to 2030
  - Included an analysis of precursor pollutant contribution to annual PM2.5 levels (Appendix VI – Precursor Demonstration)
    - Identified NO<sub>x</sub> and NH<sub>3</sub> as significant precursors
    - VOCs and SO<sub>x</sub> are not significant precursors



## 2024 PM<sub>2.5</sub> Attainment Plan (Cont'd)

- Clean Air Act Section 188(e) requires a demonstration of Most Stringent Measures (MSM)\* for areas that seek an extension of the attainment date
- NH<sub>3</sub> (ammonia) was identified as a PM<sub>2.5</sub> precursor for this region, and livestock is a source of NH<sub>3</sub> emissions
- A comparison was made between South Coast AQMD livestock rules and other air districts rules:
  - Bay Area AQMD
  - Sacramento Metropolitan AQMD
  - Imperial Valley AQMD
  - San Joaquin Valley APCD
- The comparison between air district rules noted similar mitigation measures to reduce emissions; however, different applicability thresholds are used

*MSM is defined as: “is any permanent and enforceable control measure that achieves the most stringent emissions reductions in direct PM<sub>2.5</sub> emissions and/or emissions of **PM<sub>2.5</sub> plan precursors** from among those control measures which are either included in the SIP for any other NAAQS, or have been achieved in practice in any state, and that can feasibly be implemented in the relevant PM<sub>2.5</sub> NAAQS nonattainment area.”\**

*\* 81 FR 58151; 40 CFR Section 51.1000.*



## 2024 PM2.5 Attainment Plan (Cont'd)

- The following table compares local air district livestock rule applicability thresholds

Agency	Rule	Relevant Applicability Threshold
South Coast AQMD	223	Dairy Cows – 1,000 milking cows Poultry – 650,000 laying hens Ducks – 650,000 ducks
Bay Area AQMD	10	
Sacramento Metropolitan AQMD	496	
Imperial County APCD	217	Dairy Cows – 500 milking cows Poultry – 400,000 chickens Ducks – 400,000 ducks
San Joaquin Valley APCD	4750	

- Two livestock rules have lower applicability thresholds

## 2024 PM2.5 Attainment Plan (Cont'd)

- As part of a comprehensive PM2.5 control strategy, the 2024 PM2.5 Attainment Plan identified control measures for both directly emitted PM2.5 and PM2.5 precursor emissions
- Control Measure BCM-08: Emission Reductions from Livestock Waste at Confined Animal Facilities
  - Identified further ammonia reductions by extending existing requirements to implement mitigation measures to facilities with lower animal populations
  - The existing livestock facility mitigation measures are currently implemented at larger facilities in South Coast AQMD and at smaller facilities in two other areas classified as non-attainment for PM2.5
- The PM2.5 Attainment Plan was adopted by South Coast AQMD in June 2024

South Coast Air Basin Attainment Plan for the 2012 Annual PM2.5 Standard

CM # BCM-08

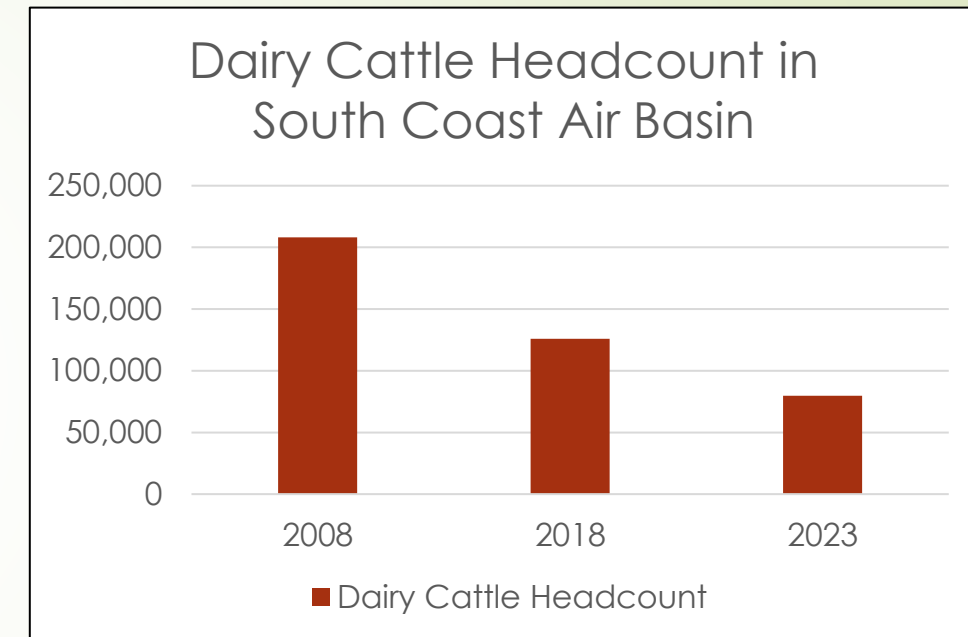
### BCM-08: EMISSION REDUCTIONS FROM LIVESTOCK WASTE AT CONFINED ANIMAL FACILITIES

[NH3]

CONTROL MEASURE SUMMARY		
SOURCE CATEGORY:	LIVESTOCK WASTE AT LARGE CONFINED ANIMAL FACILITIES	
CONTROL METHODS:	MANURE MANAGEMENT STRATEGIES	
EMISSIONS (TONS/DAY):		
ANNUAL AVERAGE [NH3]:	2018	2030
POLLUTANT INVENTORY	8.17	6.13
POLLUTANT REDUCTION	-	0.27
POLLUTANT REMAINING	-	5.86

# Need for Rule 223 Amendment

- Clean Air Act “Most Stringent Measure” requires South Coast AQMD rules be at least as stringent as those in any other air districts or states
  - Applicable to all emission sources of PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors
- Comparison to regulations from other local air districts demonstrates that Rule 223 applicability thresholds are not most stringent
- Amending Rule 223 to lower the applicability thresholds is necessary to:
  - Meet Clean Air Act “Most Stringent Measures” requirements
  - Implement PM 2.5 Attainment Plan Control measure BCM-08: Emission Reductions from Livestock Waste at Confined Animal Facilities



- Dairy cattle population in the South Coast Air Basin has decreased steadily over the last two decades



# Rule 223 Background



# Background

- Senate Bill (SB) 700 was enacted in 2004 and eliminated the exemption from the permit system for agricultural operations in the raising of fowl or animals
  - Required local air pollution control districts to adopt and implement regulations to require the owner or operator of a large confined animal facility (LCAF) to obtain permits to reduce air contaminant emissions
  - Codified under Health and Safety Code Section 40724.6
- Rule 223 – Emission Reduction Permit for Large Confined Animal Facilities was adopted in 2006 to satisfy SB 700 and California Health and Safety Code Section 40724.6 requirements



# Rule 223 Key Requirements

- Rule 223 establishes requirements for Confined Animal Facilities (CAF) and Large Confined Animal Facilities (LCAF)
- LCAFs are required to submit a permit application, facility information, and an emissions mitigation plan
  - Rule 223 Appendix A – provides a list of mitigation measures for different livestock operations and source categories
  - Facilities select from a list of mitigation measures for implementation
- 16 dairy farm and one poultry facility have Rule 223 permits

(E). <b>Handling of Solid Manure or Separated Solids:</b> Owners/operators that handle or store solid manure or separated solids outside the animal housing shall incorporate at least two (2) of the following mitigation measures:	
<i>Class One Mitigation Measures</i>	
1.	Cover dry manure piles outside the pens with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours per year, when wind events remove the covering. The covering shall be in accordance with applicable recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003, or more recent NRCS guidance.
2.	Cover dry separated solids outside the pens with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours each, when wind events remove the covering. The covering shall be in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003 or more recent NRCS guidance.
3.	Remove manure from the facility within seventy-two (72) hours of removal from the pens or corrals.
4.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
5.	Compost manure removed from pens with an aerated static pile vented to a biofilter or other control device with at least 80% control efficiency designed, constructed, operated, and maintained in accordance with NRCS Practice

# Proposed Amended Rule 223





# Proposed Rule Amendments

- Proposed Amended Rule 223 – (*Renamed*) Requirements for Confined Animal Facilities (PAR 223)
- PAR 223 would lower the applicability thresholds for a Large Confined Animal Facility (LCAF) to align with the most stringent thresholds

LARGE CONFINED ANIMAL FACILITY (LCAF) means any confined animal facility that maintains on any one day:

~~500~~1,000 or more milk-producing dairy cows; or

3,500 or more beef cattle; or

7,500 or more calves, heifers, or other cattle; or

100,000 or more turkeys; or

~~400,000~~650,000 or more chickens ~~including~~ other than laying hens; or

~~650,000 or more laying hens; or~~

3,000 or more swine; or

15,000 or more sheep, lambs, or goats; or

2,500 or more horses; or

~~400,000~~650,000 or more ducks; or

30,000 or more rabbits or other animals.



## Proposed Rule Amendments (continued)

- Permits are required for Large Confined Animal Facility, paragraph (c)(1)
- Separate compliance timeline established for dairy farms affected by new thresholds, paragraph (c)(6)
  - Submit facility information and permit application no later than January 1, 2027
  - Obtain permit to operate no later than January 1, 2029

### (c) Requirements

- (1) ~~On or after January 15, 2007, an~~ An owner or operator of an LCAF, shall not build, erect, install, alter, replace, or operate any LCAF without first obtaining written authorization from the Executive Officer, except as provided in paragraph (c)(6). The permit application shall include:



- (6) An owner or operator of an LCAF that maintains 500 to 999 Milking Cows or 400,000 to 649,999 chickens including laying hens, or 400,000 to 649,999 ducks, shall:
- (A) Submit a complete permit application with the information required by subparagraphs (c)(1)(A) through (c)(1)(E) no later than January 1, 2027; and
  - (B) Comply with paragraph (c)(1) no later than January 1, 2029.

# Proposed Rule Amendments (continued)

- Annual compliance plan submittals currently required, paragraph (c)(4)
- PAR 223 proposing to amend this provision to require an updated plan only if there are changes in operation
- Dairy farms affected by new thresholds are provided separate compliance timeline
  - Comply with paragraph (c)(4) by 2030

## (c) Requirements

(4) ~~On or before January 15, 2008, and each year thereafter, the~~ An owner or operator of an LCAF, shall submit an updated Emissions Mitigation Plan if there are changes in facility operation or the feasibility of mitigation measures an annual compliance plan that updates the information required by subparagraphs (c)(1)(A) through (c)(1)(E) of this rule, except as provided in paragraph (c)(7).



(7) An owner or operator of an LCAF that maintains 500 to 999 Milking Cows, or 400,000 to 649,999 chickens including laying hens, or 400,000 to 649,999 ducks, shall comply with paragraph (c)(4) after January 1, 2030.

# Proposed Rule Amendments (concluded)

- Updates subdivision (a) Applicability

- (a) Applicability

This rule establishes the ~~permitting~~ requirements for agricultural sources subject to permit as a result of California Health & Safety Code Section 40724.6 as effective January 1, 2004 and federal and state Clean Air Act requirements. A written Permit to Operate shall be required for all Large Confined Animal Facilities.

- Removes outdated rule language

- ~~(i) Existing Permitted Facilities~~

~~Operators that have obtained a LCAF permit on or before June 2, 2006, or submitted a complete application to the District to obtain a LCAF permit on or before June 2, 2006, satisfy the information requirements of sub-clauses (c)(1)(A) through (c)(1)(D) of this rule for initial permitting.~~

- Other minor administrative changes to improve rule clarity

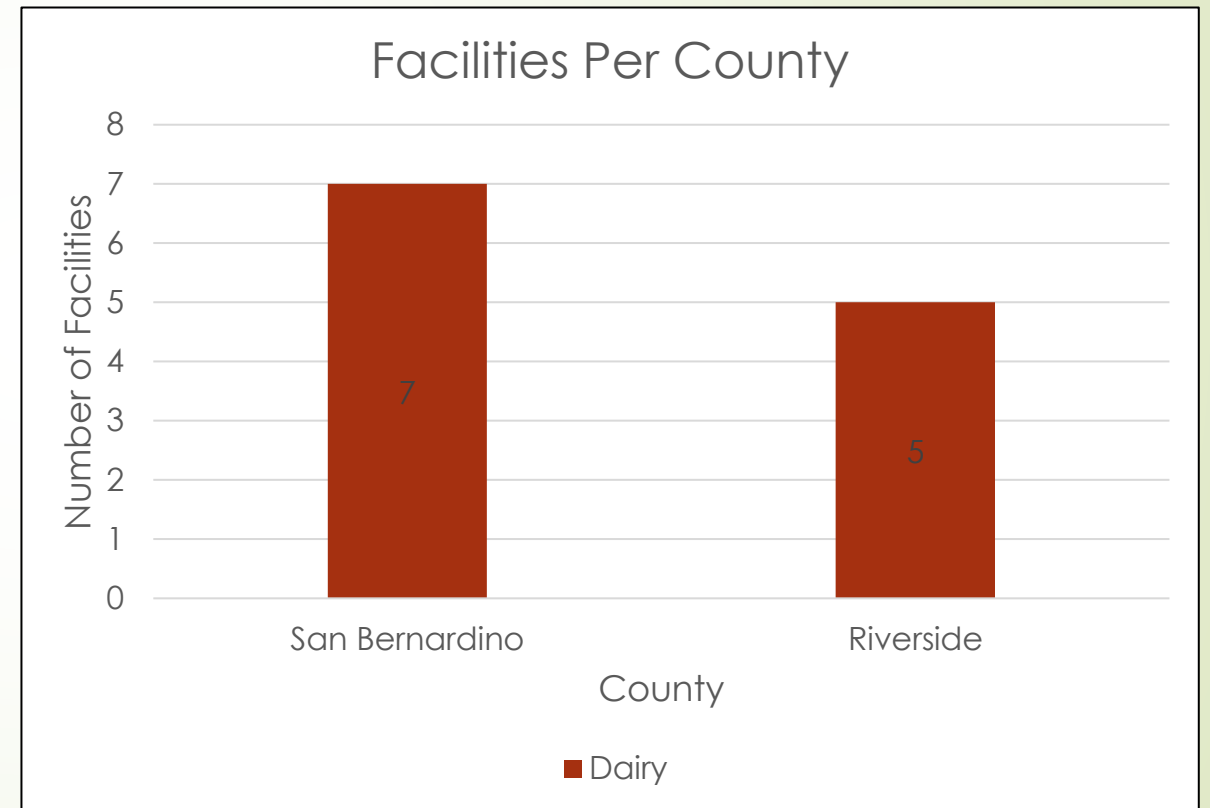


# Proposed Amended Rule 223 – Regulatory Impacts



# PAR 223 Preliminary Analysis of Potentially Impacted Facilities

- Facility search has identified
  - Twelve dairy farms
  - No impacted poultry farms
  - No impacted duck farms





# Proposed Rule Amendment - Regulatory Impacts

- Livestock facilities that meet the revised lower applicability thresholds would be subject to PAR 223 requirements
  - Permit application, facility information, and an emissions mitigation plan proposed to be submitted no later than January 1, 2027
- Control measures identified in the mitigation plan must be implemented within 12 months of the date that the permit is approved or by January 1, 2029, whichever is earlier

# Emissions Reductions Estimates

- Baseline emissions were estimated based on emission factors
  - The 12 impacted facilities emit about 0.85 tons of ammonia per day
- A review of mitigation measures determined that ammonia emission reductions can be estimated for the three source categories:
  - Feed operations
  - Handling of solid manure or separated solids
  - Land application of manure
- Facilities are anticipated to be currently implementing these mitigations measures
- PAR 223 results in enforceable measures (codified in permits) that allows for emissions reductions to be quantifiable, permanent, enforceable, and surplus to the baseline inventory
  - Total ammonia emissions reductions is estimated at approximately 21% relative to baseline inventory (0.18 tons per day)

# Cost Impacts

- Costs that incur under PAR 223 will come from preparation of the emissions mitigation plan and associated permitting fees
  - Permit processing fees approximately \$2,411 per facility
  - Annual permit renewal fee approximately \$550 per facility
- Minimal operational costs are expected



South Coast Air Quality Management District

## Form 400-E-21


### Supplemental Permit Application for Dairy Farms

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:  
SCAQMD  
P.O. Box 4944  
Diamond Bar, CA 91765-0944  
Tel: (909) 396-3385  
www.aqmd.gov

Section A - Operator Information							
Facility Name (Business Name of Operator That Appears On Permit):				Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD):			
Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site):							
<input type="radio"/> Fixed Location <input type="radio"/> Various Locations							
Section B - Number of Cows							
Total Number of Cows Currently At Your Dairy	Milk Cows	Dry Cows	Heifers 15-24 Months	Heifers 7-14 Months	Heifers 4-6 Months	Calves	Total
Maximum Number of Cows That Your Farm Was Designed For	Milk Cows	Dry Cows	Heifers 15-24 Months	Heifers 7-14 Months	Heifers 4-6 Months	Calves	Total
Section C - Facility Information							
Type of Dairy (check all that apply)	<input type="checkbox"/> Scrape <input type="checkbox"/> Flush <input type="checkbox"/> Vacuum <input type="checkbox"/> Other _____						
Type of Housing (check all that apply)	<input type="checkbox"/> Free Stalls <input type="checkbox"/> Open Corrals <input type="checkbox"/> Other _____						
Other Housing/Operations (check all that apply)	<input type="checkbox"/> Special Needs <input type="checkbox"/> Calf Housing <input type="checkbox"/> Other _____						
Waste Handling (check all that apply)	<input type="checkbox"/> Anaerobic Treatment Lagoon(s)		<input type="checkbox"/> Anaerobic Digester(s)				
	<input type="checkbox"/> Aerobic Treatment lagoon(s)		<input type="checkbox"/> Mechanical Separator				
	<input type="checkbox"/> Manure Stock Piles		<input type="checkbox"/> Land Application		<input type="checkbox"/> Storage Ponds		
	<input type="checkbox"/> Off-site Disposal		<input type="checkbox"/> Settling Basin		<input type="checkbox"/> Composting		
	<input type="checkbox"/> Other _____						
Other Dairy Equipment (check all that apply)	<input type="checkbox"/> Feed Storage / Commodity Barns			<input type="checkbox"/> Silage Piles			
	<input type="checkbox"/> Other _____						





# Socioeconomic Impact Assessment and California Environmental Quality Act (CEQA)

# Socioeconomic Impact Assessment

- Socioeconomic analysis for PAR 223 will consider:
  - Types of affected industries, including small businesses
  - Potential actions to be taken to comply with PAR 223 requirements
  - Range of probable costs, including costs to industry or business
  - Other elements typically included in the Draft Staff Report
- Preliminary analysis indicates estimated annual costs will be less than \$1M
- Socioeconomic Impact Assessment will be made available in the Draft Staff Report at least 30 days prior to the Public Hearing on June 6, 2025 (subject to change)



## California Environmental Quality Act (CEQA)

- Staff is reviewing PAR 223 to determine if it will result in any potential adverse environmental impacts
- Appropriate CEQA documentation will be prepared based on the analysis



## Key Dates

Action	Date
<b>Written Comments Due</b>	<b>April 9, 2025</b>
Stationary Source Committee	April 18, 2025
Set Hearing	May 2, 2025
Public Hearing	June 6, 2025

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| <input checked="" type="checkbox"/> Rule 223 | Emission Reduction Permits for Large Confined Animal Facilities   |
| <input type="checkbox"/> Rule 314            | Fees for Architectural Coatings   |