



2022 Update: CEQA Air Quality & Greenhouse Gas Impact Studies

for Land Use Projects

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James A. Westbrook, President
jwestbrook@bluescapeinc.com
878-774-2009



CEQA Air Quality (AQ) & Greenhouse Gas (GHG) Impact Studies Webinar

- What's New in 2022?
 - GHG Impact Analysis, onward to Net Zero
 - Cumulative Health Risk Assessment
 - Friant Ranch Health Impact Analysis
 - Technical Analysis Tools
- CEQA AQ/GHG Study Steps and Case Study
- Summary / Strategies for Project Approval

About BlueScape

- Specializing in Air Quality Impact Analysis since 1997
- Air emissions calculations, air dispersion modeling, health risk assessment
- Expert in CalEEMod, AERMOD, HARP2, other modeling tools
- Work throughout California, US and International
- Wide range of land use projects and facilities; industrial project air permits





2022 CEQA Update: AQ/GHG Impact Studies



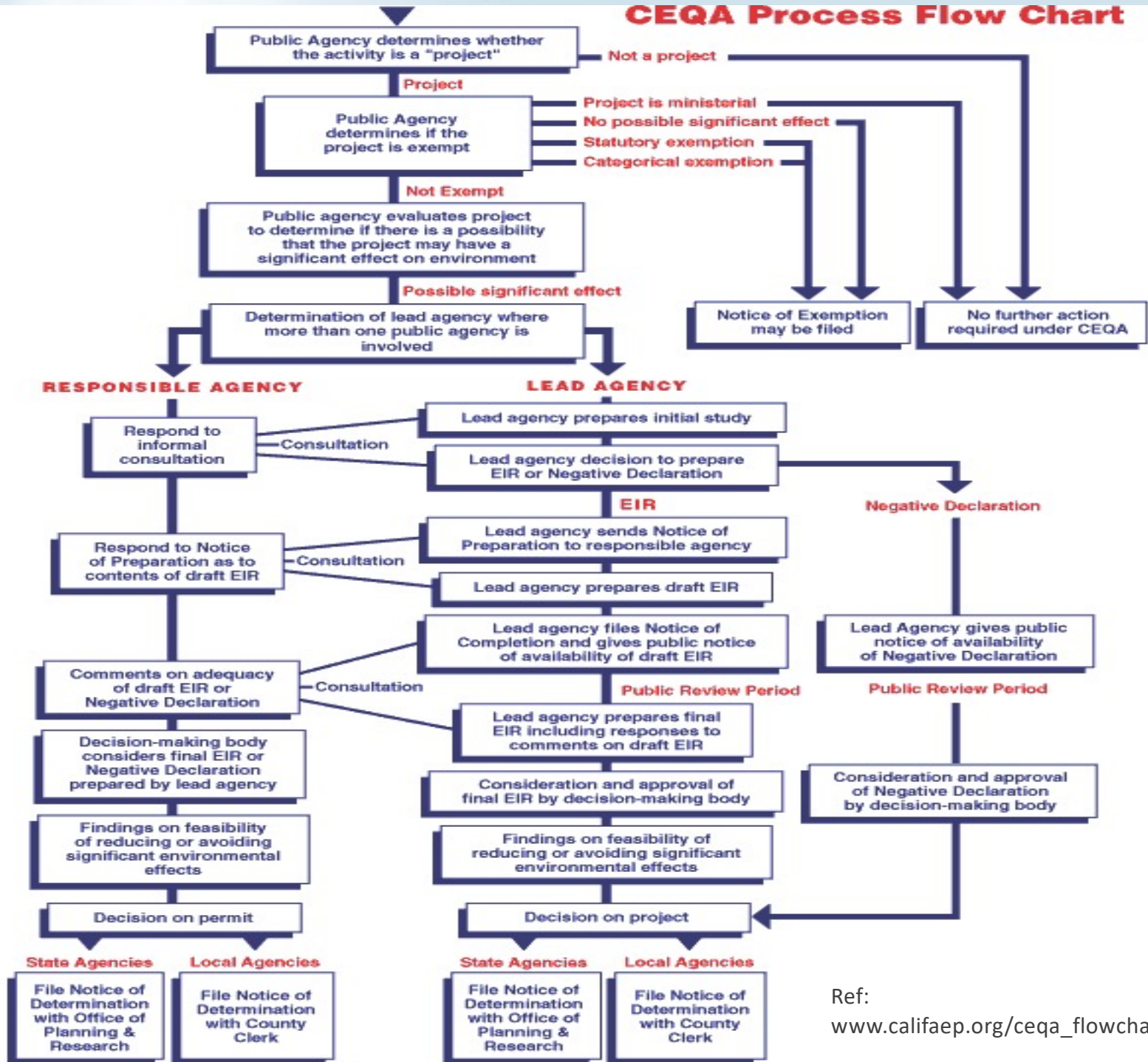
CEQA AQ/GHG – What's New in 2022?

- Planning Agencies want a Study (CEQA or not!)
- GHG impacts the big driver for Project Design
- Welcome to Net Zero Emissions by 2045!
- Impacts on Sensitive Receptors must be addressed (HRA) more than ever; diesel exhaust
- Cumulative impacts, environmental justice
- Increased Air District and community involvement
- "Friant Ranch" analysis evolving

CEQA Regulation Overview

- Applies to land use “projects”
- CEQA Statute: Public Resources Code Div 13, §21000 et seq
 - Identify significant effects, mitigate or avoid significant effects where feasible, approve if infeasible to mitigate provided other laws met
 - Project impacts, cumulatively considerable with other projects, adverse effects on human beings
- CEQA Guidelines CCR Title 14, Div. Chap 3, §15000 et seq (last updated 12/18/18)
- Lead Agencies in charge of CEQA review; Air Districts are Responsible Agencies, review and input
- CEQA AQ/GHG review methods advance per regulations, agency guidance, legal challenges *challenging!*

CEQA Process Flow Chart



Ref: www.califaep.org/ceqa_flowchart.php

CEQA Guidelines Appendix G

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air quality control district may be relied upon to make the following determinations. Would the project:

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- c) Expose sensitive receptors to substantial pollutant concentrations?
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

VIII. GREENHOUSE GAS EMISSIONS. Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

CEQA Significance Thresholds

- Criteria Pollutant Impacts – NO_x, VOC, PM₁₀, PM_{2.5}, CO, SO_x
 - Project consistency with regional air quality plans
 - Screening Level Thresholds (SLTs): daily (peak lb/day), annual (tons/year)
 - Published by Planning Agencies and Air Districts, or stated within a General Plan
 - California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS)
 - Air Quality Impact Modeling against Ambient Standards optional
 - Project emissions not cumulatively considerable
- GHG Impacts
 - Not cumulatively considerable for Climate Change
 - Numerical thresholds if consistent with AB32/SB32 targets
 - Project consistent with applicable regulations, plans, policies
- Air Toxic Impacts, health risk assessment (HRA)
 - 10 cases cancer per million at maximum exposed receptors
 - 1.0 hazard index (HI) for noncancer chemicals, chronic, acute
- Nuisance impacts to substantial number of people – can't happen, must be mitigated

Topic 1 - CEQA GHG Analysis in 2022

- SB32: 40% below 1990 levels by 2030 (260 MM MT/yr)
 - 2017 CARB Scoping Plan and 2022 Update: ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan
- SB743 Vehicle Miles Traveled (VMT) Targets
- The Path to NET ZERO emissions by 2045
 - Cars, Trucks, Offroad: Newsom EO N-79-20 (2035 /2045)
 - Utilities: SB100 Clean Energy Act (2045)
 - Trucks: CARB Advanced Clean Truck Rule (2035)
 - Buses: Innovative Clean Transit Regulation (2029)
 - CPUC: Strategic Energy Efficiency Plan (2030)
 - CARB 2022 Scoping Plan Update – modeling workshop
 - San Diego City/County (2035), LA County (2045), City of SF (2040)
 - San Diego Port (2030), MTS Bus Fleets (2040)
 - Net Zero Mitigation for Large Projects

BAAQMD CEQA Guidelines and Significance Thresholds - GHG

- Current (May 2017) – 1,100 MT CO₂e/yr or 4.6 MT CO₂e/SP/yr

Proposed¹

Thresholds for Land Use Projects (Must Include A or B)

- A. Projects must include, at a minimum, the following project design elements:
1. Buildings
 - a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
 - b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
 2. Transportation
 - a. Achieve compliance with electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
 - b. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - i. Residential projects: 15 percent below the existing VMT per capita
 - ii. Office projects: 15 percent below the existing VMT per employee
 - iii. Retail projects: no net increase in existing VMT
- B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

¹Draft Justification Report:
www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/~media/ffb719cfa04a438d9c7be10007a5abdf.ashx

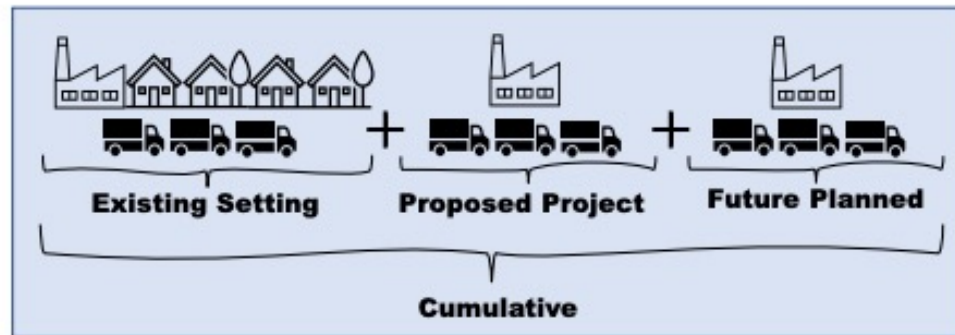
Topic 2 – Cumulative Health Risk Impacts

- Cumulative Health Risk Impact Issues:
 - CEQA: Is a project going to make community health impacts worse?
 - CEQA: Is my project impacting a receptor (residence, day care, school) already onsite as part of my project?
 - Non-CEQA: Project siting a receptor near a toxic pollution source, freeway, power plant?
- CEQA Review: Project impact *on the* environment, not the environment on the project
 - Exception, public schools get special protection under state law; environment impacts w/in ¼ mile <Public Resources Code § 21151.8
 - *CA Building Industry Association v. BAAQMD (12/15)*
- *CARB Air Quality and Land Use Handbook (2005) and SB352*
 - Freeways, railyards, major roads, distribution centers, large facilities, 500 to 1000 ft
- *Bay Area CEQA Guidelines (2017); 1,000 ft radius*
 - Project impacts in area with a qualified community risk reduction plan, or use standard risk thresholds
 - Cumulative impacts; higher risk thresholds

Topic 2 – Cumulative Health Risk Impacts

- South Coast AQMD – Cumulative Impacts from Air Toxics Workgroup (2/17/22)¹

Individual Environmental Effects May be Cumulatively Considerable



A project's environmental effects may be individually limited but the incremental effect may be cumulatively considerable (CEQA Guidelines Section 15064(h))

- Toxic emission health risk impacts are localized, not regional like ozone
- CEQA or Non-CEQA review, does it matter?
- Be prepared for increased individual / cumulative health risk review:
 - Project on the community environment, combined with other projects
 - On your Project, if you are siting sensitive uses
- Mitigation:
 - On-site impacts: Buffer land, HVAC filters, vegetation barriers, solid walls; alternative siting
 - Off-site impacts: Tier 4 diesel equipment, electrification

¹www4.aqmd.gov/enewsletterpro/uploadedimages/000001/Laura/CEQA/WGM%201%20Presentation_02172022_Final.pdf

Topic 3 – Sierra Club v. County of Fresno (Friant Ranch) Health Impact Analysis

- Friant Ranch Case, for ozone and PM_{2.5} impacts, EIR must:
 - 1) Include sufficient detail to enable reviewers to understand and to consider meaningfully the issues the project raises.
 - 2) Make a reasonable effort to connect a project's air quality impacts to likely health consequences or explain why such air quality analysis is not scientifically feasible.
- LA City Planning Air Quality and Health Effects (Oct 2019)
- Sacramento Metro AQMD (Oct 2020)
- EIRs with detailed HIA Photochemical Modeling have been completed; CAMx and EPA BenMap
- What are the Findings?
 - It is *feasible* to provide info on health impacts of ozone and PM_{2.5} as required with advanced modeling
 - The information provided *not likely to be reliable or meaningful*
- How should you approach Friant Ranch impact analysis?

Update on CEQA Technical Tools

- CalEEMod v2020.4.0 emissions model (user's guide May 2021)
 - EMFAC 2017 & OFFROAD2011 emissions models built in
- EMFAC Web Platform released Jan 2021: EMFAC2021, EMFAC2017
- OFFROAD 2017/2021
- AERMOD dispersion model v21112
- 2015 OEHHA HRA Guidelines
 - Consolidated list HRA health values 10/2/20
 - HARP2 EIM; 9/21/21; ADMRT updated 3/23/21; RAST 3/23/21
- Friant Ranch HIA – CMAQ and CAMx photochemical models; BenMAP health impacts



CEQA AQ /GHG Analysis Steps

Air Quality / GHG Review – What Now?

Start: Project design measures to meet applicable plans, regulations, standards, ordinances.

III. AIR QUALITY.

- a) Identify criteria pollutants, quantify emissions from construction and operations. Compare to screening level thresholds (SLTs), Review consistency with Air Quality Plans and growth. Significant? Option to complete air modeling. Still significant? Mitigate impacts to less than significance.
- b) Is area non-attainment, such as for ozone or particulate health standards? What other projects are nearby? Discuss cumulative impacts.
- c) Air toxic emissions from project, and sensitive receptors identified? Quantify emissions and complete analysis such as a health risk assessment; compare to risk thresholds. Significant? Mitigate impacts to less than significance. Friant Ranch health impacts? Discuss.
- d) Odors, dust, methane or anything else that could be a nuisance, adversely affecting a substantial number of people? Discuss how impacts will be minimized to below significance.

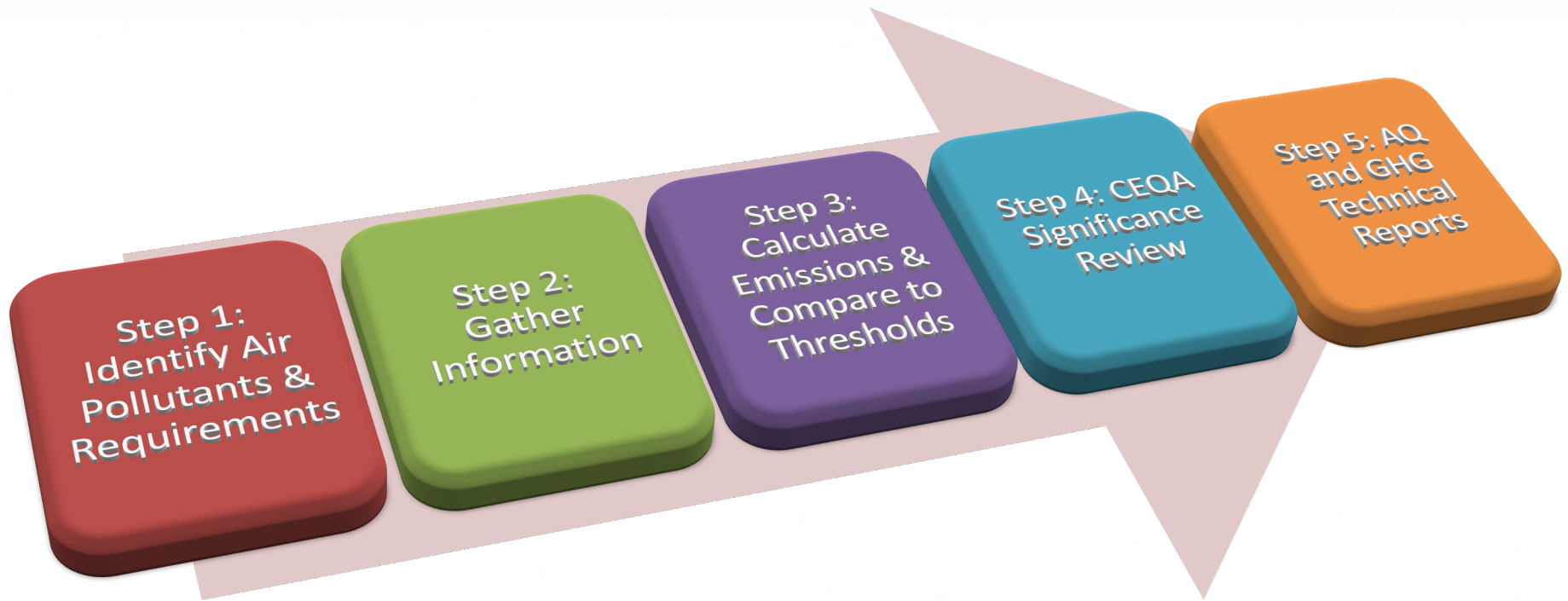
VIII. GREENHOUSE GAS EMISSIONS.

- a) Complete GHG Checklist that meets a Climate Action Plan (CAP), or quantify GHG emissions and compare to numerical significance thresholds if available. Significant? Mitigate impacts to less than significance.
- b) Identify an available CAP, or other Plans, and discuss whether the project is consistent in reducing GHG emissions. Not consistent? Mitigate impacts to meet consistency.

Air Quality Issues Review under CEQA

- Criteria Pollutants - Regional and Localized Impacts
 - Ozone (NO_x and VOC precursors), Particulate Matter (PM), NO₂, CO, SO₂
 - Particulate Matter - PM₁₀ or PM_{2.5} from combustion or fugitive dust
 - Localized sensitive receptor impacts for NO₂, PM, and CO
 - Traffic-related CO roadway and intersection hotspots
- Greenhouse Gases (GHG or CO₂e)
 - Climate Change, California SB32 regulation, Carbon Neutrality
- Air Toxics
 - Diesel Particulate Matter (DPM)
 - Other combustion toxics, operation-related toxics
 - Asbestos from demolition
 - Subsurface contamination releases
- Nuisance-Related Issues
 - Odors
 - Methane
- Hazardous Material Spills, Explosions?

CEQA AQ / GHG Impact Analysis Steps



Step 1: Identify Air Pollutants and Requirements

- What kind of Project and Location? Who is the Lead Agency?
- Lead Agency and Air District Guidelines
- Identify Project Information:
 - Preferred project alternative, and other alternatives including no action
 - Equipment and activities that cause air emission impacts
 - Identify project pollutants; Construction, Operation
 - Identify AQ/GHG review requirements and significance thresholds
 - Potential odors, methane, spills
- Locations of nearby sensitive receptors – schools, residences, day care
- Background monitoring data for setting, location of existing pollution “hot spots”
- Identify local plans, regulations, measures, ordinances and design measure / emission reduction requirements
- Recently completed EIRs/Air Studies, agency and public comments
- Identify nearby projects and existing pollution sources for cumulative impacts

South Coast AQMD Significance Thresholds

Pollutant	Construction	Operation
NO _x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM ₁₀	150 lbs/day	150 lbs/day
PM _{2.5}	55 lbs/day	55 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
Toxics	MICR ≥ 10 in 1 million Cancer Burden > 0.5 Chronic & Acute HI ≥ 1.0	
Odor	Project Creates an Odor Nuisance Pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO ₂ e for Industrial Facilities 3,000 MT/yr CO ₂ e for Residential/Commercial Projects	

Step 2: Gather Information

- Site Plans and Activity Locations
 - Project Phasing Details, by month and year
 - Construction - demo, site prep, paving and painting
 - Operation - when the project open for business
 - Equipment Type and Activity
 - Mobile Source Combustion Emissions - Onroad and Offroad
 - Stationary Source Emissions - e.g. boiler, kiln, coating line
 - Fugitive Dust - demo, grading, loading/hauling, road dust

SHORTCUTS! District Screening tables; CalEEMod has pre-populated project types
 - Required and voluntary emission controls – watering, diesel filters, solar panels, tinted windows
 - Emission-Related Information – HP rating, load factor, usage factor, miles and hours travelled
 - Operation schedule - hours per day, months, years
 - “Holes” to fill in?
-

Equipment Information

Construction Equipment

Equipment Type	Fuel	Rating (hp)	Load Factor	Usage Factor	Fuel Use	Fuel Use	Pieces of Equipment by Month												Operation (hr/day)
					gal/hp-hr	gal/hr	1	2	3	4	5	6	7	8	9	10	11	12	
175 CFM AIR COMPRESSOR	Diesel	80	0.48	0.50	0.050	1.0	1	1	1	1	1								9
BACKHOE -TRACK 1/2 CY	Diesel	106	0.465	0.70	0.050	1.7		1	1										9
BOBCAT OR DITCH WITCH	Diesel	58	0.465	0.75	0.050	1.0	2	2	2	2	2								9
70 TON MOBILE CRANE	Diesel	250	0.43	0.90	0.050	4.8				1	1	1	1	1	1	1	1	1	9
5000# FORKLIFT	Diesel	50	0.3	0.80	0.050	0.6				1	1	1	2	2	2	2	2	1	9
TRACTOR (TRUCK)	Diesel	80	0.465	0.50	0.050	0.9					1	1	1	1					9
JLG MANLIFT W/ 80' BOOM	Diesel	80	0.505	0.25	0.050	0.5				1	1	1	1	1	1	1	1	1	9
PERSONNEL LIFT	Diesel	115	0.465	0.25	0.050	0.7				1	2	3	3	3	3	2	2	1	9
375 CFM AIR COMPRESSOR	Diesel	145	0.48	0.50	0.050	1.7				1	1	1	1	1	1	1	1	1	9
Welding Machine	Electric	20	0.45	1.00	0.050	0.5	1	1	1	1	5	6	6	6	6	6	6	2	9

Construction Vehicle Peak Daily Number by Month

Vehicle Type	Miles/ Veh.-Day	Starts/ Veh.-Day	Month												
			1	2	3	4	5	6	7	8	9	10	11	12	
On-site pickup truck	5	5	1	1	1	3	5	6	6	6	6	6	6	6	3
On-site dump truck	10	2	2	2	2	2	2	0	0	0	0	0	0	0	
Off-site construction worker commute	22.5	2	18	34	55	82	119	166	197	186	191	190	174	110	
Off-site delivery vehicle	22.5	2	2	2	2	2	2	2	2	2	2	2	2	2	

Step 3: Calculate Emissions Compare to Thresholds

- Criteria pollutants, GHG, air toxics (often diesel PM)
- Assess Level-of-Effort – go with screening tables, CalEEMod or spreadsheets?
 - Conservative and technically defensible
 - CalEEMod software facilitates agency review
 - Spreadsheet provide more flexibility, control and transparency
- Throw calculations into one project “Day”, or across phases that don’t overlap
- Unmitigated and Mitigated Emissions
 - Unmitigated includes what project must do by rule or ordinance
 - Mitigated includes options to get below significance levels, or otherwise minimize
 - Decide whether to show separately or just as final project emissions
- Compare to Significance Thresholds – Done? Refine Assumptions?
- Cumulatively considerable with other nearby projects?
- Submit an Air Quality Analysis with unmitigated significant impacts?
- Expect feasible mitigation to be required reduce impacts, whether project significant or not

Step 4: CEQA Significance Review

- Complete AQ/GHG plan consistency review, or CAP checklist for GHG
- Criteria pollutant impacts exceed screening level thresholds?
 - Option to complete dispersion modeling with screening tools or AERMOD, NO₂, PM₁₀, PM_{2.5}, CO, SO₂
 - Show impacts are less than the California or National Ambient Air Quality Standards
 - Otherwise mitigate below screening thresholds
- In South Coast AQMD, dispersion modeling for localized impact for parcels less than 5 acres
- CO Hotspot Modeling, high increases in traffic volume or roadway level-of-service
- Health Risk Impacts – a quantitative Health Risk Assessment must be completed to assess significance
 - Unless you can state qualitatively negligible diesel PM or other toxics
 - Depending on proximity of sensitive receptors
 - Calculate health risks using spreadsheets and screening tables or HARP2 software
- GHG emissions exceed a threshold, not consistent?
 - Mitigate project GHG to meet consistency requirements

Step 5: AQ / GHG Technical Report Submittal

Technical Report Section	Contents
Executive Summary	Summary of Project Details, Analysis, Report Conclusions
Introduction	Technical Report Purpose and Sections Project Location and Description
Environmental Setting	Health Effects of Criteria and Toxic Air Pollutants Background on Climate Change Existing Regional and Local Air Quality Existing Project Site Emissions Federal, State, and Local Regulations
Environmental Impacts	Methodology Thresholds of Significance Unmitigated Project Impacts
Cumulative Impacts	Cumulative Construction Impacts Cumulative Operation Impacts
Mitigation Measures	Mitigation Measures Considered, Mitigated Project Impacts
Conclusions	Level of Significance After Mitigation Summary of Findings

Technical Report Level of Effort (LOE)

Project Size / Example	CEQA Status	Format / Contents
Small LOE: Residential Housing Lot Split	Exempt (non-CEQA); Initial Study	Brief letter or memo report, less background info, CalEEMod appendix
Medium LOE: Multi-family Housing, Retirement Home, fast food restaurant	Initial Study; Mitigated Neg Dec	Brief Technical Report attached, limited, specific background info, CalEEMod and HRA appendices
Large LOE: Housing Tract, Freeway, Commercial Building	Mitigated Neg Dec; Environmental Impact Report	Detailed Technical Reports attached, comprehensive background, Appendices

Combined or Separate AQ and GHG Technical Reports into One?

- Combine for smaller projects better ... but
- Agency comment “cycling”



CEQA Case Study: AQ and GHG Impacts



Office Building Development Project

- Location Monrovia in So Cal
- Demolish old office buildings
- Build a corporate office complex
= 200,000 sq. ft.
- Underground parking = 100,000 sq. ft.
- Project Site = 4.5 acres
- Number of Employees = 500
- Construction Timeframe = January 2023 – March 2024 (1.25 years)
- Lead Agency: City of Monrovia
- Air District: SCAQMD



Compare Unmitigated Peak Daily Emission Results to SCAQMD Screening Thresholds

	ROG (lb/day)	NO _x (lb/day)	CO (lb/day)	SO ₂ (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Construction						
CalEEMod Emissions	31.7	65.4	25.8	0.12	9.8	6.3
Threshold	75	100	550	150	150	55
Exceed Significance?	No	No	No	No	No	No
Operation						
CalEEMod Emissions	8.7	22.9	57.8	0.20	15.3	4.3
Threshold	55	55	550	150	150	55
Exceed Significance?	No	No	No	No	No	No

SCAQMD: Localized Significance Thresholds

- Mass Rate Lookup Tables developed by SCAQMD
- Localized impacts of NO₂ (from NO_x), CO, PM₁₀, and PM_{2.5}
- Construction and Operation thresholds developed for:
 - 1-acre, 2-acre, and 5-acre sized projects
 - Source-Receptor Areas located in SCAQMD's jurisdiction
 - Sensitive receptors located 25 m, 50 m, 100 m, 200 m, or 500 m away from project site
- Tier 1 approach to determine localized impacts

Example: SCAQMD Localized Significance Thresholds

Table C-1. 2006 – 2008 Thresholds for Construction and Operation with Gradual Conversion of NO_x to NO₂

SRA No.	Source Receptor Area	Allowable emissions (lbs/day) as a function of receptor distance (meters) from site boundary									
		1 Acre					2 Acre				
		25	50	100	200	500	25	50	100	200	500
1	Central LA	74	74	82	106	168	108	106	110	126	179
2	Northwest Coastal LA County	103	104	121	156	245	147	143	156	186	262
3	Southwest Coastal LA County	91	93	107	139	218	131	128	139	165	233
4	South Coastal LA County	57	58	68	90	142	82	80	87	106	151
5	Southeast LA County	80	81	94	123	192	114	111	121	145	205
6	West San Fernando Valley	103	104	121	157	245	147	143	156	187	263
7	East San Fernando Valley	80	81	94	122	191	114	111	121	144	204
8	West San Gabriel Valley	69	69	81	104	164	98	95	104	124	175
9	East San Gabriel Valley	89	112	159	251	489	128	151	200	284	513
10	Pomona/Walnut Valley	103	129	185	292	570	149	175	230	330	598
11	South San Gabriel Valley	83	84	96	123	193	121	118	126	147	206
12	South Central LA County	46	46	54	70	109	65	64	69	82	117
13	Santa Clarita Valley	114	115	133	173	273	163	159	172	204	291
15	San Gabriel Mountains	114	115	133	173	273	163	159	172	204	291
16	North Orange County	103	104	121	159	252	147	143	156	186	269
17	Central Orange County	81	83	98	123	192	115	114	125	148	205
18	North Coastal Orange County	92	93	108	140	219	131	128	139	165	235
19	Saddleback Valley	91	93	108	140	218	131	127	139	165	233
20	Central Orange County Coastal	92	93	108	140	219	131	128	139	165	235
21	Capistrano Valley	91	93	108	140	218	131	127	139	165	233
22	Norco/Corona	118	148	211	334	652	170	200	263	378	684
23	Metropolitan Riverside County	118	148	212	335	652	170	200	264	379	684
24	Perris Valley	118	148	212	335	652	170	200	264	379	684
25	Lake Elsinore	162	203	292	460	896	234	275	363	521	941
26	Temecula Valley	162	203	292	460	896	234	275	363	521	941
27	Anza Area	162	203	292	460	896	234	275	363	521	941
28	Hemet/San Jacinto Valley	162	203	292	460	896	234	275	363	521	941
29	Banning Airport	103	131	189	299	585	149	176	234	340	614
30	Coachella Valley	132	166	238	376	733	191	225	296	425	769
31	East Riverside County	132	166	238	376	733	191	225	296	425	769
32	Northwest San Bernardino Valley	118	148	211	334	652	170	200	263	378	684
33	Southwest San Bernardino Valley	118	148	211	334	652	170	200	263	378	684
34	Central San Bernardino Valley	118	148	211	334	652	170	200	263	378	684
35	East San Bernardino Valley	118	148	211	334	651	170	200	263	377	683
36	West San Bernardino Mountains	118	148	211	334	652	170	200	263	378	684
37	Central San Bernardino Mountains	118	148	211	334	652	170	200	263	378	684
38	East San Bernardino Mountains	118	148	211	334	651	170	200	263	377	683

C-1

Revised October 21, 2009

Mass Rate Lookup Tables: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lookup-tables.pdf?sfvrsn=2>



Compare CalEEMod Results to Localized Significance Thresholds

	NO _x (lb/day)	CO (lb/day)	PM ₁₀ (lb/day)	PM _{2.5} (lb/day)
Construction Phases				
CalEEMod Emissions	65.4	25.8	9.8	6.3
Threshold	143	1580	13.3	7
Exceed Significance?	No	No	No	No
Operation Phase (Area + Energy)				
CalEEMod Emissions	0.56	0.50	0.04	0.04
Threshold	143	1580	3.3	2
Exceed Significance?	No	No	No	No

SRA No. 1 Central LA, 25 m distance to receptor, extrapolated from 2 acre and 5 acre project site thresholds



Health Risk Assessment for Diesel PM

- Calculate Mitigated Diesel (PM) DPM Emissions (CalEEMod and/or Calculation Spreadsheets):
 - Construction total DPM emissions; average operational DPM emissions over project life
 - Calculate annual average DPM emissions
 - Operational health risks not an issue for Monrovia project
- Long-term Cancer and Chronic Noncancer risks per OEHHA Guidance
 - Also may be required to consider acute (short-term) risk impacts
- Impacts on nearest sensitive receptors
 - Residents
 - Schools and Day Care Centers
 - Hospitals and Adult Care Facilities
 - Workers
 - Recreation Areas
 - Libraries
 - Community Centers
- Modeling tools: District risk screening tools, AERMOD, HARP2

OEHHA Air Toxics Hot Spots Risk Assessment Guidelines:

<https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>



Age Sensitivity Factors (ASFs)

- Higher Residential Cancer Risks

Age Bin	ASF
3 rd Trimester	10
0 to <2 years	10
2 to <9 years	3
2 to <16 years	3
16 < 30 years	1
30 to 70 years	1

ASF, Breathing Rates, and Fraction-at-Home higher for children.

Compare Unmitigated GHG Emission Results to SCAQMD Significance Threshold

GHG from Construction is amortized over 30 years, then added to Operational GHG emissions for total project GHG emissions.

Phase	CO ₂ e (MT/yr)
Total Construction GHG	907
Amortized Construction GHG Emissions	30
Operational GHG Emissions	4,898
Total GHG Emissions	4,928
Threshold	3,000
Exceeds Threshold?	Yes

While SCAQMD GHG Significance Threshold exceeded and mitigation may be needed, we also need to complete the GHG Consistency Review

Monrovia Office Project - Consistency with GHG Regulations, Plans, Policies

- Monrovia does not have a CAP or CAP Checklist
- We've already used the "old" SCAQMD GHG threshold

Also Review Consistency with:

- Applicable Energy and Transportation regulations incl. SB 743 VMT Analysis
- Monrovia Energy Action Plan (2008)
- Monrovia General Plan Land Use Element (3/21) and others
- So Cal Association of Governments (SCAG) RTP/SCS
- State AB32/SB32 Regulations

CEQA AQ / GHG Technical Guidance

- South Coast AQMD: www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook
- Bay Area AQMD: www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa
- San Joaquin Valley APCD: www.valleyair.org/transportation/ceqa_idx.htm
- CARB Air Quality and Land Use Handbook www.arb.ca.gov/ch/landuse.htm
- Santa Barbara APCD: www.ourair.org/land-use/
- CalEEMod User's Guide www.aqmd.gov/caleemod/user's-guide
- OEHHA <https://oehha.ca.gov/air/crnrr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>
- CARB EMFAC and OFFROAD ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-documentation-road
- CAPCOA *Handbook for Analyzing GHG Reductions* (Final Draft 12/21) www.caleemod.com/documents/handbook/full_handbook.pdf
- OPR SB 743 <https://opr.ca.gov/ceqa/sb-743/>
- LA City Friant Ranch: https://planning.lacity.org/odocument/e1a00fbf-6134-4fa9-b6fd-54eee631effb/City_of_LA_-_Air_Quality_and_Health_Effects_and_Attachments.pdf

Summary

Strategies for AQ / GHG Impact Studies in 2022

- Know what the Lead Agency and Responsible Agencies want
- Closely watch developments on GHG review requirements
- Design AQ & GHG studies appropriate for your type of project and the setting
- Homework - take time to gather all the information, make a solid strategy before you start the real work
- Work with experienced CEQA land use attorney and consultants
- Prepare a conservative, defensible analysis; expect challenges on GHG and health risk impacts
- Leave room in your project for refinement and mitigation beyond design measures
- Do not submit an AQ & GHG studies with significant impacts if at all possible
- Leverage current guidance and precedent on recent projects
- Show your work, provide transparency and justification in the work to avoid review delays
- Engage and involve agency staff and public stakeholders in solving problems and deciding on mitigation

Questions?

Contact Information

James A. Westbrook, President
BlueScape Environmental
858-774-2009 mobile

jwestbrook@bluescapeinc.com

www.bluescapeinc.com

Connect with me on LinkedIn!

*The webinar presentation will be posted on
Slideshare and YouTube*

