



# OPERATIONS & NOISE REVIEW

2018-2022

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# AGENDA

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- **Introductions**
- Aircraft Operations 2018 to 2022
- Aircraft Noise Complaints 2018-2022
- Aircraft Noise Contours – Area Equivalent Method (AEM)
- Summary
- Questions

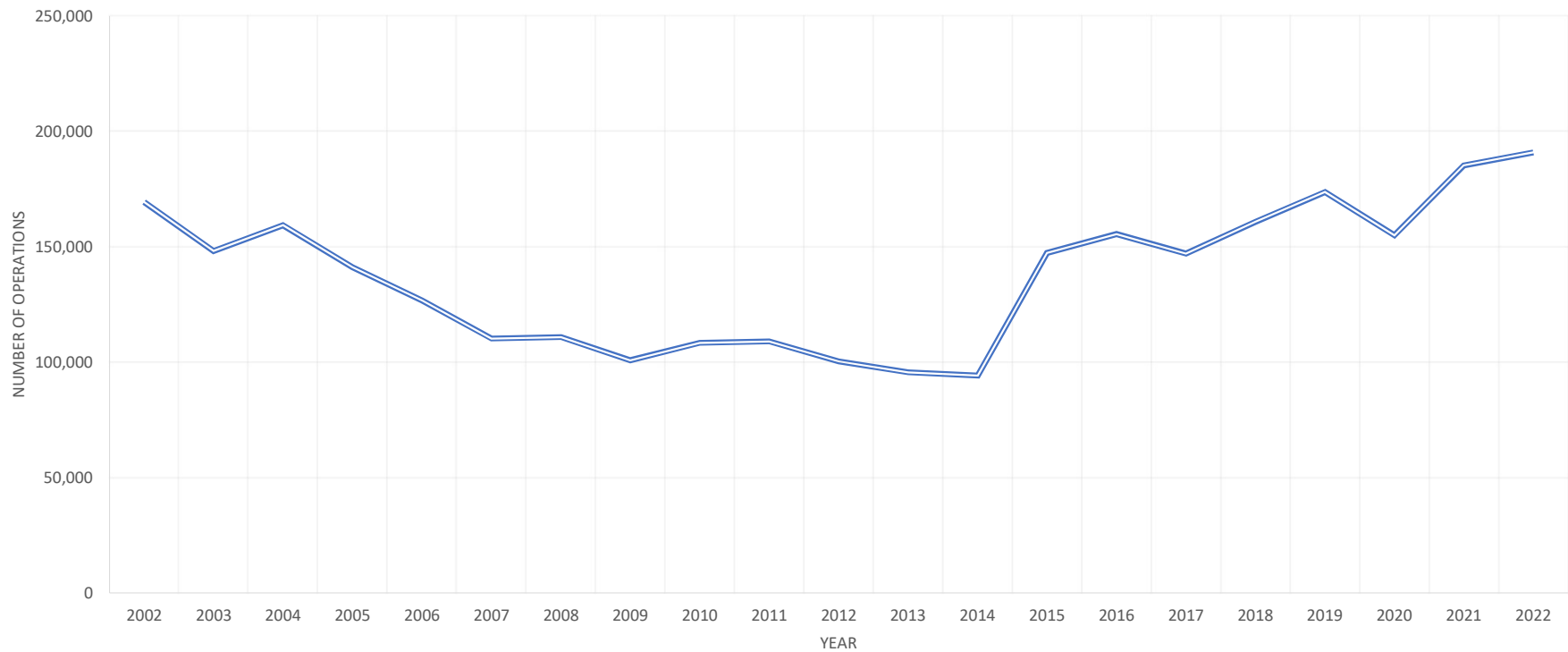


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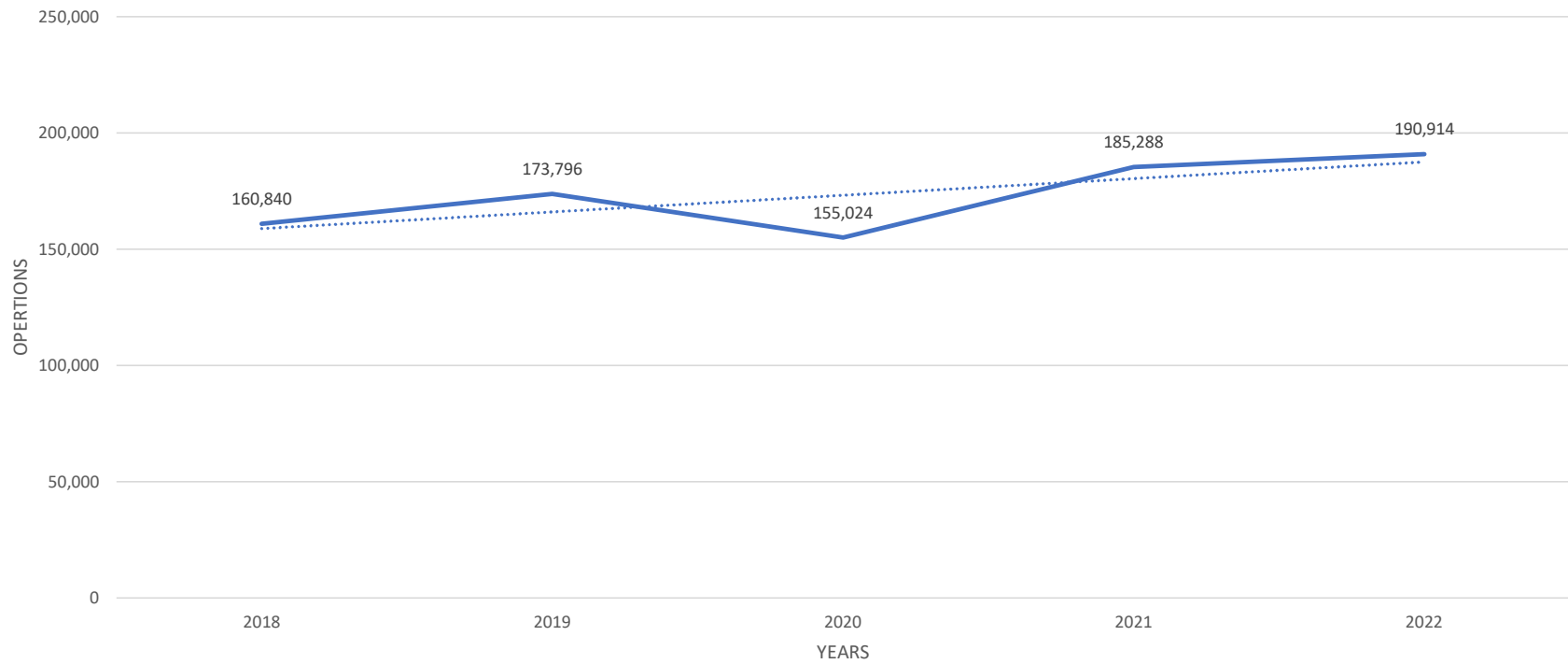
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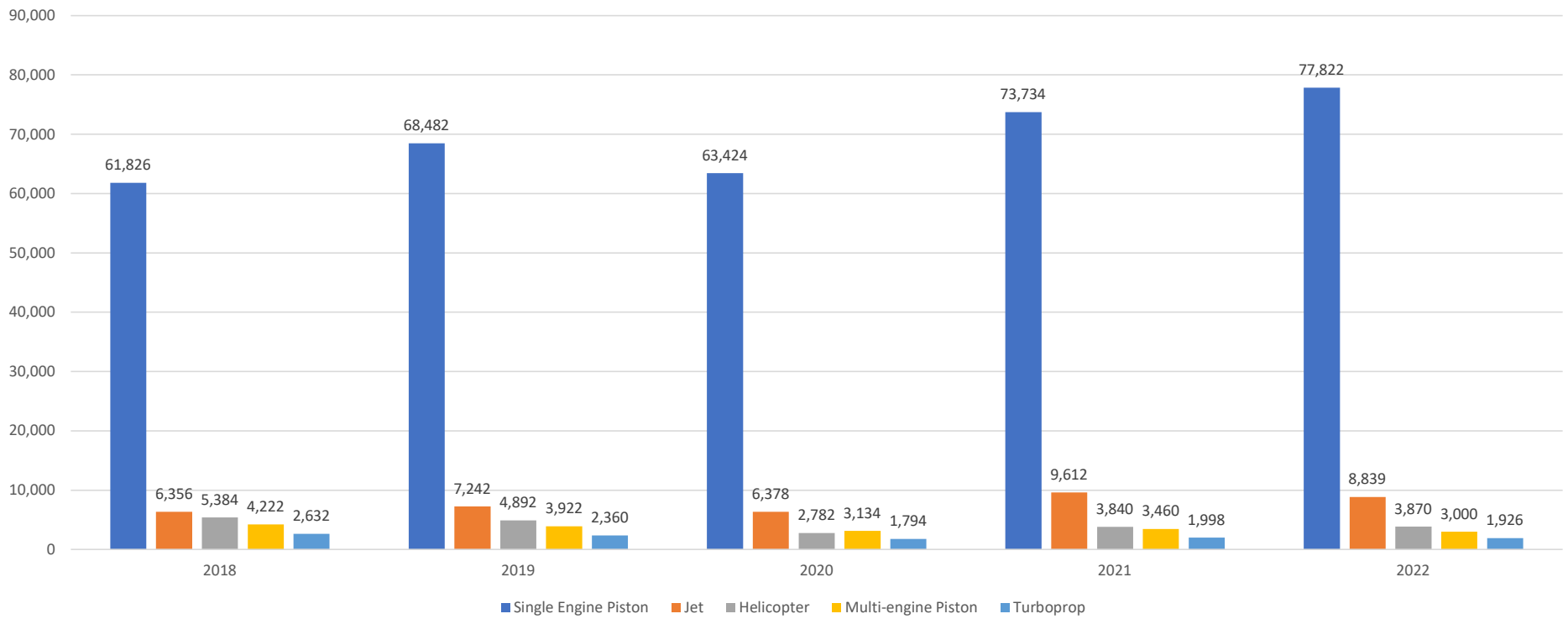
# Republic Airport Total Operations 2002-2022



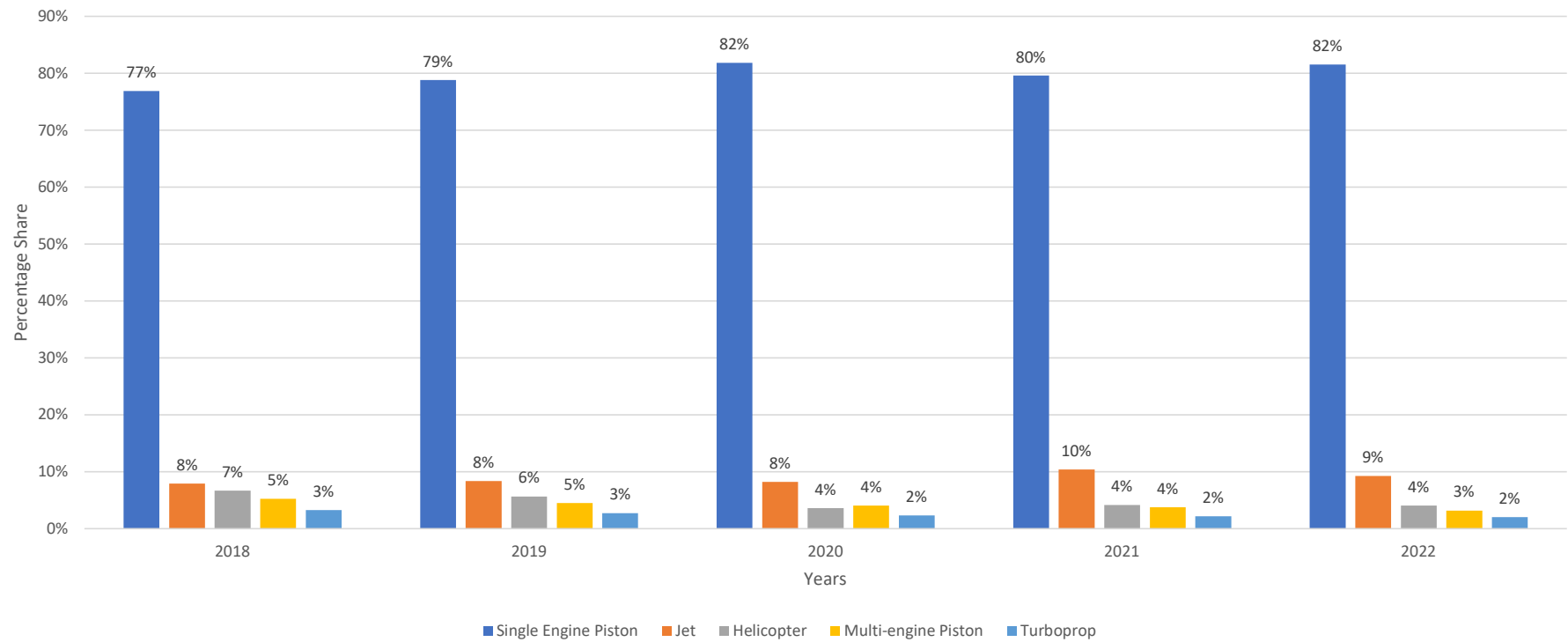
# FRG Airport Operations 2018-2022



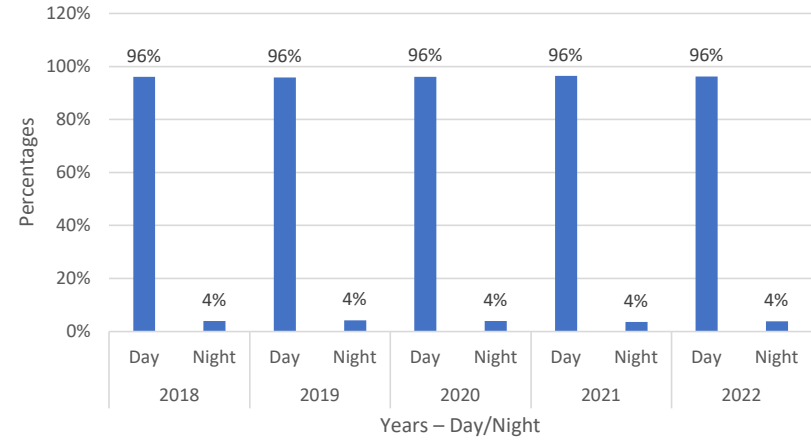
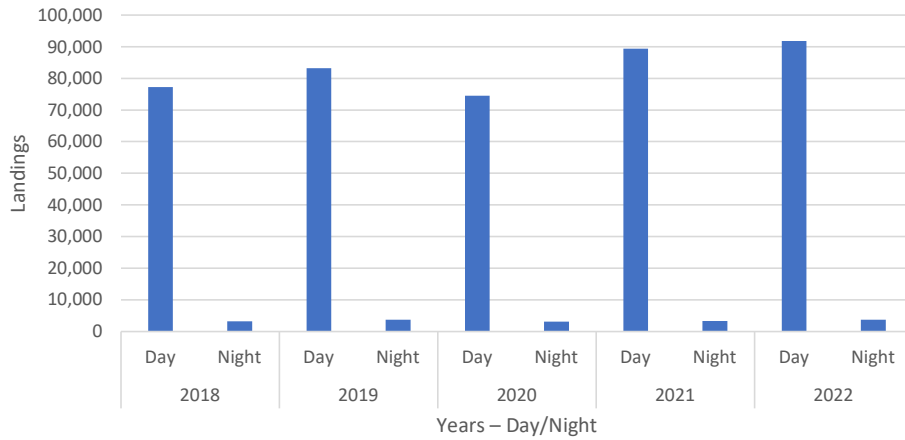
## FRG Aircraft Landings by Type 2018-2022



# FRG Percentage Share of Landings by Aircraft Type



# FRG Total Aircraft Landings Day/Night Split





# FRG AIRCRAFT OPERATIONS 2018-2022 Take-aways

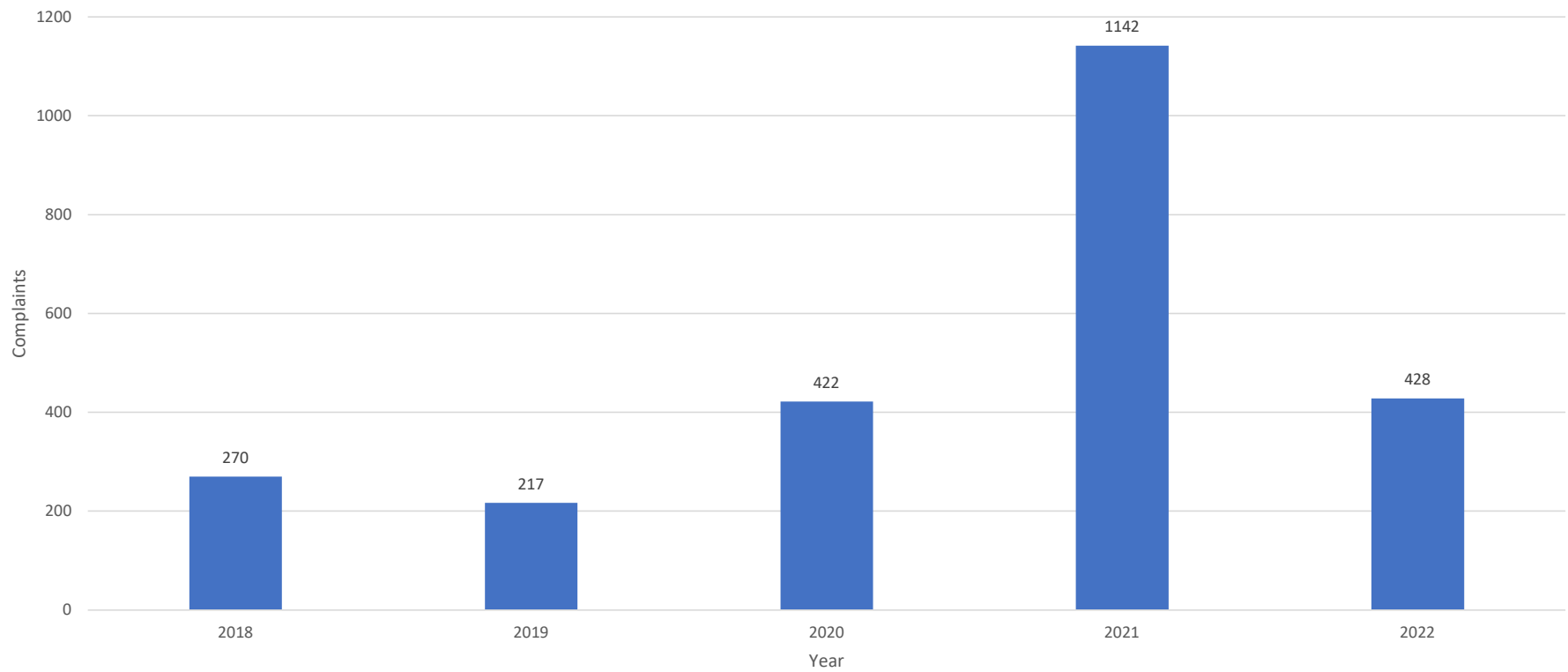
- Total Operations increased from 161k in 2018 to 191k in 2022
- Drop in operations in 2020 due to COVID-19 Pandemic restrictions.
- Single Engine Piston Planes have the highest percentage share of annual landings at an average of 80.0%
- Jets have the second highest percentage share of annual landings at an average of 8.6%
- The Day/Night split of landings is constant at 96% to 4% during the period 2018-2022



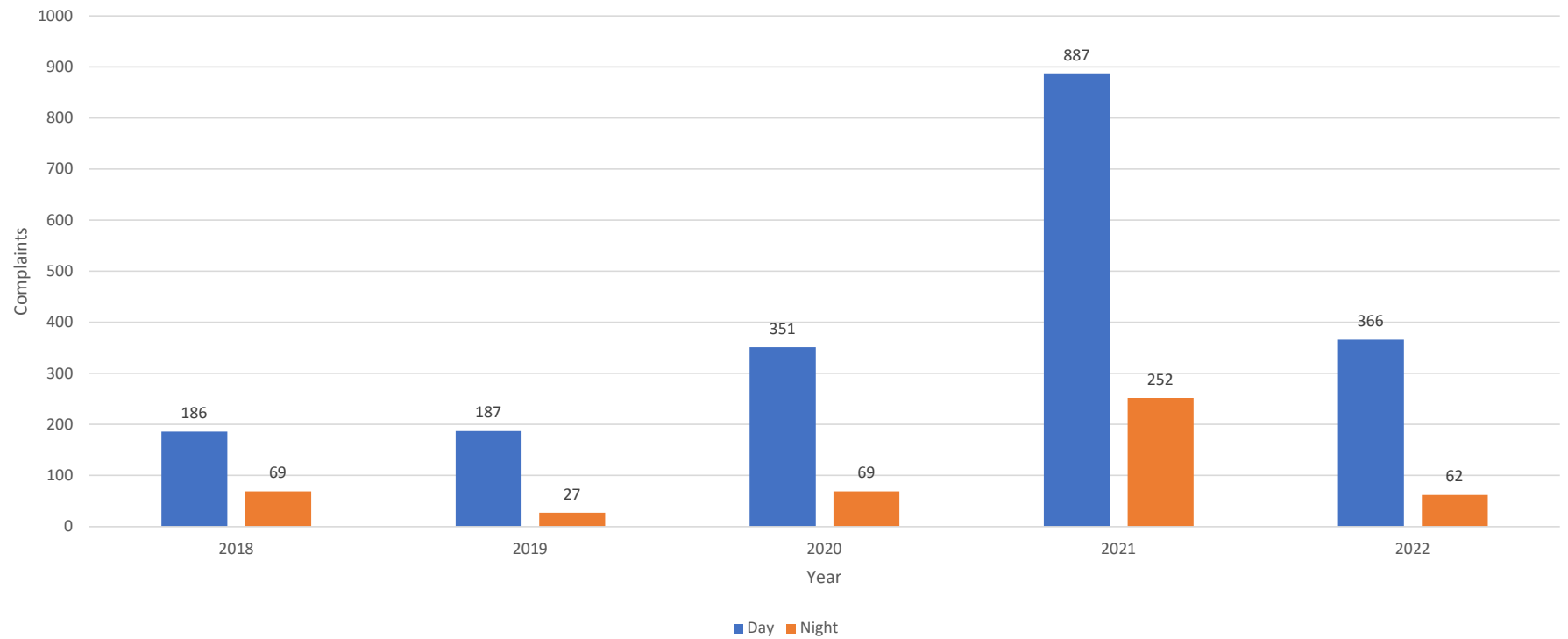
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- **Aircraft Noise Complaints**
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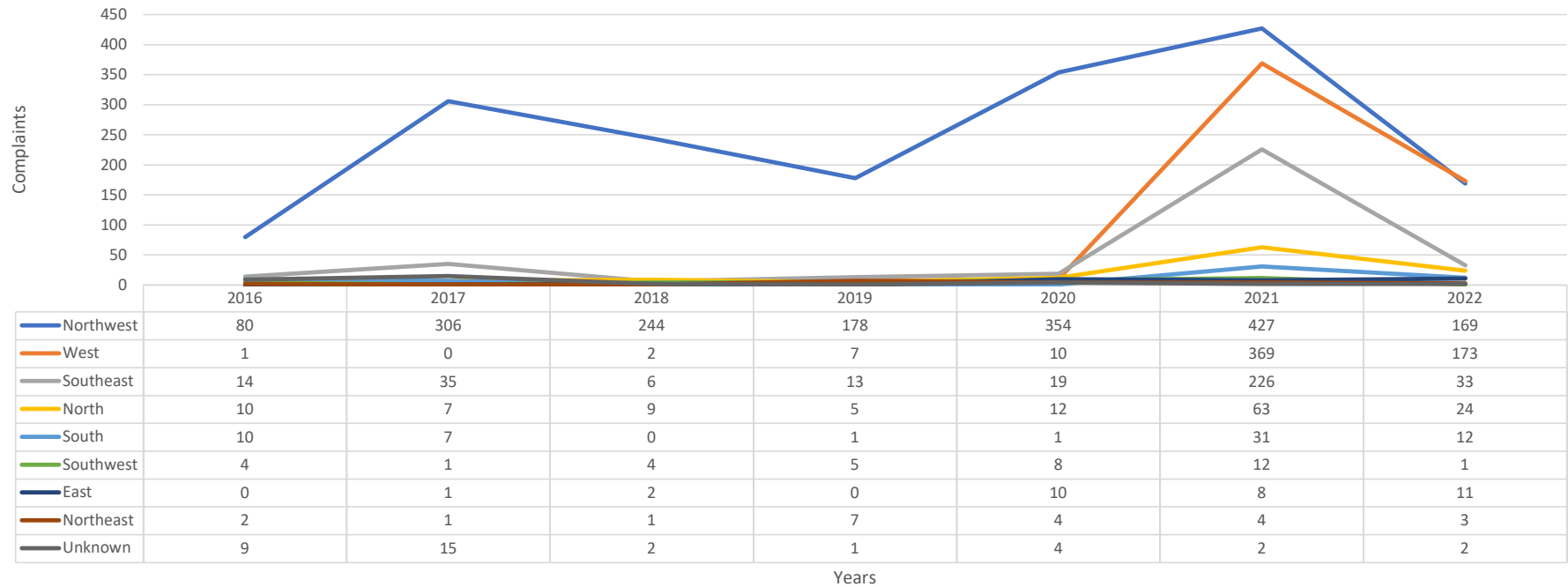
# FRG Annual Noise Complaints 2018-2022



# FRG Noise Complaints by Day/Night Split

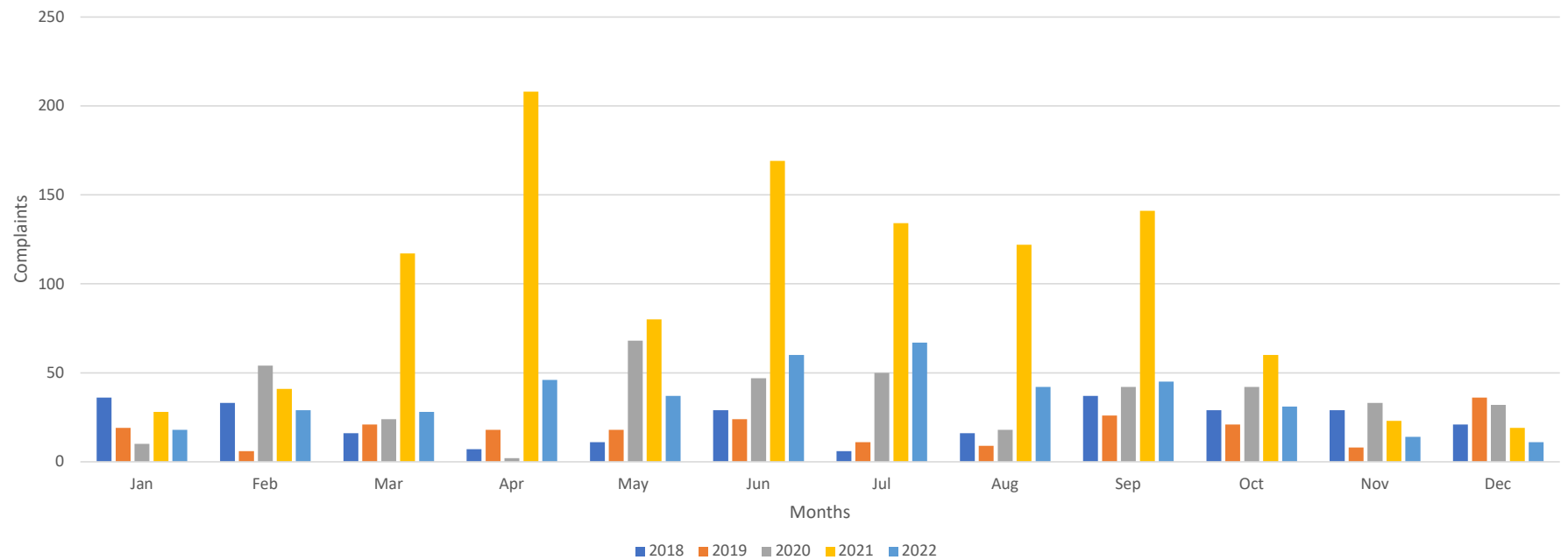


# FRG NOISE COMPLAINTS BY GEOGRAPHIC SECTORS



— Northwest 
 — West 
 — Southeast 
 — North 
 — South 
 — Southwest 
 — East 
 — Northeast 
 — Unknown

# FRG Noise Complaints by Month



# FRG Noise Complaints 2018-2022 Take-aways

- Noise Complaints showed a spike in 2021 especially in the North-west, West and South-east sectors. Marked increase in April 2021
- Contributory conditions:
  - Increased utilization of Runway 14-32 while Runway 01-19 was closed (11/18/20 – 05/27/21) for construction of the Runway Safety Area Project.
  - COVID-19 Restrictions resulted in many people remaining at home all day.
  - Spring weather allowing for the opening of windows in homes.
- The normal trend resumed in 2022, following the re-opening of Runway 01-19.



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# AREA EQUIVALENT METHOD (AEM)



AEM is a mathematical procedure that provides an estimated change in noise contour area for an airport given the types of aircraft and the number of operations for each aircraft.



The Noise Contour Metric is the Day-Night Average Sound level (DNL) which provides a single quantitative rating of a noise level over a 24-hour period.

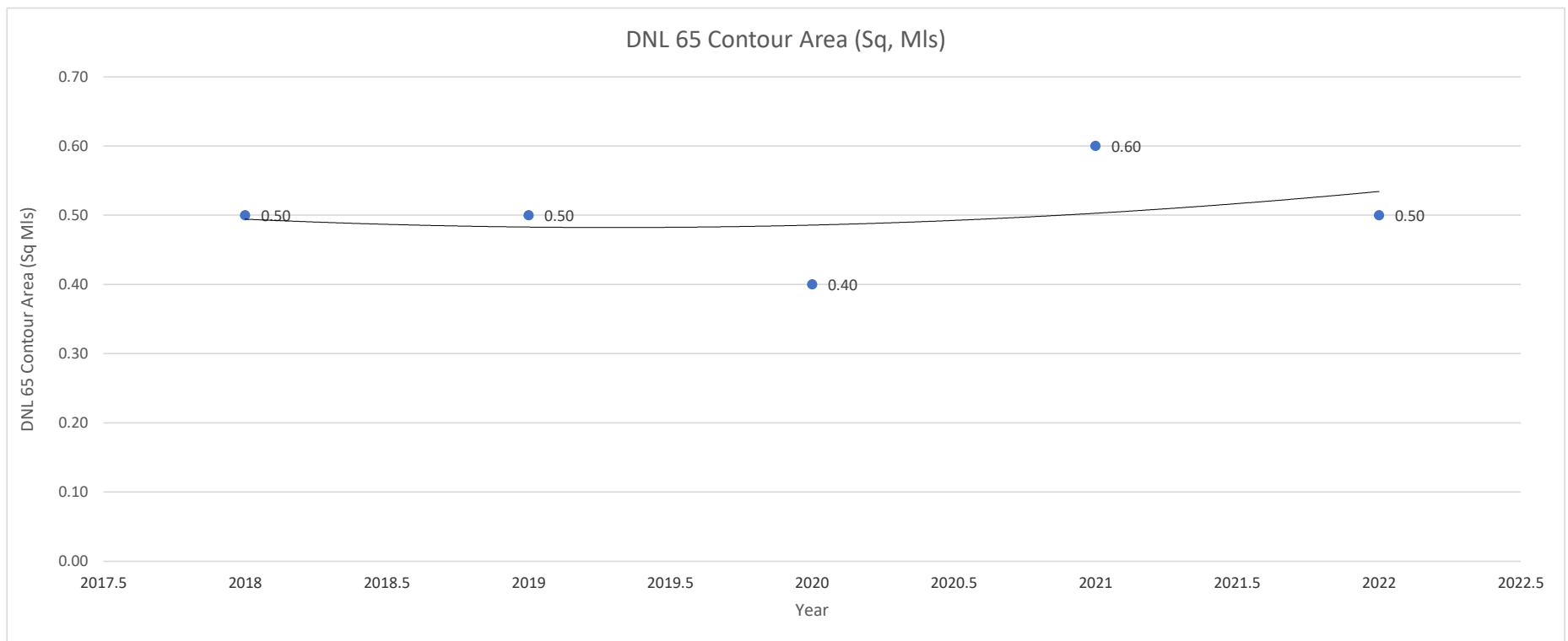


The AEM produces noise contour areas (in square miles) for the DNL 65 dBA noise level.

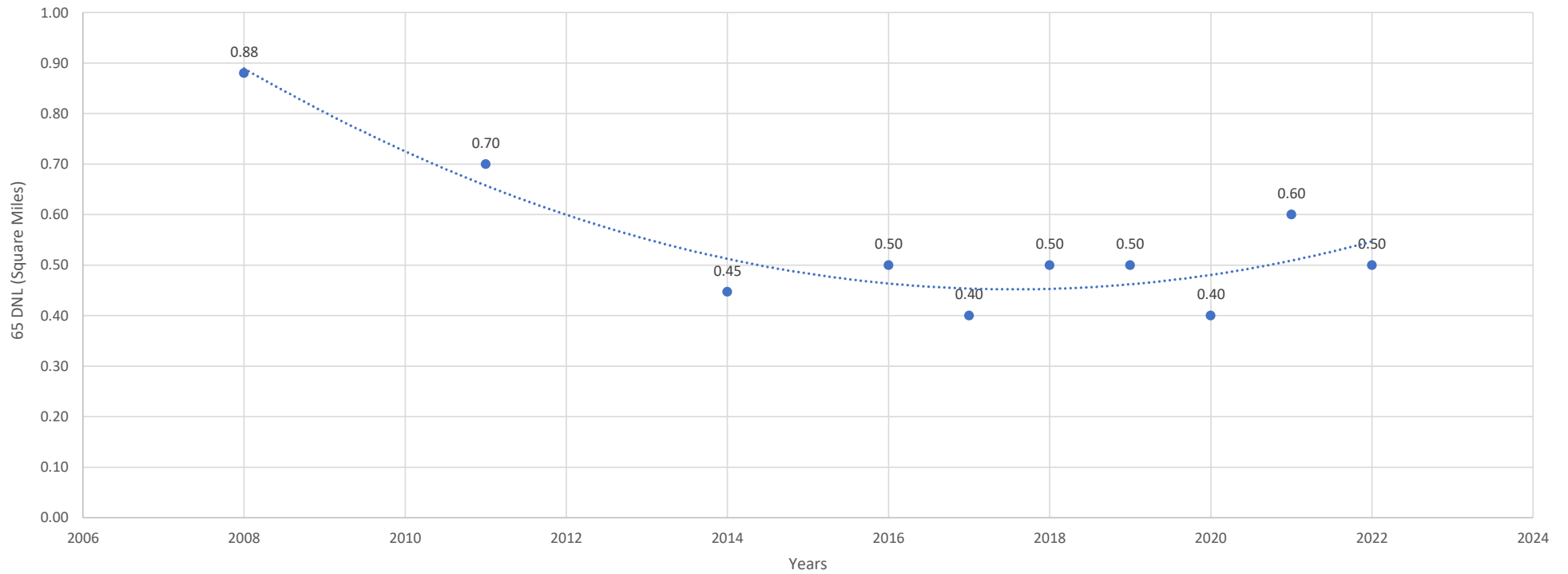


The purpose of the AEM is to screen for significant impact within the 65 dBA contour area.

# FRG AEM RESULTS 2018-2022

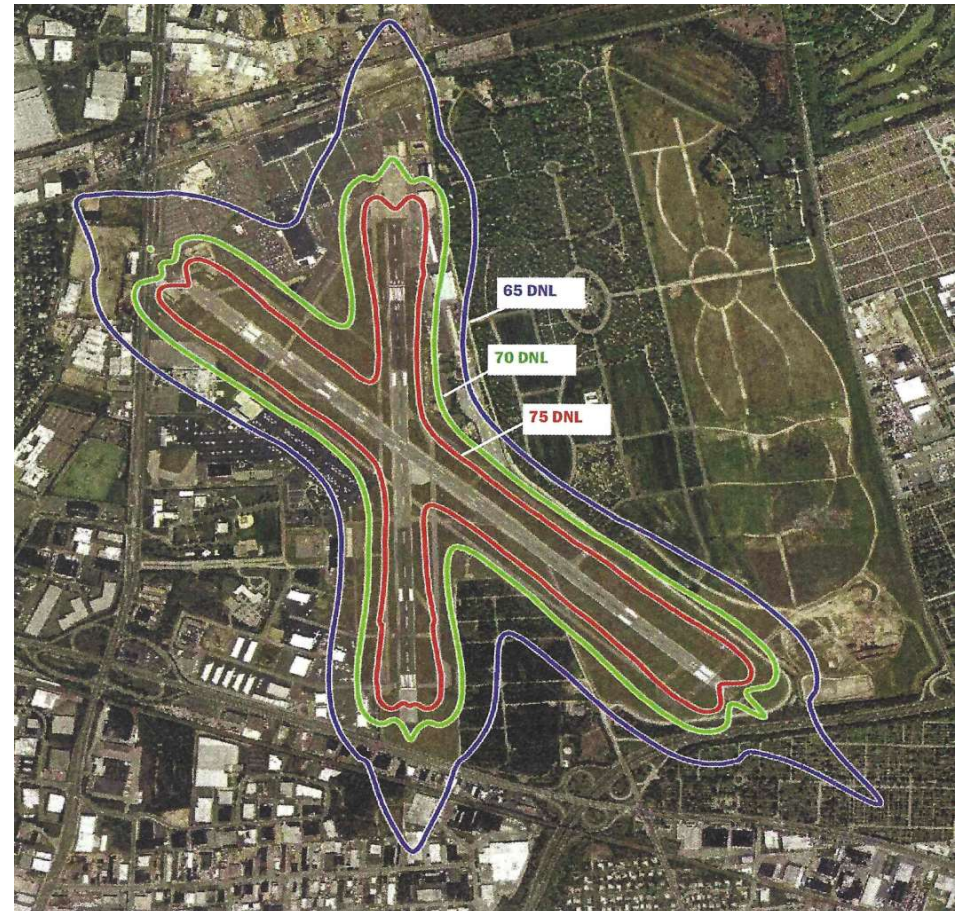


# FRG AEM RESULTS 2002-2022



# FRG 2008 NOISE EXPOSURE MAP (NEM)

- The 2008 NEM shows the 65, 70 and 75 DNL noise contours; focus is on the 65 DNL.
- The 2008 NEM does not have any incompatible land uses. The land uses in the 65 DNL contour include cemeteries, airport property, light industrial and roadways.
- As part of the airport's Rules and Regulations, the Airport has been resolute not to have the 65 DNL encroach on residential land uses.
- Since 1983 when the first NEM was completed for the FRG, the 65 DNL contour has not encroached on residential land uses.
- The 2008 DNL 65 noise contour comprised 0.88 Square Miles.



# FRG AEM Results 2018-2022 Takeaways

- The AEM results for FRG in the five years 2018-2022 trended at an average of 0.50 square miles and was consistent with the level of Jet activity during the period.
- In 2020 the aircraft activity was restricted as result of the COVID-19 Pandemic conditions and reflected in a decrease in the DNL 65 noise contour area.
- The DNL 65 noise contour areas during 2018-2022 shows no impact on residential land uses.
- As part of the airport's Rules and Regulations, the airport has been resolute not to have the 65 DNL encroach on residential land uses.
- Comparison of the 2008 Noise Exposure Map and DNL Noise Contour Area (0.88 Sq M) to the significantly lower current FRG AEM trend (0.50 Sq M) suggests that the airport can serve as a center for Business Aviation for many years into the future.



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# FRG Operations and Noise Review Update 2023 Summary

## ❑ Aircraft Operations

- Operations showed a growth trend during the period, from 161 K in 2018 to 191 K in 2022
- There was a decline in the number of operations in 2020 due to COVID-19 National Health Emergency restrictions
- Air traffic regained the growth trend in 2021 and 2022
- Single-engine piston aircraft and Jet aircraft at averages of 80.0 % and 8.6% respectively comprised the greater shares of operations at the airport
- The Day/Night Split of operations was constant at 96% to 4%.

## ❑ Noise Complaints

- Noise Complaints showed a spike in 2021 especially in the North-west, West and South-east sectors. Marked increase in April 2021
- Contributory conditions:
  - Increase utilization of Runway 14-32 while Runway 01-19 was closed for construction (11/18/20 – 04/27/21) of the Runway Safety Area Project.
  - COVID-19 Restrictions resulted in many people remaining at home all day.
  - Spring weather allowing for the opening of windows
- The normal trend resumed in 2022, following the re-opening of Runway 01-19.

## ❑ AEM Noise Analysis

- During the 2018 to 2022 period the DNL 65 area trended at an average of 0.50 sq. ml. and was consistent with the Jet LTOs in the period.
- The sizes of DNL 65 contour area during the period indicate that no incompatible residential land use is impacted.
- As part of the airport's Rules and Regulations, the airport has been resolute not to have the 65 DNL encroach on residential land uses.
- Comparison of the 2008 Noise Exposure Map and DNL Noise Contour Area (0.88 Sq M) to the significantly lower current FRG AEM trend (0.50 Sq M) suggests that the airport can serve as a center for Business Aviation for many years into the future.



## QUESTIONS/COMMENTS



Spoken questions/comments are limited to 3 minutes per person



Written questions/comments may be emailed to the Airport Manager, Mr. John Lauth

[John.Lauth@dot.ny.gov](mailto:John.Lauth@dot.ny.gov)