

Via: Electronic Mail

July 20, 2021

Mr. Kevin Smith, General Manager
Truckee Tahoe Airport District
10356 Truckee Airport Road
Truckee, CA 96161

Re: GHG Analysis for TRK Airshow

Dear Kevin:

First Environment, Inc. (First Environment) is pleased to provide this proposal to Truckee Tahoe Airport District (TTAD) for technical assistance services. This proposal identifies our understanding of the project, a proposed approach and schedule, and estimated costs.



Understanding of the Project



On Saturday, September 11, 2021, Truckee Tahoe Airport will host its 2021 Airshow and Family Festival. The event is attended by over 15,000 visitors and supported by over 200 volunteers. Airshow performances include military jets, aerobatic aircraft, and sky-diving teams. Consistent with previous initiatives to better understand its environmental impact in the region, TTAD is seeking an analysis of the greenhouse gas (GHG) emissions associated with Airshow activity.



Approach and Schedule

First Environment proposes the following analysis of GHG emissions associated with the TRK Airshow. This approach is informed by:

- U.S. EPA Center For Corporate Leadership – *Greenhouse Gas Inventory Guidance for Indirect Emissions from Events and Conferences (December 2018)*.
- U.S. EPA Center For Corporate Leadership – *Emission Factors for Greenhouse Gas Inventories (April 2021)*.



Scope of the Analysis

First Environment proposes to include the following emission sources within the GHG Analysis:

- Aircraft Emissions
- Attracted Vehicle Travel
- Hotel Stays
- Waste Disposal and Recycling

The analysis will estimate emissions of the following greenhouse gases:

- Carbon dioxide (CO₂)
- Methane (CH₄),
- Nitrous oxide (N₂O)

Quantification Approaches

First Environment proposes the following methods to quantify emission from the Airshow sources:

Aircraft Emissions

GHG emissions from Airshow aircraft, including performances, paid rides, and static aircraft displays, will be calculated using aircraft fuel consumption and fuel-based emission factors.

In addition, “avoided emissions” associated with typical airport operations during the event period that will not occur because of airshow activities will also be quantified. These avoided emissions will be based on typical historical operations during the Airshow weekend and derived from LTO emissions quantified in TTAD’s 2015 GHG Inventory.

The avoided emissions will be subtracted from the Airshow aircraft emissions total to identify “net airshow aircraft” emissions.

Attracted Vehicle Travel

Emissions from vehicle travel to the Airshow will be quantified using attendee and parking estimates from previous TRK airshows or data from the 2020 Airshow if available. This attendee data will be used with reasonable assumptions regarding attendee points of origin (e.g., Lake Tahoe area, Reno, Sacramento, Bay Area, etc.), to determine travel distances and U.S. EPA distance-based emission factors.

Hotel Stays

Emission from hotel stays associated with Airshow attendance will be quantified using stay estimates, reasonable assumptions of the visited hotels, and U.S. EPA hotel room night energy consumption default factors with electricity and natural gas emission factors.

Waste Disposal and Recycling

Emissions from airshow waste disposal and recycling will be quantified using waste material volume estimates (or 2020 Airshow volumes if available), reasonable assumptions regarding waste composition, and U.S. EPA material-based/disposal method emission factors.

Deliverables

First Environment will summarize the results of the Airshow GHG Analysis in a report that identifies the data and assumptions, the GHG quantification methods, and the results of the emission calculations. GHG emissions will be reported both by individual gases (CO₂, CH₄, and N₂O) as well as in Carbon Dioxide Equivalents (CO₂e) consistent with recognized best practice.

First Environment will also provide the Airshow emissions calculation workbook to facilitate similar analyses for future airshows.

Schedule

The following is the proposed schedule for Airshow GHG Analysis:

| Step | Target Completion Week |
|--|-------------------------------|
| Kick-off call to confirm Airshow GHG Analysis scope and initial data estimates and assumptions | August 16, 2021 |
| Initial airshow emission calculations | August 23, 2021 |
| TTAD provides any updated Airshow data estimates and assumptions | September 13, 2021 |
| Finalize Airshow emission calculations | September 20, 2021 |
| Complete Airshow GHG Analysis Summary Report | September 27, 2021 |

Costs

First Environment offers its services to TTAD to conduct the TRK Airshow GHG Analysis, consistent with the previously defined scope and approach, for a cost of \$4,750.

First Environment appreciates the opportunity to submit this proposal. If you have questions or wish to further discuss any aspect of this proposal, please do not hesitate to contact us.

We look forward to the chance to support TTAD with its GHG management activities through our Technical Assistance services.

Very truly yours,

FIRST ENVIRONMENT, INC.



Jay Wintergreen
Senior Associate

Attachment 1 - First Environment's Environmental Commitment

Attachment 1. First Environment's Environmental Commitment

What We Put First

First Environment is committed to assisting our clients in developing strategies that are tailored to their needs and provide solutions on both a global and local scale. We bring technical knowledge, a collaborative approach, and advanced thinking to develop solutions that meet the demands of today while securing the future for those who will come after us.

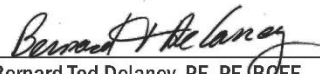
Our Commitments

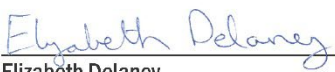
| | | |
|---|--|---|
| 1 | Work on behalf of our clients and ourselves to protect the environment, prevent pollution, and protect worker health and safety |  |
| 2 | Strive for accurate and transparent communication with our clients and others who have a stake in our operations |  |
| 3 | Continually improve our environmental, quality, health, and safety management and performance |  |
| 4 | Support further education and development of our firm members |  |
| 5 | Foster a talented and diverse workforce in an atmosphere of mutual respect |  |
| 6 | Meet our compliance obligations and demonstrate integrity and ethics in our activities |  |
| 7 | Leverage our knowledge and resources to support local, community, government, and international organizations so as to advance society's goals of a just and clean world |  |

We believe these commitments produce a balanced company that will grow and prosper, as will the world.

Attested to by:




Bernard Tod Delaney, PE, PE, BOEE
President


Elizabeth Delaney
Vice President

www.firstenvironment.com