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March 1, 2022

Sarah Lucas, Planner
Oregon Department of Aviation
3040 25th Street SE
Salem, Oregon 97302

Subject: Comments to the Aurora State Airport Draft Airport Master Plan

Dear Ms. Lucas:

I am reviewing the Aurora State Airport Draft Airport Master Plan of February 2022. What is conspicuously absent in the current draft is any mention of climate change and its potential impact on future operability of the Aurora State Airport. Over the next 20 years and beyond, climate change in this locale is likely to have significant impacts on airport operations and economics. Some of these impacts are described below. Not taking climate change into account makes the Plan deficient.

The Environmental Data section on Page 2-19 provides a recitation of the weather and climate conditions at the airport based on historical climate information. However, according to respected scientific organizations such as NASA, NOAA, the National Academies and the Intergovernmental Panel on Climate Change (IPCC), the climate is changing significantly. In the past, historical climate conditions were reliable predictors of future climate conditions. That is no longer true. Thus, the elements of the Plan that are based on historical climate conditions are not reliable.

There is now irrefutable scientific evidence that the climate is changing and that the change is human caused. Since the beginning of the industrial age, the Earth has warmed by about 1.1°C (2°F) caused primarily by the burning of fossil fuels for heat and power. Carbon dioxide (CO_2) and other heat-trapping gases released into the atmosphere have disrupted the Earth's climate regulating systems. This increase in thermal energy has not only produced warmer temperatures but more frequent and extreme weather events. Furthermore, climate scientists have told us that unless the warming is kept below 1.5°C (2.7°F), extreme weather events will get markedly worse. Some changes are likely irreversible.

While the Northwestern U.S. may not be affected as much as other U.S. locations, the Aurora Airport locale has already experienced the impacts of climate change. Last February's exceptional ice storm and the unprecedented 110+°F heat wave in June of 2021 are recent examples and harbingers of things to come. Extreme heat events and extreme storms will affect the ability of aircraft to land and take off safely and disrupt airport operations. In response to such events, civil infrastructure assets including airports need to become more climate resilient, able to withstand or recover from extreme climate and weather events. Yet the resilience plan for the Aurora State Airport only deals with seismic resilience. While cities and counties across

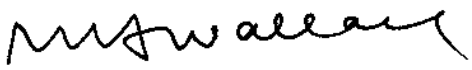
the country are developing plans to make their communities climate resilient, the Airport Plan makes no mention of climate resilience.

The latest draft IPCC report issued this week concludes that the window for action is closing rapidly and is urging the U.S. and other countries to reduce carbon emissions to net zero by 2050 and be half way there by 2030, less than 8 years from now. Efforts are now underway to reduce carbon emissions, and the transportation sector one of the largest carbon emitters. While aviation accounted for 2.4 percent of the total CO_2 emissions, other aircraft engine emissions such as nitrous gases, water vapor, soot, sulphates and particulate matter pushed their warming contribution to 3.5 percent.

In response, auto manufacturers have committed to stop production of gas-powered cars, selling only zero emission vehicles by 2040. For aircraft manufacturers, zero emissions power is not a feasible option. Continuing to operate fossil fuel powered aircraft will become an economic and regulatory burden on aircraft and airport owners and operators as countries including the U.S. seek to reduce their carbon footprint. Some kind of carbon tax or regulations requiring the reduction of carbon emissions is inevitable. Yet, there is no discussion of carbon emissions and its impact in the Plan.

In reviewing the Scope of Work for the Aurora State Airport Master Plan Update, climate is mentioned briefly (page 16) and not in the context of changing climate conditions. I encourage the Oregon Department of Aviation and the consultant, Century West Engineering, to study this issue in more depth and incorporate the potential impacts into the plan.

Sincerely,



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