October 16, 2023

Via email

Ms. Colleen Liang
Port of Oakland
Environmental Programs and Planning Division
530 Water Street
Oakland, CA 94607
TermDev@portoakland.com

RE: Comments on Draft Environmental Impact Report (DEIR) (SCH No. 2021050164), Oakland International Airport Terminal Modernization and Development Project

Dear Ms. Liang,

The Center for Biological Diversity ("Center") offers the following comments to the Board of Commissioners of the Port of Oakland ("Port") regarding the Draft Environmental Impact Report ("Draft EIR" or "DEIR") for the Terminal Modernization and Development Project ("Project") at the Oakland International Airport ("OAK" or "airport") (SCH No. 2021050164). The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 1.7 million members and online activists throughout California and the United States. The Center has worked for many years to protect imperiled plants and wildlife, open space, air and water quality, and overall quality of life for California residents.

The proposed Terminal Modernization and Development Project will have significant direct and indirect impacts on Bay Area communities, workers, and the environment, and the Port's Draft EIR fails to adequately disclose, analyze, or mitigate them. In short, the Project removes current limitations on the Oakland Airport's growth, which in time will drastically increase the amount of flights, passengers, and cargo that pass through the airport. This additional flight traffic directly contributes to the climate crisis by causing more air pollution and greenhouse gas emissions. The Project also burdens already disadvantaged communities in Alameda, East Oakland, and San Leandro—along with airport workers themselves—with more air pollution, and it will trap more Bay Area neighborhoods under noise-saturated flight paths.

Moreover, the Draft EIR disguises the true impact of the Project. For example, it describes the Project as a "modernization" effort rather than as an expansion project that will result in double the square footage currently in use. It uses an outdated 2019 baseline that is already several years old and does not track the reality of post-pandemic flight patterns. And it classifies anticipated future demand in passengers as inevitable, when in fact that growth could only occur if expanded airport facilities enabled it. Moreover, when climate disasters are ubiquitous across California and the rest of the world, it is simply the wrong time to expand operations and flight traffic at California's seventh-largest airport.

Oakland residents deserve better from this Project. The Port should reconsider before approving years of construction noise and air pollution in the local community that would occur if the Oakland Airport undergoes significant growth. These omissions and errors, among others, constitute violations of the California Environmental Quality Act ("CEQA"), Pub. Res. Code § 21000 *et seq.*, and 14 Cal. Code Regs. § 15000, *et seq*. ("CEQA Guidelines"). As such, the Center urges the Port to stay action on any Project approvals until the issues identified below have been addressed in a recirculated Draft EIR pursuant to these laws and regulations.

This comment letter incorporates by this reference in their entirely the following comment letters: Stuart Flashman, on induced demand, and Will Thornton, on noise impacts. Their comments and resumes will be submitted under separate cover.

I. The Draft EIR uses an outdated and inflated baseline that masks the real impacts of the Project.

An EIR compares two possible worlds: one with the proposed project and one without. That framework allows the public to understand the full significance of a project's impacts on the existing environment and requires decisionmakers to consider alternatives and mitigation measures that eliminate or reduce those impacts. Here, the DEIR's choice of a 2019 baseline is misleading, both because it will be sorely outdated if this Project moves into the construction phase, and because it inaccurately presents an inflated and stable picture of future aviation growth. This foundational error mars the resulting analysis of the Project's actual impacts, feasible mitigation, and reasonable alternatives.

The project baseline is the critical point of comparison against which an EIR assesses all impacts of, and alternatives to, a proposal. "Before the impacts of a project can be assessed and mitigation measures considered, an EIR must describe the existing environment" against which any significant environmental effects will be measured. *County of Amador v. El Dorado County Water Agency*, 76 Cal.App.4th 931, 952 (1999).

"Generally, the lead agency should describe physical conditions as they exist at the time the notice of preparation is published." CEQA Guidelines § 15125(a)(1). CEQA's central policy goals are best served by this "default" baseline, which provides clarity to decisionmakers and the public, elucidates tradeoffs between short-term and long-term environmental impacts, and avoids the difficulties of predicting the future. An existing conditions baseline is the "norm from which a departure must be justified." *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, 57 Cal.4th 439 at 455 (Cal. 2013). And any deviation from existing conditions, such as prior historic operations, must be "supported with substantial evidence." CEQA Guidelines § 15125(a)(1).

Here, the Port selected 2019 as its baseline year and compared it with 2028 (Planning Activity Level 1) and 2038 (Planning Activity Level 2).[1] Though it issued its Notice of Preparation of a Draft EIR in May 2021, the Port looked back to 2019, as that was the last year before flight

[1] Draft EIR ("DEIR") at 2-6.

traffic was seriously disrupted due to the COVID pandemic. The Draft EIR was released in July 2023, and if approved, planned construction would not start until 2025 at the earliest.[2] At that point the Port would be relying on data from six years prior.

Current data shows that flight patterns in Oakland continue to trail pre-pandemic levels by a significant margin. For example, in June 2023, the most recent month for which data is available, passenger enplanements are down 18.34% compared to the DEIR's 2019 baseline from that same month. For the first six months of 2023, total passenger enplanements range between 10 to 18% lower than the corresponding 2019 levels. Freight volume follows a similar path, ranging in 2023 from 10 to 27% lower than corresponding 2019 levels. While enplanements and freight volume at OAK continue their post-COVID rebound, the recovery is slower and more uncertain than some have predicted.

	2019 Monthly Passenger Enplanements	**2023 Monthly Passenger Enplanements**	**Monthly 2023 volume as percentage of 2019**	**2019 Monthly Freight (M lbs.)**	**2023 Monthly Freight (M lbs.)**	**Monthly 2023 volume as percentage of 2019**
January	954,160	819,955	-14.07%	107,121	77,723	-27.44%
February	881,204	794,338	-9.86%	92,811	72,688	-21.69%
March	1,095,906	912,916	-16.70%	108,421	97,665	-9.93%
April	1,136,370	938,369	-17.42%	105,510	85,568	-18.90%
May	1,204,966	1,002,621	-16.79%	110,871	92,157	-16.88%
June	1,221,824	997,785	-18.34%	101,703	85,530	-15.90%

Figure 1. Total Passenger Enplanements and Freight Volume at OAK, 2019 vs. 2023[3]

This data has important implications for the Draft EIR. It casts doubt on the EIR's rosy projections for so-called inevitable growth in enplanements in future years. Pre-pandemic levels are already out-of-date, as flight traffic at OAK has not returned to those levels. And even if total passenger enplanements do rise in future years, the overall mix of flight traffic remains unknown, as it relates to cargo traffic, business travel, and general aviation. This uncertainty limits the public's ability to understand the magnitude of the project as it related to flight paths and overall volume of flight traffic. *See Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal. 4th 1112, 1113 (affirming that the court's role in reviewing an EIR is to ensure that the public and responsible officials are adequately informed of the environmental consequences of their decisions).

Experts are divided on the future of air travel generally. While some expect air travel to rise in coming years, others note that macroeconomic constraints may limit this growth in several important ways. For example, a recent investigation pointed out that increased ticket prices (driven in part by the increased cost of carbon mitigation), along with inflation and consumers' lower disposable income may limit industry growth in coming years, despite the receding

[2] DEIR at 3.3-23.
[3] Oakland Airport, Monthly Activity Reports, *available at*: https://www.oaklandairport.com/news/statistics/monthly-activity-report/

pandemic.[4] Airlines' staffing shortages, a current issue causing mass cancellations and delays, may further limit growth.[5] Moreover, climate change is already making flying more tenuous and unpredictable. For example, there have already been flight disruptions from more frequent thunderstorms due to hotter air, visibility limitations from wildfire smoke, "invisible turbulence" from hotter air trapped near the ground, increased overall turbulence due to the changing jet stream, planes unable to take off in extreme heat, and damage to airport infrastructure from sea level rise and flooding.[6] Macroeconomic factors and current risks from climate change already inject much uncertainty into long-range planning. The Port's decision to use an outdated and arbitrary baseline multiplies that uncertainty even further. This legal error undermines the DEIR's value as an informational document and skews its analysis and disclosure of impacts. *See Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Cmrs*., 91 Cal. App. 4th 1344, 1382 (2001).

One of the largest areas of uncertainty in the post-COVID era is the extent to which business travel rebounds to pre-pandemic levels. If the overall trends towards remote work and less flying continue, the current dip in business travel may very well become permanent. According to research by Stanford University economics professor Nicholas Bloom, as of May 2023, business air travel costs were up only 1% over 2019, and given total inflation of 20% over the past four years, that represents a real decline.[7] Traditional markers of business travel, such as hotel room occupancies and conference center bookings, are still down across the Bay Area.[8] The trend towards remote work may dampen the rebound of aviation demand at OAK over the long-term, yet the DEIR ignores these possibilities.

Finally, policy change may also limit demand for aviation in California. The Air Resources Board is currently considering adding conventional jet fuel to the Low Carbon Fuel Standard,[9] which if adopted, could cost airlines more money to offset their deficits and consequently raise ticket prices. Future regulation at the national or international level might also impact the availability and price of future flights. Yet the DEIR's forecast analysis ignores these possibilities as well.

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[4] Weston, Geoffrey, et al., Bain & Company, Air Travel Forecast to 2030: The Recovery and Carbon Challenge, July 20, 2023, *available at*: https://www.bain.com/insights/air-travel-forecast-interactive/
[5] https://www.cbsnews.com/news/the-future-of-flying-more-delays-more-cancellations-more-chaos/
[6] *See, e.g.*, Allain, Rhett, Why Phoenix's Airplanes Can't Take Off in Extreme Heat, Wired, Jun. 20, 2017, *available at*: https://www.wired.com/story/phoenix-flights-canceled-heat/; Cerullo, Megan, Another Effect of Climate Change? More Flight Delays and Cancellations, CBS News, Jul. 27, 2023, *available at*: https://www.cbsnews.com/news/climate-change-flight-delays-and-cancellations-travel/; Environmental Defense Fund, Five Ways Climate Change Can Make Air Travel Worse, *available at*: https://www.edf.org/card/5-ways-climate-change-can-make-air-travel-worse?card=5; Tomer, Adie & George, Caroline, America's Airports Aren't Ready for Climate Change, Brookings, Mar. 1, 2023, *available at*: https://www.brookings.edu/articles/americas-airports-arent-ready-for-climate-change/.
[7] Baron, Ethan, Will Business Travel to the Bay Area Bounce Back to Pre-COVID Levels? Maybe Not, Mercury News, Sept. 5, 2023, *available at*: https://www.mercurynews.com/2023/09/05/will-business-travel-to-the-bay-area-bounce-back-to-pre-covid-levels-maybe-not/.
[8] *Id.*
[9] Low Carbon Fuel Standard Standardized Regulatory Impact Assessment, California Air Resources Board, https://ww2.arb.ca.gov/resources/documents/low-carbon-fuel-standard-sria

Given the many overlapping axes of uncertainty regarding long-raise aviation demand forecasts, the Final EIR can at the very least mitigate some of this uncertainty by starting from an accurate baseline, not one that will be at least six years old by the time the Project commences. The 2019 data inflates the passenger baseline by 10 to 18% compared with the most recent data from 2023. This inflated baseline makes the impacts on existing conditions appear substantially less than they actually will be, a defect that mars the DEIR's analysis of noise, GHG emissions, air pollutants, and other areas. The Final EIR should include updated information that reflects changed circumstances since the Port's initial study, and it should use 2022 or 2023 baseline conditions, as such data is available.

II. The DEIR fails to consider the substantial growth-inducing impacts of the Project, which removes limitations on the airport's growth.

An EIR must describe any growth-inducing impacts of a proposed project, including indirect impacts on growth. Pub. Res. Code §21100(b)(5); 14 Cal Code Regs §15126(d), §15126.2(e); *Napa Citizens for Honest Gov't v Napa County Bd. of Supervisors* (2001) 91 CA 4th 342, 368. Removing obstacles to growth is a growth-inducing impact that must be considered. 14 Cal. Code Regs. §15126.2(e). As one example, the Guidelines specify that constructing a wastewater treatment plant might mean that wastewater treatment capacity would no longer be a limiting factor to growth in the area. *Id*. The project would therefore be growth-inducing and that effect would need to be analyzed. The EIR must also consider aspects of the project besides economic growth "which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively." *Id*.

This Draft EIR fails to describe growth-inducing impacts of the Project and is therefore not adequate under CEQA. The DEIR claims that "the increase in passengers would occur whether or not" the Project is completed, and therefore, that "no indirect effect of growth would occur."[10] But the evidence shows the opposite. The DEIR admits that the existing terminals impede the airport's ability to serve a higher volume of passengers, especially at peak demand periods:

> "*The existing terminals at OAK were designed to accommodate an estimated 8 to 10 million annual passengers. However, in 2019, more than 13 million annual passengers traveled through the Airport. This means that the existing terminal facilities (gates, holdrooms, ticketing/check in, passenger security screening checkpoint, baggage makeup, baggage claim, and CBP area) at OAK already do not meet industry standard levels of service. New and modernized terminal facilities would be sized to accommodate the market-based passenger demand at industry standard levels of service, including peak-hour domestic and international flights*."[11]

The DEIR's Project Objective #4 acknowledges that absent additional re-designed gates, larger aircraft cannot be accommodated at the facility without leaving some gates empty:

[10] DEIR at 5.3.2.
[11] DEIR at 2.5.2.

> "*The existing terminals are experiencing operational constraints because the existing terminals were designed to accommodate aircraft that were in the fleet at the time the terminals were designed. Passenger airlines now use larger aircraft, which means that some existing aircraft parking positions cannot operate independently of an adjacent aircraft gate. For example, if a widebody aircraft is parked at Gate 3, it may not be possible for another aircraft to park at Gate 5 because the wing tip from the aircraft parked at Gate 3 penetrates the area where an aircraft would park at Gate 5.*
>
> *The new and modernized terminal facilities would be sized and configured to support the aircraft fleet forecast to operate at OAK by providing each gate with sufficient terminal frontage and apron area so that all gates can operate independently*."[12]

It further notes that the existing facilities are inadequate to handle likely increases in air travel and cargo. These constraints—limited capacity in the terminal facilities and inability to accommodate large planes simultaneously—limit growth, and the Project will admittedly remove those constraints. In fact, the Port of Oakland's Director of Aviation admitted as much in a 2022 interview: "'We're one of the few airports with an opportunity to really expand our existing terminal footprint,' he said, adding that the expansion could greatly increase the airport's passenger and aircraft traffic, and do so efficiently."[13] All in all, the Project would allow the significant impacts associated with increased aircraft and passenger traffic to occur—a "but for" growth-inducing impact the DEIR needs to analyze.

A. The DEIR arbitrarily used "unconstrained" growth forecasts, essentially assuming the conclusion it attempts to reach.

The DEIR attempts to sidestep the effects of the Project fact by claiming that future air travel is solely determined by market-based demand and is not affected by whether the Project is completed. But it provides no evidence to support that argument. The DEIR includes an "Oakland Airport Comprehensive Aviation Activity Forecast" appendix that offers "unconstrained" forecasts of how aviation demand might grow over time, but its analysis "assumes facilities can accommodate the projected demand."[14] Because the forecast only predicts "unconstrained" growth, it contains no analysis of how the lower levels of service and limitations at the Oakland Airport could affect flight traffic at the airport. For example, the DEIR forecasts that 24.5 million people will pass through the airport in 2038, compared with 13.4 million in 2019—a year when, according to the DEIR, its facilities were already constrained.[15] It is highly unlikely that the Airport could accommodate a near doubling of passenger traffic with its current facilities without causing airlines to make different choices about routing their flights

[12] DEIR at 2.5.4, and n. 5.
[13] Fink, Bill, "New Restaurants and Other Improvements for Oakland International Airport," The Points Guy, June 20, 2022, *available at*: https://thepointsguy.com/news/oakland-airport-upgrades/
[14] DEIR Appendix C at 11. ("The forecasts presented here are "unconstrained" and as such do not take facility constraints or other outside limiting factors into consideration. In other words, for the purposes of estimating future demand, the forecast assumes facilities can accommodate the projected demand.")
[15] DEIR Appendix C at 6.

through OAK, or, without passengers choosing another airport because of delays, traffic, poor customer experience, etc. Conversely, if the Project is approved and a new terminal is constructed, airlines would be more likely to route flights through OAK, and passengers would be encouraged to utilize the expanded itineraries the airport offers. The DEIR did not analyze these possibilities, and its decision to include only "unconstrained" forecasts lacks substantial evidence and is thus inadequate under CEQA.

The DEIR also engaged in circular logic around forecasted demand by essentially predicting that traffic at OAK will grow *precisely because* OAK can accommodate the growth. By 2034, FAA's projection shows 23% fewer passengers passing through OAK than the DEIR's modeling.[16] The DEIR argues that the FAA projections are wrong, in part, because of "Southwest Airlines commitment to the airport and specific plans for growth at OAK, and OAK's ability to accommodate this growth in traffic, specifically available airside capacity, in contrast to other constrained regional airports."[17] In essence, the DEIR is arguing that OAK will grow because Southwest is committed to growing its presence at the airport, and because OAK can accommodate that growth (which is presumably enabled by this Project). This circular logic shows that the DEIR expects growth to occur because the airport can and will accommodate it, without explaining how much growth would occur if the Project did not move forward.

This common sense principle about airport expansion—that demand is constrained by and determines supply—is widely recognized. *See, e.g.,* Bill Hethcock, "Dallas Fort Worth International Airport to Add Gates," Dallas Business Journal, Dec. 5, 2018 (stating 15 additional gates at repurposed concourse "will support up to 100 additional flights a day")[18]; Jeremy Hill, "U.S. Airports Spend Record Sums to Renovate Amid Travel Boom," Bloomberg News, July 2, 2018 (Airports Council president noting that "burst of building" is intended to "meet the demands of passenger growth")[19]; Robert Silk, "More and More Airports Running Out of Space," Travel Weekly, June 17, 2018 (Boyd Group International president noting "air traffic demand has a tendency to adjust to supply" and that, "as major airports fill up, flights often spill over to nearby, smaller airports")[20].

A further deficiency in the DEIR's demand analysis relates to its omission of the connection between OAK and the other two large Bay Area airports, San Jose ("SJC") and San Francisco ("SFO"). The DEIR concedes that OAK, SFO, and SJC compete for the core passenger market in the Bay,[21] and that "predicting future demand levels at individual airports cannot be done in isolation and one must consider the trends and dynamics occurring at other airports in the

[16] DEIR Appendix C at 57.
[17] *Id.*
[18] *Available at* https://www.bizjournals.com/dallas/news/2018/12/05/dallas-fort-worthinternational-airport-to-add.html.
[19] *Available at* https://www.bloomberg.com/news/articles/2018-07-02/travel-surge-hasairports-spending-on-renovation-at-record-pace.
[20] *Available at* https://www.travelweekly.com/Travel-News/Airline-News/More-andmore-airports-running-out-of-space.
[21] DEIR Appendix C at 20.

region."[22] Despite this recognition of the need for holistic analysis, the DEIR flatly asserts that those other airports could not absorb a greater share of the expected demand. For example, it simply states that SFO and SJC are constrained, citing, in the only parenthetical dedicated to the topic: "(e.g., airfield capacity, weather, and nighttime curfews)".[23] There is no further discussion of these limitations, or any explanation of why these airports cannot meet some or all of the projected demand growth. This is especially egregious in the case of SFO, which has nearly triple the number of daily departure seats as compared to OAK.[24] This lack of analysis is startling and legally deficient: the DEIR's failure to evaluation the capacity limitations of other regional airports lacks substantial evidence and is inadequate under CEQA.

B. The DEIR's growth modeling suffers from optimism bias and does not consider the possibility of contraction or other growth trajectories.

It is clear that the DEIR's confidence about the projected growth stems in large part from both public commitments by and confidential conversations with Southwest, the airport's biggest airline, which consumed 76% of the airport's seat capacity in 2021.[25] The DEIR notes that Southwest is "invested in growing [at] the airport,"[26] and admitted that due to "additional discussions with the airline, Southwest during the pandemic reaffirmed their commitment to OAK."[27] And the DEIR notes that its demand forecasting was affected in part by the fact that the Southwest operating day will be longer in 2028 than in 2019.[28] It is odd that so much of the DEIR's analysis of why its growth projections are so different from FAA's relies on Southwest's own projections, and casts doubt on its assumption that future growth is determined by forces entirely outside the airport's control.

The overly narrow focus on Southwest leads the Port down a path of what some researchers have called "optimism bias," which is especially important because "aviation demand forecasts are used to justify and fund infrastructure investments."[29] Further complicating the practice of forecasting is optimism: optimism that aviation demand will grow, and optimism that investment in the airport will spur development itself. Since the beginning of airport development in the U.S., the mindset in the aviation industry has pro-growth based underlying assumptions of economic growth and global consumer capitalism.[30] The authors of one paper compared 704 10-year aviation demand forecasts from 64 airports between 1995 and 2005. They found that 85% of the errors *overestimated* the demand that actually occurred; *the median forecast error was close*

[22] DEIR Appendix C at 58.
[23] DEIR Appendix C at 77.
[24] DEIR Appendix C at 21.
[25] DEIR Appendix C at 39.
[26] DEIR Appendix C at 42, 58.
[27] DEIR Appendix C at 58.
[28] DEIR Appendix C at 76.
[29] Suh, Daniel & Ryerson, Megan, Forecast to Grow: Aviation Demand Forecasting In An Era of Demand Uncertainty and Optimism Bias, Transportation Research Part E 128 (2019), 400-16, at 409.
[30] *Id.* at 403.

to 30%.[31] The authors wrote that with so much uncertainty, precisely predicting demand is "challenging at best and impossible at worst."[32] Several examples are shown in Fig. 2 below.

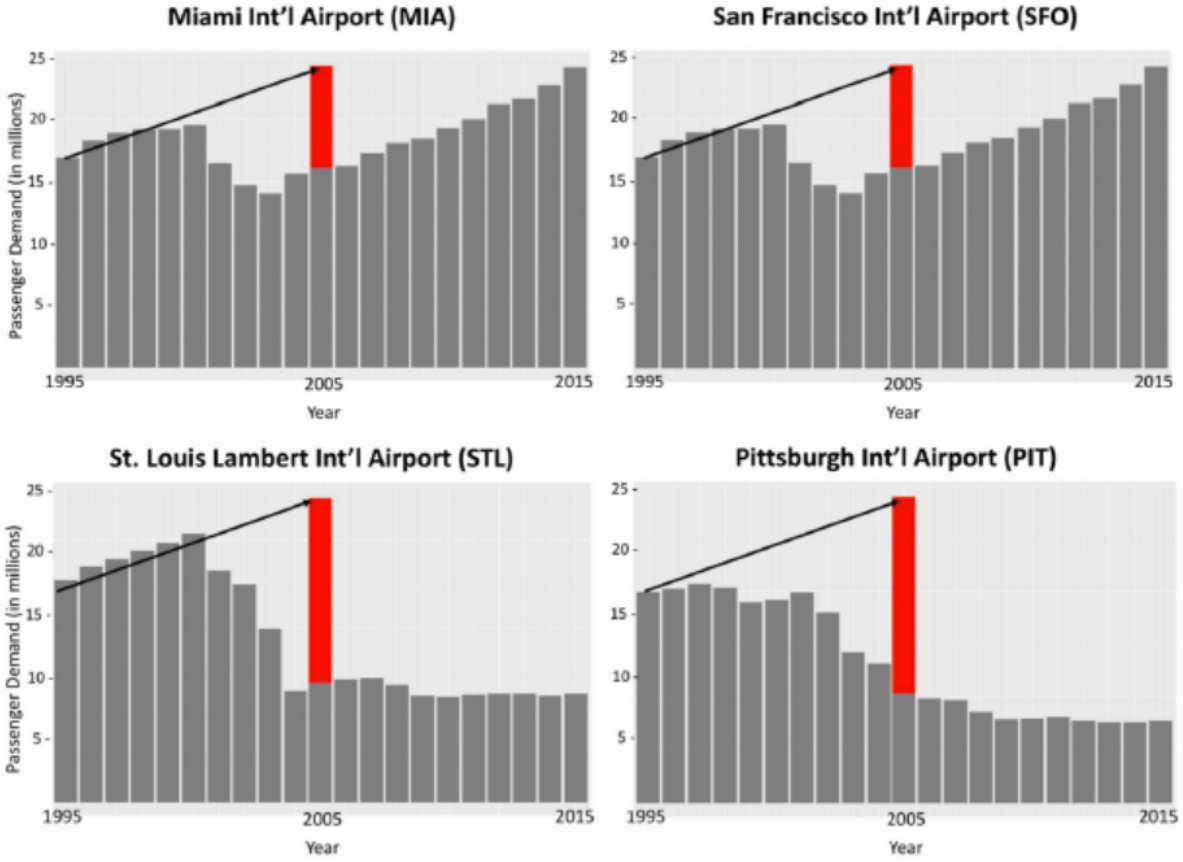

Fig. 2. Annual passenger demand and 10-year TAF forecast (base year 1995, target year 2005) for sample airports.

The authors studied four airports where the 10-year demand projections were wildly off-base. At Miami and San Francisco, demand in the target year was much lower than projected, though those airports eventually rebounded and reached the target many years behind schedule. At St. Louis and Pittsburgh, demand permanently contracted and never met the projected volumes. The authors then developed a mathematical model to predict 10-year contraction in passengers. By pivoting from trying to predict demand accurately to instead modeling the likelihood of contraction, airport planners can avoid unwise infrastructure investments.[33] Instead of engaging with this literature, the DEIR instead turned its rose-colored glasses to the future, and based largely on the announced plans of Southwest, decided that demand would be linear and continuous—despite much evidence to the contrary from peer airports. The DEIR improperly ignored the risks of contraction and did not run models that accounted for interruptions to growth, despite acknowledging that September 11 and the pandemic both cased unanticipated

[31] *Id.* at 404.
[32] *Id.* at 403.
[33] *Id.* at 415.

rapid demand drop. The DEIR does not acknowledge or analyze the possibility that its expansion project, along with the capacity it adds, will go unused in future years.

C. The DEIR ignores the substantial literature concerning induced demand from transportation infrastructure projects.

The clearest evidence that removing obstacles to travel increases the amount of travel comes from roadway expansion projects. Numerous studies have confirmed that increasing road capacity also increases vehicle travel and associated emissions.[34] Adding roadway capacity through new freeway developments, widenings, and expansions decreases travel time and traffic, "in effect lowering the 'price' of driving" and resulting in an increase in vehicle miles traveled ("VMT").[35] The increase in VMT is not offset by decreases in other road usage.[36] And VMT increases even more in the long term after a capacity expansion.[37] Both Caltrans[38] and the California Air Resources Board[39] have issued guidance to help agencies estimate and account for induced demand from road expansion projects. Equally, increasing the capacity of airports lowers barriers to air travel and increases air traffic. Demand-induced travel is beyond debate in the context of roads, and the DEIR is misguided to ignore it in an analogous context.

Even more specifically, some research applies these findings to aviation. One paper notes the general finding that infrastructure investment and ensuing passenger demand are linked, a basic relationship the DEIR fails to acknowledge: "[C]apacity change would trigger a complicated set of adjustment of and interplay among passenger demand, air fare, flight frequency, aircraft size,

[34] Susan Handy & Marlon G. Boarnet, Cal. Air Res. Bd., Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions (2014) [hereinafter HANDY & BOARNET], *available at* https://ww2.arb.ca.gov/sites/default/files/2020-06/Impact_of_Highway_Capacity_and_Induced_Travel_on_Passenger_Vehicle_Use_and_Greenhouse_Gas_Emissions_Policy_Brief.pdf; see also Susan Handy, Nat'l Ctr. for Sustainable Transp., Increasing Highway Capacity Unlikely to Relieve Traffic Congestion (2015), *available at* https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/final-reports/10-12-2015-ncst_brief_inducedtravel_cs6_v3.pdf; Michael L. Anderson, Lucas W. Davis & Leila Safavi, California Air Resources Board, Estimating Induced Travel from Capacity Expansions on Congested Corridors (2021), available at: https://ww2.arb.ca.gov/sites/default/files/2021-04/18RD022.pdf. *See also* Technical Advisory on Evaluating Transportation Effects in CEQA, Office of Planning and Research, State of California, April 2018, *available at*: https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf.

[35] Handy & Boarnet, *supra* note 18, at 2.

[36] *Id.* at 5.

[37] *Id.* at 4.

[38] Jose Comacho, CalTrans, Induced Travel Calculator Improvements (2022), *available at*: https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/research-notes/task3354-rns-02-22a11y.pdf

[39] Michael L. Anderson, Lucas W. Davis & Leila Safavi, California Air Resources Board, Estimating Induced Travel from Capacity Expansions on Congested Corridors (2021), *available at*: https://ww2.arb.ca.gov/sites/default/files/2021-04/18RD022.pdf.

and flight delays, leading to an equilibrium shift."[40] More specifically, the authors find that "capacity constraint suppresses demand and increases passenger generalized cost. Facing delays, passengers' willingness-to-pay is reduced; airlines tend to lower frequency and pass part of the delay cost they bear to passengers."[41] The converse is also true: "With higher capacity, airlines tend to raise both fare and frequency while decreasing aircraft size. More demand emerges in the market, with reduced generalized cost for each traveler."[42] The DEIR again ignores the basic finding that increased infrastructure leads to more capacity and stimulates more demand.[43]

The fact that the Port is proposing to expand OAK to such an extent is itself evidence that this must enable and/or induce additional passenger operations, since otherwise pouring billions of dollars into a major overhaul of the terminals would be pointless. Merely improving existing passengers' "experience," when the Port claims that demand will continue to rise at the same rate even if the Project were not built, does not make sense, unless it would also increase revenues and/or enable growth.

These failures and omissions show that the DEIR does not provide accurate information about the amount of growth the Project will cause. In short, the DEIR proposes expanding the airport so it can accommodate more passengers through the terminals and put them onto bigger airplanes, but denies the public any information about how this will affect the air traffic above them. In so doing, the EIR fails to disclose the full extent of the Project's direct and indirect environmental impacts, and consequently fails to properly analyze or mitigate those impacts, in violation of CEQA.

III. The DEIR's Analysis of Alternatives Is Flawed.

CEQA requires agencies to consider reasonable alternatives to a proposed project. A proper analysis of alternatives is essential to comply with CEQA's mandate that significant environmental damage be avoided or substantially lessened where feasible. Pub. Res. Code § 21002; CEQA Guidelines §§ 15002(a)(3), 15021(a)(2), 15126(d); *Citizens for Quality Growth v. City of Mount Shasta* (1988) 198 Cal.App.3d 433, 443-45. "Without meaningful analysis of alternatives in the DEIR, neither the courts nor the public can fulfill their proper roles in the CEQA process . . . . [Courts will not] countenance a result that would require blind trust by the public, especially in light of CEQA's fundamental goal that the public be fully informed as to the consequences of action by their public officials." *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Ca1.3d 376, 404. Critically, an EIR's consideration of alternatives must "foster informed decision-making and public participation." CEQA Guidelines

[40] Zou, Bo & Hansen, Mark, Flight Delays, Capacity Investment, and Social Welfare Under Air Transport Supply-Demand Equilibrium, Transportation Research Part A, Vol. 46, p. 965-980 (2012), *available at*: https://www.sciencedirect.com/science/article/pii/S096585641200033X
[41] *Id.* at 978-79.
[42] *Id.* at 965.
[43] *See also*, Gong, Zhenwei et al., On the Effects of Airport Capacity Expansion Under Responsive Airlines and Elastic Passenger Demand, Transportation Research Part B: Methodological, Vol. 170, p. 48-76 (April 2023), *available at*: https://www.sciencedirect.com/science/article/abs/pii/S0191261523000231.

§ 15126.6(a); *Laurel Heights*, 47 Ca1.3d at 404 ("An EIR's discussion of alternatives must contain analysis sufficient to allow informed decision-making."). The discussion of alternatives must focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. CEQA Guidelines § 15126.6(b).

The key to selection of alternatives is identifying alternatives that meet most project objectives while reducing the level of environmental impacts. *Watsonville Pilots Ass'n v City of Watsonville* (2010) 183 CA4th 1059, 1089. In order to do that, the project objectives must first be broad enough that they do not foreclose the possibility of alternatives. *North Coast Rivers Alliance v. Kawamura* (2015) 243 Cal.App.4th 647, 668-670 (EIR violated CEQA where it narrowly defined project a project objective, then dismissed alternatives that would not accomplish this objective). Next, the environmental impacts of alternatives that largely met the objectives must be evaluated against the proposed project. *Citizens for Quality Growth v. City of Mount Shasta* (1988) 198 Cal.App.3d 433, 443-45. This DEIR failed on both counts.

A. The Project's narrow objectives foreclose an adequate alternatives analysis.

The DEIR employs improperly narrow project objectives in order to reject all alternatives to the proposed Project. A project's objectives may not be so narrowly defined that they essentially preordain the selection of the agency's proposed alternative. *North Coast Rivers Alliance*, 243 Cal.App.4th at 668-670 (EIR violated CEQA where it narrowly defined a project objective, then dismissed alternatives that would not accomplish this objective).

In *We Advocate Thorough Environmental Review v. County of Siskiyou ("WATER")*, Crystal Geyser applied for a permit to revive a shuttered plant that extracted and bottled groundwater. (2022) 78 Cal.App.5th 683, 691. The EIR said that the project's objectives were to operate a beverage bottling facility at the plant to "meet increasing market demand" and to "utilize the full production capacity of the existing Plant building." *Id.* at 692. The court found that those objectives were "so narrow as to preclude any alternative other than the Project." *Id*. As the court said, "if the principal project objective is simply pursuing the proposed project," then the results of the alternatives analysis are a "foregone conclusion" and an "empty formality." *Id*. The court found that the error was prejudicial because it prevented informed decisionmaking and public participation. *Id*. at 693.

The Port here, too, has essentially described the project objective as operating the Project as proposed. The objective of this Project is to expand the existing airport to "accommodate market-based demand" and a "larger-sized aircraft fleet."[44] As in *WATER*, the objective predetermines what the land use will be (an airport expanded for more and larger traffic), the size (large enough to meet supposed market demand), and the location (the current OAK site).

Like in *WATER*, the alternatives section then becomes an empty formality. This DEIR screens out every single alternative on the grounds that it will not accommodate the assumed market-

[44] DEIR at ES-1.

based demand or will be cost-prohibitive.[45] This screening process leads to a DEIR that only analyzes two possibilities, the proposed project or no project, and comes to the odd conclusion that the project is its own environmentally superior alternative.[46] Because only a project that "accommodates market-based demand" on that site will meet the project objectives, no alternatives are possible—exactly the analysis that failed in *WATER.*

B. The DEIR's claim that there is no environmentally superior alternative lacks evidence.

An EIR must focus on alternatives that can avoid or substantially lessen a project's significant environmental effects. Pub. Res. Code §21002; 14 Cal. Code Regs. §15126.6(a)–(b). The alternatives discussed in an EIR should be ones that offer substantial environmental advantages over the proposed project. *Citizens of Goleta Valley v Board of Supervisors* (1990) 52 C3d 553, 566. See *Cleveland Nat'l Forest Found. v San Diego Ass'n of Gov'ts* (2017) 17 CA5th 413, 436 (rejecting transportation plan EIR that did not consider alternatives that would reduce vehicle miles traveled). An EIR may not exclude the required discussion of environmentally superior alternatives without providing substantial evidence and analysis showing why none is available. *Habitat & Watershed Caretakers v City of Santa Cruz* (2013) 213 CA4th 1277, 1305; *Save Our Access–San Gabriel Mountains v Watershed Conserv. Auth.* (2021) 68 CA5th 8, 31; *Mount Shasta Bioregional Ecology Ctr. v County of Siskiyou* (2012) 210 CA4th 184, 199.

This DEIR's alternative analysis fails because it concludes, without substantial evidence, that no alternatives will avoid the air quality and greenhouse gas impacts caused by the proposed Project. The EIR claims that "there is no potential avoidance alternative for air quality and greenhouse gas operational emissions as the emissions are the result of aircraft activity."[47] The DEIR's alternative analysis is thus rendered invalid by the same fundamental flaw described above: it denies the impact the Project will have in the form of increased induced air traffic. In fact, the increase in air traffic will be the most significant direct impact of the proposed Project. In the alternatives analysis, the unsupported assumption that air traffic will be constant in every scenario means that the DEIR fails to identify alternatives that would mitigate that impact. Because the proposed Project will induce flight-related growth and CEQA requires that growth-inducing impacts be analyzed with the Project, the DEIR must consider alternatives that would not induce growth.

The DEIR's denial that the Project will increase air traffic leads it to overlook an alternative that could reduce impacts. It screens out alternative 4.4.3, a plan that would retrofit Terminal 1 to meet current seismic and fire code standards without expanding the airport's capacity or doing any other renovations.[48] Alternative 4.4.3 would make the airport safer and potentially more efficient, but not busier. In fact, alternative 4.4.3 would maintain limits on growth, and therefore, would avoid inducing growth in air traffic and the attendant environmental harms. By omitting this analysis, the EIR does not "foster informed decision-making and public participation," in violation of CEQA. CEQA Guidelines § 15126.6(a); *Laurel Heights,* 47 Ca1.3d at 404 ("An

[45] DEIR at 4-6-10.
[46] DEIR at 4-11-14.
[47] DEIR at 4.8.
[48] DEIR at 4.8.9.

EIR's discussion of alternatives must contain analysis sufficient to allow informed decision-making.").

IV. The DEIR Fails to Describe Repeated Single-Event Noise Impacts of the Project, in Violation of Clear Caselaw Concerning This Same Airport.

The goal of providing Californians with "freedom from excessive noise" is included among CEQA's basic policies. Pub. Res. Code §21001(b). Under the definition of the term "environment" in Pub. Res. Code §21060.5, noise is included as a physical condition that may be affected by a proposed project. The Guidelines definition clarifies this reference by using the term "ambient noise " to describe the physical condition that could be changed by a project. 14 Cal. Code Regs. §15360.

This same airport has been subject to CEQA litigation in years past, which makes it all the more striking that the Port did not follow the clear guidance set forth in that case. In *Berkeley Keep Jets Over the Bay Comm. v Board of Port Comm'rs* (2001) 91 CA4th 1344, 1377, the court rejected the Oakland Airport's EIR's exclusive reliance on a cumulative noise descriptor (the Community Noise Equivalent Level, or CNEL) as the sole indicator of the noise impacts of expanding cargo flight operations at an airport. The court found the impact assessment did not provide a meaningful analysis of the increase in the number of nighttime flights resulting from the project, the changes to noise levels in quiet residential areas that would result, and the community reaction to those changes in the nighttime noise environment. *Berkeley Keep Jets*, 91 CA4th at 1381.

The court stated further:

> "We believe the potential noise impact of increased nighttime flights mandates further study. The Guidelines provide that the level of detail required in addressing particular impacts should be "in proportion to their severity and probability of occurrence." Guidelines, § 15143. Using this standard, the Port cannot simply ignore the CEQA standard of significance for assessing noise, the credible expert opinion calling for further evaluation of the impact of single event noise, and public concern over the noise created by increased nighttime flights. CEQA requires that the Port and the inquiring public obtain the technical information needed to assess whether the ADP will merely inconvenience the Airport's nearby residents or damn them to a somnambulate-like existence." *Berkeley Keep Jets,* 91 CA4th at 1381.

According, the Draft EIR fails to comply with this decision for the following reasons:

- The Draft EIR does not list, in clear, understandable language, the impact that many more daily flights will have on ambient noise in surrounding communities. The DEIR makes the same foundational error cited above: by assuming that the dramatic increase in flight traffic in 2028 and 2038 is inevitable, the DEIR fails to grapple with the changes in noise in surrounding communities the Project will create. As the *Berkeley KJOB* court noted, residents need to understand what effect the Project will have on their daily lives, including sleep, as there is great reason to believe that the communities already suffering from repeated nighttime flyovers will endure more of the same with the Project. Bizarrely, the DEIR claims there will be very little difference in residents' sleep

disturbances between 2019 and 2038, despite the growth in air traffic. In Appendix M, the DEIR claims that average nighttime sleep disturbances ("NAWR") are *virtually identical* between 2019 and 2038: 8 to 34 disturbances in 2019, depending on if windows are closed or open, versus 8 to 37 disturbances in 2038, depending on if windows are closed or open.[49] The document does not address why this would be the case, and how the possible alteration of flight paths and flight frequencies impact this analysis.

- Noise has been worsened since the *Berkeley KJOB* decision by the conversion of flight paths to and from the airport from a "cone" vector arrival path to the NextGen GPS path where all arriving and departing planes fly over the exact same neighborhoods.[50] The DEIR fails entirely to address repeated single event noise impacts to communities along the arrival and departure paths, specifically in the Berkeley/Oakland Hills. The Airport receives hundreds of complaints annually regarding this impact, which will be substantially worsened with the Project. While Appendix M address sleep disturbances, it does not analyze the Berkeley or Oakland Hills at all, instead narrowing its focus of affected areas to Alameda, part of East Oakland near the Bay, and part of San Leandro. The Oakland and Berkeley hills deserve careful analysis, as residents there have complained for years about the impact of aircraft noise on their daily lives and sleep.[51] The DEIR should be revised to include a map of flight paths, a table of noise complaints with accompanying map, and a detailed analysis of single event noise as it may affect sensitive receptors in the Berkeley/Oakland Hills and elsewhere. The document should also add noise receptors to cover all foreseeably affected areas, such as in the South Bay.

- The DEIR contradicts Oakland's newly adopted Environmental Justice Element for its General Plan ("EJ Element").[52] The landmark EJ Element "serves as the foundation for achieving equity and environmental justice when planning for future growth and development in Oakland."[53] The Plan aims to improve "the environmental health of those most harmed by pollution burdens and impacted by historic disinvestment and disenfranchisement by investing in these communities to create opportunities that will allow its residents to live long, healthy lives." As such, this Project should comply with the recently adopted EJ Element, maintaining consistency with the City as it brings renewed attention to issues of inequity and pollution.

  While noise will be studied more carefully in Phase 2 of the EJ Element, to be completed in 2025,[54] there are important indications that the Airport Project will exacerbate the

[49] DEIR Appendix M, Table 2-3.
[50] *See, e.g.*, East Bay NextGen Flight Path Maps, Save Our Skies East Bay, *available at*: https://soseastbay.org/east-bay-nextgen-flight-path-maps/
[51] These communities are not the only ones affected by noise from OAK. Oakland's General Plan notes that in 2003, 83% of complaints received by OAK's noise report hotline were from Alameda and Fremont callers. The DEIR did not analyze the noise in Fremont at all. *See* Oakland General Plan (2005), at 11, *available at*: https://cao-94612.s3.amazonaws.com/documents/oak070995.pdf
[52] Oakland Environmental Justice Element ("EJ Element"), Sept. 26, 2023, *available at*: https://cao-94612.s3.us-west-2.amazonaws.com/documents/EJ-Element_Adopted-9.26.23.pdf.
[53] *Id.* at ES-1.
[54] *Id.* at 1-3.

environmental injustice the Element seeks to fix. For example, the document lists "protecting homes from excessive noise and improving community noise environments," "ensuring public spaces do not experience excessive noise while also supporting community events," "and reducing noise pollution and exposure" as primary goals.[55] It also notes that "constant, excessive noise can increase stress, anxiety, depression, high blood pressure, heart disease, and more"[56]—a substantial literature that the Draft EIR ignores altogether. The Draft EIR nonetheless plows ahead, clearing the way for aviation pollution that will continue to burden the very communities Oakland is trying to project through its EJ Element. The Project is clearly at odds with the City's intention in its General Plan update. A recirculated EIR should address how the increase in aircraft traffic can be compatible with Oakland's lofty goals to protect its residents from unnecessary noise pollution, along with the other related issues the EJ Element addresses that are worsened by increased flight pollution.

V. Cumulative Impacts

The DEIR uses a "list" approach to identifying planned projects that may result in cumulative impacts in combination with those of the proposed project. While the list may be comprehensive, the subsequent analysis of impacts is not. For example, the biological resources assessment fails to discuss cumulative loss of wetland and burrowing owl habitats; the air quality and greenhouse gas discussions fail to quantify cumulative emissions; and the cumulative transportation analysis addressed LOS and not VMT, as currently required under CEQA.

VI. Aircraft Contribute Significantly to Climate Change and Harm Human Health and Welfare, and This Project Will Result in More Flight-Based Emissions

As argued above, the Project will bring thousands of new flights and millions of new passengers through the OAK Airport in coming years. As such, the Project contributes to the escalating climate crisis as well as local air pollution that affects communities and workers in the vicinity of the airport.

A. Climate change is one of the greatest challenges facing the United States and the world.

Global warming is occurring on an unprecedented scale as a result of human activities.[57] The combustion of fossil fuels since the Industrial Revolution is the most prominent force driving

[55] *Id.* at 1-5.
[56] *Id.* at 2-8. *See also,* Baumgaertner, Emily et al., Noise Could Take Years Off Your Life. Here's How. NY Times, Jun. 9, 2023, *available at*: https://www.nytimes.com/interactive/2023/06/09/health/noise-exposure-health-impacts.html
[57] NASA Global Climate Change, Facts: Evidence – Climate Change: How Do We Know?, https://climate.nasa.gov/evidence/. The Fourth National Climate Assessment, comprised of the 2017 Climate Science Special Report (Volume I) and the 2018 Impacts, Risks, and Adaptation in the United

climate change.[58] The United States government, and EPA in particular, have repeatedly recognized that this anthropogenic climate change is causing widespread, severe harms across the country, requiring immediate and substantial greenhouse gas emissions reductions.[59] The impacts of more frequent and intense extreme weather events, intensifying droughts, hazardous air quality associated with wildfire and ozone pollution, rising water temperatures, ocean acidification, and sea level rise "are already being felt in communities across the country."[60]

To limit warming to 1.5°C, global CO_2 emissions must be cut in half by 2030—ten years from now—and reach near zero by 2050,[61] with faster reductions needed in the U.S.[62] Thus, to avoid the devastating climate change-driven damages that would come with exceeding 1.5°C warming, we must implement deep greenhouse gas emissions reductions without delay across all sectors, including aviation.

The IPCC's most recent report, entitled Climate Change 2022: Impacts, Adaptation and Vulnerability, found that warming is proceeding even faster than anticipated, and the best-case scenario for climate change is slipping out of reach. (IPCC 2022.) The report now estimates that, over the next 20 years, the world will cross the global warming threshold of 1.5°C. And unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5°C—or even 2°C—will be beyond reach. The United Nations Secretary General described the forecasts in this report as an "atlas of human suffering." (Borenstein 2022.)

The United States has contributed more to climate change than any other country. The U.S. is the world's biggest cumulative emitter of greenhouse gas pollution, responsible for 27 percent of cumulative global CO2 emissions since 1850, and the U.S. is currently the world's second highest emitter on an annual and per capita basis. (World Resources Institute 2020.) Nonetheless, U.S. climate policy is wholly inadequate to meet the international climate target to hold global average temperature rise to well below 2°C above pre-industrial levels to avoid the worst dangers of climate change. Current U.S. climate policy has been ranked as "insufficient" by an international team of climate policy experts and climate scientists which concluded that "the US'

States (Volume II), concluded that "there is no convincing alternative explanation" for the observed warming of the climate over the last century other than human activities. U.S. Global Change Research Program, Climate Science Special Report: Fourth National Climate Assessment, Vol. I (2017), https://science2017.globalchange.gov/ at 10 ("Fourth National Climate Assessment 2017"). "[E]vidence of human-caused climate change is overwhelming and continues to strengthen, that the impacts of climate change are intensifying across the country, and that climate-related threats to Americans' physical, social, and economic well-being are rising." U.S. Global Change Research Program, Impacts, Risks, and Adaptation in the United States, Fourth National Climate Assessment, Volume II (2018) at 36 ("Fourth National Climate Assessment 2018").

[58] NASA Global Climate Change, Facts: Causes – The Causes of Climate Change, https://climate.nasa.gov/causes/.

[59] *See, e.g.*, Fourth National Climate Assessment 2017; Fourth National Climate Assessment 2018. EPA contributed to the drafting of both volumes of the Fourth National Climate Assessment.

[60] Fourth National Climate Assessment 2018 at 25.

[61] IPCC Special Report at 12-14, Figure 2.6.

[62] Climate Equity Reference Project, Climate Equity Reference Calculator, https://calculator.climateequityreference.org/

climate policies and action in 2030 need substantial improvements." (Climate Action Tracker 2022.)

In response to inadequate action on the national level, California has taken steps through legislation and regulation to fight climate change and reduce statewide GHG emissions. Enforcement and compliance with these steps are essential to help stabilize the climate and avoid catastrophic impacts to our environment. California has a mandate under AB 32 to reach 1990 levels of GHG emissions by the year 2020, equivalent to approximately a 15 percent reduction from a business-as-usual projection. (Health & Saf. Code, § 38550.) Based on the warning of the Intergovernmental panel on Climate Change and leading climate scientists, Governor Brown issued an executive order in April 2015 requiring GHG emission reduction 40 percent below 1990 levels by 2030. (Executive Order B-30-15 (2015).) The Executive Order is line with a previous Executive Order mandating the state reduce emission levels to 80 percent below 1990 levels by 2050 in order to minimize significant climate change impacts. (Executive Order S-3-05 (2005).) In enacting SB 375, the state has also recognized the critical role that land use planning plays in achieving greenhouse gas emission reductions in California.

Although some sources of GHG emissions may seem insignificant, climate change is a problem with cumulative impacts and effects. (*Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.* (9th Cir. 2008) 538 F.3d 1172, 1217 ("the impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis" that agencies must conduct).) One source or one small project may not appear to have a significant effect on climate change, but the combined impacts of many sources can drastically damage California's climate as a whole. Therefore, project-specific GHG emission disclosure, analysis and mitigation is vital to California meeting its climate goals and maintaining our climate.

Given the increasingly urgent need for drastic action to reduce GHG emissions, the DEIR's failure to consider alternatives to reduce the Project's significant climate change effects—especially stemming from the aircraft themselves—is all the more alarming.

B. Aviation is among the fastest-growing contributors to climate change.

Aviation adds CO_2 and smaller amounts of nitrous oxide, a potent greenhouse gas, into our atmosphere.[63] When these pollutants are emitted from aircraft, they have a larger impact on climate, as aviation emissions "occur in the climatically sensitive upper troposphere and lower

[63] Emissions from aircraft consist of approximately 70 percent CO_2, 30 percent water vapor, and less than one percent each of oxides of nitrogen or NOx (including nitrous oxide), carbon monoxide (CO), oxides of sulfur (SOx), and other trace components such as particulate matter (PM) and hydrocarbons like methane (CH_4). Federal Aviation Administration, Office of Environment and Energy, Aviation Emissions, Impacts & Mitigation: A Primer (Jan. 2015) at 2, *available at* https://www.faa.gov/sites/faa.gov/files/regulations_policies/policy_guidance/envir_policy/Primer_Jan2015.pdf. Nitrous oxide (N_2O), a powerful, long-lived greenhouse gas, has a warming effect 300 times that of CO_2. U.S. Environmental Protection Agency, Overview of Greenhouse Gases, http://epa.gov/climatechange/ghgemissions/gases/n2o.html.

stratosphere where they may have a disproportionate impact on climate."[64] Moreover, due to contrails and aviation-induced cirrus cloud formation, "aviation has a larger impact on radiative forcing" than that caused by CO_2 emissions alone.[65]

Aviation is one of the fastest-growing sources of greenhouse gas emissions.[66] Flights departing from airports in the United States and its territories were responsible for almost a full quarter of global aviation's passenger transport-related carbon dioxide emissions in 2018.[67] Globally, aviation was responsible for 2.4 percent of energy-related total carbon dioxide emissions in 2018, and 3.5 percent of anthropogenic effective radiative forcing after accounting for nitrogen oxides, black carbon, and aviation-induced cloudiness.[68] Due to the radiative forcing effect of pollutants emitted at altitude, those emissions are estimated to account for about five percent of warming.[69]

Over the last ten years, aviation emissions increased by 44 percent, as growing passenger and cargo traffic outpaced efficiency improvements.[70] Emissions are expected to triple again by 2050 under a business-as-usual scenario.[71] The aviation sector is on pace to emit approximately

[64] Federal Aviation Administration, Office of Environment and Energy, Aviation Emissions, Impacts & Mitigation: A Primer (Jan. 2015) at 10.
[65] Lee, David S. et al., Aviation and global climate change in the 21st century, 43 Atmospheric Env't 3520, 3523 (2009).
[66] Graver, Brandon et al., CO_2 emissions from commercial aviation, 2018, International Council on Clean Transportation (2019) ("Graver 2019"), https://theicct.org/sites/default/files/publications/ICCT_CO2-commercl-aviation-2018_20190918.pdf at 1-2.
[67] *Id.* at 1. Two thirds of the emissions from flights departing from U.S. airports are associated with domestic flights. *Id.* Just in the U.S., aviation constitutes 12 percent of transportation emissions. Olmer, Naya and Dan Rutherford, U.S. Domestic Airline Fuel Efficiency Ranking, 2015-2016, The International Council on Clean Transportation (Dec. 2017), https://theicct.org/sites/default/files/publications/US-Airline-Ranking-2015-16_ICCT-White-Paper_14122017_vF.pdf.
[68] Graver 2019, *supra* n.21; Lee, David S. et al., The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018, Atmospheric Env't. (2020), https://doi.org/10.1016/j.atmosenv.2020.117834.
[69] Fahey, David W. & Lee, David S., Aviation and Climate Change. A Scientific Perspective. In: Carbon & Climate Law Review 2: 7 (2016).
[70] Zheng, Sola & Dan Rutherford, Fuel burn of new commercial jet aircraft: 1960 to 2019, International Council on Clean Transportation (2020) ("Zheng 2020") https://theicct.org/publications/fuel-burn-new-comm-aircraft-1960-2019-sept2020 at 1.
[71] *Id.* The International Civil Aviation Organization (ICAO) also expects "[t]he 4.3 billion airline passengers carried in 2018 . . . to grow to about 10.0 billion by 2040." ICAO, The World of Air Transport in 2018 (2018), https://www.icao.int/annual-report-2018/Pages/the-world-of-air-transport-in-2018.aspx. International air travel and tourism associations do not expect the pandemic to reduce air travel levels in the long-term. International Air Transport Association and Tourism Economics, Air Passenger Forecasts: Potential Paths for Recovery into the Medium- and Long-run (July 2020), https://resources.oxfordeconomics.com/hubfs/Webinar%20presentations/Air-Passenger-Forecasts-potential-paths-for-recovery-into-medium-and-long-run.pdf.

56 billion tonnes of CO_2 from 2015-2050. This would constitute more than a quarter of the total emissions consistent with a global carbon budget that keeps temperature rise below 1.5°C.[72]

The United States is by far the largest aviation carbon polluter. In 2015, EPA estimated that emissions from U.S. aircraft "are *about 7 times higher* than aircraft greenhouse gas emissions from China," which is ranked second in the world for its aircraft emissions.[73] Maintaining this business-as-usual path will cause additional greenhouse gas pollution that we cannot afford.

C. *Aircraft Contribute to Particulate Matter Emissions that Harm Human Health and Welfare*

Aircraft emissions significantly contribute to ambient $PM_{2.5}$ pollution, especially in areas with large commercial airports.[74] Premature deaths due to aviation emissions number about 16,000 per year globally, with $PM_{2.5}$ responsible for 87% of those deaths.[75] In North America alone, 1,500 premature deaths per year have been attributed to aviation emissions, with 650 or 43% of those deaths attributable to landing and takeoff emissions.[76]

Studies centered around busy airports have linked aircraft and health impacts.[77] A study that focused on three New York Airports found that residents living within 5 miles of these airports were at increased risk of hospital admissions for respiratory illnesses relative to those living farther than 5 miles away.[78] A report prepared by various Washington State government agencies similarly determined that there were significantly higher rates of lung cancer, oral and pharyngeal cancer; deaths from lung cancer and chronic obstructive pulmonary disease; and hospital admissions for asthma, pneumonia, and influenza within one-three miles of the Seattle-

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[72] Pidcock, R., et al. Aviation could consume a quarter of 1.5C carbon budget by 2050, Carbon Brief (Aug., 2016), https://www.carbonbrief.org/aviation-consume-quarter-carbon-budget; *see also* Öko-Institut, Emission Reduction Targets for International Aviation and Shipping (2015) at 28, https://www.europarl.europa.eu/RegData/etudes/STUD/2015/569964/IPOL_STU(2015)569964_EN.pdf.

[73] *Proposed Finding That Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare and Advance Notice of Proposed Rulemaking*, 80 Fed. Reg. 37,758, 37,788 (July 1, 2015) (emphasis added). In total, greenhouse gas emissions from U.S. "covered" aircraft are "about 6 times" more than corresponding emissions from China. *Id.*

[74] Proposed Rule Control Air Pollution from Aircraft Engines: Emission Standards and Test Procedures, 87 Fed. Reg. at 6,333.

[75] Yim, S.H.L. et al., Global, regional and local health impacts of civil aviation emissions, 10 Env't Res. L. 034001 (2015) (of 16,000 total premature deaths from $PM_{2.5}$ and ozone, 87% were attributable to $PM_{2.5}$).

[76] *Id.*

[77] *See, e.g.*, Hudda, Neelakshi et al., Emissions from an International Airport Increase Particle Number Concentrations 4-fold at 10km Downwind, 48 Environ. Sci. Technol. 6628 (May 29, 2014), https://pubs.acs.org/doi/full/10.1021/es5001566; Manisalidis, Ioannis et al., Environmental and Health Impacts of Air Pollution: A Review, 8 Frontiers in Public Health 14 (Feb. 20, 2020) ("Manisalidis 2020"), *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7044178/#.

[78] Lin, S. et al., Residential proximity to large airports and potential health impacts in New York State, 81 Int Arch Occup Environ Health 797 (2008).

Tacoma Airport as compared to the rest of King County and to Washington State.[79]

In another study, focused on the area surrounding Los Angeles International Airport, exposure to ultrafine particles was linked to increased instances of preterm birth.[80] There is growing evidence that the ultrafine PM aircraft generates is especially harmful—ultrafine PM's properties of larger surface area per unit mass and potent cell penetration leads to even more adverse health impacts than $PM_{2.5}$.[81] Outdoor ultrafine particle number concentrations ("PNC") are elevated in areas around commercial airports.[82] One study found concentrations of ultrafine particles to be four or more times higher in areas surrounding airports.[83] And research reveals that this aviation-related ultrafine PNC penetrates indoors and contributes to higher PNC indoors.[84]

The harmful impacts of particle pollution fall most heavily on communities of color and low-income communities that disproportionately live near airports. For example, in California, communities within 10 miles of international airports are disproportionately low-income and people of color, exposing them to above-average airport-associated air pollutants.[85] These communities often already bear the brunt of climate change impacts and compounding air pollution from nearby industry and roadways.[86]

Because aircraft PM pollution is most associated with take-off and landing operations,[87] areas around airports will see the largest increases in PM pollution from increased air traffic. In some regions like Los Angeles, airplane traffic has grown to be as significant a contributor to elevated particle pollution as the entire urban freeway network.[88] Increasing traffic also will make it

[79] Osaki, C. & J. Finkbonner, Final Report State Board of Health Priority: Environmental Justice (2001).
[80] Wing, S. E. et al., Preterm birth among infants exposed to in utero ultrafine particles from aircraft emissions, 128 Environmental Health Perspectives (2020).
[81] Li, N. et al., Ultrafine particulate pollutants induce oxidative stress and mitochondrial damage, 111 Environmental Health Perspectives 455 (2003); Oberdörster, G. et al., Translocation of inhaled ultrafine particles to the brain, 16 Inhalation Toxicology 437 (2004).
[82] 87 Fed. Reg. at 6,333. *See also* Austin, Elena et al., Mobile Observation of Ultrafine Particles: The MOV-UP Study Report, University of Washington Department of Environmental & Occupational Health Sciences, 2019, *available at* https://deohs.washington.edu/sites/default/files/Mov-Up%20Report.pdf.
[83] Hudda, N. et al., Impacts of aviation emissions on near-airport residential air quality, 54 Environmental Science & Technology 8580 (2020); Shirmohammadi, F. et al., Emission rates of particle number, mass and black carbon by the Los Angeles International Airport (LAX) and its impact on air quality in Los Angeles, 151 Atmospheric Environment 82 (2017).
[84] 87 Fed. Reg. at 6,332.
[85] Corey, Richard, California Air Resources Board, Comments re: Proposed Rulemaking for Control of Air Pollution from Airplanes and Airplane Engines: GHG Emission Standards and Test Procedures; 85 Fed. Reg. 51,556, August 20, 2020, to Administrator Andrew Wheeler, U.S. EPA (October 19, 2020).
[86] *See, e.g.*, American Lung Association, Disparities in the impact of air pollution (updated April 20, 2020), https://www.lung.org/clean-air/outdoors/who-is-at-risk/disparities; Carlson, A., The Clean Air Act's blind spot: Microclimates and hotspot pollution, 65 UCLA Law Review 1036 (2018).
[87] 87 Fed. Reg. at 6,345.
[88] Hudda, N. et al., Emissions from an international airport increase particle number concentrations 4-fold at 10 km downwind, 48 Environmental Science & Technology 6628 (2014).

harder for regional air quality districts with large airports to meet air quality standards.[89] For example, Alameda County already has elevated levels of $PM_{2.5}$ and is classified as in nonattainment.[90] And according to the American Lung Association's 2022 "State of the Air" report, Alameda County has a "Fail" grade for both year-round ozone and particulate matter pollution, under both the 24-hour and annual metrics.[91] As long as air traffic continues to increase toward and beyond pre-pandemic levels, regional air quality districts may struggle to reach attainment status even as they take measures to reduce particulate pollution from other sources within their jurisdiction.

D. Airport Workers and Airport-Adjacent Community Residents Will Suffer the Most from This Pollution

One of the few places where the Draft EIR actually admits a harmful outcome—despite its rejection of many other flight-related harms—is its discussion of airport workers. The DEIR claims that airport worker will face "potentially significant and unavoidable" risks from Toxic Air Contaminants ("TACs").[92] The Port's proposed mitigation measure, to install electrical infrastructure in the new terminal, is wholly inadequate to address the root issue: the Project subjects airport workers to much more hazardous air than they currently face, with no signs of abatement or effective mitigation.

This issues touches implicates both racial and economic justice. The overlap of racial and economic injustice and pollution burden is well-documented at this point. Airport workers and residents of downwind communities face increased risk of asthma, respiratory illness, and hospitalization.[93] Indeed, the City of Oakland has recognized the disproportionate burden that certain Oakland neighborhoods have based on their proximity to the Port and its pollution-generating activities:

> One of the most pressing environmental justice issues in Oakland is the disproportionate pollution burden that West and East Oakland neighborhoods face, largely due to proximity to the Port of Oakland, industrial land, and its associated uses, such as truck transport. Coupled with Oakland's economic history, these land use patterns were created by zoning choices, racial exclusion, and urban renewal. This has resulted in a legacy of polluting uses right next to sensitive uses such as homes, schools, and parks… A growing body of research indicates that these polluting industrial land uses increase rates of

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[89] U.S. EPA, Clean Air Act (CAA) and Federal Facilities, https://www.epa.gov/enforcement/clean-air-act-caa-and-federal-facilities (a region of the U.S. is categorized as "non-attainment" when it does not meet the required air quality standards under the Clean Air Act).
[90] U.S. EPA, Current Nonattainment Counties for All Criteria Pollutants, 2023, https://www3.epa.gov/airquality/greenbook/ancl.html
[91] American Lung Association, "State of the Air," 2022, *available at*: https://www.lung.org/getmedia/74b3d3d3-88d1-4335-95d8-c4e47d0282c1/sota-2022.pdf
[92] DEIR at ES-5.
[93] *See, e.g.*, Bendtsen, Katja, et al., A Review of Health Effects Associated With Exposure to Jet Engine Emissions In and Around Airports, Environmental Health 20:10 (2021) (documenting the increased exposure to air pollutants faced by airport workers and residents of downwind communities, similar to exposure to diesel exhaust and air pollution), *available at*: https://backend.orbit.dtu.dk/ws/portalfiles/portal/258643773/616573b266dbf20027898860.pdf

asthma, cancer, and other health issues, as well as decreased life expectancy. The impacted communities are disproportionately communities of color.[94]

Some of the most vulnerable census tracts in the City are the ones directly adjacent to the airport. For example, the Lockwood/Coliseum, Oakland Airport, and Havenscourt/Coliseum are the three Oakland communities with the highest CalEnviroScreen scores, meaning that they rank higher than 97.8, 97.2, and 96.2 percent, respectively, of all California communities in terms of overall pollution burden.[95] As shown in Figures 3 and 4 below, the communities most burned by pollution are largely coterminous with the lowest-income areas of the City, many of which are adjacent to the Airport.

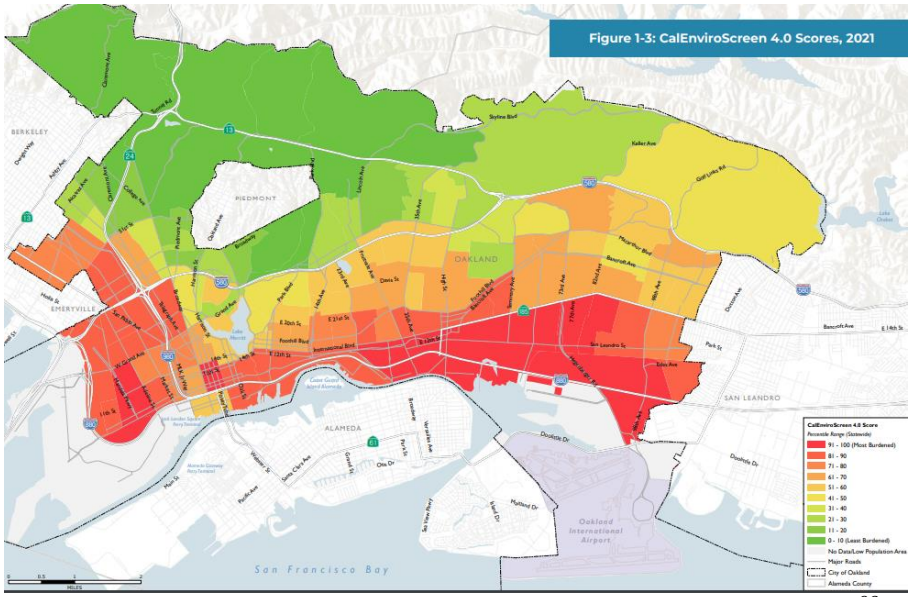

Figure 3. CalEnviroScreen Values for Oakland Neighborhoods, 2021.[96]

[94] EJ Element at 1-10.
[95] Oakland 2045, Environmental Justice and Racial Equity Baseline ("Equity Baseline"), Mar. 2022, at 9, *available at*: https://cao-94612.s3.us-west-2.amazonaws.com/documents/Equity-Baseline_revised4.15.22.pdf
[96] Equity Baseline at 11.

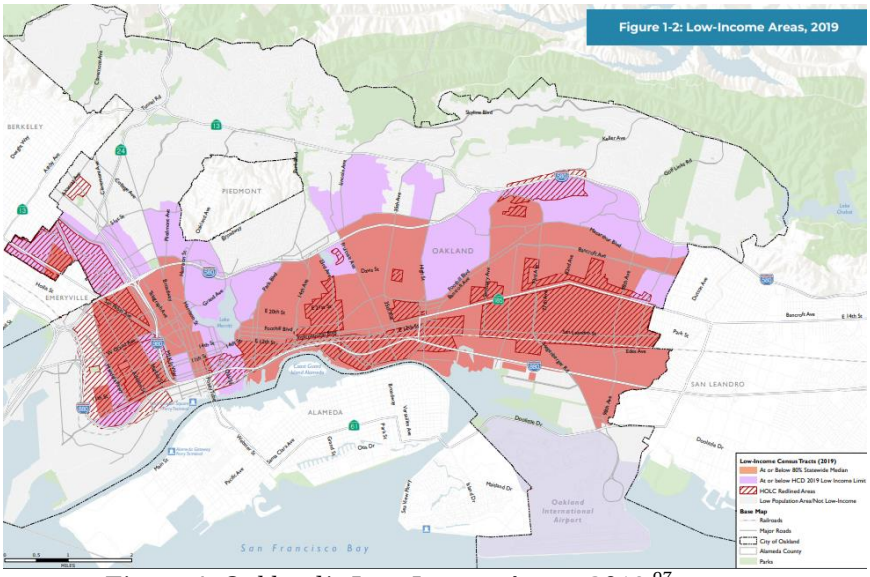

Figure 4. Oakland's Low-Income Areas, 2019.[97]

Oakland cannot both claim to protect and prioritize its disadvantaged communities, and at the same time authorize this Project, which will condemn them to an even higher pollution burden in the decades ahead. The goals are simply incompatible. As SEIU and others have pointed out, airport service workers tend to be largely immigrants and people of color—groups already more vulnerable to pollution-related illnesses.[98] It is telling that the Draft EIR admits that offering electrification options at the new terminal, its proposed mitigation, will not reduce impacts to less-than-significant levels, and therefore that the impact would be "significant and unavoidable."[99]

VII. The Proposed Mitigation Measures for the Western Burrowing Owl are Insufficient and Would Further Harm One of the Last Remaining Populations in the Bay Area.

The DEIR must analyze and mitigate all impacts on special status species, including California Department of Fish and Wildlife ("CDFW") species of special concern. The CDFW defines a species of special concern as a species that, among other things, "is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status."[100] CDFW aims to "achieve conservation and recovery of these animals before they meet California Endangered Species Act criteria for listing as threatened or endangered." (*Id.*) CDFW states that species of special concern "should be considered during the environmental review process." (*Id.*; CEQA Guidelines § 15380(b)(B).) An impact to wildlife is significant where it "substantially reduce[s]

[97] Equity Baseline at 10.
[98] See Turbulence Ahead: What LAX's Expansion Means for the City of Los Angeles' Legacy on Racial Equity & Environmental Justice, SEIU, June 2021, *available at:* https://www.seiu-usww.org/wp-content/uploads/2021/06/turbulenceahead.pdf
[99] DEIR at 3.3-46.
[100] *See* California Dep't of Fish & Wildlife, *Species of Special Concern, available at* https://www.wildlife.ca.gov/Conservation/SSC/.

the number or restrict[s] the range of an endangered, rare or threatened species." (CEQA Guidelines, § 15065.) CDFW interprets this provision to apply to species of special concern. Therefore the Project must mitigate significant effects whenever feasible. (Cal. Pub. Res. Code § 21080.5(d)(2)(A).)

The DEIR's conclusions that potentially significant impacts to burrowing owls are reduced to less than significant levels after mitigation are unsupported by substantial evidence. CEQA requires that feasible mitigation be adopted that results in the reduction or avoidance of potentially significant environmental impacts. (CEQA Guidelines § 15126.4.) The feasibility and effectiveness of a proposed mitigation measure must be supported by substantial evidence in the record. (*Sierra Club v. County of San Diego* (2014) 231 Cal.App.4th 1152, 1168; see also *Cleveland Nat'l Forest Found. v. San Diego Ass'n of Gov'ts* (2017) 17 Cal.App.5*th* 413, 433.)

While the DEIR acknowledges that burrowing owls are in the construction zone, their proposed mitigation consists only of pre-construction surveys, a buffer zone from the active nest site, and other "minimization measures" including blinds and screens. These measures are insufficient, as the result is still loss of habitat for this population, which has suffered massive declines due to urbanization both onsite and across the State.

Burrowing owls represent an interesting contradiction. Because they have been historically considered an "urban adapter" and a "common species" through the Western United States, they have been easily dismissed during individual project environmental impact reports. Unfortunately, this neglect has had a cumulative impact on the species, leading to substantial declines in populations throughout its historic range. This decline is most acute in areas of high development such as the Bay Area.

For example, the neighboring populations in Santa Clara County have suffered a well-documented decline since the early 1900s. At the turn of the century, the western burrowing owl was a common bird of Santa Clara County (Price 1898; Van Denburgh 1899; Fisher 1904)[101] and continued to be considered a "fairly common resident in the drier, unsettled interior parts of the region" several decades later (Grinnell and Wythe 1927)[102]. But, by the 1940s, burrowing owls were becoming scarce in the more settled areas due in part to ground squirrel control.

Estimates have suggested that there were about 1,000 nesting pairs of burrowing owls in the Southern San Francisco Bay region in 1970 and 250 pairs in 1980 (CDFG 2003)[103]. Approximately 60% of known owl locations in Santa Clara County were then lost between the

[101] Price, W.W. 1898. Birds of the campus. The Sequoia 7(26): 310-311; Van Denburgh, J. 1899. Notes on some birds of Santa Clara County, California. Proc. Amer. Phil. Soc. 38: 157-180; Fisher, W. K. 1904. List of birds of Santa Clara County and Santa Cruz Mountains, exclusive of water birds. Handbook of Birds of the Western United States, pp. 1i-1iv. (F. M. Bailey, editor) Houghton, Mifflin and Company.
[102] Grinnell, J. and M. W. Wythe. 1927. Directory to the bird-life of the San Francisco Bay region. Pacific Coast Avifauna Number 18. Cooper Ornithological Club.
[103] California Department of Fish and Game (CDFG). 2002a. Information from CDFG files on the burrowing owl provided by David Kiene, Office of the General Counsel, CDFG.

early 1980s and 1993 (DeSante and Ruhlen 1995)[104]. H. T. Harvey and Associates 1994 documented 215 sites where burrowing owls were observed between 1984 and 1988, with at least 500 owls; 97% of the sites supported fewer than 10 birds and 81% supported only 1 or 2 birds. In 1998 123 of these 215 sites were resurveyed, finding that 70 (57%) were lost to development, an average of almost 6% per year.[105] Another 12 sites (10%) were reduced in size or habitat quality (Trulio 1998a).[106]

By 1997, the breeding owl population in Santa Clara County had dwindled to about 120-141 pairs. Trulio resurveyed 111 of the sites listed by H.T. Harvey that were located on private land; by 2002 only 27% of these 111 locations still contained suitable owl habitat; 66% had been developed completely and 7% were significantly reduced in size. More recently, Wilkerson and Siegel (2010) located breeding burrowing owls in Santa Clara County during their 2006-2007 survey of the region.[107] Detections were restricted to the lowland area in the northwestern corner, as they were in the DeSante et al. (2007) 1990s study. Wilkerson and Siegel detected 56 pairs on two blocks in San Jose and two blocks in Mountain View, reduced from 97 pairs located in the early 1990s study. The 2013 Santa Clara Valley HCP/NCCP stated that only 40 breeding owls left in the valley and Higgins 2015 only counted 5 sites in Santa Clara County with at least 60 burrowing owls.

As this example illustrates, burrowing owls are much more susceptible to development than previously thought. Therefore, it is critical to implement mitigation measures that center habitat protection for the remaining populations.

While the DEIR acknowledges that burrowing owls are "known to nest" at the airport and therefore, "there is potential for this species to occur within the BSA" (DEIR, page 3.4-17) However, the only listed mitigation measures include "pre-construction surveys" and "nest avoidance" during breeding season (DEIR, page 10-11). This implies that outside burrowing season, active or passive relocation will occur if owls exist within the proposed project area. However, relocation of owls is not designed to mitigate for the habitat loss, habitat fragmentation, and reduced owl survivorship caused by development. Many of the active relocation efforts for burrowing owls that have been monitored have failed to establish viable owl populations at the relocation sites, with owls either disappearing completely, attempting to return to the capture site (where their burrows have often been destroyed), or exhibiting low breeding success at the relocation site (Harris 1987; Delevoryas 1997; Trulio 1997)[108]. One of

[104] DeSante, D. F. and E. Ruhlen. 1995. A census of burrowing owls in California, 1991-1993. Institute for Bird Populations. Point Reyes Station, CA.
[105] H. T. Harvey and Associates. 1994. Environmental impact report on the burrowing owl: Interland-Mission College development. Prepared for Mindigo and Associates.
[106] Trulio, L. A. 1998a. The burrowing owl as an indicator of CEQA effectiveness and environmental quality in Silicon Valley. Environmental Monitor. Fall 1998. pp. 4-5.
[107] Wilkerson, R.L. and R.B. Siegel. 2010. Assessing Changes in the Distribution and Abundance of Burrowing Owls in California, 1993-2007. Bird Populations 10:1-36.
[108] Harris, R.D. 1987. Burrowing Owl Relocation, Harbor Bay, Alameda, California. Larry Seeman Associates, Inc., Berkeley, California; Delevoryas, P. 1997. Relocation of Burrowing Owls During Courtship Period. Pages 138-144 *in* Lincer, J.L. and K. Steenhof (editors). 1997. The Burrowing Owl, Its

the reasons for this is that burrowing owls are very site tenacious and are not easily forced to move to a different burrow, especially during nesting season (Trulio 1997). Such burrow fidelity is a widely recognized trait, with owls regularly reusing burrows from one year to the next (Martin 1973; Wedgwood 1976; Green 1983)[109]. A study by Green (1983) found an average of 76% of owl burrows were reoccupied the next year. Trulio (1994) reported that over a 3-year time span at a site in northern California, 73% of nest burrows or burrows within 100 meters were reoccupied the next year.

Many active relocation efforts involve moving owls to artificial burrows. A significant problem with artificial burrows is that they require permanent maintenance to provide long-term nesting habitat, otherwise they can become buried (P. Bloom, pers. comm., 2002). Another potential problem with active relocation is that moving owls in this manner likely stresses the birds (Trulio 1997). Another failure has been the lack of requirement for long-term management of owl habitat at release sites.

Harris (1987)[110] noted that only 1 of 8 (12.5%) previous active burrowing owl relocations in California was even remotely successful in terms of establishing breeding at the new location, with 2 of the 6 relocated owls in that instance remaining and breeding on the site for up to 3 years. Owls released during 2 spring relocations returned to the capture site within 1 month of release (Feeney 1997). Three of the relocations were done in the fall, and the timing of the other relocations was unknown (H. T. Harvey and Associates 1993).

Delevoryas (1997) reported on the failed active relocation in 1990 of 5 pairs of owls from Mission College in Santa Clara to 2 sites 31 kilometers to the south.[111] The owls were trapped in mid-February and released in mid-March, just as breeding season was getting underway. The first season 2 of the 5 pairs (40%) bred successfully, with only 2 nestlings surviving to fledging (it is unclear if the fledglings survived to the following breeding season). Of the 10 translocated owls, 5 left the site, 1 was killed, and 4 adults plus the 2 fledglings remained at the relocation sites in 1991. By 1992 only 2 owls remained, and by 1994 only 1 owl remained. The site was not maintained for burrowing owls after the first year - the site was disked, and artificial burrows were not maintained (P. Delevoryas, pers. comm., 2003).

Biology and Management; Including the Proceedings of the First International Burrowing Owl Symposium. Raptor Research Report Number 9; Trulio, L.A. 1997. Strategies for Protecting Western Burrowing Owls (*Speotyto cunicularia hypugaea*) from Human Activities. Pp. 461-465 *in* Duncan, J.R., D.H. Johnson, and T.H. Nicholls (editors). Biology and Conservation of Owls of the Northern Hemisphere. USDA Forest Service General Technical Report NC-190. St. Paul, Minnesota.

[109] Martin, D.J. 1973. Selected Aspects of Burrowing Owl Ecology and Behavior. Condor 75: 446-456; Wedgwood, J.A. 1976. Burrowing Owls in South-Central Saskatchewan. Blue Jay 34: 26-44; Green, G.A. 1983. Ecology of Breeding Burrowing Owls in the Columbia Basin, Oregon. M.S. Thesis. Oregon State University, Corvallis, Oregon.

[110] Harris, R.D. 1987. Burrowing Owl Relocation, Harbor Bay, Alameda, California. Larry Seeman Associates, Inc., Berkeley, California.

[111] Delevoryas, P. 1997. Relocation of Burrowing Owls During Courtship Period. Pages 138-144 *in* Lincer, J.L. and K. Steenhof (editors). 1997. The Burrowing Owl, Its Biology and Management; Including the Proceedings of the First International Burrowing Owl Symposium. Raptor Research Report Number 9.

Trulio (1997) compiled known information on active burrowing owl relocations conducted in California. Of 27 owls relocated to new burrows, 17 (63%) disappeared within a year of release and 7 (26%) flew back to their original site. Only 4 owls (14%) attempted to breed at their new locations (1 owl bred at the new site before disappearing). Only 2 owls (7%) bred successfully, and only 1 owl (4%) stayed on the site for 2 breeding seasons. In addition to the failure of 93% of these owls to successfully breed at the relocation sites, the fate of most of the relocated owls was unknown, as the majority disappeared.

In 1997 H. T. Harvey & Associates successfully translocated 8 owl pairs to a relocation site at the San Jose/Santa Clara Water Pollution Control Plant buffer lands. All but 1 pair (which may have been moved too late in the breeding season) remained on the relocation site, and successfully raised chicks to the age o fledging; about 11 pairs nested at this relocation site in 2002, most of which nested in artificial replacement burrows constructed in 1997 (D. Plumpton, pers. comm., 2002).

The unfortunate result of most active relocation efforts has been the loss of known occupied owl habitat to development, with very little proven nesting success at relocation sites and the ultimate fate of most translocated owls unknown. Clearly, the practice of active relocation of burrowing owls as a "mitigation" for development impacts is detrimental to preserving owl populations. There have also been several failed reintroduction attempts (long distance movement to formerly occupied parts of their range) of burrowing owls. DeSmet (1997)[112] reported that of 169 young and 85 adults captured in South Dakota and released into temporary aviaries and artificial burrows in Manitoba, Canada, only 1 of these birds (0.4%), a juvenile, was seen the next year. Martell et al. (1994) reintroduced 104 fledgling owls from South Dakota to hack sites in Minnesota, distances of 450 and 600 kilometers away. None of these birds were seen after the summer they were released. After a decade of owl family relocations from Washington State to British Columbia (Dyer 1988[113]; Dyer pers. comm. as cited in Trulio 1997) the program has not successfully established a self-sustaining population.

The mixed results of active relocation, the failure of reintroduction efforts, and the misuse of passive relocation techniques indicates that it is imperative to protect remaining occupied burrowing owl habitat and owl populations in situ. The practice of translocating owls as "mitigation" eliminates occupied habitat without adequate mitigation for the true impacts of development. As a relatively adaptable species, all that burrowing owls must be afforded in order to survive is habitat, and if that habitat is systematically removed for the convenience of development, owls will predictably disappear. Therefore, all remaining burrowing owl habitat must be protected to ensure this population is provided the necessary space and resources to survive.

Given the above evidence, the proposed mitigation in the DEIR is not sufficient to reduce impacts to less than significant levels, in violation of CEQA.

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[112] DeSmet, K. 1997. Return Rates and Movements of Burrowing Owls in Southwestern Manitoba (abstract). *In* Second International Symposium: Biology and Conservation of Owls of the Northern Hemisphere. February 5-9 1997; Winnipeg, Manitoba.

[113] Dyer, O. 1988. Reintroductions of Burrowing Owls (*Athene cunicularia*) to the South Okanagan Valley, British Columbia (1983-1988). Report to the Ministry of Environment, British Columbia.

VIII. Conclusion

Thank you for the opportunity to submit comments on the Draft Environmental Impact Report for the Oakland Airport Terminal Modernization and Development Project. Because of the serious deficiencies in the document, we urge the Port to reject the current DEIR and revise and recirculate a new version with these deficiencies amended.

Given the possibility that the Center will be required to pursue legal remedies in order to ensure that the Port complies with its legal obligations including those arising under CEQA, we would like to remind the Port of its statutory duty to maintain and preserve all documents and communications that may constitute part of the "administrative record" of this proceeding. § 21167.6(e); *Golden Door Properties, LLC v. Superior Court* ((2020) 53 Cal.App.5th 733. The administrative record encompasses any and all documents and communications that relate to any and all actions taken by the Port with respect to the Project, and includes "pretty much everything that ever came near a proposed [project] or [] the agency's compliance with CEQA . . . ." *County of Orange v. Superior Court* (2003) 113 Cal.App.4th 1, 8. The administrative record further includes all correspondence, emails, and text messages sent to or received by the Port's representatives or employees, that relate to the Project, including any correspondence, emails, and text messages sent between the Port's representatives or employees about the Project. Maintenance and preservation of the administrative record requires that, *inter alia*, the Port (1) suspend all data destruction policies; and (2) preserve all relevant hardware unless an exact replica of each file is made.

Please do not hesitate to contact me with any questions at the number or email below.

Sincerely,

Scott Hochberg
Staff Attorney
Climate Law Institute
Center for Biological Diversity
1212 Broadway, Suite 800
Oakland, CA 94612
(510) 844-7119
shochberg@biologicaldiversity.org