



computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2022). CalEEMod output files for the project are included in Attachment A to this report.

Construction input data for CalEEMod include but are not limited to (1) the anticipated start and finish dates of construction activity; (2) inventories of construction equipment to be used; (3) areas to be excavated and graded; and (4) volumes of materials to be exported from and imported to the Project area. The CalEEMod calculations for the project are based on a combination of default data, as described above, and Applicant-provided project assumptions. The project Applicant identified the off-road equipment fleet mix would include five scrapers, two dozers, and one water truck. The scrapers would facilitate the export of 184,000 CY of soil from the grading permit site to the adjacent receiving site via approximately 425 scraper trips per day. The grading activity would occur between May 27, 2024, and June 7, 2024, with work occurring eight hours per day and five days per week.

CalEEMod has the capability to calculate reductions in construction emissions from the effects of dust control, diesel-engine classifications, and other selected emissions reduction measures. Construction emission calculations presented herein assume exposed surfaces would be watered two times daily during grading in accordance with South Coast Air Quality Management District (SCAQMD) Rule 403. These calculations also assume the scrapers and dozers required for the proposed grading activity would have Tier 4 Final engines based on information provided by the project Applicant.

## THRESHOLDS

The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. The significance thresholds are updated, as needed, to appropriately represent the most current technical information and attainment status in the South Coast Air Basin (SCAB). Table 1, *SCAQMD Regional Significance Thresholds*, presents the current regional daily thresholds for short-term construction emissions. A project with daily emission rates below these thresholds would not obstruct the attainment of air quality standards for the SCAB.

**Table 1**  
**SCAQMD REGIONAL SIGNIFICANCE THRESHOLDS**

<b>Pollutant</b>	<b>Mass Daily Construction Thresholds (pounds per day)</b>
VOC	75
NO <sub>x</sub>	100
CO	550
PM <sub>10</sub>	150
PM <sub>2.5</sub>	55

Pollutant	Mass Daily Construction Thresholds (pounds per day)
SO <sub>x</sub>	150
Lead	3

Source: SCAQMD 2023

VOC = volatile organic compound; NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide;

PM<sub>10</sub> = respirable particulate matter with a diameter of 10 microns or less;

PM<sub>2.5</sub> = fine particulate matter with a diameter of 2.5 microns or less; SO<sub>x</sub> = sulfur oxides

In addition to regional thresholds identified for the attainment of air quality standards, SCAQMD has developed the localized significance threshold (LST) methodology based on mass rate look-up tables by source receptor area (SRA) that can be used by public agencies to determine whether a project may generate significant adverse localized air quality impacts for sensitive receptors. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard; they are developed based on the ambient concentrations of that pollutant for each SRA (SCAQMD 2009). The LST methodology translates the concentration standards into emissions thresholds that are a function of project site area, source-to-receptor distance, and the location within the SCAB. The LST methodology is recommended to be limited to projects of five acres or less and to avoid the need for complex dispersion modeling. For projects that exceed five acres, such as the proposed grading permit site, the five-acre LST look-up values can be used as a screening tool to determine the need for more detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a five-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project exceeds the LST look-up values, then the SCAQMD recommends that project-specific localized air quality modeling be performed.

The proposed project is within SRA 24, Perris Valley (SCAQMD 1999). The closest sensitive receptors are the single-family residences approximately 66 feet (20 meters) west of the project site, across Briggs Road. Therefore, the LSTs in SRA 24 for receptors located within 82 feet (25 meters) and for project sites less than or equal to five acres were used in the project LST analysis. The applicable LSTs for the project are shown in Table 2, *SCAQMD Localized Significance Thresholds*.

**Table 2**  
**SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS**

Pollutant	Maximum On-Site Construction Emissions (pounds per day)
NO <sub>x</sub>	270
CO	1,577
PM <sub>10</sub>	13
PM <sub>2.5</sub>	8

Source: SCAQMD 2009

NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide; PM<sub>10</sub> = respirable particulate matter with a

diameter of 10 microns or less; PM<sub>2.5</sub> = fine particulate matter with a diameter of 2.5

microns or less

The Riverside County Climate Action Plan, Appendix D, establishes a screening level threshold of 3,000 metric tons (MT) of carbon dioxide equivalents (CO<sub>2</sub>e) per year. County guidance also recommends including construction emissions (amortized over a typical duration of 30 years) in the comparison to the screening threshold. The 3,000 MT CO<sub>2</sub>e per year value is used in defining small projects' GHG emissions that are considered less than significant, requiring no further screening or alternative GHG mitigation analysis.

## RESULTS

The project's construction emissions were estimated using CalEEMod Version 2022.1, Applicant-provided project assumptions, and default model settings, as described above. The results of the calculations for maximum daily emissions during grading are shown in Table 3, *Maximum Daily Grading Emissions*. The data is presented as the maximum anticipated daily emissions for comparison with the SCAQMD regional thresholds shown in Table 1.

**Table 3**  
**MAXIMUM DAILY GRADING EMISSIONS**

Construction Activity	Pollutant Emissions (pounds/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Grading Maximum Daily Emissions	1.7	9.2	64.7	0.1	8.2	3.3
<i>SCAQMD Regional Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Exceed Threshold?</i>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: CalEEMod (output data is provided in Attachment A)

VOC = volatile organic compound; NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; SO<sub>x</sub> = oxides of sulfur;

PM<sub>10</sub> = particulate matter less than 10 microns in diameter; PM<sub>2.5</sub> = particulate matter less than 2.5 microns in diameter;

SCAQMD = South Coast Air Quality Management District

As shown in Table 3, the maximum daily emissions of criteria pollutants and precursors related to the proposed grading activity would not exceed the SCAQMD regional significance thresholds. Therefore, criteria pollutants generated during project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations west of the grading permit site in accordance with the SCAQMD's LST methodology. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Emissions related to off-site construction worker trips are not considered in the evaluation of localized impacts, as these emissions are distributed throughout the region. Table 4, *Maximum Daily Localized Emissions*, provides the maximum on-site daily emissions calculated in CalEEMod and compares these emissions with the applicable LSTs for SRA 24, receptors located within 82 feet (25 meters), and project sites less than or equal to five acres.

**Table 4**  
**MAXIMUM DAILY LOCALIZED EMISSIONS**

Construction Phase	Pollutant Emissions (pounds/day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Grading Maximum On-Site Daily Emissions	9.1	63.0	7.9	3.2
SCAQMD LST	270	1,577	13	8
Exceed Threshold?	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: CalEEMod (output data is provided in Attachment A)

NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; PM<sub>10</sub> = particulate matter less than 10 microns; PM<sub>2.5</sub> = particulate matter less than 2.5 microns; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold

As shown in Table 4, localized project construction emissions would remain below their respective SCAQMD LSTs. Therefore, on-site project construction emissions of criteria pollutants would not expose sensitive receptors to substantial pollutant concentrations.

Construction activities were estimated to generate a total of 62.9 MT CO<sub>2</sub>e. This value can be compared to, and is less than, the County’s screening level threshold of 3,000 MT CO<sub>2</sub>e per year. Therefore, the project would not result in substantial GHG emissions.

**CONCLUSION**

Soil export that would occur under the proposed grading permit would not result in emissions exceeding the applicable regional or localized thresholds established by the SCAQMD and County. Therefore, impacts associated with the proposed grading permit would be less than significant, and no new or significant impacts related to construction on the grading permit site would occur.

Sincerely,



Victor Ortiz  
 Senior Air Quality Specialist



Sydney Wells  
 Air Quality Specialist

**Attachments:**

- Figure 1: Aerial Photograph
- Attachment A: CalEEMod Output

## REFERENCES

California Air Pollution Control Officers Association (CAPCOA).2022. California Emissions Estimator Model User's Guide. March 28. Available at: <http://www.caleemod.com/>.

South Coast Air Quality Management District (SCAQMD). 2023. SCAQMD Air Quality Significance Thresholds. March. Available at: <https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25>.

2009. Mass Rate Localized Significance Thresholds Look-up Tables. October 21. Available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2>.

1999. General Forecast Areas and Air Monitoring Areas. Available at: <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.