



TRUCKEE TAHOE AIRPORT DISTRICT - INTEROFFICE MEMORANDUM

TO: BOARD OF DIRECTORS
FROM: HARDY BULLOCK, A.A.E. – DIRECTOR OF AVIATION AND COMMUNITY SERVICES
SUBJECT: AVIATION & COMMUNITY SERVICES PROJECTS UPDATE
DATE: OCTOBER 28, 2020

ADS-B:

Implementation Site Service Acceptance Testing (ISAT) is underway. Staff has performed four flights producing reference data for the FAA. Other opportunity target flights are being analyzed. Once ISAT is complete the FAA flight inspection **may** occur. Completion of the ADS-B certification may be delayed by COVID-19 restrictions and the FAA delay on flight check. As of the date of this report L3Harris and the FAA estimate ADS-B completion with FAA integration on December 15th, 2020.

On October 18, 2020 Staff meet with Oakland Center Director Jeff Hubert, FAA Staff, and Midwest Tower Manager Larry Finney to discuss the use of ADS-B surveillance in the shared control of aircraft operating at KTRK. The Airports District Office and FAA representatives were briefed on ADS-B and flight Procedures initiative on October 14th, 2020.

On September 29th, 2020 Staff meet with Truckee Tahoe Soaring Association, ACAT Chair Diamond, and L3 Harris Chief Scientist Dr. Toni Boci. Solutions to glider ADS-B equipment and coverage, technology related to ADS-B, and operational concepts to use ADS-B data were discussed. Additionally, Dr. Boci outlined enhancements to ADS-B that may assist TTAD and the FAA in coverage of non-cooperative radar targets, (aircraft not equipped with ADS-B), that currently comprise about 5% of KTRK traffic.

Other requirements that Staff is working on fulfilling include the display technology authorizations to use the data in the tower, the purchase or procurement of actual tower display technology, the letters of authorization between Oakland Center and our control facility, vertical guidance navigational aids as well as discussions with Midwest ATC regarding

the required training and authorization of control tower staff to use ADS-B, as well as separation standards and protocols to leverage ADS-B.

Flight Procedures: Attachment A

(IMPORTANT INFORMATION PLEASE READ CAREFULLY)

The Board and the community should pay special attention to the proposed flight procedure routes included in the assessment. Community outcry and litigation are a common outcome when new flight procedures are adopted by either the FAA or the airport sponsor. Because these procedures potentially adopt new paths that fly directly over residential neighborhoods, Staff encourages the Board to seek comments and guidance from the airport district constituency directly. Staff will undertake a vigorous outreach effort designed to provide guidance for neighborhoods under the new flight paths proposed in each procedure. Some of the neighborhoods directly affected include Glenshire and Airport Flats, Pine Forest, areas along the south side of Tahoe Donner, Ponderosa Estates, Alder Hill and Northstar.

Concerning changes in flight paths Peter Kirsch, Attorney with Kaplan Kirsch Rockwell opined the following:

“Changes in flight paths, even those implemented with the most admirable objectives, can have unintended consequences. Communities throughout the country have discovered that the change in flight patterns – regardless of the decibel levels measured with the traditional CNEL metric – can produce substantial adverse community reaction. Each community is different but the response is often the result of the change, rather than the raw amount of noise energy. This is especially true for concentrated flight tracks: where a community might have been accustomed to occasional overflights, a narrower or tighter flight track can provide meaningful relief for some while simultaneously producing more overflight events for others.

It is important to avoid two principal common pitfalls: the first is to assume that, if the overall number of persons exposed to noise (especially using the CNEL metric) is reduced, there is a community benefit. Concerns about shifting noise or concentrating noise can supersede any benefits. Second, it would be unwise to rely entirely upon traditional noise energy metrics like CNEL. As aircraft have become quieter, communities are now reacting as often to the frequency of overflights as to the noise levels. Changes in flight tracks that increase overflight frequency can produce considerable community reaction even in areas far outside the traditional thresholds of noise analysis such as the 65 dB CNEL contour.

Because of the narrow legal and formal FAA remedies for affected communities, the reaction is often directed at airports whose legal authority to remedy concerns is generally very limited. Airport sponsors need to be alert to unintended consequences and adverse community reactions.”

These procedures are designed to shorten track miles, reduce duration of noise exposure, and ultimately reduce total cumulative annoyance and green house gas emissions impacts for the Truckee-North Tahoe area as a whole. While this is the case, concentrated and single event annoyance for certain neighborhoods will increase and flight in areas previously devoid of overflight will occur if these procedures are adopted. Staff has retained BridgeNet to model community impact and environmental emissions which may be used, in the December Board meeting, to better understand the viability and community impact of each procedures as well as enhance community understanding.

The Flight Procedure Assessment Draft is designed to provide developed conceptual solutions to the following objectives:

1. Influence the path of aircraft as they approach and transition to land.
2. Influence the path of aircraft as they depart and transition on course.
3. Develop safe flight paths that benefit the community and reduce environmental impact.
4. Develop safe flight paths that accommodate the widest array of aircraft type, size, speed, and character.
5. Create procedures that align and compliment control authority goals, airspace structures, neighboring airports, and en-route structures to enhance adoption and use.

The assessment summarizes the following potential flight procedures:

1. IFR Departure procedure off runway 29, straight out, climbing left turn to SIGNA intersection.
2. IFR Departure procedure off runway 11, climbing left turn to TRUCK intersection.
3. IFR Advanced RNAV Arrival from the west into runway 11.
4. Advanced RNAV – Fly Visual Segment Arrival from the east over Lake Tahoe into runway 29.
5. IFR RNAV Arrival Runway 29, basic left downwind for 29, terminating on final approach runway 29.

Runway Utilization Report: Attachment B

Tom Breen from Vector has produced the preliminary bi-annual runway utilization report for peak period comparison for periods from 2015/2016 – 2018/2019 – and 2020. Mr. Breen will present this report and summarize data for the Board at the December 2, 2020 regular meeting. Staff will forward the preliminary data when available in mid-November.

Land Management Plan: Attachment C

The Land Management Plan is a comprehensive document that provides a detailed inventory of land use types under ownership or control by the TTAD. The document strives to provide management concepts and costs that align with the Board vision of conservation, restoration,

access and control for the nearly 2500 acres included in the airports sphere of responsibility. HT Harvey and Balance Hydrologic will be presenting this plan directly at the December 2, 2020 regular Board meeting.

Tower Control Services Request for Information: Attachment D

Staff has prepared a Request for Information for Certified Tower Services Providers. This document will be offered to qualified firms who may be interested in offering services at KTRK. This document serves as the preliminary development of information that will be presented to the Board in early 2021 when the existing Control Tower Service contract with Midwest ATC expires on May 31, 2021. Staff will gather options and present alternatives to the Board for control tower services including levels of control, technology under use, hours of operations, and cost etc.

What's Next: The technical reports included here represent a broad range of topics. If the Board or the community need assistance in understanding anything included herein please reach out to Hardy Bullock and or other Staff for assistance. Additionally, Staff is happy to connect anyone with consultants who contributed to these technical documents.