



South Coast Air Quality Management District

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SENT VIA E-MAIL:

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Draft Program Environmental Impact Report (Draft PEIR) for the Proposed City of Irvine 2045 General Plan Update (Proposed Project) (SCH No. 2023070463)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. The City of Irvine is the California Environmental Quality Act (CEQA) Lead Agency for the Proposed Project. To provide context, South Coast AQMD staff has provided a brief summary of the project information and prepared the following comments organized by topic of concern.

South Coast AQMD Staff's Summary of Project Information in the Draft PEIR

Based on the Draft PEIR, the Proposed Project would update the General Plan Land Use Element to support the City's Regional Housing Needs Allocation (RHNA) allocation of 23,610 units.¹ The Proposed Project would also adopt a residential and residential mixed-use overlay zone to allow greater flexibility for proposed residential development projects to accommodate 57,656 new residential units.² The overlays would promote higher-density residential and mixed-use in three focus areas, in which the number of permitted residential units would be increased by an additional 1) 15,000 units in Focus Area 1, 2) 26,607 units in Focus Area 2, and 3) 5,252 units in Focus Area 3.³ The remaining 8,536 residential units would be accommodated outside the focus areas throughout the City.⁴

South Coast AQMD Staff's Comments on the Draft PEIR

Additional Air Quality Mitigation Measures for NO_x and PM Emissions from Construction

Section 4.2 – Air Quality in the Draft PEIR discusses the mitigation measure (MM) AQ-1 that the Proposed Project “use construction equipment...as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower.”⁵ However, in the event that the Proposed Project has construction spread throughout

¹ Draft PEIR. Page 3-3.

² *Ibid.* Page 3-2.

³ *Ibid.* Page 3-4 and 3-6.

⁴ *Ibid.* Page 3-6.

⁵ *Ibid.* Page 4.2-19.

the long-term development to reach full buildout, Tier 4 technology may not be the cleanest technology when construction occurs in the later years. According to the California Air Resources Board (CARB) Strategies for Reducing Emissions from Off-Road Construction Equipment, the implementation of off-road Tier 5 starting in 2027 or 2028 and the Governor's Executive Order in September 2020 requires CARB to develop and propose a full transition to Zero Emissions (ZE) by 2035.⁶ Considering the scope of the project, it is crucial to ensure that the levels of construction emissions, specifically NOx and PM10, remain less than the significance thresholds during the construction period for each proposed individual project. Moving towards achieving this goal, when feasible, involves opting for electric emission-free engines instead of diesel-fueled engines for construction equipment. This proactive choice not only aligns with environmental concerns but also demonstrates a commitment to minimizing the Proposed Project's environmental footprint. The abatement of NOx can also be pursued by enforcing greener construction activities, such as limiting the usage of older, dirtier engines in favor of adopting the latest available technologies or even incorporating exhaust retrofits, such as cutting-edge exhaust after-treatment techniques.

Emission Reductions from Health Risk Strategies

When certifying an EIR for a project, retain the authority to include any additional information deemed relevant to assessing and mitigating the environmental impacts. South Coast AQMD is concerned about the potential public health impacts of sitting sensitive populations within the proximity of existing air pollution sources (e.g., freeways and railroads). For this reason, prior to approving future development projects, the Lead Agency is recommended to consider the impacts of air pollutants on people who will live in a new project and provide effective mitigation. Additionally, South Coast AQMD suggests that the Lead Agency review and apply the guidance provided in 1) the California Air Resources Board (CARB) Air Quality Land Use and Handbook: A Community Health Perspective,⁷ which provides criteria for evaluating and reducing air pollution impacts associated with new projects involving land use decisions; and 2) CARB's technical advisory which contains strategies to reduce air pollution exposure near high-volume roadways.⁸

Many strategies are available for residential receptors to reduce being exposed to particulate matter, including, but not limited to, HVAC systems equipped with filters rated at a minimum efficiency reporting value (MERV) 13 or higher air filtration capabilities. In some cases, MERV 15 or better is recommended for building design, orientation, location, vegetation barriers, landscaping screening, etc. Enhanced filtration units are capable of reducing exposure. However, enhanced filtration systems have limitations. For example, filters rated MERV 13 or higher are able to screen out greater than or equal to 50% of DPM,⁹ but they have no ability to filter out volatile organic compound (VOC) emissions. Also, in a study that South Coast AQMD conducted

⁶ CARB. Going Zero. Available at: <https://ww2.arb.ca.gov/going-zero>

⁷ California Air Resources Board (CARB), Air Quality Land Use and Handbook: A Community Health Perspective, April 2005. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-05/Land%20Use%20Handbook_0.pdf

⁸ CARB's Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways. Available at: https://ww2.arb.ca.gov/sites/default/files/2017-10/rd_technical_advisory_final.pdf

⁹ U.S. EPA, "What is a MERV rating?" Available at: <https://www.epa.gov/indoor-air-quality-iaq/what-merv-rating>

to investigate filters rated at MERV 13 or better in classrooms,^{10,11} a cost burden is expected to be within the range of \$120 to \$240 per year to replace each filter panel. The initial start-up cost could substantially increase if an HVAC system needs to be installed and if standalone filter units are required. Installation costs may vary, including costs for conducting site assessments and obtaining permits and approvals before filters can be installed. Other costs may include filter life monitoring, annual maintenance, and training for conducting maintenance and reporting. In addition, the filters would not have any effect unless the HVAC system is running. Therefore, when in use, the increased energy consumption from each HVAC system should be evaluated in the Draft EIR. While the filters operate 100 percent of the time when the HVAC is in use while the residents are indoors, the environmental analysis does not generally account for the times when the residents are not using their HVAC and instead have their windows or doors open or are moving throughout the common space outdoor areas of the Proposed Project. Furthermore, when used filters are replaced with new filters, emissions associated with trucks delivering the new filters and waste disposal trucks transporting the used filters to disposal sites should be evaluated in the Draft EIR. Therefore, any presumed effectiveness and feasibility of a particular HVAC filter should be carefully evaluated in more detail based on supporting evidence before assuming they will sufficiently alleviate exposure to DPM emissions.

South Coast AQMD Air Permits and Role as a Responsible Agency

If the implementation of the Proposed Project would require the use of new stationary and portable sources, including but not limited to emergency generators, fire water pumps, boilers, spray booths, etc., air permits from South Coast AQMD will be required, and the role of South Coast AQMD would change from a Commenting Agency to a Responsible Agency under CEQA. In addition, if South Coast AQMD is identified as a Responsible Agency, per CEQA Guidelines Sections 15086, the Lead Agency is required to consult with South Coast AQMD. In addition, CEQA Guidelines Section 15096 sets forth specific procedures for a Responsible Agency, including making a decision on the adequacy of the CEQA document for use as part of evaluating the applications for air permits. For these reasons, the Final EIR should include a discussion about any new stationary and portable equipment requiring South Coast AQMD air permits and identify South Coast AQMD as a Responsible Agency for the Proposed Project.

The Final EIR should also include calculations and analyses for construction and operation emissions for the new stationary and portable sources, as this information will also be relied upon as the basis for the permit conditions and emission limits for the air permit(s). Please contact South Coast AQMD's Engineering and Permitting staff at (909) 396-3385 for questions regarding what types of equipment would require air permits. For more general information on permits, please visit South Coast AQMD's webpage at <http://www.aqmd.gov/home/permits>.

Conclusion

As set forth in California Public Resources Code Section 21092.5(a) and CEQA Guidelines Section 15088(a-b), the Lead Agency shall evaluate comments from public agencies on the

¹⁰ South Coast AQMD, Draft Pilot Study of High-Performance Air Filtration For Classroom Applications, October 2009. Available at: <https://www.aqmd.gov/docs/default-source/ceqa/handbook/aqmdpilotstudyfinalreport.pdf>

¹¹ International Journal of Indoor Environment and Health, Pilot Study of High-Performance Air Filtration for Classroom Applications, November 2012. Available at: <https://onlinelibrary.wiley.com/doi/10.1111/ina.12013>

environmental issues and prepare a written response at least 10 days prior to certifying the Final EIR. As such, please provide South Coast AQMD written responses to all comments contained herein at least 10 days prior to the certification of the Final EIR. In addition, as provided by CEQA Guidelines Section 15088(c), if the Lead Agency's position is at variance with recommendations provided in this comment letter, detailed reasons supported by substantial evidence in the record to explain why specific comments and suggestions are not accepted must be provided.

Thank you for the opportunity to provide comments. South Coast AQMD staff is available to work with the Lead Agency to address any air quality questions that may arise from this comment letter. Please contact Danica Nguyen, Air Quality Specialist, at dnguyen1@aqmd.gov should you have any questions.

Sincerely,

Sam Wang

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Planning, Rule Development & Implementation

SW:DN

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