

# I OAK

## OAK Noise Plan

PREPARED BY: Port of Oakland

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# OAK Noise Plan

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## **OAK Noise Plan**

### **Introduction**

Produced by the City of Oakland, a municipal corporation, acting by and through its Board of Port Commissioners ("Port of Oakland" or "Port") in collaboration with, and approved by, representatives of Citizens League for Airport Safety and Serenity (CLASS) and the City of Alameda (CITY) (collectively, the Parties).

The Oakland International Airport (OAK) Noise Plan is designed to meet certain requirements set forth by the (1) Amended and Restated Agreement entered into as of November 14, 2001 (Phase One Agreement); (2) the Phase Two Agreement entered into as of October 8, 2002 (Phase Two Agreement between the Port of Oakland, the City of Alameda, CLASS); and the March 19, 2025 Settlement Agreement between the Port of Oakland, City of Alameda and CLASS, collectively, the "Agreements" as well as additional procedures OAK has implemented to address noise impacts from flight operations at OAK.

### **Contents of Aircraft Noise Mitigation Plan**

#### **Section 1:**

Describes each of the aircraft noise abatement procedures included in the OAK Noise Plan and the Agreements.

#### **Section 2:**

Provides a summarized review of the quarterly report format (*Quarterly Aircraft Noise Report*) that generally applies to each element of the report.

#### **Section 3:**

Provides a list of proactive or remedial actions that the Port has instituted and/or agrees to take as reasonable efforts intended to assure that aircraft operating at the Airport will comply with noise abatement procedures described in the OAK Noise Plan and the Agreements, to the extent permitted by applicable laws and regulations (hereafter, collectively, "applicable laws").

#### **Section 4:**

Provides a glossary or definitions of the terminology utilized to describe reasons for compliance and non-compliance provided in summary form in the comment sections of the noise abatement procedure reports.

#### **Section 5:**

Provides detailed compliance monitoring actions and the compliance reporting formats specific to each of the aircraft noise abatement procedures to be utilized by aircraft operating at the Airport.

#### **Section 6:**

Provides the process for updating the Noise Plan to implement new or modified noise abatement procedures or make other appropriate changes.

## Section 1. Noise Abatement Procedure Summaries

The following are summaries of the aircraft noise abatement procedures that are listed in Exhibit D of the Phase One Settlement Agreement. Each of these procedures shall be utilized by aircraft using the Airport, as appropriate, to the extent permitted by applicable law at the discretion of the FAA as long as the applicable procedures may be safely implemented. In addition, OAK posts "Fly Quiet Procedures" on the airport's website.

Items noted with an asterisk below are not specifically included in any settlement agreement but are additional measures created and implemented by the Port to reduce noise in communities surrounding OAK.

### A. Engine Maintenance Run-Up Noise Limits

The Port maintains an aircraft engine run-up restriction policy at OAK under Operations Directive Number 616.5, as may be amended. Directive 616.5, the Aircraft Engine Maintenance Run-ups/Ground Run-up Enclosure Use Policy, is intended to ensure that engine run-up noise levels during the evening hours, from 7:00 p.m. to 10:00 p.m. should not exceed 75 decibels and from 10:00 p.m. to 7:00 a.m. engine run-up noise levels should not exceed 70 decibels, as measured by the Port's noise measurement system in residential areas of Bay Farm Island.

In 2002, the Port installed a \$4.2 million Ground Run-Up Enclosure (GRE) facility, large enough to accommodate a Boeing 747 aircraft. The GRE reduces noise from engine maintenance by approximately 17 decibels and is leveraged to operate within the noise levels identified above. All aircraft operators subject to Operations Directive Number 616.5, should use the GRE to minimize the noise generated by Aircraft Engine Maintenance Run-ups/Ground Run-ups in accordance with Directive 616.5. Maximum noise levels are reviewed at the noise monitoring terminal located on Beach Road (NMT #15) when a power engine run-up occurs between 7:00 p.m. and 7:00 a.m. daily. A non-compliant engine run-up will equal or exceed  $L_{max}$  75 dB between 7:00 p.m. and 10:00 p.m. and will equal or exceed  $L_{max}$  70 dB between 10:00 p.m. and 7:00 a.m.

### B. North Field VFR Aircraft Departure Procedure\*

Noise abatement procedures for North Field VFR (Visual Flight Rules), which are applicable 24/7 for aircraft departures from Runways 28R/L or 33 instruct pilots, safety permitting, to make a right crosswind turn over San Leandro Bay until reaching I-880 (Nimitz Freeway) and continue per FAA air traffic control instructions. Whenever safely possible, pilots are requested to avoid flying over nearby residential areas. A noncompliant departure is defined as a VFR departure from Runways 28R/L or 33 that flies over Alameda residential areas when it would have been safe to follow the VFR noise abatement procedure.

### C. SILENT Departure Procedure

The SILENT departure is an FAA conventional instrument departure procedure at OAK, designed to reduce noise from turbojet and turbofan aircraft departures between 10:00 p.m. and 7:00 a.m. The SILENT departure procedure is described as a turbojet aircraft take-off from Runway 30 that turns left on a heading of 270 degrees to intercept and proceed via the SFO R-342 (the San Francisco VOR<sup>1</sup> 342 degree radial).

Note that a 10-minute buffer (10:00 p.m. to 10:10 p.m. and 6:50 a.m. and 7:00 a.m.) is applied to this procedure as aircraft anticipated to depart shortly before 10:00 p.m. or shortly after 7:00 a.m. might depart a few minutes before or after their expected departure time due to taxi time or unexpected delays. Buffer-time departures are noted in quarterly reports but are not considered non-compliant.

### D. HUSSH Departure Procedure\*

The HUSSH departure procedure is an FAA Area Navigation (RNAV)<sup>2</sup> instrument departure procedure at OAK, designed to generally mimic the initial heading and noise reduction benefit of the SILENT departure. This departure procedure, using satellite-based navigation technologies, is assigned between 10:00 p.m. and 7:00 a.m. and requires departing aircraft to turn left towards the HUSSH waypoint, located near the middle of the Bay, before proceeding northbound up the middle of the Bay towards the NIITE waypoint.

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<sup>1</sup> Very High Frequency Omnidirectional Range (VOR) is a ground-based radio navigation system used by aircraft.

<sup>2</sup> RNAV, or Area Navigation, is a method of navigation that permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

#### **E. SUNNE Departure Procedure\***

The SUNNE departure procedure is a conventional departure used at nighttime that turns aircraft roughly 180 degrees to the left after departure, away from Alameda. Use of this procedure is limited due to conflicts with SFO arrivals but may be used when practicable.

Note that a 10-minute buffer (10:00 p.m. to 10:10 p.m. and 6:50 a.m. and 7:00 a.m.) is applied to this procedure as aircraft anticipated to depart shortly before 10:00 p.m. or shortly after 7:00 a.m. might depart a few minutes before or after their expected departure time due to taxi time or unexpected delays. Buffer-time departures are noted in quarterly reports but are not considered non-complying.

#### **F. OAKLAND Departure Procedure\***

To reduce noise to areas near the departure end of Runway 30, OAK has collaborated with FAA to shift the initial heading of the OAKLAND departure procedure from 296 degrees to 290 degrees. This procedure, which is assigned to certain aircraft during the day (7:00 a.m. to 10:00 p.m.), requires pilots to make a six-degree left turn after departing OAK and reaching a safe altitude. Specific headings on this procedure may change from time to time due to magnetic shift or operational reasons.

#### **G. North Field Quiet Hours Procedures (10:00 p.m. to 7:00 a.m.)**

The Quiet Hours procedures provide recommendations to pilots using the North Field and is intended to minimize noise from 10:00 p.m. to 7:00 a.m. for residents living near OAK. To achieve this goal, a variety of noise abatement departure and arrival procedures and recommendations, to be utilized when safety, weather, and ATC instructions permit, have been developed for the North Field. These are:

1. Encouraging pilots of fixed and rotary wing aircraft to avoid, as much as possible, flying over hotels and residential areas.
2. The use of the SALAD departure procedure from Runways 28L/28R
3. Runway 28L is the preferred landing runway.
4. Runways 10R and 28R are the preferred departure runways.
5. No left turn departures from Runways 10 L/R.
6. No straight out departures from Runway 10L.
7. All aircraft over 75,000 pounds are directed to use Runways 12/30.
8. Use only full runway-length departures from the chosen North Field runway.

#### **H. Preferential Runway Use Procedures (24-hour program)**

The North Field Preferential Runway Use noise abatement procedure states that the aircraft listed below should not depart at any time of the day from Runways 28R/L or land on Runways 10R/L, except during emergencies, when Runway 12/30 is not available closed for construction, maintenance, repairs, or by any cause beyond the control of the Port. Pilots are requested to use Runway 12/30 whenever possible.

- Turbo-jet and turbo-fan powered aircraft.
- Turbo-prop aircraft over 17,000 pounds.
- Four-engine reciprocating powered aircraft.
- Surplus military aircraft over 12,500 pounds.

Regularly scheduled passenger and cargo airlines or regional jet commercial passenger aircraft operations shall not land on Runways 28L/R at the North Field, except for emergencies or when Runway 12/30 is closed for maintenance or repairs.

#### **I. Landing Airplanes (24-hour program):**

- On landings, avoid flying over residential areas as much as possible.
- No straight-in landings to Runway 15, unless required by wind or safety conditions

#### **J. Touch & Go Operations (24-hour program):**

- Runway 28L is the preferred touch-and-go runway; fly counter-clockwise, making a left crosswind turn as soon as practicable

#### **K. Daytime Operations (7:00 a.m. to 10:00p.m.):**

- Departures off Runways 28R/L:

- Make right crosswind turn over San Leandro Bay until reaching I-880 (Nimitz Freeway) and continue per ATC instructions.
    - No straight out departures.
  - Departures off Runway 33:
    - Make right northerly turn over San Leandro Bay until reaching I-880 Freeway and continue per ATC instructions.
    - No straight out or left crosswind/downwind departures.
- L. Other Noise Abatement techniques: OAK provides and will continue to provide on the OAK website, as appropriate, information related to general noise abatement recommendations such as those produced by the Aircraft Owners and Pilots Association (AOPA) and other pilot groups<sup>3</sup>. These recommendations are only general in nature and it is up to the pilot to determine whether or not following these procedures is advisable in any given situation as safety is paramount in any flight. Currently, OAK shares some of the following AOPA recommendations:
- i. Avoid noise-sensitive areas to the extent practical
  - ii. Gain altitude as quickly as possible upon takeoff without compromising safety
  - iii. Make first power reduction at 500' if consistent with safety
  - iv. Modulate RPMs to reduce noise
  - v. Retract landing gear either as soon as landing straight ahead on the runway can no longer be accomplished or as soon as the aircraft achieves a positive rate of climb
  - vi. Maintain best-angle-of-climb airspeed upon reaching 50' or an altitude that provides clearance from terrain or obstacles prior to accelerating to best-rate-of-climb airspeed

## Section 2. Quarterly Report Format

Section 4.4(e)(1) of the Phase One Agreement references a "quarterly written report" that the Port is to provide that identifies certain North Field operations or engine run-up events that do not conform with applicable noise abatement procedures, "...identifying the persons responsible, explaining the reason for the *deviation*, describing the efforts taken by the Port to notify the responsible persons of the *deviation* and prevent future *deviations* by such persons, summarizing any response received by the Port, and appending a copy of any such written notification and response." The Port fulfills the quarterly written report requirement by producing the **Quarterly Aircraft Noise Report**, which shall be published four times per year, and which may be modified from time to time as mutually agreed upon by the Port and the Noise Forum. The format of this report as of the publication of this document is shown on Appendix 5.

In keeping with the terminology the Parties have historically used in relation to the Phase One Agreement and the Phase Two Agreement, this Noise Plan uses the terms "compliant" and "non-compliant" to refer both to: a) actions the Port has the power to implement unilaterally, without the voluntary cooperation of third parties; and b) actions by third parties that the Port cannot require, e.g., adherence by pilots or airlines to desired noise abatement measures that are not mandated by laws or regulations. For avoidance of doubt, the Port is "in compliance" with the Agreements and the OAK Noise Plan if the Port has taken the actions that it is required to take (e.g., to issue a report or take a particular step to encourage pilots or airlines to implement a noise abatement procedure). A determination that a third party is not "in compliance" with a term of the Agreements or the OAK Noise Plan indicates that third party has not conformed with applicable noise abatement procedures; such a determination does not itself indicate a failure by any third parties to comply with any legal duty, whether created by law or regulation. Such a determination also does not itself indicate a failure by the Port to comply with any legal duty, whether created by law or regulation, or by the terms of the Agreements and the OAK Noise Plan, although it may be relevant to whether the Port has fulfilled other obligations in the Agreements or the OAK Noise Plan.

- A. Following is a description of the prescribed format for the **Quarterly Aircraft Noise Report (Report)**. The Report provides introductory statements regarding roles and responsibilities, safety concerns and a general disclaimer. Specifically, the Report currently includes:
1. A summary description of each noise abatement procedure.

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<sup>3</sup> <https://www.aopa.org/-/media/Files/AOPA/Home/Advocacy/AOPANoiseSteps.pdf>

2. Subject to approval of the Noise Forum, an explanation in the description section identifying the actions Port staff shall take for non-compliant activity.
3. A glossary of the terms or classifications that are utilized to explain the differences between compliant and non-compliant aircraft operations and pilot or air traffic controller actions. All exempted actions that apply to any particular procedure will also be identified and described.
4. A summary table for each noise abatement procedure which identifies statistical information on relevant aircraft operations and the number of complying versus non-complying operations. A performance value shall be provided in terms of the percentage of activity that conformed with the requirements of a particular procedure.
5. A list of all non-compliant or exempt aircraft operations for each procedure along with a summarized explanation for any non-compliant or exempt activity. The information shall include the date and time of the activity, aircraft type, flight number and/or aircraft registration number (if available), flight destination if available, and runway used. Exempted aircraft operations shall include an explanation as to why the flight was exempted from a noise abatement procedure.
6. The Port will maintain records indicating when written communication was made with aircraft operators who may be responsible for any non-compliant activity for a period of no less than two years. The Port will maintain records documenting any written communications made with any aircraft owner/operator of a non-compliant aircraft event for a period of no less than two years. The Parties may review the communication documentation upon request.

**B. Other Reports**

1. Noise abatement procedure performance data shall periodically be used for compliance trend analysis.
2. The number and type of outreach activities conducted by the Port will be provided periodically to the Forum.

### **Section 3. Port of Oakland Reasonable Efforts**

The Port has included in this Noise Plan certain efforts undertaken by the Port to demonstrate the Port's reasonable and good faith, best efforts to enhance program effectiveness. Such actions shall include:

1. Conducting pilot outreach and engagement.
2. Contacting non-compliant operators. The Port reaches out to non-compliant operators advising them of noise abatement procedures in an effort to eliminate repeated non-compliance. Such communication is intended to be timely, and ideally within three business days. In the event an operator commits several noncompliant actions, the Port will consult with the Forum and/or the North Field/South Field Research Group to explore methods of mitigating the likelihood of future incidents.
3. Conducting timely compliance monitoring with best efforts to issue a letter, email, or phone call within 3 business days of the non-compliant event.
4. Continuously upgrading ANOMS as necessary to automate the process of identifying noncompliant aircraft to the greatest extent possible.
5. Ensuring the Port has access to a database of registered aircraft operators, enabling prompt response to non-compliant activities.
6. Maintaining a recording system of radio frequencies as necessary to ensure aircraft compliance of noise abatement procedures can be determined. Port shall periodically, as necessary, review tower recordings of instructions on non-compliant departures from the North Field to help determine whether additional outreach/engagement needs to happen with FAA staff to encourage pilot compliance with NAPs.
7. Update OAK website as necessary to improve pilot access to NAPs and OAK's other noise abatement efforts.
8. Exploring the use of other technology to improve pilot knowledge of, and compliance with, NAPs.

9. The Port shall not, without approval from the Noise Forum, create or modify any categories of aircraft operations as presented in the quarterly reports that determine the compliance of a particular operation.

#### **A. Program non-compliance notification procedures**

The Port will take specific actions when any aircraft activities at the Airport do not comply with the Port's aircraft noise abatement procedures. Most actions will consist of documented communication to FAA air traffic control or the owner/operator of the aircraft involved with any non-complying operations. This communication is intended to not only reinforce noise abatement procedures but to provide education to pilots and controllers about the importance of such procedures. The actions taken by the Port will follow the "reasonable effort" methodology described above and may vary according to the nature of the noise abatement procedure, the reason for the non-compliant activity, the level of attention required for the most desirable results, and whether or not a pilot or operator has specifically identified to the Port that they do not intend to follow noise-abatement procedures even though they are aware of their existence.

#### **B. Communications with the Federal Aviation Administration**

In accordance with Section 4.4 of the Phase One Agreement and Section 4.2 of the Phase Two Agreement, the Port shall take the following steps with respect to the Port's communications and interactions with the FAA:

1. Sponsor Northern California TRACON Tours in coordination with, and subject to the approval of, the NorCal TRACON for accommodation; a minimum of one tour will be scheduled annually as long as there is sufficient interest and participation by the Noise Forum or with an airfield research group or community members.
2. Issue periodic reminders to FAA air traffic control management to encourage implementation of noise abatement procedures on Southeast Plan operations.
3. Communicate with FAA promptly as problems with compliance with the noise abatement procedures are identified or arise.
4. Maintain, Airport Operations Manager, or designee, meetings with local Air Traffic Control Tower (ATCT) Management.
5. Request and encourage FAA representation at airport research group and Noise Forum Meetings.
6. Offer educational sessions to air traffic controllers as needed to heighten awareness of the aircraft noise abatement program and the importance of and reasons to support the program and encourage their suggestions regarding implementation of noise abatement procedures.

#### **C. Distribution of noise abatement information to fixed base operators and flight schools**

AAs necessary, update and distribute aircraft noise abatement procedure information to all fixed base operators and flight schools at OAK. In these materials, the Port, subject to the limitations of applicable laws, shall urge each such operator to use its good faith, best efforts to encourage compliance with these procedures. The Port will provide and maintain other educational materials at FBO facilities as needed.

#### **D. Request signed acknowledgments from all existing and future lessees**

Following the Phase One Agreement, Port staff conducted a year-long program in 2002 to acquire signed acknowledgements from tenants of the receipt of the notification from the Port, urging aircraft operators, subject to the limitations of applicable laws, to use their good faith, best efforts to comply with the noise abatement procedures. The Port has developed an updated acknowledgement form, which may be updated from time to time, and shall distribute it to existing and future tenants in accordance with the provisions of Section 4.4(e)(2) of the Phase One Agreement.

In addition, the Port will schedule briefings, and/or provide information, to all new corporate tenants who operate aircraft or flight service enterprises to review the Port's aircraft noise abatement procedures.

#### **E. Education & outreach programs**

The Port shall conduct routine educational meetings with pilots, FAA ATCT staff, FBOs and other flight service providers operating at the Airport to increase compliance with noise abatement procedures. The following provisions shall apply to education and outreach programs:

1. Pilot and/or airport user educational outreach programs will be offered as needed. Port shall invite Noise Forum to attend.

2. Education and outreach meetings will be structured to promote awareness of applicable aircraft noise abatement procedures. The most recent quarterly noise abatement program report statistics will be provided at education and outreach meetings.
3. Port shall provide season-specific outreach efforts, as necessary, to advise FAA of the likelihood of Southeast Plan operations between the months of October and March to ensure they understand noise procedures related to jet arrivals on the North Field.
4. The Port shall continue to publish multimedia content related to noise abatement procedures on its website and other platforms utilized by pilots.
5. The Port shall offer educational sessions to FAA air traffic controllers as needed, subject to approval by the FAA, to heighten awareness of noise procedures, to identify the importance of supporting the noise program, and to solicit input in methods for improving noise procedures at OAK.
6. The Port shall offer educational sessions to members of the Noise Forum and members of associated subcommittees.
7. The Port shall conduct outreach to the City in advance of large scheduled events that are hosted at OAK, such as Fleet Week.

#### **F. Research Groups and activities**

The Port shall continue to research and consider development of program enhancements or additional noise abatement procedures that may be implemented safely and in compliance with applicable laws, in cooperation with the memberships of the Noise Forum, the North Field and South Field Research Groups and other groups and/or noise-related committees that may be formed from time to time. Port staff, or consultant, should regularly conduct research on noise abatement programs at other airports and, to the extent they can provide benefit at OAK, discuss those measures in the Noise Forum and/or North Field/South Field research groups.

#### **G. Performance monitoring and trend analysis**

On at least an annual basis, or as otherwise determined by the Forum, the Port shall produce a rolling three-year trend chart for the aircraft noise abatement procedures to be presented to the Parties and other community representatives at the airport research group meetings. The trend chart will report the three-year quarterly values (number of aircraft flights and compliance percentages) and shall be utilized to measure the overall effectiveness of the actions included in this OAK Noise Plan. This analysis will assist the program stakeholders to determine if any further steps should be taken to improve noise abatement procedures, e.g. additional research and development. Potential additional actions may include enhanced or expanded monitoring activity as well as a discontinuation of monitoring activities in the event it is unnecessary to maintain compliance actions due to the success of a procedure or the termination of an operational activity (e.g. airlines do not perform training flights any longer at OAK).

#### **H. Optional action by the Parties**

In the event that noise abatement procedure performance levels for operations at the Airport are unacceptable to the Parties, at the request of the Parties, the Port shall schedule a consultation meeting with the Parties at which meeting the Port and the Parties shall consider recommendations for modifying or expanding any of the current noise abatement procedures in this OAK Noise Plan.

### **Section 4. Compliance Monitoring Terminology**

The Noise/Environmental Conformance Office reviews flight track data and air traffic control communications' recordings, along with other data resources, to determine compliance with aircraft noise abatement procedures. This support information is reported in the various lists that document aircraft landing and departures relevant to the noise abatement procedures that are monitored for compliance. Comments are provided in these lists that summarize the circumstances or the reason that most appropriately explains the Port's determination as to whether or not the aircraft flight was complying or non-complying with noise abatement procedures. Terms and definitions used in the Quarterly Noise Reports may be amended from time to time as mutually agreed upon by the Port and the Forum.

## **Section 5. Noise Abatement Procedures**

### **5.1. Engine Maintenance Run-Up Noise Limits**

#### **A. Procedure Information**

Maximum noise levels shall be reviewed at the permanent noise microphone located on Beach Road (RMT #15) adjacent to the Airport when a power engine run-up occurs between 7:00 p.m. and 7:00 a.m. daily. Aircraft engine run-up information is correlated to maximum noise level data collected from RMT 15. A non-compliant engine run-up equals or exceeds 75 dB (Lmax) between 7:00 p.m. and 10:00 p.m. and 70 dB (Lmax) between 10:00 p.m. and 7:00 a.m.

#### **B. Airport Operations Directive**

Airport Directive 616.5, current version.

#### **C. Applicable Forms**

See Appendix 3.

#### **D. Compliance Monitoring**

Airport Operations staff are required to maintain activity reports for all engine maintenance run-ups. Port staff shall continue to review these reports and noise measurements at RMT 15 to determine if any noise events exceed the established noise level restrictions during any aircraft engine maintenance run-up that is performed during the evening and nighttime hours. Staff shall compare the engine run-up activity reports with noise measurements generated at both RMT 15 and RMT 16 (located in the Ground Run-up Enclosure (GRE)).

If a non-compliant run-up occurs, the Port staff investigates the occurrence and coordinates with Airport Operations and the aircraft operator/airline to minimize future non-compliant run-up operations. Historically noise measurements exceeding the limit are rare and those noise levels were only slightly higher than the established limit. Noise measurements above the noise limits may be caused by any number of factors, including weather conditions or conditions beyond the control of any aircraft operator, and engine run-ups have historically been a rare source of non-compliance with the noise abatement procedure.

#### **E. Report Format**

Engine Maintenance Run-up Procedure reports shall provide a summary table that provides the number of engine maintenance run-ups performed under the evening and nighttime procedures, individually, for each month along with the number of run-ups that created noise measurements that exceeded the maximum level allowed. The report shall provide a complete listing of all engine run-ups for the calendar quarter along with information on the operator, aircraft type, engine power levels, date and time of activity, and the location where the run-up was performed.

### **5.2. North Field VFR Aircraft Departure Procedures**

#### **A. Procedure Information**

This report provides information on noncompliant VFR aircraft departures compared to all flights recorded by ANOMS during the calendar quarter reported. A noncompliant departure is defined as a VFR departure from Runways 28R/L or 33 that flies over Alameda residential areas when it would have been safe to follow the VFR noise abatement procedure.

Many VFR aircraft that fly over Alameda residences on departure from the North Field may need to do so in order to maintain safe separation from other general aviation aircraft flying in the vicinity of the airport. Often aircraft on arrival flight patterns from the north and east of the airport are flying in directions opposite from those aircraft that are departing from the North Field. In these circumstances, departing VFR aircraft are considered to be in compliance with the noise abatement procedure.

#### **B. Compliance Monitoring**

ANOMS identifies aircraft departures that fly VFR over residential areas in Alameda or Bay Farm Island. Port staff reviews each flight track for such departures, using the flight replay feature, to determine if any potential airspace conflict may have occurred resulting in a compliant aircraft departure. In any event where an aircraft is determined to be not in compliance with the noise abatement procedure, the Port will make best efforts to contact the owner/operators.

### **C. Report Format**

The report includes a table that summarizes compliance with VFR aircraft noise abatement departure procedures for the reported calendar quarter, along with similar tables for each month of the calendar quarter. The summary table also provides the number of total VFR and IFR aircraft departures and the runways used for these departures. A procedure performance percentage is provided on the compliance rate.

The report also includes a table listing all VFR aircraft departures that flew over residential areas of Alameda and identifies non-compliant aircraft departures and departures considered to be compliant. Explanatory comments are provided regarding the reason why the aircraft departure was determined to be compliant.

## **5.3. Silent Departure Procedure**

### **A. Procedure Information**

When flying the Silent departure procedure, aircraft are further from residential areas and there is less aircraft noise impact on residences than there would be when departing aircraft fly straight out over the San Francisco Bay on a runway heading. When safe to do so, the FAA air traffic controllers assign this departure procedure between 10:00 p.m. and 7:00 a.m. for turbojet aircraft departures.

Although the Silent departure procedure is assigned to turbojet aircraft that depart off Runway 30 between 10:00 p.m. and 7:00 a.m., a buffer zone of ten minutes is applied for monitoring performance. Turbojet aircraft departures between 10:00 p.m. and 10:10 p.m., as well as those between 6:50 a.m. and 7:00 a.m., are considered meeting the noise abatement departure procedure even if they do not fly the Silent departure procedure. These "buffer zone" departures will be identified and appear in the tables in the report in black text, while the aircraft that are identified as noncompliant will appear in red text.

The buffer zone is applied because two different air traffic controllers may be involved in directing a pilot on departure from the airport. The "clearance delivery" air traffic controller is the first controller who instructs the pilot prior to taxiing to the runway and assigns the departure procedure. The second air traffic controller is responsible for directing the aircraft onto taxiways and releasing the aircraft onto the runway for departure. Several minutes may pass between instructions from one controller to the next and aircraft normally scheduled to depart before 10:00 p.m. and are not assigned the Silent departure procedure may be delayed a few minutes and depart shortly after 10:00 p.m.. In a similar situation, turbojet aircraft that are scheduled to depart after 7:00 a.m. may depart a few minutes earlier than the actual scheduled time.

### **B. Compliance Monitoring**

Non-compliance with the Silent departure procedure occurs when a turbojet aircraft, departing from Runway 30, does not make the initial 270 degrees heading turn and/or passes over Alameda instead of following the Silent departure pattern up the San Francisco Bay. ANOMS filters out those aircraft deemed not to have flown the procedure as designed.

Non-compliance is reported to the FAA Air Traffic Control Tower to encourage communications that would help minimize the number of future non-compliant departures. Since the FAA is responsible for assigning the Silent departure procedure to a pilot, non-compliance is not reported to the air carrier involved unless the incidence is determined to be the fault of the pilot. Note: Due to a historically consistent high compliance rate (99%) with the Silent Departure Procedure, the Port does not routinely communicate with the FAA ATC or the air carriers.

### **C. Report Format**

This report includes a summary table for nighttime Runway 30 turbojet aircraft departures and Silent departure compliance performance based upon the percentage those departures that follow the Silent departure procedure. The report also includes a list of all Silent noncompliant departures which separately identifies any "buffer zone" departures. Flight track maps are also included displaying all Silent noncompliant departures for each month during the reported calendar quarter.

## **5.4. North Field Quiet Hours Procedures (10 PM to 7 AM)**

### **A. Procedure Information**

The Quiet Hours procedures provide recommendations to pilots using the North Field on runway use and a choice of departure procedures. If the procedures are flown as intended, aircraft will avoid flying over nearby residential areas on Bay Farm Island, East End Alameda, and the Davis West/Timothy Drive area of San Leandro between the hours of 10:00 p.m. and 7:00 a.m.

Pilots are requested to avoid flying over nearby residential areas when landing or departing the North Field and to follow prescribed procedures when safety, weather and ATC instructions permit. These procedures include:

- Runways 10R and 28R being designated as the preferred departure runways.
- Left turns from Runways 10R/L are discouraged.
- Straight out Runway 10L departures are discouraged.
- All aircraft over 75,000 pounds are requested to use Runways 12/30.
- Full-length departures from the chosen North Field Runway are encouraged.

For VFR and IFR aircraft departures using Runway 10R/L, pilots may choose from the following departure procedures, wind and weather permitting:

- For Runway 10R departures, pilots are requested to use the 140-180 degree departure headings when able for E/SE-bound departures or continue to fly right turns over the airport for N/NE-bound departures when able from Runways 10R or 10L.

For nighttime landings, pilots are advised that Runway 28L is the preferred runway. For all nighttime flights, pilots are advised to fly aircraft, including helicopters, over freeways and water as much as possible to avoid flying over hotels and residential areas.

#### **B. Compliance Monitoring**

The ANOMS filters out all aircraft departures that fly over residential areas during the Quiet Hours in Alameda, Bay Farm Island or the Davis West/Timothy Drive areas of San Leandro. Port staff reviews each flight track, using the ANOMS flight replay feature, to determine if an airspace conflict may have occurred. An aircraft departure is considered compliant if there was a potential airspace conflict or if it is otherwise exempted. If the aircraft is determined to be non-compliant with the noise abatement procedure, the Port will mail a letter to or e-mail the aircraft owner/operator to advise them of the non-compliant flight and to provide educational material. The Port shall continue to make best efforts to ensure that the letter or email and educational material is received by the intended recipient.

#### **C. Report Format**

The Quiet Hours report includes a table that summarizes compliance with the North Field Quiet Hours aircraft noise abatement procedure for the reported calendar quarter by each month. The report also includes a table listing all aircraft departures that flew over residential areas of Alameda. Explanatory comments are provided for non-compliant aircraft departures as well as for the aircraft that are exempt from the procedure to explain the reason why the aircraft departure was determined to be compliant. Flight track maps are also provided.

### **5.5. Preferential Runway Use Procedures**

#### **A. Procedure Information**

Neither the Airport nor the FAA Air Traffic Controllers may restrict a pilot's access to an available runway based solely on noise considerations. However, the Port will advise FAA ATCT staff and pilots and operators that turbo-jet and turbo-fan powered aircraft, four engine reciprocating powered aircraft, and turbo-prop aircraft over 17,000 pounds, and surplus military aircraft over 12,500 pounds should not, at any time, depart from Runway 28R/L or land on Runway 10R/L, except during emergencies or when Runway 12/30 is not available. The Port will provide a community advisory and will publish on the OAK website an advisory of any work on Runway 12/30 that is more than minimal and that will cause Runway 12/30 to be closed; provided, however, that no notice shall be given when the Port closes Runway 12/30 after midnight on Monday mornings for routine maintenance and inspections.

#### **B. Compliance Monitoring**

ANOMS filters out any aircraft departures or landings that do not appear to meet the requirements of the preferential runway use procedure. Port staff reviews each flight track, sometimes using the flight replay feature, and the audio recordings of the ATC and pilot communications to determine the cause for the noncompliant aircraft flight. In any event where an aircraft is determined to be not in compliance with the noise abatement procedure, the Port will mail a letter to or e-mail the aircraft owner/operator or the FAA ATC to advise them of the non-compliant flight and to provide educational material. The Port shall continue to make best efforts to ensure that the letter or email and educational material is received by the intended recipient.

### **C. Report Format**

The report includes two tables that summarize compliance with the Preferential Runway Use Procedures for the reported calendar quarter by month. One table summarizes North Field jet departure (or any other noncompliant aircraft departure) activity and provides compliance performance statistics. Another table summarizes North Field jet landing (or any other non-compliant aircraft landing) activity and provides compliance performance statistics. The report also includes a table listing all non-compliant and exempted aircraft departures or landings that flew over residential areas of Alameda along with explanatory comments.

## **6. Updates to OAK Noise Plan**

The format and content of the various reports listed in this Noise Plan are subject to change upon approval by the Noise Forum, and the Parties agree to review and update the document as necessary to reflect any modifications or refinements required over time. In addition, the Port may update this Noise Plan from time to time to incorporate changes to FAA laws and regulations and to implement new best practices in aircraft noise abatement. Before updating this Plan, the Port shall bring the changes to the Noise Forum for discussion. In the event the Parties believe the proposed amendments are inconsistent in any manner with the prior settlement agreements, at the request of the Parties, the Port shall schedule a consultation meeting with the Parties at which meeting the Port and the Parties shall consider recommendations for modifying the amendments to comply with such settlement agreements.