AGENDA ITEM: __11___

TRUCKEE TAHOE AIRPORT DISTRICT

BOARD OF DIRECTORS STAFF REPORT

AGENDA TITLE: Noise Operations Monitoring System (NOMS) – RFP Decision

MEETING DATE: October 21, 2026

PREPARED BY: Jeff Menasco, Director of Aviation
Larry Finney, Safety, Security, Community Engagement Manager

RECOMMENDED ACTION:

Board approve or disapprove a generic scope of work for a Request For Proposal (RFP) for implementation of a Noise Operations Monitoring System (NOMS).

DISCUSSION:

The Board has previously discussed the potential benefits and costs of implementing a Noise Operations Monitoring System (NOMS) at Truckee Tahoe Airport. NOMS could support three District objectives:

1. **Community Engagement:** Provide additional information to help staff respond to aircraft noise complaints and communicate noise impacts to the community.

2. **Noise Abatement Evaluation:** Evaluate the effectiveness of existing noise abatement procedures and identify opportunities for improvement.

3. **Long-Term Trend Analysis:** Monitor changes in aircraft noise exposure over time and support data-informed decisions.

Staff contacted four vendors to obtain Rough Order of Magnitude (ROM) estimates for available noise monitoring technologies, system capabilities, implementation requirements, and associated costs.

Because vendors were not provided with a standardized scope of work, estimates vary in configuration and services and should not be considered as directly comparable proposals.

Vendor: configuration	Startup estimate	Annual estimate
V1a: purchase 7 physical NMTs**	$247K	$102K
V1b: lease 7 physical NMTs	$72K	$147K
V1c: virtual-only	$42K	$97K
V2: base software, no hardware	Not provided	From $35K
V3: physical monitor per site	$23-33K	$1,500–$2,000 per NMT
V4a: virtual grid reporting; 20+ locations	Not specified	$30K
V4b: optional permanent physical NMT	~$10K per unit	Maintenance extra

**Noise Monitoring Terminal

The following alternatives reflect a combination of preliminary vendor information and staff estimates.

Option A – Virtual NOMS / Light Hybrid (Staff Preferred)
*Estimated annual cost: **$50,000–$100,000***

A software-based approach that models aircraft noise using flight tracking data, aircraft characteristics, and other inputs without relying on permanent physical noise monitors. This approach would provide modeled geographic noise exposure, historical trends, and information to support community engagement and evaluation of noise abatement procedures. Based on price points and potential to re-calibrate TTAD owned NOMS sensors, there might be an opportunity to leverage some portable devices under option-A, though this is not guaranteed or the focus of this option.

- Lowest anticipated cost and implementation complexity.
- Broad geographic coverage without physical equipment installation; potentially some sensors.
- Provides modeled rather than directly measured noise levels; potentially some sensors.

Option B – Hybrid NOMS
*Estimated annual cost: **$50,000–$150,000***

Combines virtual noise modeling with a limited number of physical noise monitors, potentially including temporary or mobile devices. This approach would allow the District to compare modeled noise estimates with actual measurements at selected locations.

- Balances geographic coverage, physical measurements, and cost.
- Provides flexibility to investigate specific locations or community concerns.
- Requires additional equipment, maintenance, management, and potential land leasing.

Option C – Comprehensive NOMS
*Estimated annual cost: **$150,000–$400,000***

A comprehensive system combining virtual noise modeling with a network of permanent physical noise monitors throughout the surrounding community. This approach would provide continuous measured noise data at selected locations, detailed trend analysis, and additional tools for community engagement.

- Most extensive physical noise monitoring capability.
- Provides continuous measurements at selected locations.
- Highest anticipated acquisition, operating, potential ground leasing, and maintenance costs.

Three-Year Cost Comparison
The following table illustrates the estimated cost of each NOMS alternative over a three-year period. Estimates are based on preliminary vendor information and staff planning assumptions.

NOMS Alternative	Annual Cost	Three-Year Operating Cost
Option A – Virtual NOMS (Staff Preferred)	$50K–$100K	$150K–$300K
Option B – Hybrid NOMS	$50K–$150K	$150K–$450K
Option C – Comprehensive NOMS	$150K–$400K	$450K–$1.2M

Note: Three-year estimates assume constant annual costs and exclude one-time startup, equipment acquisition, and installation expenses. Actual costs would be determined through the RFP process. The comparison illustrates the potential long-term financial differences between the alternatives. While more extensive physical monitoring can provide additional measured noise data, it also introduces higher equipment, maintenance, and operational costs.

STAFF RECOMMENDATION
Staff recommends **Option A – Virtual NOMS** as the preferred approach for developing an RFP. A virtual system offers the potential to support the District's three primary objectives—community engagement, noise abatement evaluation, and long-term trend analysis—at a substantially lower cost and with less implementation complexity than a permanent physical monitoring network. It should be noted that there is a "potential" to leverage TTAD owned noise sensors, however they would need to be calibrated and may no longer be usable. Based on RFP, there might be low-cost option to deploy portable sensors for a limited amount of time.

Although virtual systems model, rather than directly measuring noise levels, staff believe this approach provides an appropriate starting point to evaluate the value of a NOMS before committing to more costly physical monitoring infrastructure.

Staff recommend proceeding with an RFP to establish system capabilities, limitations, and actual costs. Staff would evaluate proposals and return to the Board with a recommendation for consideration and approval prior to any contract award.

FISCAL IMPACT:

There is no immediate fiscal impact associated with developing and issuing an RFP, other than existing staff time. Estimated three-year operating costs range from $150,000 to $1.2 million depending on the selected system configuration, excluding startup and equipment costs. These figures are preliminary planning estimates. Any proposed expenditure would be returned to the Board for separate approval.

PUBLIC COMMUNICATIONS:

NOMS could enhance the District's existing community engagement and aircraft noise management efforts by providing additional information on aircraft noise exposure, noise abatement effectiveness, and long-term trends. Specific public reporting and data accessibility capabilities would be evaluated through the RFP process.

SAMPLE MOTION(S):

Motion 1 – Discontinue NOMS Consideration

I move to direct staff to discontinue further consideration of the Noise Operations Monitoring System at this time.

Or

Motion 2 – Authorize RFP

I move to authorize staff to develop and issue a Request for Proposals for a Noise Operations Monitoring System based on the following approach:

- Option A – Virtual NOMS (Staff Recommended); potential for limited physical monitors.
- Option B – Hybrid NOMS; virtual and physical monitors.
- Option C – Comprehensive NOMS infrastructure.

Staff will evaluate proposals and return to the Board with a recommendation for consideration and approval prior to contract award.