# **Working Group Meeting #5**

# Cumulative Impacts from Air Toxics for CEQA Projects



March 20, 2024

1:30 p.m. (PDT)

### **REMOTE MEETING INFORMATION**

Join Zoom Webinar Link: https://scaqmd.zoom.us/j/94556369595

> Webinar ID: 945 5636 9595 Dial In: (669) 900 6833



# Agenda

- I. Overview of Initial Objective and Previous Working Group Meetings
- II. Recent Updates and Recap of Working Group Meeting #4
- III. Additional Criteria for Adjusting the Cumulative Threshold
- IV. Retrospective Sensitivity Analysis
- V. Next Steps
- VI. Staff Contacts

## **Overview of Initial Objective and Previous Working Group Meetings**

**Initial Objective:** Pursuant to the California Environmental Quality Act (CEQA) which requires an analysis of direct, indirect, and cumulative impacts, South Coast AQMD has initiated a public process to develop additional guidance for evaluating cumulative air quality impacts from increased concentrations of air toxics for projects.

### Working Group Meeting (WGM) #1 - February 17, 2022

- ✓ Gathered information and shared the initial objective
- ✓ Identified the importance of conducting cumulative impact analysis
- ✓ Recognized the necessity for further guidance on analyzing cumulative impacts of air toxics
- ✓ Initiated a public process to develop a phased qualitative and quantitative approach

### WGM #2 - May 26, 2022

- $\checkmark\,$  Shared valuable feedback from stakeholders
- ✓ Based on the stakeholders' feedback, staff presented:
  - Various mapping tools
  - Concept of using a range of distances to define geographic scope
  - Ideas for developing a cumulative significance threshold



## **Overview of Previous Working Group Meetings** (concluded)

### WGM #3 - January 24, 2023

Summarized stakeholder feedback and comments about how to:

- ✓ Define significance threshold for project with cumulatively considerable impacts
- Evaluate incremental project impacts qualitatively and quantitatively
- ✓ Combine background and incremental impacts

### WGM #4 - June 6, 2023

Proposed Process Steps and Tiered Approach for Cumulative Toxic Air Contaminants (TAC) Impacts Analyses:

- $\checkmark$  Initial objective and scope
- ✓ Policy concepts and strategy
- ✓ Cancer Risk (CR) impacts
- ✓ Discussed proposed concepts and process steps for regional plan level and project level analyses

### **Overview and Objective of Working Group Meeting (WGM) #3**

**Overview:** Discuss potential concepts and tiered approach for conducting an enhanced qualitative and quantitative cumulative impact analysis for air toxics

Objective: Seek feedback on approaches that will be shared today



## **Overview and Objective for Working Group Meeting #5**

**Overview:** Provide updates on the additional criteria and retrospective sensitivity analysis for conducting a cumulative impact analysis for air toxics

**Objective:** Seek feedback on the information that will be shared today



## Updates From Other Agencies -Existing or Proposed Guidance for Cumulative Impacts

### **U.S. EPA's Cumulative Impacts Research**

### (https://www.epa.gov/healthresearch/cumulative-impacts-research)

- Challenges and opportunities for research supporting cumulative impact assessments at the U.S. EPA's Office of Research and Development (February 2024)
- Legal Tools to Advance Environmental Justice Cumulative Impacts Addendum (January 2023)
- Cumulative Impacts Research Final Report (September 2022)

### Bay Area AQMD's 2022 CEQA Guidelines

(https://www.baaqmd.gov/plans-and-climate/california-environmentalguality-act-ceqa/updated-ceqa-guidelines)

 Minor updates to Appendix E - Recommended Methods for Screening and Modeling Local Risks and Hazards (August 2023)

### CARB, Caltrans, DTSC, Office of Environmental Health Hazard Assessment (OEHHA), and Other Air Districts

No further updates as of March 2024









## Updates From Stakeholders

tive map shows the logistics industry footprint in Los Angeles, Orange, Riverside, and San Bernardino Counties. Zoom in and/or click an area to see specific community impacts.

rs io		Warehouse count	Acreage 🝦	Warehouse floor space (Sq.Ft.)	Daily Truck trips	Daily Diesel PM (pounds)	Daily NOx (pounds)	Daily CO2 (metric tons)	Jobs 🝦
		182	3,518	84,300,000	56,000	77.5	8,725	2355.2	28,1 <mark>4</mark> 4
		47	3,592	86,100,000	58,000	80.2	9,036	<mark>24</mark> 39.3	28,736
ch LLC						7		Base     O Imag	emap gery
ΓΥ v1.18 (Ja	an.	C8		MORENO VALLEY				✓ Wareh ✓ Jurisdi ✓ Cir	ouses ictions cle
lresearch.s ouseCITY/)	<u>hinya</u>	Mor M	eno Vallevi arch Field					CalEnviroScree	ail oScreen n Score
l quantify t potprint an	he Id						Mystic Lake	0% - 20 20% - 4 40% - 6 60% - 8 80% - 10	2% ⊧0% §0% §0% 00%
al impact i Iifornia	n		CP F		Lake Perris				

- Radical Research LLC
- Warehouse CITY v1.18 (Jan. 2024) (<u>https://radicalresearch.shinya</u> pps.io/WarehouseCITY/)
  - Visualize and quantify the warehouse footprint and environmental impact in Southern California

Lakeview

Status Existing Planned and Approved

## Recap of WGM #4: Considerations When Developing Policy for Analyzing Cumulative Impacts from Air Toxics

### **Needs and Reasons**

- ✓ Community concerns about high health risk impacts
- ✓ CEQA lawsuit by California Department of Justice (CA DOJ\*)
- ✓ Limitations on current CEQA guidance may result in an inadequate analysis
- ✓ Enhance existing thresholds from 2003

### **Policy Goals**

Provide streamlined guidance and resources that:

- Lead agencies can rely upon for informed decision-making
- ✓ Address CA DOJ concerns
- Address community concerns and provide useful information
- ✓ Promote equity

### Policy <u>NOT</u> Intended To

- ✓ Delay or stop proposed projects
- Require EIRs for all proposed projects

\* People of the State of California v. City of Fontana, San Bernardino Superior Court, Case No. CIVSB2121829

## Recap of WGM #4: Consideration of Cancer Risk By Land Use

✓ CEQA Requirement – **Cancer Risk (CR)** during project operation (point and non-point sources)

✓ Staff predicted potential **CR** impacts for projects would vary based on land use type and size

### Low CR impacts

- **Residential:** apartment, condo, mobile home, single family home development project
- **Commercial:** office, bank, government, pharmacy
- **Recreational:** arena, park, restaurant, golf course, health club, hotel, theater
- Educational: daycare, school, college, library, church/temple
- **Retail:** auto repair center, grocery store, shopping center/mall

### **Medium CR impacts**

- Truck yard: enclosed, parking lot, structure, asphalt/nonasphalt
- **Retail:** gas station, auto body shop, paint shop, dry cleaner
- Small Industrial projects: printing, material testing and assembly of data processing equipment
- Linear projects: bridge, roadway, freeway (new or improvements)

### **High CR impacts**

- Industrial: warehouse, light, heavy, manufacturing, industrial park
- Major Transportation projects: airport, port, railyard, bus/train station
- Major Planning projects: Master Plan, General Plan, Specific Plan

## Recap of WGM #4: Multi-Layered Approach for Analyzing Cumulative TAC Impacts

Methods	Methods Description		Weaknesses	Incorporated into Proposed Concepts?
Brightline	Clearly defined threshold or standard composed of objective factors	Easy to use/verify	Not flexible	Yes
Listing and Projection Summaries	List past/present/future projects producing related impacts OR summarize projections contained in a plan	Informational, logical	May not be sufficient	Yes, required (CEQA Guidelines Section 15130(b))
Modeling	Powerful mathematical tool for quantifying cause-and-effect relationship	Science-based, integrate time/space	Need data, can be costly	Yes, optional for Regional Plans
Mapping	Overlay mapping from list of projects to help identify geographic impacted areas	Visually address proximity impacts	Difficult to address magnitude of impact	Yes, optional
Questionnaires /checklist	Gather wide range of information on multiple actions and resources needed to identify impacts	Flexible, can deal with subjective information	Not quantifiable	Yes
Trend Analyses	Assess status of projects in the communities over time	Address accumulation over time	Need a lot of data, difficult to determine threshold	No

# Recap of Process for Analyzing Regional Projects

# **Recap of Process for Analyzing <u>Regional Projects</u>**



# **Recap of Process for Analyzing <u>Regional Projects</u>**



**Describe Severity of Cumulatively Significant Impacts** 

Recap of Process for Project-Level Analysis

## **Recap of Process for <u>Project-Level</u> Analysis**



## **Recap of Process for <u>Project-Level</u> Analysis**



Describe Severity of Cumulative Impacts via **Qualitative Analysis**  Demonstrate Severity of Cumulative Impacts via Quantitative Analysis

### Project-Level Analysis: Step 3 of 7 – Determine Cumulative Significance Threshold

Initial Threshold					
Project's	Proposed Initial				
Background	Threshold Based on				
MATES* Cancer	Cancer Risk				
Risk	[cases per million]				
Most stringent	A (e.g., 1)				
> 90 <sup>th</sup> percentile	B (e.g., 3)				
90 <sup>th</sup> to 50 <sup>th</sup> percentile	C (e.g., 5)				
50 <sup>th</sup> to 30 <sup>th</sup> percentile	D (e.g., 7)				
< 30 <sup>th</sup> percentile	E (e.g., 10)				

	Additional Criteria to Adjust Stringency		
	Additional Criteria		
#1	High Volume Diesel-fueled Mobile Sources Trucks, trains, etc., at or near the Proposed Project site based on certain distance to sensitive receptors		
#2	Post-2018 Projects with High Volume Diesel —fueled Trucks Along Proposed Project's truck route <sup>+</sup>		Cu Sia
#3	Sensitive Receptor Population Either within AB 617 area or > 80 <sup>th</sup> percentile CalEnviroScreen 4.0 (See next slide)		Tŀ
#4	Other Considerations Seeking suggestions		

Cumulative Significance Threshold

Step 3

\* MATES V is based on 2018 data

- If one or more additional criterion apply, the initial threshold will be adjusted to the next, more stringent level. For example, the least stringent initial threshold is "E" (10 in one million). If Criterion #1 applies, then the cumulative threshold will adjust to "D" (7 in one million). If Criterion #2 also applies, then the cumulative threshold will adjust to "C" (5 in one million).
- + Truck route is from the Proposed Project site to major freeway, within certain distance to sensitive receptors, add all diesel-fueled trucks from post-2018 projects.

# Criterion #1: High Volume Diesel-Fueled Mobile Sources

Trucks, trains, etc., at or near the Proposed Project site based on certain distance to sensitive receptors

- Calculated Cancer Risk (CR) for 28 Met. Stations using AERMOD (Version 22112)
- CR calculated based on OEHHA 2015 Risk Assessment Guidelines
- CARB's EMFAC 2021 provided emission rates (T7 class 8)
- AERMOD Assumptions
  - Volume Source: 100,000 sq. ft. (Rule 2305)
  - Receptor spacing based on distance from the source
  - Flat terrain and no building downwash
  - Averaging time: Period
- Calculated truck trips that trigger **CR threshold of 100 in a million** from modeled ground–level concentration (ug/m<sup>3</sup>)
  - 91 one-way trips/day (33.14 lb/yr PM2.5)

Similar calculations can be made for other diesel-fueled equipment, such as locomotive engines, marine vessels, tugboats, etc.



# Criterion #2: High Volume Diesel-Fueled Trucks Along Route to Freeway

Along Proposed Project's truck route:

- Calculated CR for 28 Met. Stations using AERMOD
  - Line Source: Truck route from project site to major freeway
  - CR calculated based on OEHHA 2015 Risk Assessment Guidelines
- Calculated truck trips that trigger CR threshold as 100 in a million from the calculated ground-level concentration (ug/m<sup>3</sup>)
  - 368 one-way trips/day (78.48 lb/yr PM2.5)



### Criterion #2 truck trips (AADT) =

[Most recent Caltrans truck trips + Proposed Project truck trips + Future truck trips (if known) - 2018 Caltrans truck trips]

# **Truck Traffic Data Resources**

- Caltrans Traffic Census Program
  - Truck traffic volumes for freeway on- and off-ramps-Annual Average Daily Traffic (AADT) (<u>https://dot.ca.gov/programs/traffic-operations/census</u>)
  - Highway datasets (<u>Caltrans Home (arcgis.com</u>))
  - Caltrans Performance Measurement System (<u>PeMS</u>)
- Other Traffic Data from City, County, and Other Government Agencies







## Criterion #3: Determine Significance Threshold - Either within AB 617 area or > 80th Percentile CalEnviroScreen 4.0



# **Retrospective Sensitivity Analysis**

- Why: To estimate the number of projects that would require the preparation of an EIR if new cumulative policy criteria is applied
- Who: CEQA-Intergovernmental Review (IGR) team receives environmental documents from cities & counties for review; documents are logged into an internal database
- **How:** Information extracted from internal database identified wide variety of CEQA documents received for projects during the past 5 years from June 2018 to June 2023
- What: Internal database categorizes projects by 12 different land use types

1 – Goods Movement	5 – Waste and Water-Related	9 – Medical Facilities	
2 – Warehouse & Distribution Centers	6 – Utilities	10 – Retail	
3 – Airports	7 – Transportation	11 – General Land Use (Residential)	
4 – Industrial & Commercial	8 – Institution	12 – Plans and Regulations	

# **Statistics of CEQA Documents Received**

- CEQA documents for 3,806 projects were received from June 2018 to June 2023 (5 years)
- For the retrospective sensitivity analysis, 1,179 MNDs and 192 NDs (red bars) were reviewed to see how they would be impacted by the proposed policy
- 680 projects with EIRs will remain unchanged under the proposed policy
- 1,755 Other category refers to other types of documents (e.g., Public Hearing Notices, Community Updates, etc.) which were excluded from the retrospective analysis



# **Statistics of MND/ND Projects**

Land Use Type	Number of MND Projects from June 2018 to June 2023	Number of ND Projects from June 2018 to June 2023	Study be Conducted with either 1-year or 5-year Lookback Project List?
1 – Goods Movement	6	9	5-year
2 – Warehouse & Distribution Centers	166	4	1-year
3 – Airports	2	2	5-year
4 – Industrial & Commercial	124	29	1-year
5 – Waste and Water-Related	166	8	1-year
6 – Utilities	14	0	5-year
7 – Transportation	78	12	1-year
8 – Institution	127	6	1-year
9 – Medical Facilities	18	1	5-year
10 – Retail	136	13	1-year
11 – General Land Use (Residential)	313	41	1-year
12 – Plans and Regulations	29	67	1-year

# Methodology to Determine if an EIR is Required

- Internal database includes key information regarding a project
  - Project title, description, location, Lead Agency, etc.
  - CEQA document type (e.g., MND or ND)
  - ➤ AB 617 communities
- Process to determine if an EIR is required:
  - Step 1 Determine the Initial Cumulative Threshold based on MATES percentile
  - > Step 2 Identify if project triggers any of the following:
    - Criterion #1: Number of one-way truck trips generated (if any)
    - Criterion #2: High Volume Diesel–Fueled Trucks along truck route
    - Criterion #3: CalEnviroScreen 4.0 Percentile or AB 617 communities
  - Step 3 Determine the Final Cumulative Significance Threshold based on the initial cumulative thresholds in Step 1 and the number of additional criteria met in Step 2
  - Step 4 Compare the project's operational CR to the Final Cumulative Significance Threshold and determine if project is cumulatively significant
  - Step 5 For a cumulatively significant project, an EIR would be required instead of a MND/ND if the project design is not modified, or mitigation cannot fully reduce impacts

#### Project-Level Analysis: Step 3 of 7 (continued) – Determine Cumulative Significance Threshold



# Methodology to Determine if an EIR is Required



# **Results of Retrospective Sensitivity Analysis**

Land Use Type	Total Projects Reviewed	How Many Projects Would Require an EIR? (Number/%)	How Many Projects Would Continue to Require a MND/ND? (Number/%)
1 – Goods Movement†	13	2 / 15%	11 / 85%
2 – Warehouses & Distribution Centers*	37	15 / 41%	22 / 59%
3 – Airports†	4	0 / 0%	4 / 100%
4 – Industrial & Commercial*	17	4 / 24%	13 / 76%
5 – Waste and Water-Related*	26	0 / 0%	26 / 100%
6 – Utilities†	10	1 / 10%	9 / 90%

\* Land Use with a 1-year project list from June 2022 to June 2023

<sup>+</sup> Land Use with a 5-year project list from June 2018 to June 2023

# **Results of Retrospective Sensitivity Analysis**

Land Use Type	Total Projects Reviewed	How Many Projects Would Require an EIR? (Number/%)	How Many Projects Would Continue to Require a MND/ND? (Number/%)
7 – Transportation*	10	0 / 0%	10 / 100%
8 – Institution*	26	0 / 0%	26 / 100%
9 – Medical Facilities <sup>+</sup>	16	1 / 6%	15 / 94%
10 – Retail*	16	1/6%	15 / 94%
11 – General Land Use (Residential)*	57	1 / 2%	56 / 98%
12 – Plans and Regulations*	9	0 / 0%	9 / 100%

\* Land Use with a 1-year project list from June 2022 to June 2023

<sup>+</sup> Land Use with a 5-year project list from June 2018 to June 2023

## Results of Retrospective Sensitivity Analysis For Warehouses & Distribution Centers Land Use

Out of 37 reviewed projects, 15 projects (41%) would require an EIR to be prepared because:

- Each project has CR ranging between 1 to 7 in one million
- Each project has an Initial Cumulative Threshold, either 3 or 5 in a million based on their MATES V percentile
- Additional criteria are triggered (either 1, 2, or all 3)
- Each project has a new Final Cumulative Significance Threshold, either 1 or 3 in one million
- Each project's operational CR exceeds the Final Cumulative Significance Threshold
- Each project is cumulatively significant



Land Use Type	Total Projects Reviewed	How Many Projects Would Require an EIR? (Number/%)	How Many Projects Would Continue to Require an MND/ND? (Number/%)
<ul> <li>Warehouse &amp;</li> <li>Distribution Centers*</li> </ul>	37	15/ 41%	22 / 59%

## Results of Retrospective Sensitivity Analysis For Warehouses & Distribution Centers Land Use – Example 1

### **Project Description in MND**

The project consists of constructing two warehouses totaling 329,100 sq. ft, 81,000 sq. ft of business uses, 76,800 sq. ft of vehicle storage uses, 128,600 sq. ft of self-storage uses, 4,000 sq. ft of service station uses, and 4,650 sq. ft of restaurant uses on 44 acres. Located in AB 617 Eastern Coachella Valley Community.

### CR = 5.4 in one million.

Initial Project's Background MATES* Cancer Risk Most stringent	Threshold Proposed Initial Threshold Based on Cancer Risk [cases per million] A (e.g., 1)	MATES V Percentile	Initial Cumulative Threshold (Based on MATES	e Criterion # Met? V)	1 Criterion #2 Met?	Criterion #3 Met?	Final Cumulative Threshold	
> 90 <sup>th</sup> percentile	B (e.g., 3)	63	5	Y	Y	Y	1	
90 <sup>th</sup> to 50 <sup>th</sup> percentile	C (e.g., 5)							
50 <sup>th</sup> to 30 <sup>th</sup> percentile	D (e.g., 7)		is triggered			triggered because the		
< 30 <sup>th</sup> percentile	E (e.g., 10)		because the		threshold is 368			
			threshold is 91 trips/day			trips/da	V	
		– Most recent Annual Avera Traffic	2022 Caltrans ge Daily Truck (AADT)	Proposed Project Truck Trips per Day	2018 Caltrans Truck Numbers (AADT)	Criterion Truck Trij	#2 ps	
		4,6	618	528	4,425	721	) 30	

## Results of Retrospective Sensitivity Analysis REVISED For Warehouses & Distribution Centers Land Use – Example 2

### **Project Description in MND**

The project consists of constructing a 181,100 sq. ft warehouse with 27 loading docks on 9.44 acres.

### CR = 0.14 in one million.



## Retrospective Sensitivity Analysis Results For Medical Facilities Land Use

Out of 16 projects reviewed , 1 project which is a medical research facility (6%) would require an EIR to be prepared because:

- Project relies on another plan's CR for its long-term health impact, with a CR = 6.56 in one million
- Project has an Initial Cumulative Threshold of 5 in one million (MATES V percentile is 63%)
- No additional criteria are triggered
- New Final Cumulative Significance Threshold is 5 in one million
- Project's CR exceeds the Final Cumulative Significance Threshold
- Project is cumulatively significant



Land Use Type	Total Project Reviewed	How Many Projects Would Require an EIR? (Number/%)	How Many Projects Would Continue to Require an MND/ND? (Number/%)
9 – Medical Facilities†	16	1 / 6%	15 / 94%

Note: An EIR might need to be prepared if the medical facility has multiple emission sources (e.g., I.C. engines, boilers, etc.) contributing to the operational CR.

## **Retrospective Sensitivity Analysis Results For General Land Use (Residential)**

Out of 57 projects reviewed , 1 project (2%) would require an EIR to be prepared because:

- Project includes a gas station (benzene is a TAC), plus the total project CR = 8.3 in one million
- Project has an initial threshold of 5 in one million (MATES V percentile is 73%)
- Project triggers 1 additional criterion
- New Final Cumulative Significance Threshold of 3 in one million
- Project's CR exceeds the Final Cumulative Significance Threshold
- Project is cumulatively significant



Land Use Type	Total Project Reviewed	How Many Projects Would Require an EIR? (Number/%)	How Many Projects Would Continue to Require an MND/ND? (Number/%)
11 – General Land Use (Residential)*	57	1 / 2%	56 / 98%

# **Results of Retrospective Sensitivity Analysis**

**Results**: EIRs would be required for ~10% of the total projects reviewed, with over half attributed to Warehouses and Distribution Centers land use

The retrospective sensitivity analysis provided a pathway which:

- Quantifies percentage of projects that would require an EIR after applying criteria
- Demonstrates no substantial increase in the number of projects that would require the preparation of an EIR
- Supports having a standardized approach for conducting an analysis of cumulative impacts from air toxics



# **Staff Recommendation and Request for Feedback**

- Staff recommends proceeding with developing the guidance document to implement the proposed policy/methodology for analyzing cumulative impacts from air toxics
- Staff is seeking stakeholder feedback on:
  - Proposed cumulative significance thresholds
  - Proposed methodology for conducting the analysis
  - > Any other thoughts or concerns for consideration

# **Next Steps**

- > Develop/Compile additional mitigation measures and alternatives
- Prepare preliminary draft of proposed guidance
- Continue to hold WGMs and meet with stakeholders
- Provide updates on CEQA Policy Development webpage (available at <u>http://www.aqmd.gov/home/rules-compliance/ceqa/ceqa-</u> <u>policy-development-(new)</u>)

# **CEQA-IGR Staff Contacts**

Sam Wang, Program Supervisor, 909-396-2649, <a href="mailto:swang1@aqmd.gov">swang1@aqmd.gov</a>		
Danica Nguyen, Air Quality Specialist, 909-396-3531, <u>dnguyen1@aqmd.gov</u>		Michael Krause
Sahar Ghadimi, Air Quality Specialist, 909-396-2392, <u>sghadimi@aqmd.gov</u>		Assistant
Evelyn Aguilar, Air Quality Specialist, 909-396-3148, <u>eaguilar@aqmd.gov</u>		Deputy Executive Officer
Michael Morris Planning & Rules Manager 909-396-3282 <u>mmorris@aqmd.gov</u>	Barbara Radlein Planning & Rules Manager, CEQA/Socio 909-396-2716 <u>bradlein@aqmd.gov</u>	909-396-2706 mkrause@aqmd.gov

Sign up for CEQA Updates at: <u>https://www.aqmd.gov/sign-up</u>

## **Concept – Applicability and Definition**

Applicability and definitions will include:

- ✓ Lead agencies and jurisdiction
- ✓ Applicable CEQA document type
- ✓ Exempt and screen-out projects and type of CEQA document
- ✓ Health risk cancer
- ✓ Project operation and long-term construction
- ✓ Regional plans vs. project-level
- ✓ Geographical impact radius
- ✓ Trucks routes
- $\checkmark$  Sensitive receptors and distance to the sources
- ✓ More...