

Proposed Amended Rule 1157 – PM₁₀ Emission Reductions from Aggregate and Related Operations (PAR 1157)









Working Group Meeting #1

Date: September 2, 2025

Time: 10:30 am



Meeting Information

- Working group meetings will be held remotely via videoconference and teleconference (through Zoom)
- Staff will take the time to listen to all stakeholder comments
 - Please use the “raise hand” feature to speak:
 -  Click on the  button
 -  Dial *9
- When it is your turn to speak, your name will be announced
 - If you are a panelist, use the “unmute” feature to speak:
 -  Click on the  button
 -  Dial *6
 - If you are not a panelist, the meeting host will unmute you
- In addition to working group meetings, staff is available for individual meetings

Agenda



South Coast AQMD and Rule Development Process



PM₁₀ Background



Aggregate Facilities Background



Rule 1157 Summary



Need for Proposed Amendments



Next Steps



South Coast AQMD and Rule Development Process



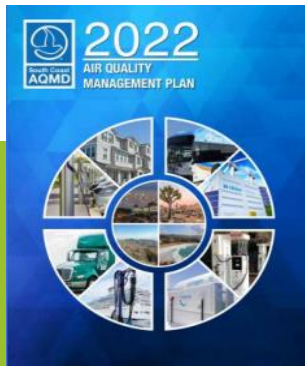
South Coast AQMD

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

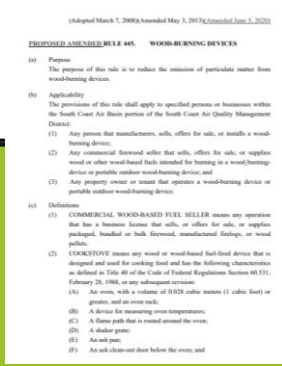




Key South Coast AQMD Activities



Develops the Air Quality Management Plan (AQMP) – blueprint for achieving compliance with federal and state clean air standards



Adopts air rules and regulations to reduce emissions from various sources



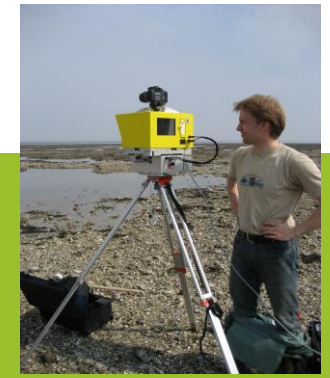
Issues permits for equipment that limits the amount of air emissions to ensure compliance with air quality rules



Conducts periodic inspections to ensure compliance with air quality requirements



Responds to air quality complaints from the public



Conducts ambient air quality monitoring and special studies and disseminates monitoring data to protect public health



Rule Development Process

Working Group and stakeholder meetings continue throughout process

**Information
Gathering
and Analysis**

Currently Here

**Preliminary
Draft Rule
and Staff
Report**

*Released 75
days before
Public Hearing*

**Public
Workshop**

*Public comment
on Preliminary
Draft Rule*

**Draft Rule
and Staff
Report**

*Released 30
days before
Public Hearing*

**Public
Hearing**

*Public
comments
and Board
action*



Working Groups Meetings

- Working group meetings are held throughout the rule development process and are open to the public
 - Shared knowledge benefits development of the rule
- Early input from stakeholders is strongly encouraged to help develop proposed rule amendments and address potential issues
- Gathered information is used to:
 - Provide more context
 - Accurately characterize information used for the rulemaking and its potential impacts such as cost

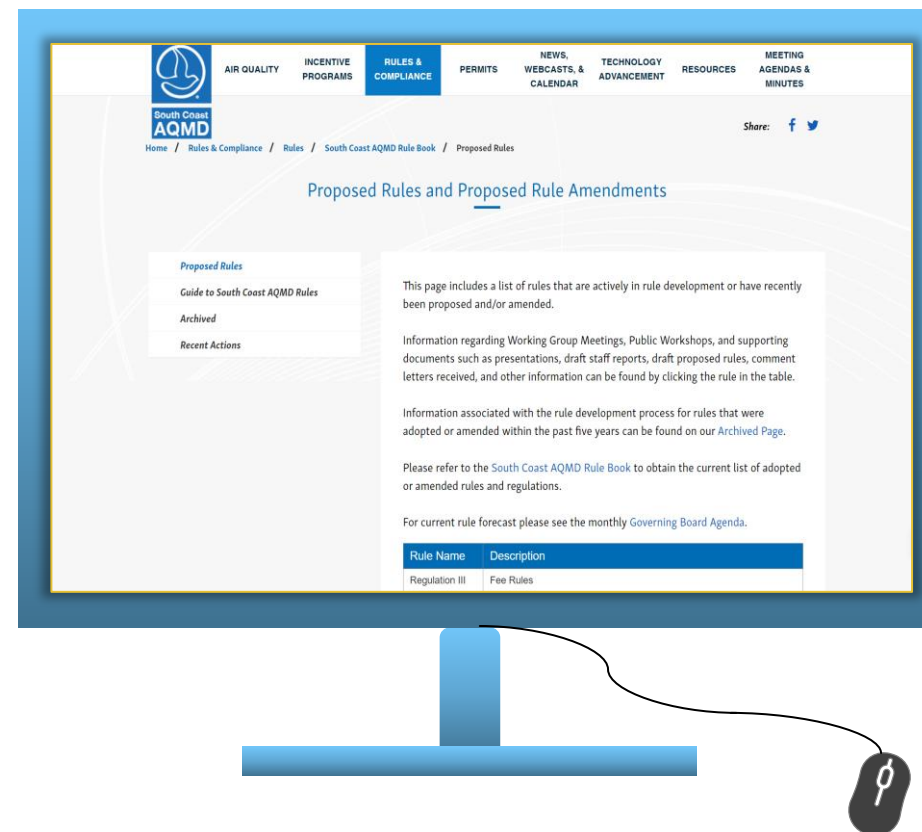


Working Group Materials

Working group materials for each working group meeting will be made available on the Proposed Rules and Proposed Rule Amendments Website:

<https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules>

Point your smartphone camera here to be directed to the website:



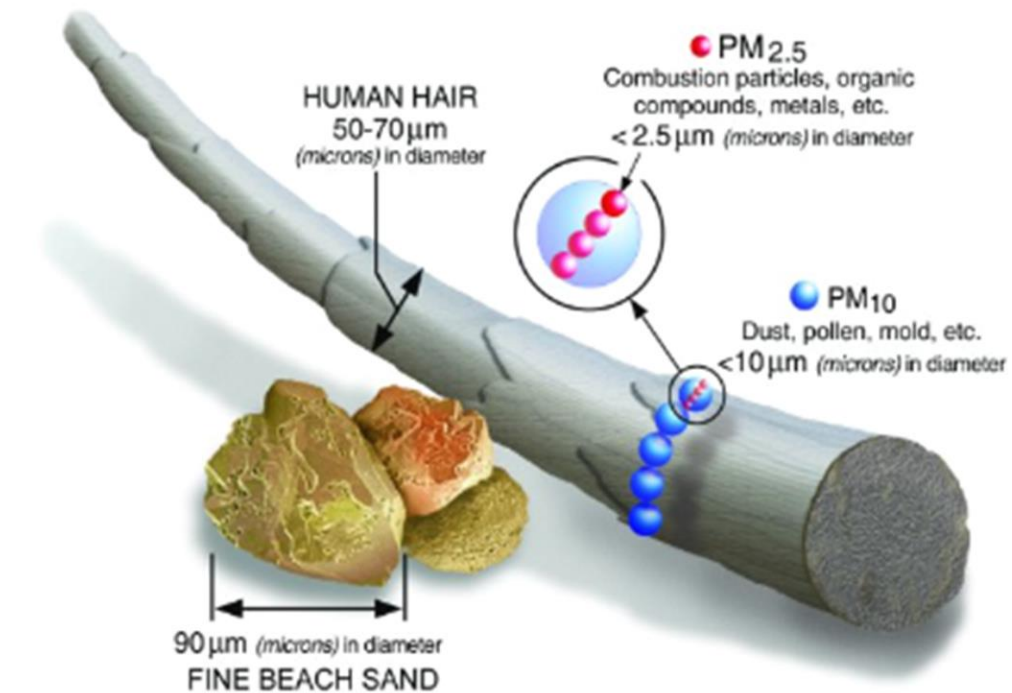


PM₁₀ Background





- Particulate matter (PM) are small, inhalable particles:
 - PM_{10} : inhalable particles of 10 or less microns in diameter
 - $PM_{2.5}$: fine inhalable particles of 2.5 or less microns in diameter
- PM_{10} includes dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, wind-blown dust from open lands, pollen, and fragments of bacteria

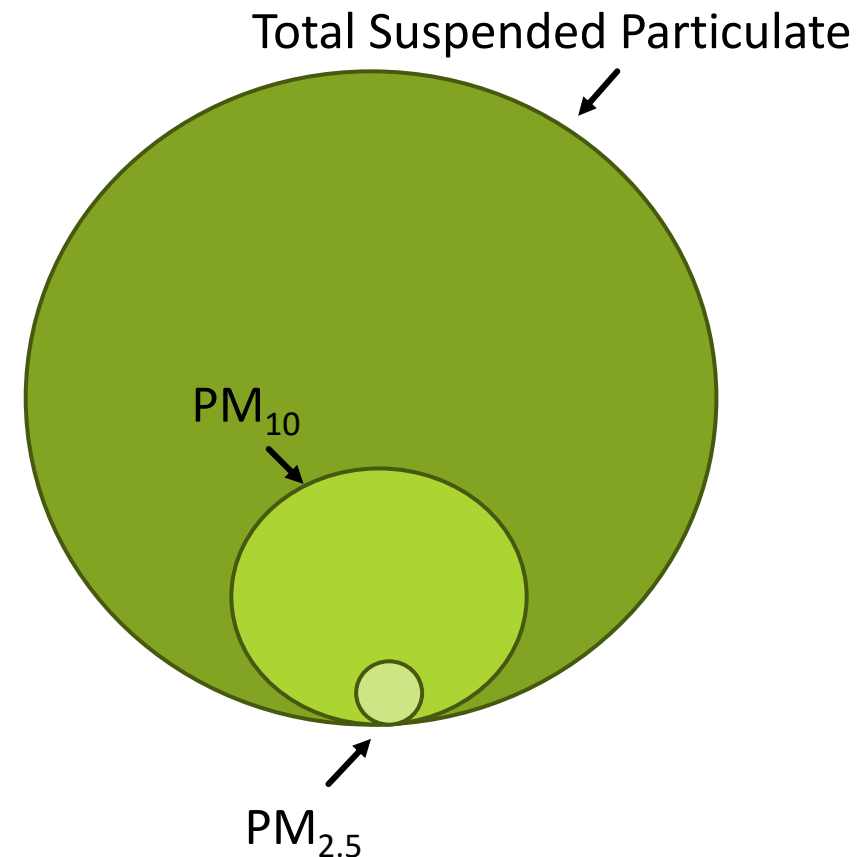


Size comparisons for PM particles



Dust and Particulate Matter

- Geologic dust can originate from a variety of natural and anthropogenic (man-made) sources
- A dust cloud or plume can be referred to as Total Suspended Particulate (or TSP) that contains both PM_{10} and $PM_{2.5}$
- Amount of PM_{10} and $PM_{2.5}$ vary by environment and source
- Dust sources are more likely to contain coarse inhalable particles
 - Based on emissions inventory estimates, TSP emissions from construction and demolition activities are comprised of approximately 49% PM_{10} and 5% $PM_{2.5}$ ¹



¹ 2022 Air Quality Management Plan, South Coast Air Quality Management District. (2022)



Health Effects of PM₁₀

- PM₁₀ can be inhaled and deposited deep into the lungs, causing adverse health effects such as:
 - Decreased lung function
 - Increased respiratory symptoms
 - Irritation of the airways, coughing, or difficulty breathing
 - Worsening of asthma, chronic obstructive pulmonary disease, and other respiratory diseases
 - Irregular heartbeats
 - Premature mortality in people with heart or lung disease



Localized PM₁₀



- As PM₁₀ is a heavier particulate, there is higher spatial variation that can result in more localized concerns
- Although the South Coast Air Basin is in attainment of federal Ambient Air Quality Standards for PM₁₀, some emission sources can elevate PM₁₀ emission levels locally





Aggregate Facilities Background

Aggregate Terminology



- **Aggregate** is granular or grainy material such as gravel, crushed stone, and quarried rocks
- **Aggregate operations** produce sand, gravel, crushed stone, and quarried rocks
- **Aggregate related operations** use aggregate materials
 - E.g., concrete batch plants



Common Aggregate Facilities



Sand



Gravel



Concrete Batch Plants



Hot Mix Asphalt



Other Aggregate Facilities



Recycled Aggregate

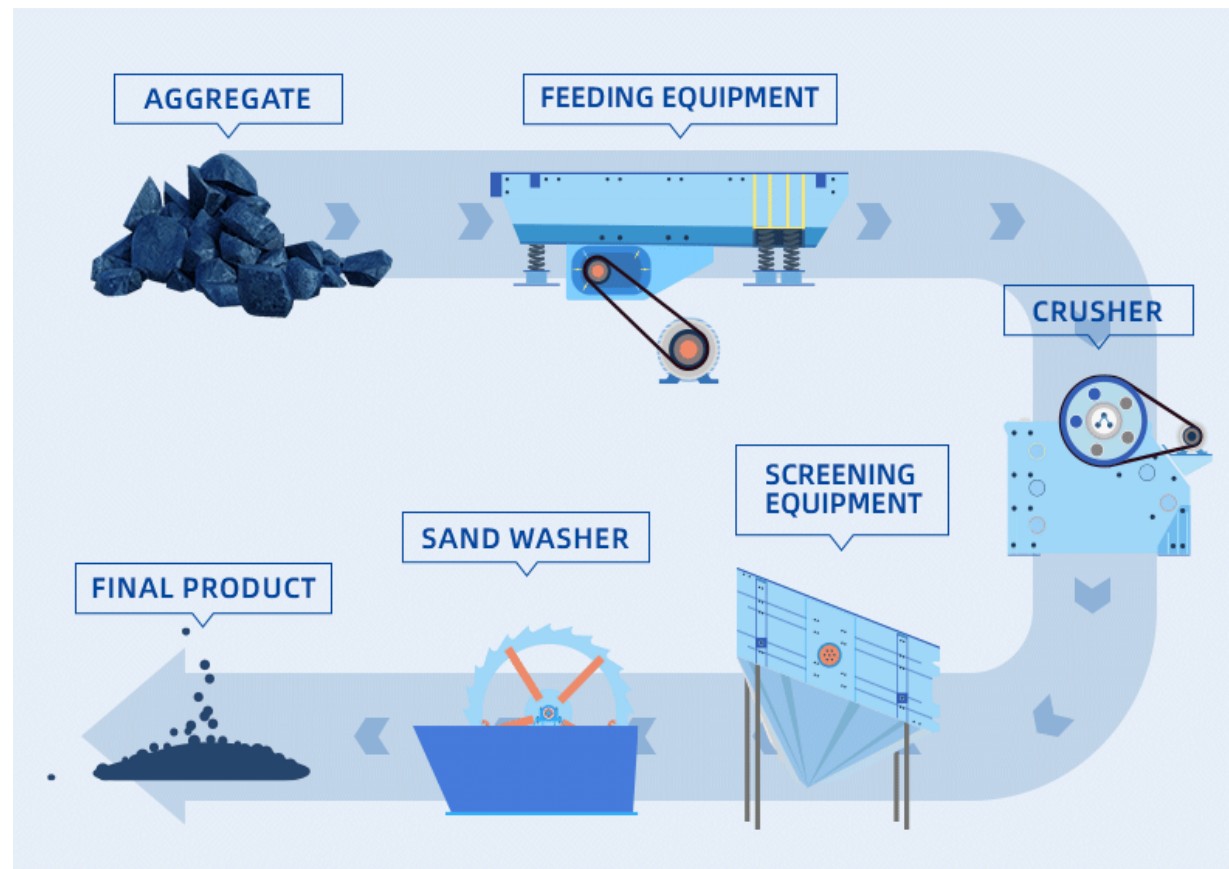


**Construction
and
Demolition
Waste**





Typical Process of Aggregate Operations





Distribution of Aggregate Facilities

- The table below provides facility data (2023 federal Employment Development Department):

NAICS Code	NAICS Industry	# of Facilities
212321	Construction Sand and Gravel Mining	22
212322	Industrial Sand Mining	3
327320	Ready-Mix Concrete Manufacturing	133
327331	Concrete Block and Brick	23
327332	Concrete Pipe	5
327390	Other Concrete Product Manufacturing	50
324121	Asphalt Paving Mixture and Block Manufacturing	21
212312	Crushed and Broken Limestone Mining and Quarrying	0
327410	Lime Manufacturing	2
327420	Gypsum Product Manufacturing	17

- Staff is reviewing permit data and other resources to update the PAR 1157 facility universe



PM₁₀ Sources at Aggregate Facilities

Permitted Equipment

- Crushing, screening, conveying equipment



Other Sources

- Storage piles, haul roads, material handling





Rule 1157 Summary

Overview of rules to address aggregate facility PM₁₀ emissions



Source-Specific Rules

Rule 1157– PM₁₀

Emission Reductions from Aggregate and Related Operations

- Requirements specific to aggregate and related operations

Rule 1155 - PM Control Devices

- Requirements and performance standards for air pollution control devices at point sources



Prohibitory Rules

Rule 401 – Visible Emissions

- Prohibits emissions that are visibly dark or obstruct visibility beyond set limits

Rule 402 –Public Nuisance

- Prohibits any source from causing public injury, nuisance, or annoyance

Rule 403 – Fugitive Dust

- Mandates best practices to reduce dust and PM₁₀ from all sources



Rule 1157 Overview

Adopted: January 2005

Amended: September 2006



- Aims to reduce PM₁₀ emissions from aggregate and related operations
- Applies to permanent and temporary aggregate and related operations under South Coast AQMD jurisdiction
 - Aggregate operations involve extracting, crushing, screening, and storing bulk materials (i.e., gravel, concrete, asphalt, and brick) from construction and demolition projects for recycling and reuse
 - Related operations include concrete batch plants, cement storage terminals, hot-mix asphalt production, recycling of construction materials, and inert landfills

Rule 1157 Key Requirements

Minimizes particulate emissions from aggregate facilities through key requirements:

- **Dust Suppression**
 - Apply water or chemical suppressants on crushers, screens, conveyors, storage piles, and unpaved internal roads
 - Use baghouses when water/suppressants alone don't control emissions
- **Track-Out Control**
 - Install rumble grates, wheel washers, or equivalent devices at exit points
 - Sweep external roads and clean internal paved roads regularly
- **Storage Piles**
 - Keep piles < 8 ft if within 300 ft of occupied structures
 - Alternatively, install irrigation systems for full dust stabilization
 - Silos and bunkers are acceptable as alternatives to open storage piles





Rule 1157 Key Requirements (cont.)

Minimizes particulate emissions from aggregate facilities through key requirements:

- **Visible Emissions Standards**
 - Violations occur when:
 - 20% opacity (average of 12 consecutive readings)
 - 50% opacity (average of 5 consecutive readings)
 - Dust plumes > 100 ft in any direction from source
- **Sensitive Receptor Provisions**
 - Facilities within 500 m of schools, hospitals, or homes face stricter requirements if they accrue > 3 violations in 12 months:
 - Must submit an Emission Reduction Plan within 30 days



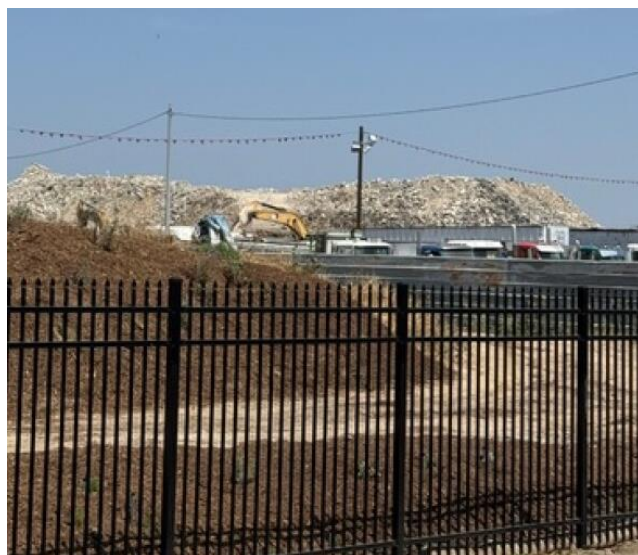


Need for Proposed Amendments

Communities' Concerns on PM₁₀ from Aggregate and Related Facilities



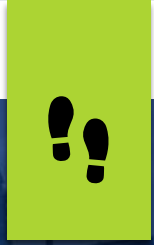
- Neighboring communities have expressed concerns of PM₁₀ and dust from local aggregate facilities (e.g., Sun Valley and San Bernardino)



Communities' Concerns on PM₁₀ from Aggregate and Related Facilities (cont.)



- In February 2025, Senator Caroline Menjivar introduced Senate Bill (SB) 526 to address her constituents concerns regarding aggregate facilities in Sun Valley
- SB 526* proposes South Coast AQMD to update Rule 1157 to include requirements such as:
 - Pile heights depending on proximity to sensitive receptors and containment, fence-line monitoring, notifications, and handling repeated violations
- South Coast AQMD is working to strengthen Rule 1157 to address concerns related to aggregate operations



Next Steps

Next Steps



Continue to obtain additional facility information to refine facility universe



Conduct site visits and stakeholder meetings



Prepare proposed rule amendment concepts



Next Working Group meeting



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Rule 1157

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PAR 1157 Staff Contacts

Please contact staff with any questions or comments

Ashley Dang


Air Quality Specialist

 (909) 396-3328

 adang@aqmd.gov

Marisa Gonzalez, Ph.D.


Air Quality Specialist

 (909) 396-2681

 mgonzalez@aqmd.gov

Michael Laybourn


Program Supervisor

 (909) 396-3066

 mlaybourn@aqmd.gov

Neil Fujiwara


Program Supervisor

 (909) 396-3512

 nfujiwara@aqmd.gov

Kalam Cheung, Ph.D.


Planning and Rules Manager

 (909) 396-3281

 kcheung@aqmd.gov

Michael Krause

Assistant Deputy Executive Officer

 (909) 396-2706

 mkrause@aqmd.gov