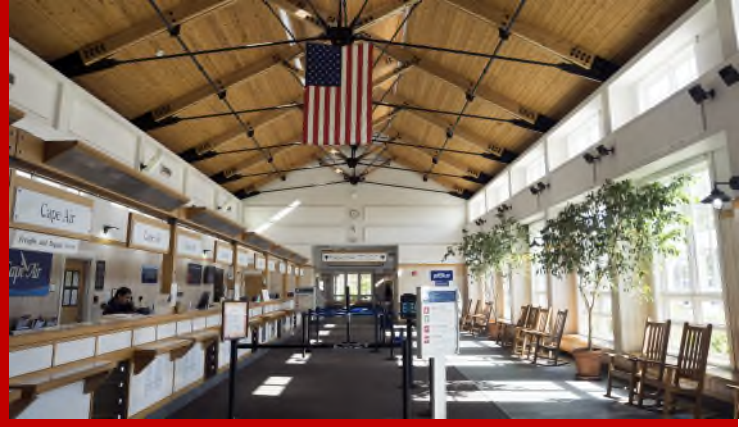




Welcome!

Airport Noise Compatibility Planning Study (Part 150)
Martha's Vineyard Airport

Technical Advisory Committee Meeting #3
October 10, 2023

Meeting Agenda

- Welcome and introductions
  - Martha's Vineyard Airport Commission
  - Part 150 Consulting Team
  - Project schedule review
- Review of land use map and noise model inputs, including forecast operations
- Review of Noise Exposure Maps and noise measurement program
- Review of "Fly Friendly" voluntary noise abatement program
- Adjournment

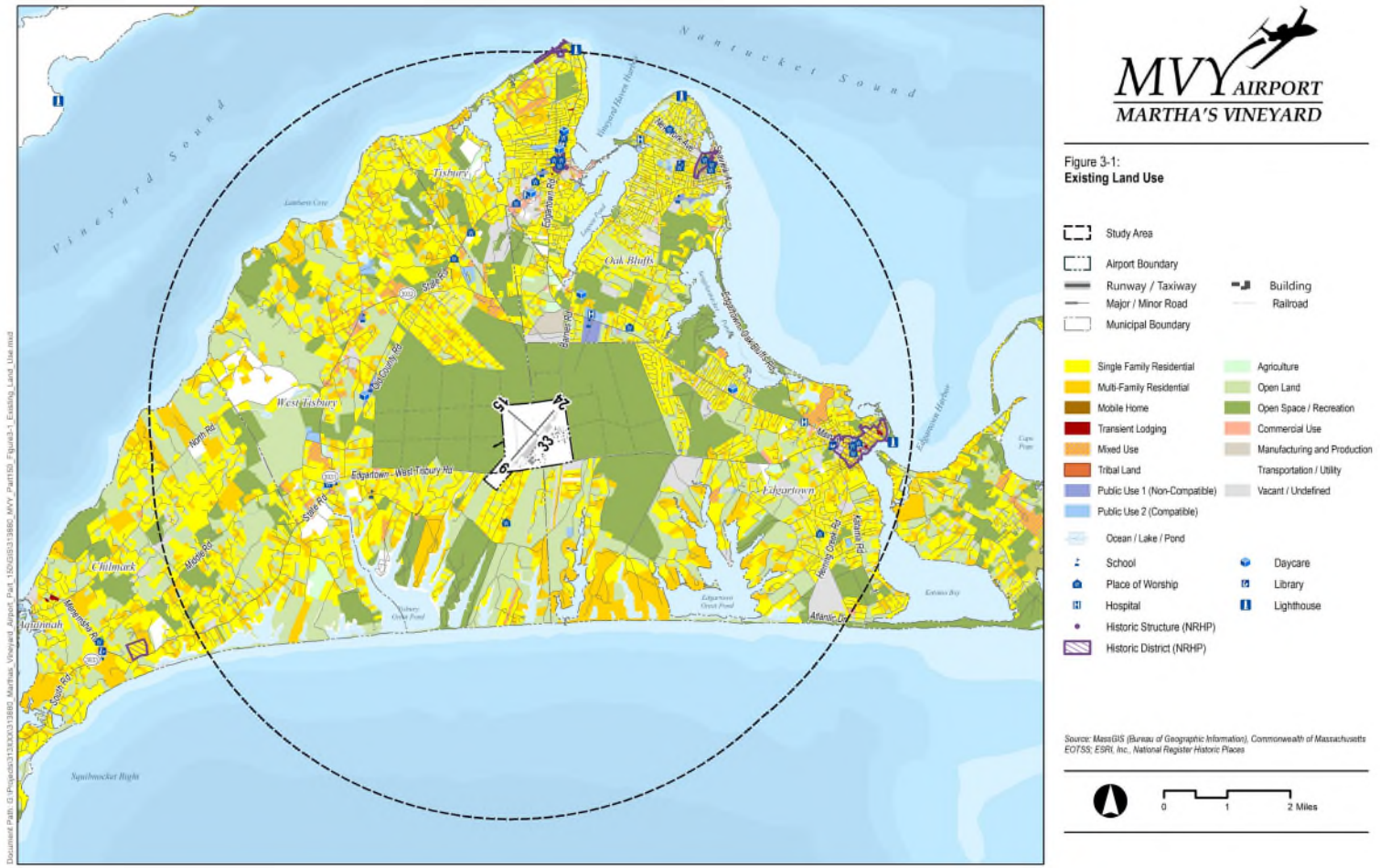
Project Schedule Review

Meeting	Date	Topic
TAC Meeting #1	January 31, 2023	Introduction to the Part 150 process
Public Information Workshop #1	January 31, 2023	Introduction to the Part 150 study
TAC Meeting #2	April 25, 2023	Noise modeling inputs
Noise Measurement Program, July 10 – 18, 2023		
TAC Meeting #3	***October 10, 2023 (Today)***	***Noise measurement results and draft NEM***
Public Information Workshop #2	October 10, 2023 (Today)	Presentation of the study results

Please consider attending the public information workshop this evening at Martha's Vineyard Airport in the airport terminal from 6 to 8 pm

Land Use Map Review

Minor adjustments to the land use map made based on windshield survey observations, July 2023

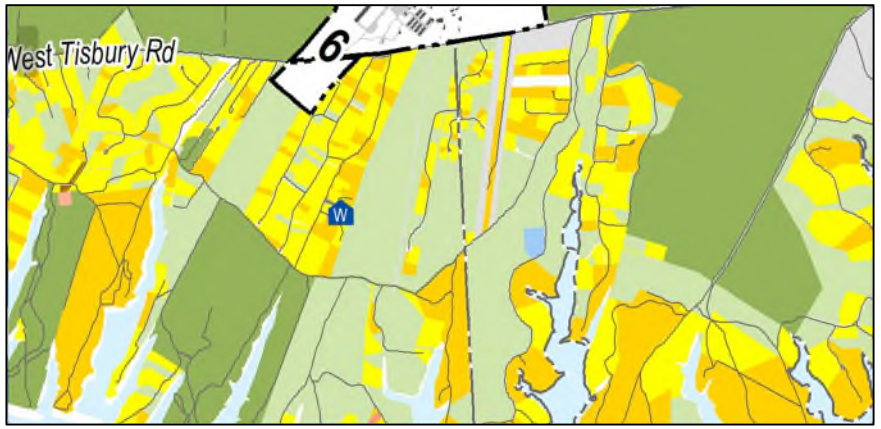


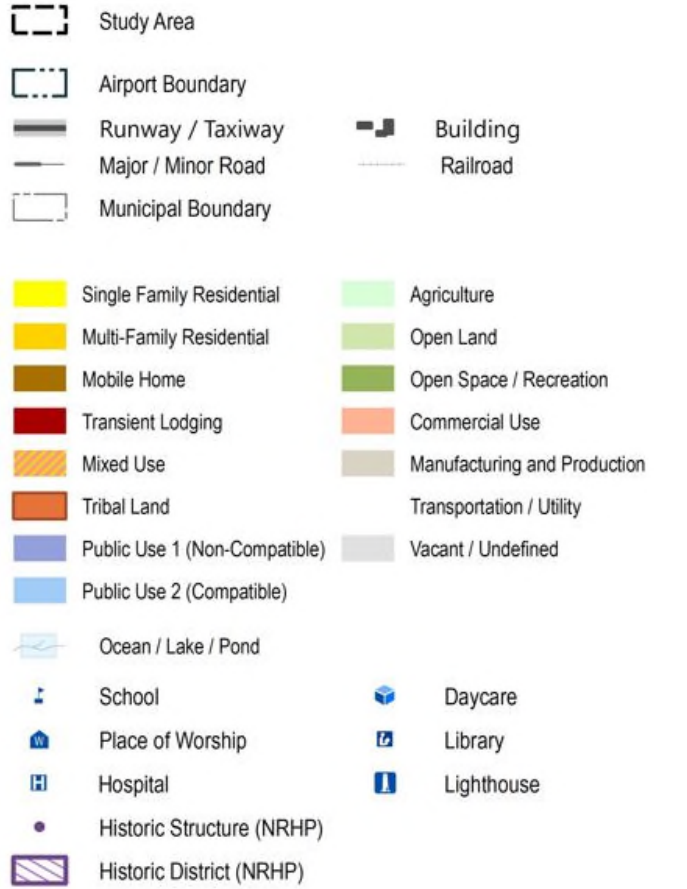
Land Use Map Review

Zoom-in views of land use closest to Airport

North of MVY

South of MVY

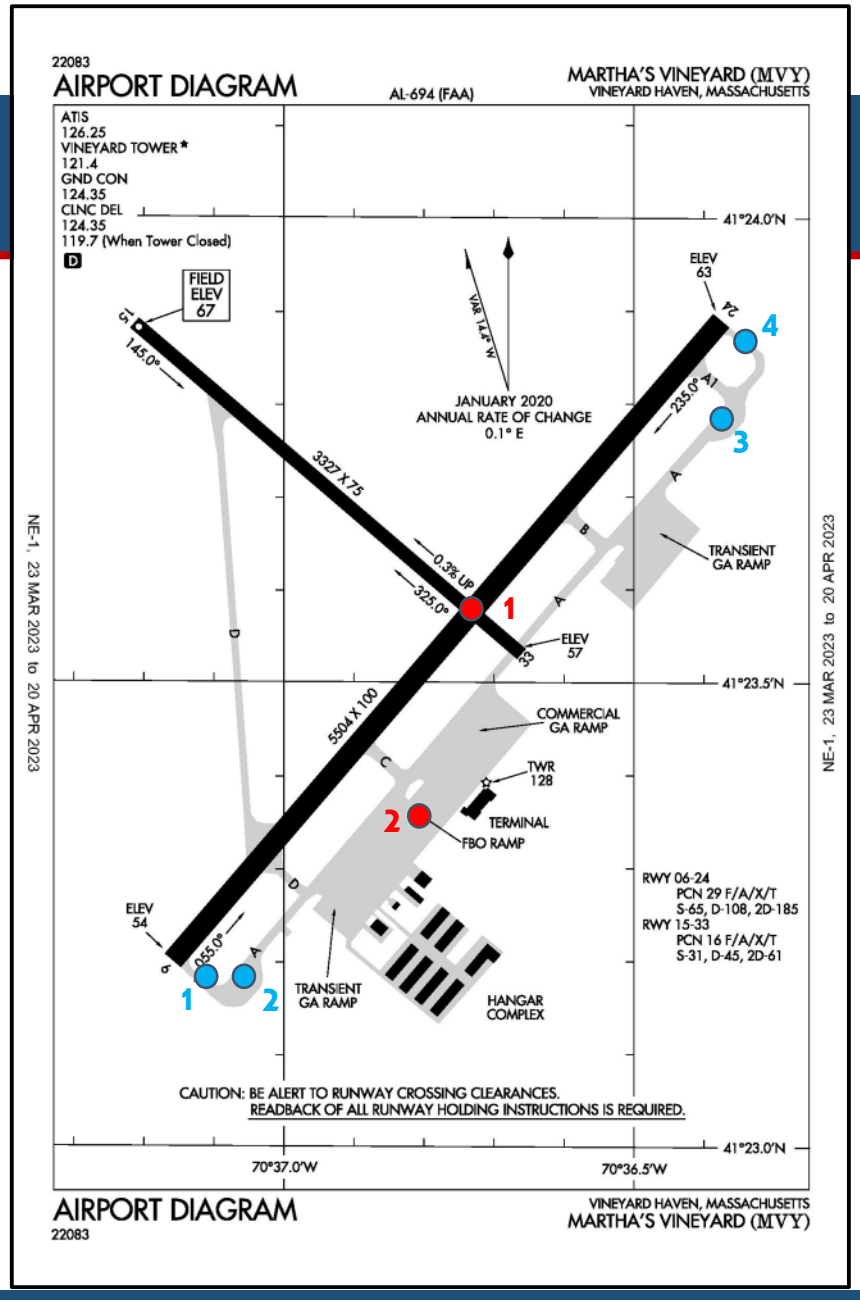




Source: MassGIS (Bureau of Geographic Information), Commonwealth of Massachusetts EOTSS; ESRI, Inc.,

Airport Physical Parameters

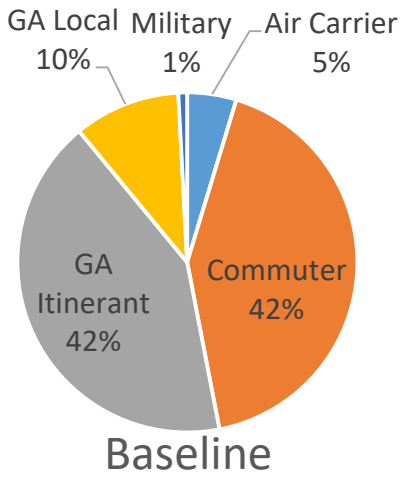
- Runway 6/24
  - 55º / 235º
  - 5,504 feet long
  - 100 feet wide
- Runway 15/33
  - 145º / 325º
  - 3,327 feet long
  - 75 feet wide
- “Helipads” modeled at red dots
- Runups/taxi noise modeled at blue dots

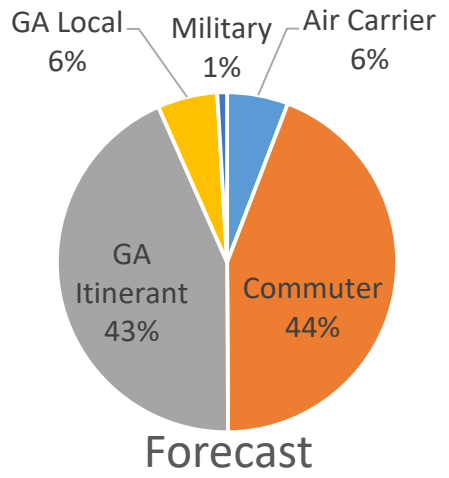


MVY Forecast Summary

Overall, we expect MVY will see an increase of approximately 1,700 operations from 2023 to 2028.

	Baseline	Forecast
	2023	2028
Annual Operations		
Air Carrier	2,165	2,634
Commuter	19,629	19,899
GA Itinerant	19,529	20,627
GA Local	4,695	2,575
Military	393	413
Total	**46,411**	**48,148**





Current and Forecast Year Flight Operations

Operations Period		Jet	Non-Jet	Helicopter	Total
Annual	2023	9,880	34,236	2,295	**46,411**
	2028	10,568	35,257	2,323	**48,148**
Average Annual Day	2023	27.0	93.8	6.3	**127.1**
	2028	29.0	96.6	6.4	**132.0**
Peak Season Avg Day*		67.4	153.7	8.8	**229.9**

*Peak season defined as July and August. Analysis based on counts from 2022 flight data.

Draft Noise Exposure Contours – 2023

- Outermost contour DNL 60 dB shown for informational purposes only

Draft Noise Exposure Contours – 2028

- Outermost contour DNL 60 dB shown for informational purposes only

Draft Noise Exposure Contours – 2023/2028

DNL 60 dB (dashed contours) are shown for informational purposes only

Key changes:

- 3.75% increase in operations from 2023-2028 (4.8 more average daily operations)
- JetBlue fleet mix changes (Embraer 190 → Airbus A220)

Noise Level, DNL	Existing – 2023		Forecast – 2028	
	Estimated Population	Estimated Housing Units	Estimated Population	Estimated Housing Units
65-70 dB	0	0	0	0
70-75 dB	0	0	0	0
75+ dB	0	0	0	0
Total	**0**	**0**	**0**	**0**

MVY AIRPORT
MARTHA'S VINEYARD

Figure 6-3:
Comparison of Existing Condition (2023) and Forecast Conditions (2028) NEM

- 2023 Baseline DNL Contour (65-75 dB)
- 2023 Baseline DNL Contour (60 dB Informational Only)
- 2028 Forecast DNL Contour (65-75 dB)
- 2028 Forecast DNL Contour (60 dB Informational Only)
- Airport Boundary
- Runway / Taxiway
- Building
- Major / Minor Road
- Railroad
- Municipal Boundary
- Single Family Residential
- Multi-Family Residential
- Mobile Home
- Transient Lodging
- Mixed Use
- Tribal Land
- Public Use 1 (Non-Compatible)
- Public Use 2 (Compatible)
- Agriculture
- Open Land
- Open Space / Recreation
- Commercial Use
- Manufacturing and Production
- Transportation / Utility
- Vacant / Undefined
- Ocean / Lake / Pond
- School
- Daycare
- Place of Worship
- Library
- Hospital
- Lighthouse
- Historic Structure (NRHP)
- Historic District (NRHP)

Note: Entire area shown is within the County of Dukes County.

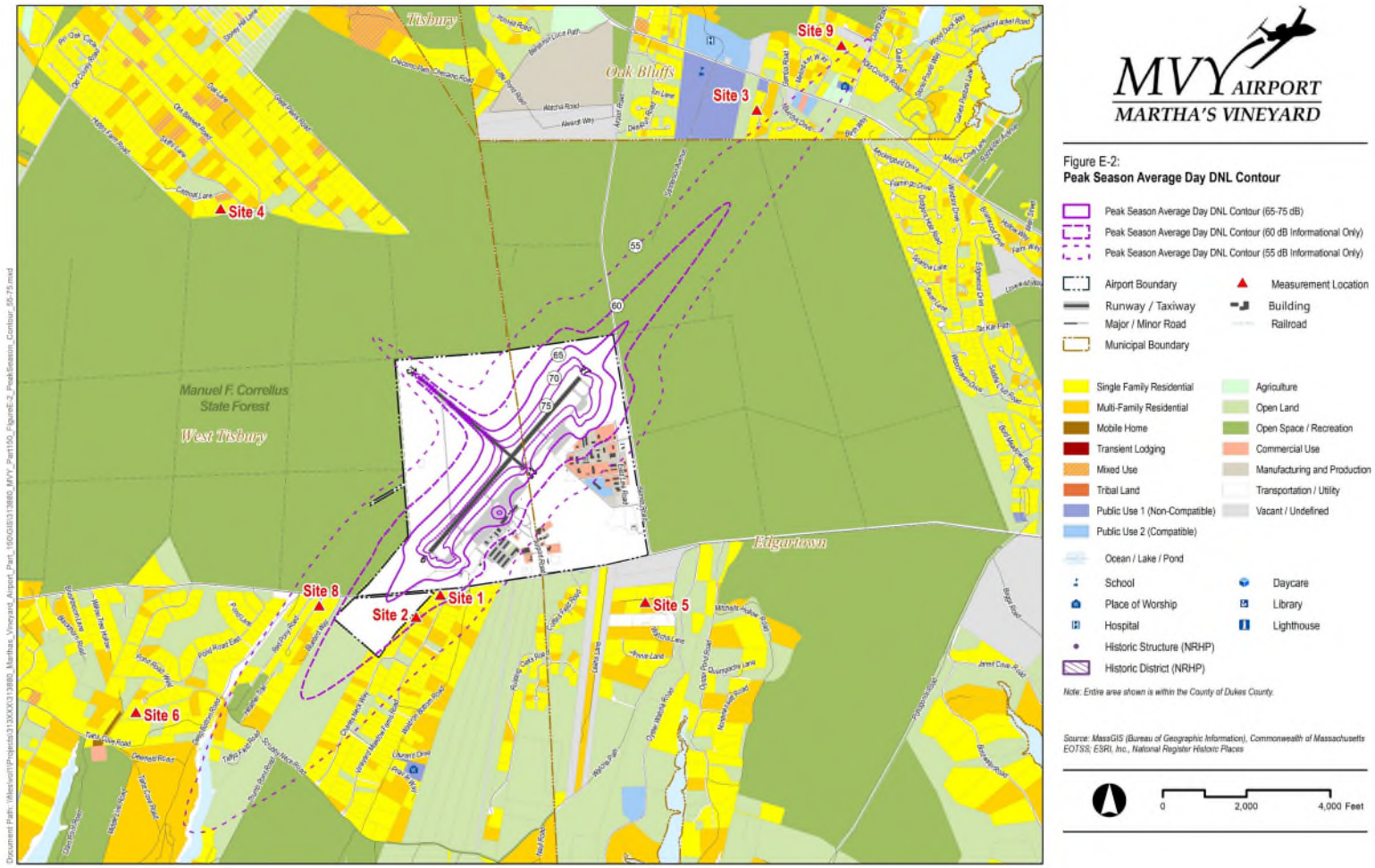
Source: MassGIS (Bureau of Geographic Information), Commonwealth of Massachusetts EOTSS; ESRI, Inc., National Register Historic Places

0 1,000 2,000 Feet

Draft Noise Exposure Contours – Peak Season

- Outermost contour DNL 55 dB shown for informational purposes and comparison to contours on MVY website

Peak season defined as July and August. Analysis based on counts from 2022 flight data.



MVY AIRPORT
MARTHA'S VINEYARD

Figure E-2:
Peak Season Average Day DNL Contour

- Peak Season Average Day DNL Contour (65-75 dB)
- Peak Season Average Day DNL Contour (60 dB Informational Only)
- Peak Season Average Day DNL Contour (55 dB Informational Only)
- Airport Boundary
- Runway / Taxiway
- Major / Minor Road
- Municipal Boundary
- Measurement Location
- Building
- Railroad
- Single Family Residential
- Multi-Family Residential
- Mobile Home
- Transient Lodging
- Mixed Use
- Tribal Land
- Public Use 1 (Non-Compatible)
- Public Use 2 (Compatible)
- Agriculture
- Open Land
- Open Space / Recreation
- Commercial Use
- Manufacturing and Production
- Transportation / Utility
- Vacant / Undefined
- Ocean / Lake / Pond
- School
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- Hospital
- Historic Structure (NRHP)
- Historic District (NRHP)
- Daycare
- Library
- Lighthouse

Note: Entire area shown is within the County of Dukes County.

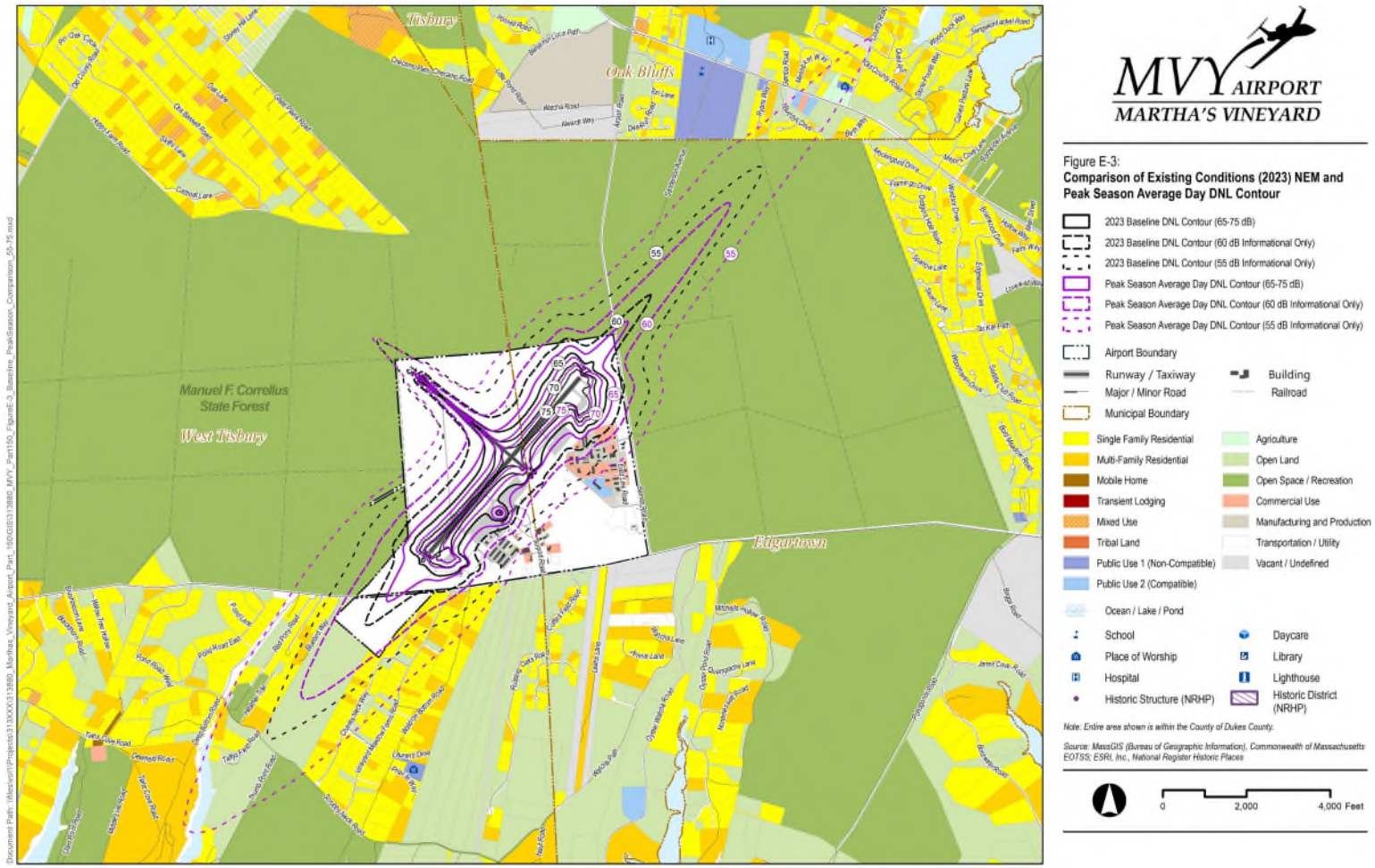
Source: MassGIS (Bureau of Geographic Information), Commonwealth of Massachusetts EOTSS; ESRI, Inc., National Register Historic Places

0 2,000 4,000 Feet

Draft Noise Exposure Contours – 2023/Peak Season

- Outermost contour DNL 55 dB shown for informational purposes and comparison to contours on MVY website

Peak season defined as July and August. Analysis based on counts from 2022 flight data.



MVY AIRPORT
MARTHA'S VINEYARD

Figure E-3:
Comparison of Existing Conditions (2023) NEM and Peak Season Average Day DNL Contour

- 2023 Baseline DNL Contour (65-75 dB)
- 2023 Baseline DNL Contour (60 dB Informational Only)
- 2023 Baseline DNL Contour (55 dB Informational Only)
- Peak Season Average Day DNL Contour (65-75 dB)
- Peak Season Average Day DNL Contour (60 dB Informational Only)
- Peak Season Average Day DNL Contour (55 dB Informational Only)
- Airport Boundary
- Runway / Taxiway
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- Single Family Residential
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- Historic Structure (NRHP)
- Daycare
- Library
- Lighthouse
- Historic District (NRHP)

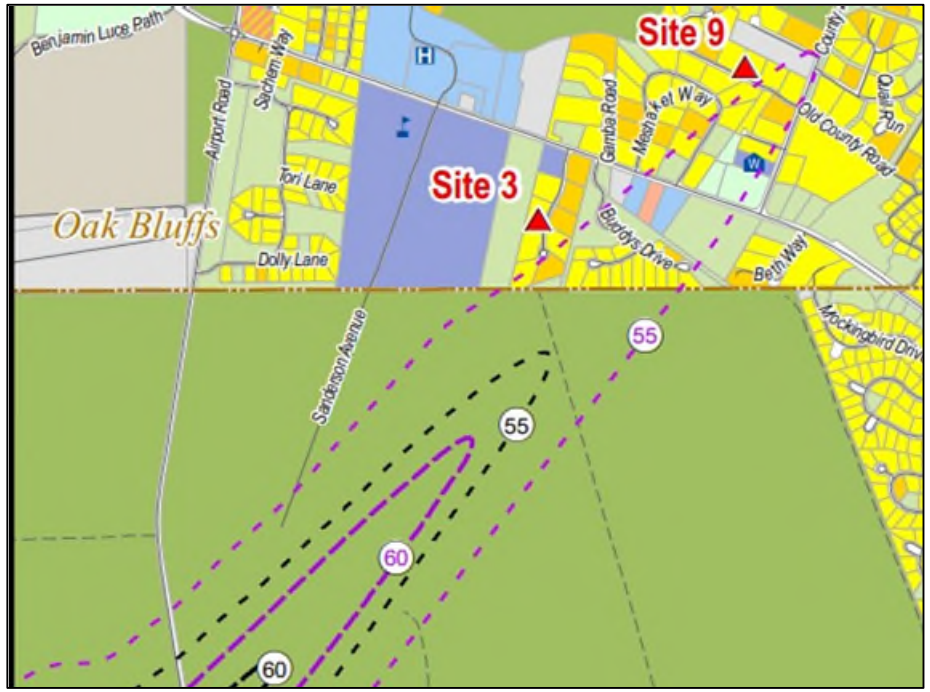
Note: Entire area shown is within the County of Dukes County.

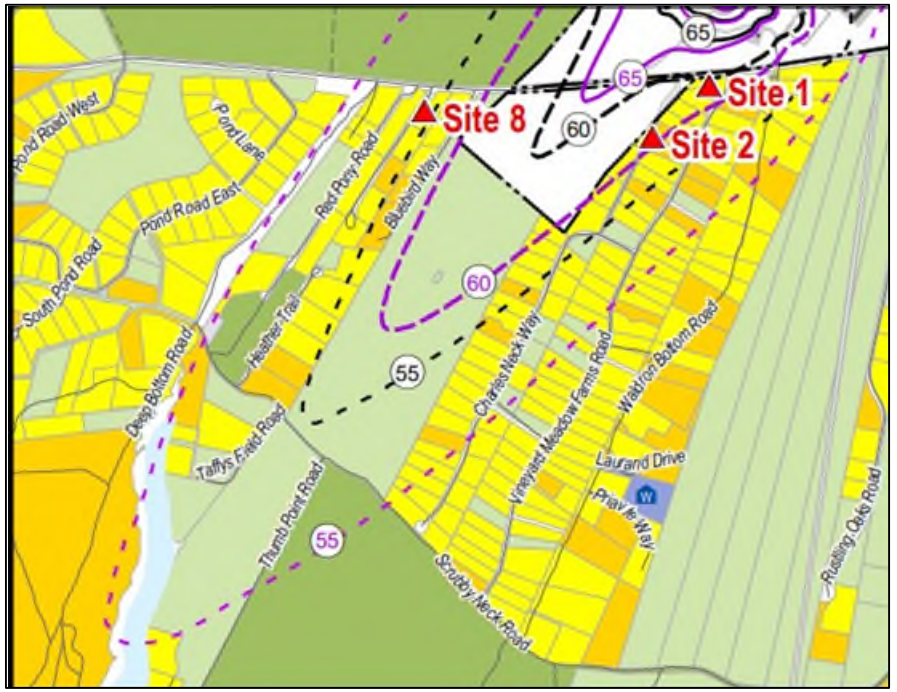
Source: MassGIS (Bureau of Geographic Information), Commonwealth of Massachusetts EOTSS; ESRI, Inc., National Register Historic Places

0 2,000 4,000 Feet

Draft Noise Exposure Contours – 2023/Peak Season

Zoom-in views of land use closest to Airport





MVY AIRPORT
MARTHA'S VINEYARD

Figure E-3:
Comparison of Existing Conditions (2023) NEM and Peak Season Average Day DNL Contour

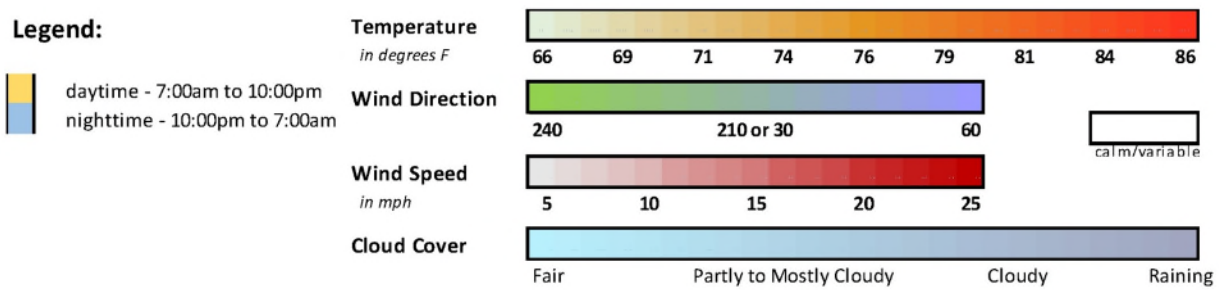
- 2023 Baseline DNL Contour (55-75 dB)
- Peak Season Average Day DNL Contour (55-75 dB)
- Measurement Location
- Place of Worship

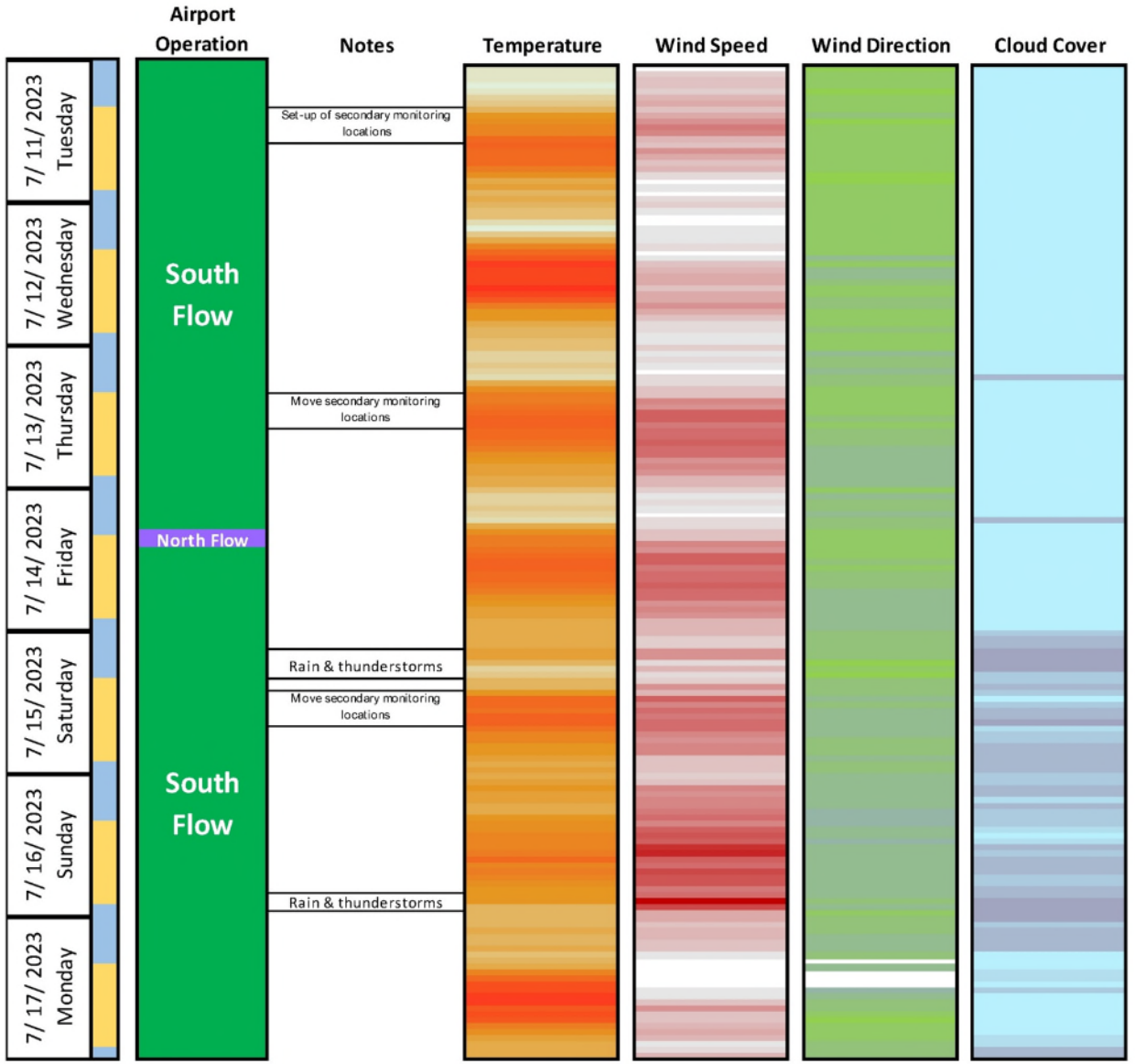
Noise Measurement Program

- HMMH and MJ staff measured noise at 10 sites from July 10-18, 2023
  - Staff spent time observing and logging aircraft noise events
- Goals:
  - measure Day Night Average Sound Level (DNL) values during the peak season,
  - obtain single event noise data (SELs) from typical airport operations

Noise Measurement Program

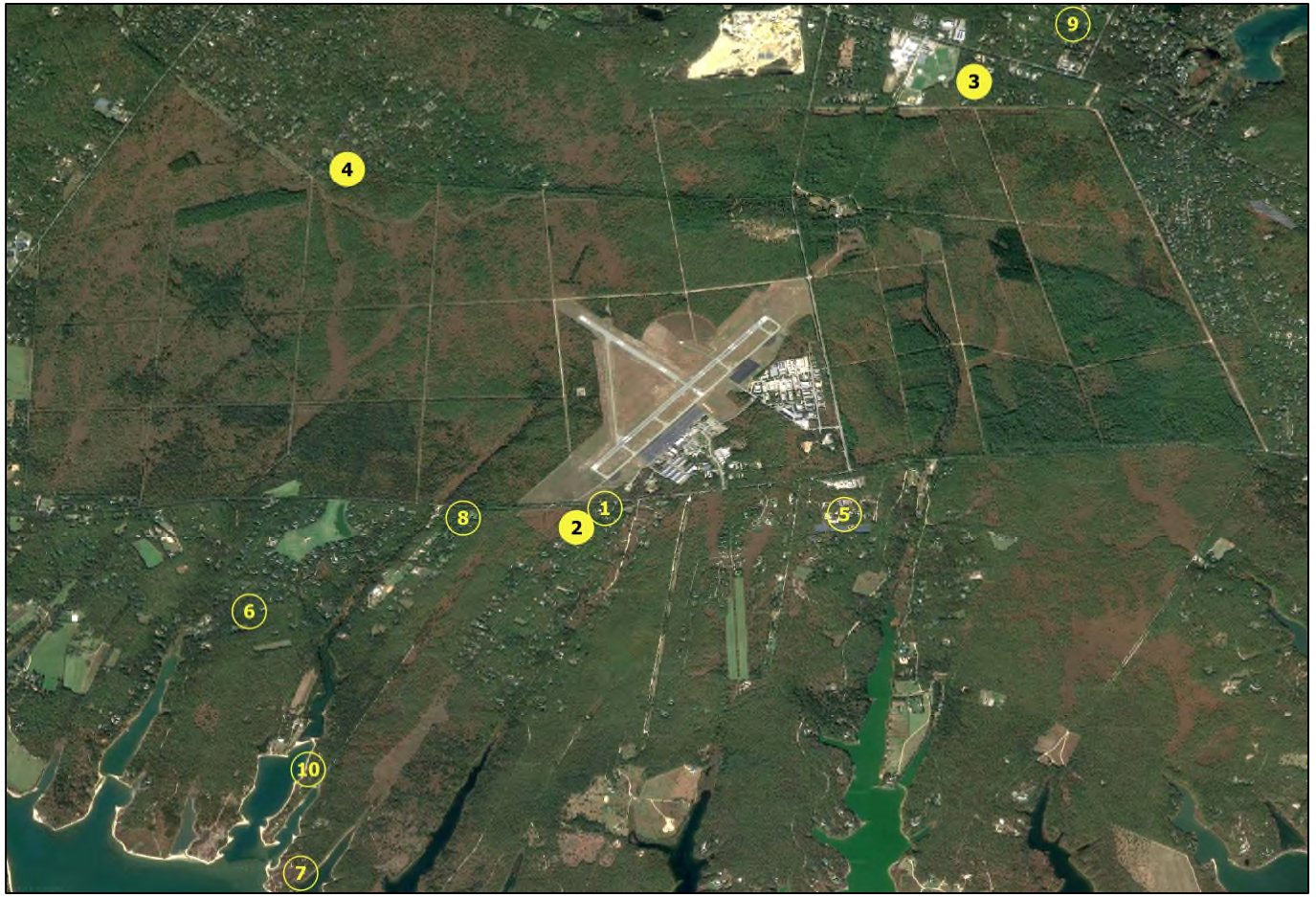
- Airport was in south flow almost exclusively (arrivals to and departures from Runway 24)
- Flow direction corresponds to wind direction
- Excess noise energy from rain and thunderstorms was excluded from DNL calculations
- Airport briefly closed on Saturday afternoon



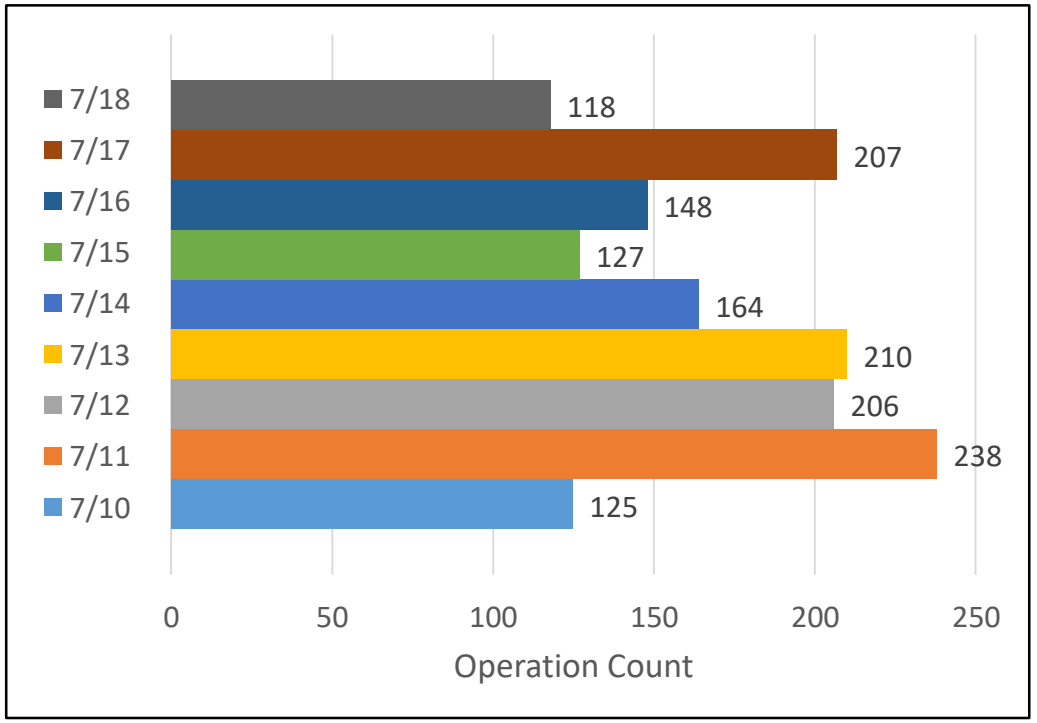


Noise Monitor Locations

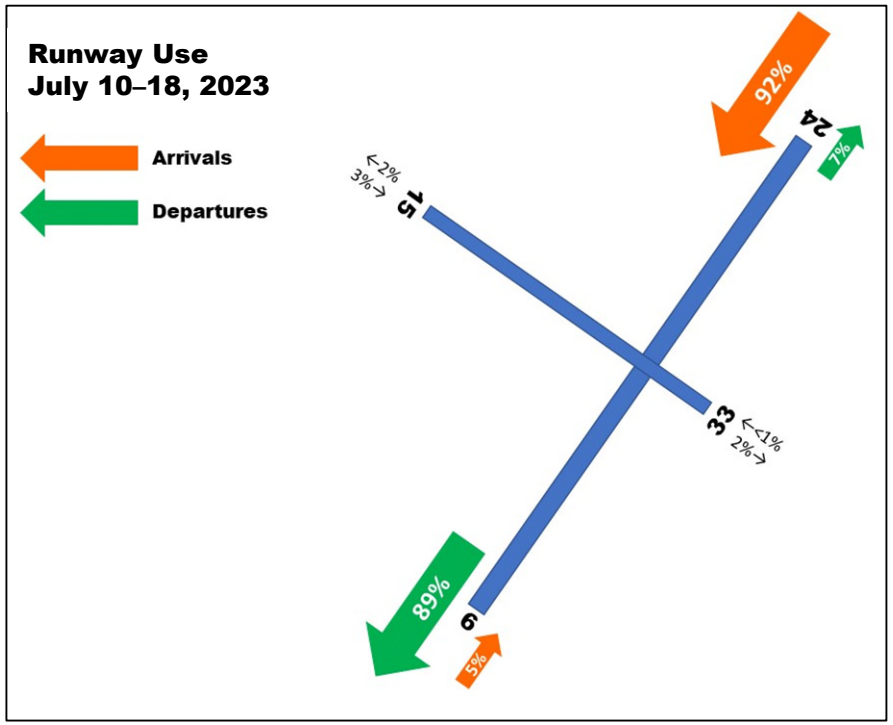
- 3 primary sites
  - Used 3 of the 6 monitors
  - Closest to runway ends
  - Collected data all week (180 hours)
  - Circles 2, 3, 4
- 7 secondary sites
  - Used other 3 monitors
  - 48 – 120 hours at each
  - Different types of aircraft noise events
  - Circles 1, 5, 6, 7, 8, 9, 10



Aircraft Activity During Measurement Program

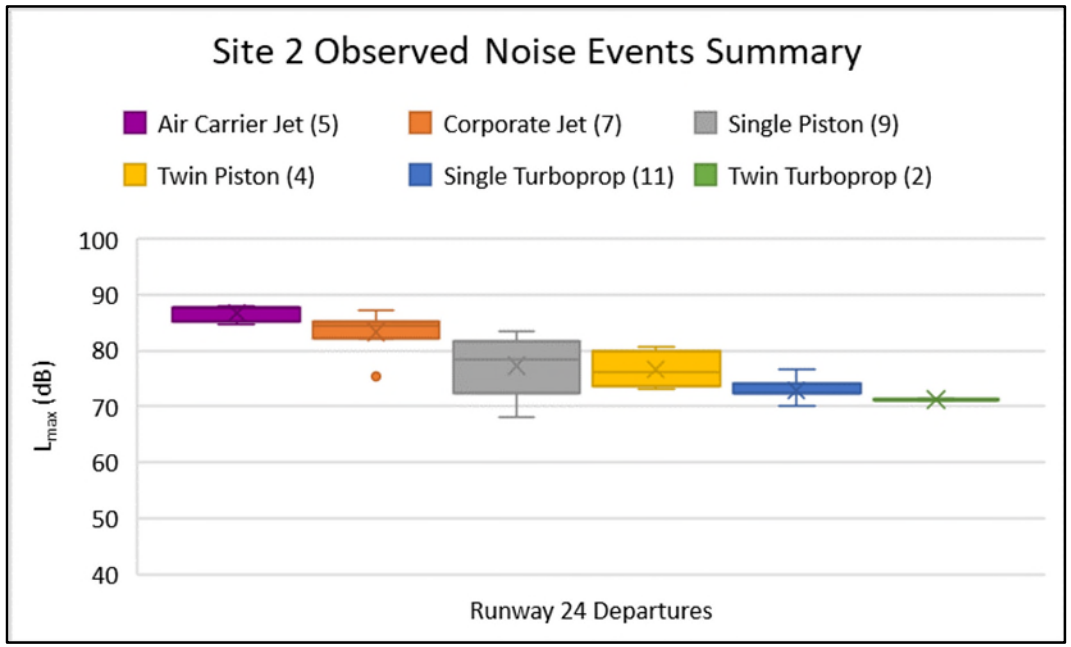


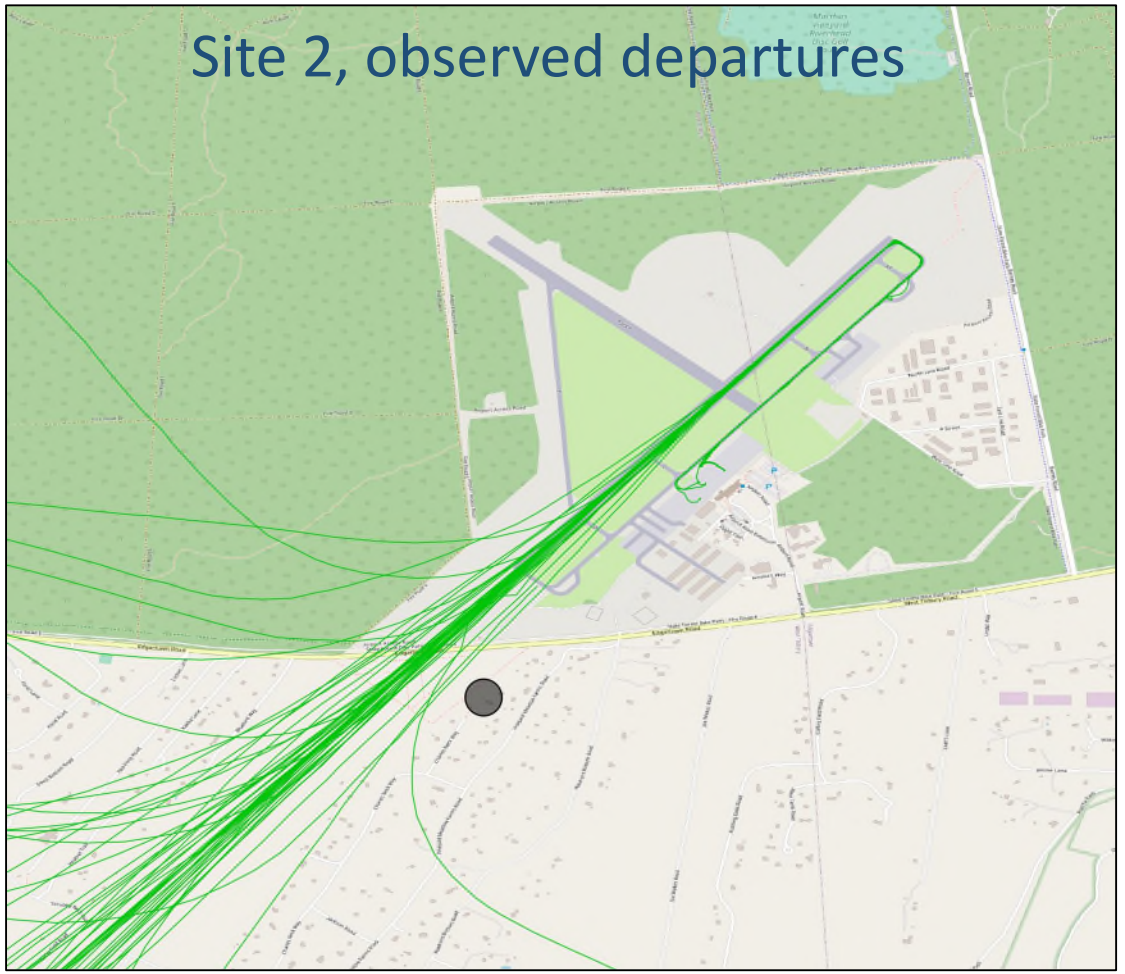
- An average of 230 operations per day were modeled for the peak season contours
- Peak season runway use was modeled with about 80% using Runway 24



Sample of Measured Noise Levels – Aircraft Events

Aircraft Category	Number of Events	L_{max} Range
Air Carrier Jet	5	85 – 88
Corporate Jet	7	75 – 87
Single Piston	9	68 – 83
Twin Piston	4	73 – 81
Single Turboprop	11	70 – 77
Twin Turboprop	2	71 – 71





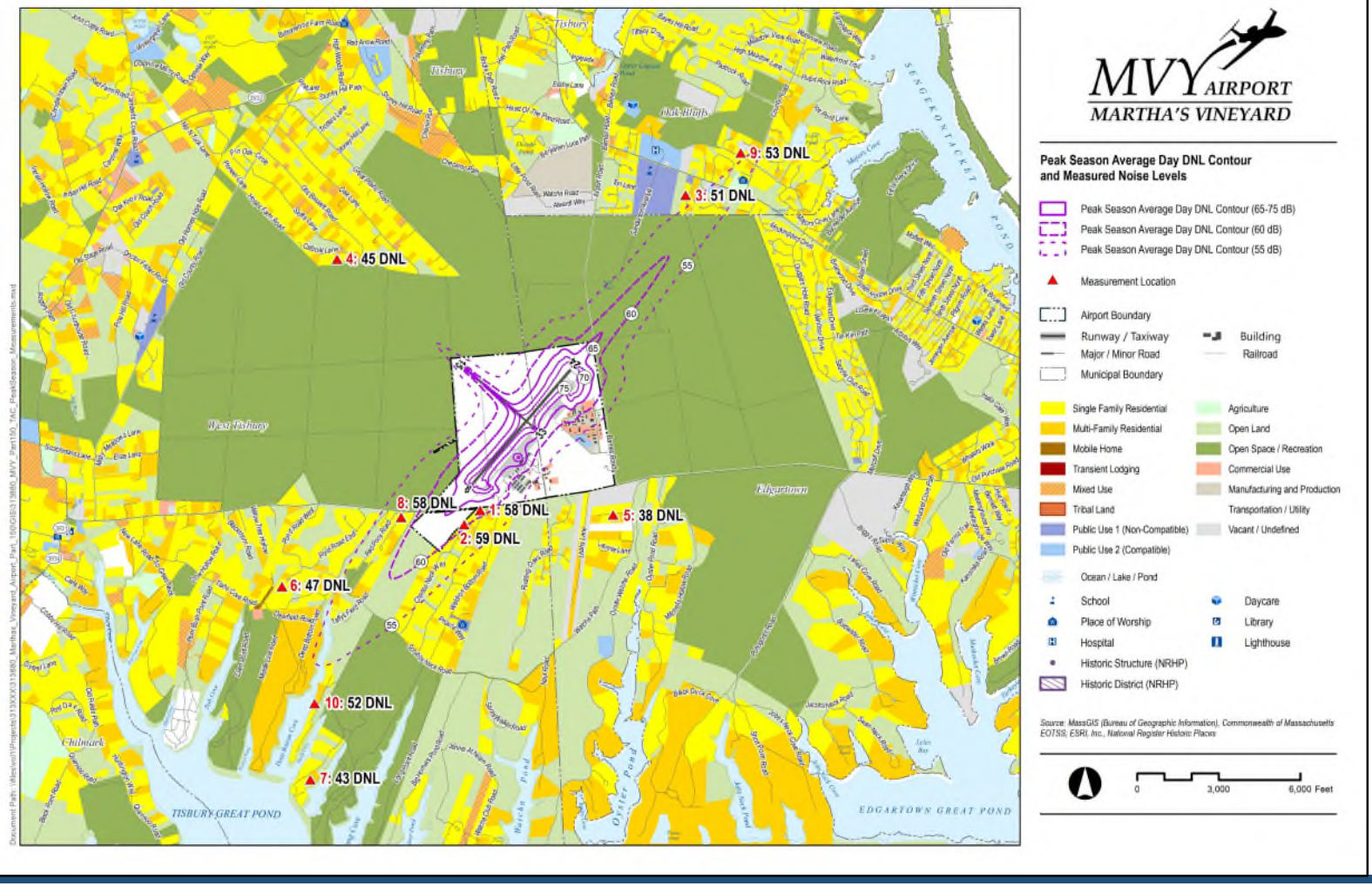
Measured Noise Levels – DNL

- All measured aircraft DNL are well below 65 dB
- Total DNL includes non-aircraft noise sources

Site	Location	Tues July 11	Wed July 12	Thurs July 13	Fri July 14	Sat July 15	Sun July 16	Mon July 17	Aircraft Total DNL	Total DNL with All Sources
1	Vineyard Meadow Farms Road				56	57	59	59	**58**	**59**
2	Vineyard Meadow Farms Road	58	57	57	57	59	61	60	**59**	**60**
3	Ryan's Way, Oak Bluffs	49	48	52	51	49	52	54	**51**	**53**
4	Catboat Lane	44	43	45	47	47	45	46	**45**	**55**
5	Watcha Path	37	39						**38**	**53**
6	South Pond Road		46						**47**	**50**
7	Middle Point Road				43				**43**	**54**
8	Edgartown – West Tisbury Road						59	57	**58**	**59**
9	Quantapog Road		51	55	55				**53**	**55**
10	Thumb Point Road						50		**52**	**55**

Measured Noise Levels – DNL

Site	Peak Season AEDT-Calculated DNL	Difference (Measured – Peak-Season AEDT)
1	61	-3
2	60	-1
3	54	-3
4	48	-3
5	45	-7
6	50	-5
7	47	-5
8	58	-1
9	54	-1
10	52	-1



Fly Friendly Program Assessment

- MVY's noise abatement program established in 2003
- Voluntary & informal
- Evaluation based on the program materials published on the website, compared to full year of radar flight track data

https://mvyairport.com/noise-abatement-fly-friendly/

MVY AIRPORT
MARTHA'S VINEYARD

NOISE ABATEMENT

Volume 1 / Issue 1

FLY FRIENDLY

The Martha's Vineyard Airport is committed to being a good neighbor.

We have developed the Fly Friendly program to support flying activities that are considerate of our community.

The Fly Friendly program identifies practical measures to decrease noise, such as voluntary limitations of flight training and flights over residential areas, and promoting good flying habits.

FLYING HIGH TO LESSEN NOISE

Pilots are required by law to maintain a safe altitude at all times, including when flying over residential areas. Aside from landing or taking off, the minimum height a plane should fly is 1,000ft over inhabited areas and 500ft over uninhabited areas or over water.

Safety is always first

Safety is paramount at Martha's Vineyard Airport. Pilots are expected to make their best efforts to comply with the Fly Friendly program, but there may be times when weather, air traffic procedures and safe separation distances between aircraft may mean that they are not able to follow all of the fly friendly procedures.

Considerate flying

Pilots are encouraged to be respectful when flying to/from Martha's Vineyard. Through the Fly Friendly program, pilots are asked to:

- Be aware of noise sensitive areas
- Avoid prolonged engine run-ups during evening/night/morning
- Avoid flying low at all times, especially over residential areas
- Keep flight training patterns as compact as possible, avoid turns over residential areas.
- Climb to altitude (2000ft) as soon as possible and then reduce power to cruise settings.
- Minimize tight turns over residential areas
- Fly across the least noise-sensitive areas, circumnavigate the island over the water.
- Use proper power settings during arrivals and departures.
- Visit **mvyairport.com** for more information and updates.

Delaying aircraft turns

Because residential communities surround most areas South and West of the airport, pilots should make every effort to wait to turn to minimize noise over residential areas (see map 1a.) Aircraft landing runway 06 will intercept a 2 mile straight in (SILOC) or turn over the 3rd finger of the West Tisbury Great pond. Aircraft departing runway 24 are asked to make their turn at an altitude of 2000ft or 2 miles, 3rd finger of the pond. Right hand turns can be made departing runway 24 before the West Tisbury road and the turn stays within the confines of the State Forest and it is a **SAFE** operation for the pilot and aircraft.

"Complying with voluntary noise abatement procedures helps maintain the character of Martha's Vineyard that has made it a treasured place to live, work and visit"

VOLUNTARY NOISE ABATEMENT PROGRAMS AT MVY

Martha's Vineyard airport has long implemented a voluntary noise abatement program to address aircraft activity that may affact our sourounding communitites.

- No departures exceeding 75 dBa between 2200 and 0600 local time (10:00pm-6:00am)
- All aircraft to avoid intersection departures
- Corporate pilots use close-in noise abatement profiles as defined by their aircraft manufacturer or by the National Business Aircraft Association (NBAA)
- Preferred runway for noise abatement is runway 06
- Use over-water approaches/departures (06-24) to reduce noise over residential areas especially at night and early mornings.
- Pattern altitudes: light aircraft (1000ft) Large and Turbine powered aircraft (1500ft)
- Remain 1 mile off shore when circumnavigating the island
- See FAA Advisor Circular AC90-66A

KATAMA AIRFIELD TRAFFIC (NOT CONTROLLED BY MVY ATC)

- From N/NW: expect MVY transition N & E of shorline at 2000ft or overhead at 3000ft
- From West: expect MVY transition along South shoreline at 2000ft or overhead at 3000ft

NOISE REDUCTIONS ON THE GROUND

Noise on the apron can carry into residential areas. Try to minimize noise on the ramp.

- Auxiliary Power Units (APU) are important for pilots for safety checks and to keep the cabin comfortable. But excessive use creates noise exceeding 110 decibels and air pollution. **Please limit APU use to 15 minutes.**

MVY frequencies

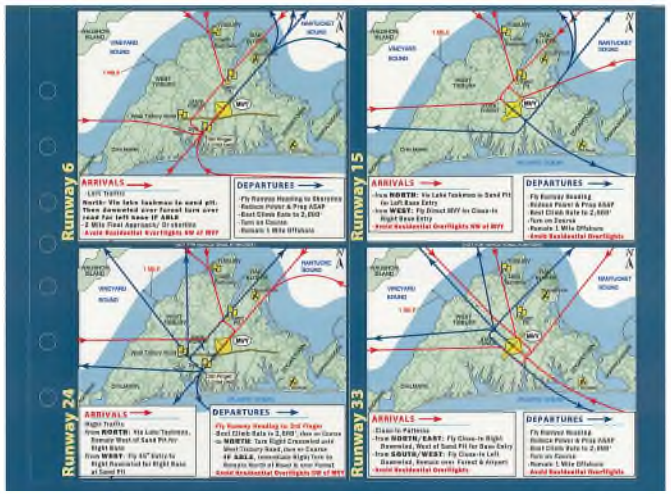
- Tower: 121.4
- Ground: 124.35
- Unicom: 122.95
- Boston South: 119.70

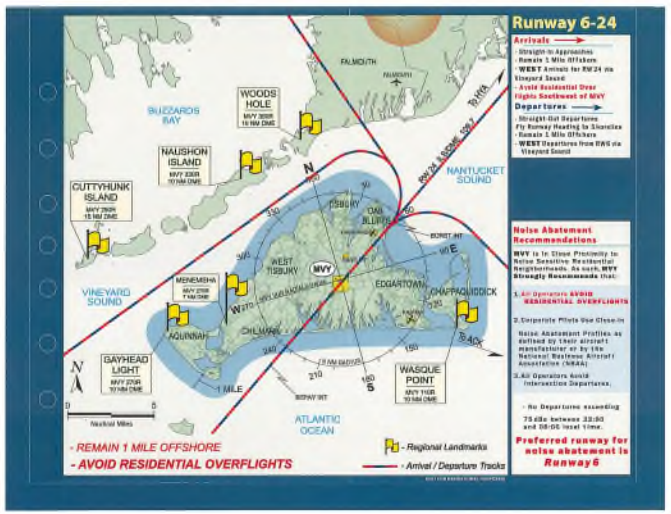
Fly Friendly Noise Abatement Program

Measure Number[2]	Recommendation[1]	Measure Status[3]
1	Delaying Aircraft Turns	Partially followed
2	No Departures Exceeding the 75dB Between 2200 and 0600 local Time	Followed
3	All Aircraft to Avoid Intersection Departures	Followed
4	Noise Abatement Profiles	N/A
5	Preferred Runway for Noise Abatement is Runway 06	Partially followed
6	Use Over-water Approaches/Departures for Runway 6/24	Not followed
7	Pattern Altitudes	Not followed
8	Remain 1 Mile Offshore When Circumnavigating the Island	Not followed
9	Use FAA Advisor Circular AC90-66A	N/A
10	Noise Reductions on the Ground	N/A

Notes:
(1) Measure information obtained from https://mvyairport.com/noise-abatement-fly-friendly/
(2) Numbering of measures is for the purposes of this evaluation; the measures are not numbered on the Fly Friendly program description published on the airport website

Measure 1: Delaying Aircraft Turns





"Light"
Aircraft under 12,500 lbs

Common light aircraft –
C402 (Cessna 402, Cape Air)
PC12 (Pilatus PC-12 Tradewind)
C172, P28A, C208 etc,
including smaller jets like
C25B (Cessna Citation)
SF50 (Cirrus Vision SF50)
E50P (Embraer Phenom 100)
HDJT (HondaJet), etc.

Aircraft weight data source
https://aspm.faa.gov/aspmhelp/index/Weight_Class.html

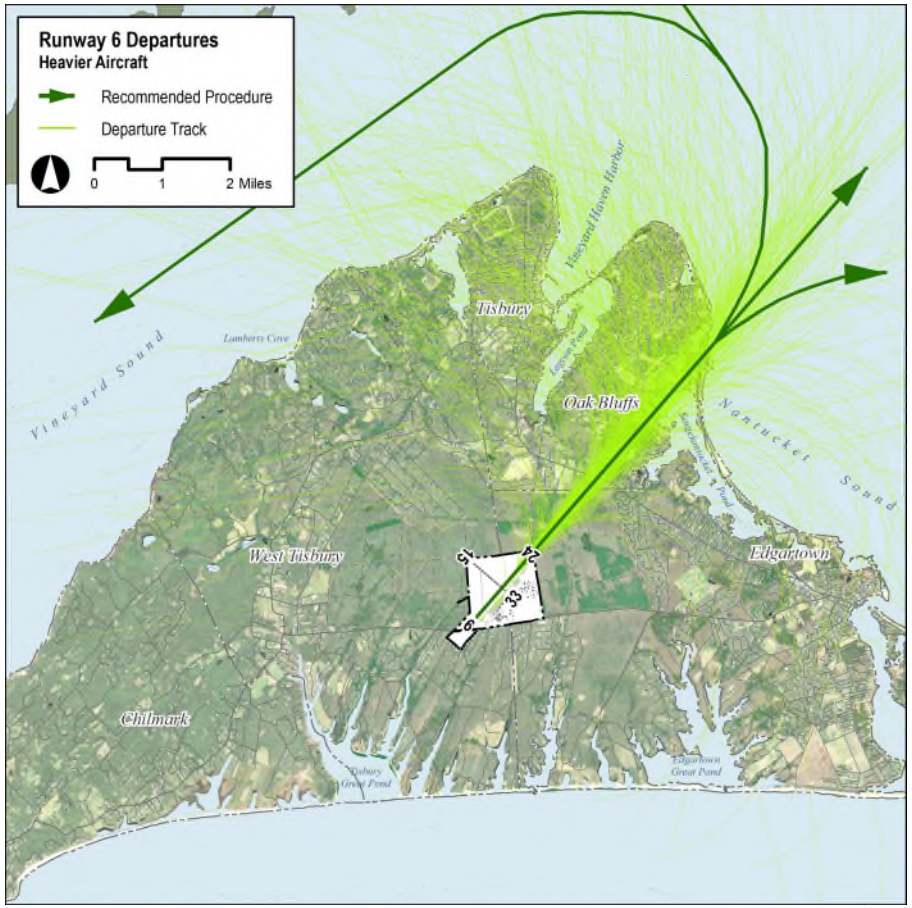
"Heavy"
Aircraft over 12,500 lbs

Common heavy aircraft –
E190 (JetBlue),
E175 (American, Delta),
larger business jets like
C680 (Cessna Citation Sovereign)
C56X (Cessna Citation Excel)
CL60 (Bombardier Challenger 600)
GIV (Gulfstream IV), etc.

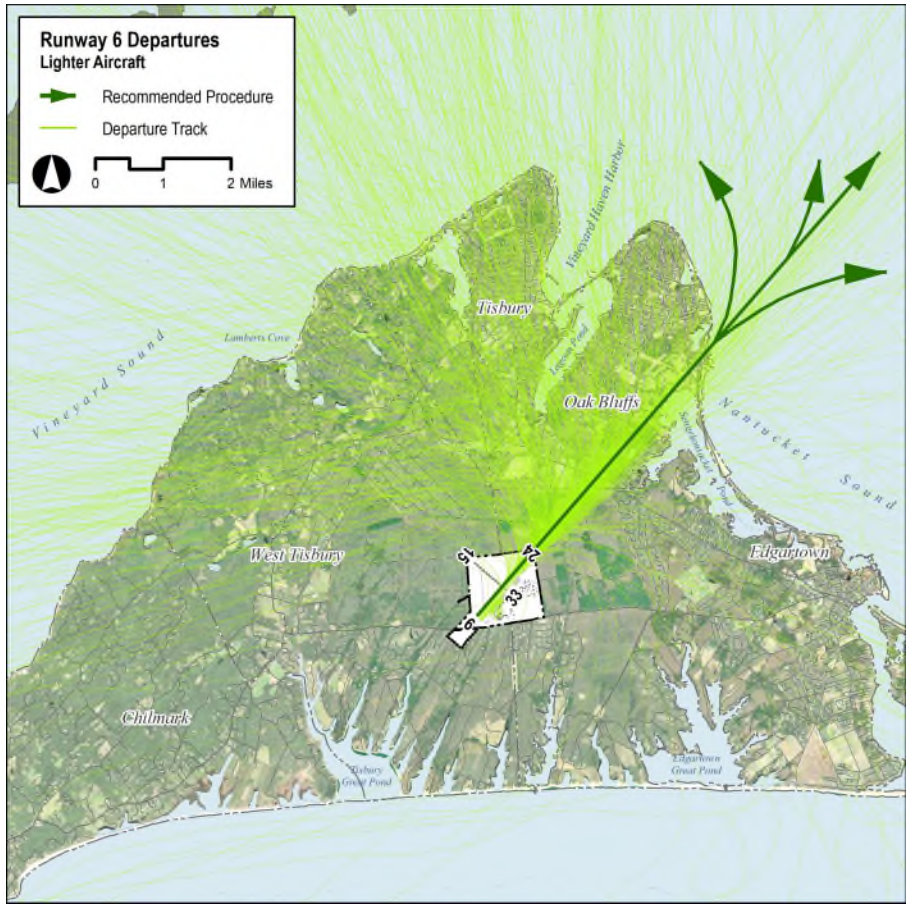
Fly Friendly diagrams can be viewed at
https://mvyairport.com/noise-abatement-fly-friendly/

Flight Track Assessment (Runway 6 departures)

Heavy (>12,500 lbs)

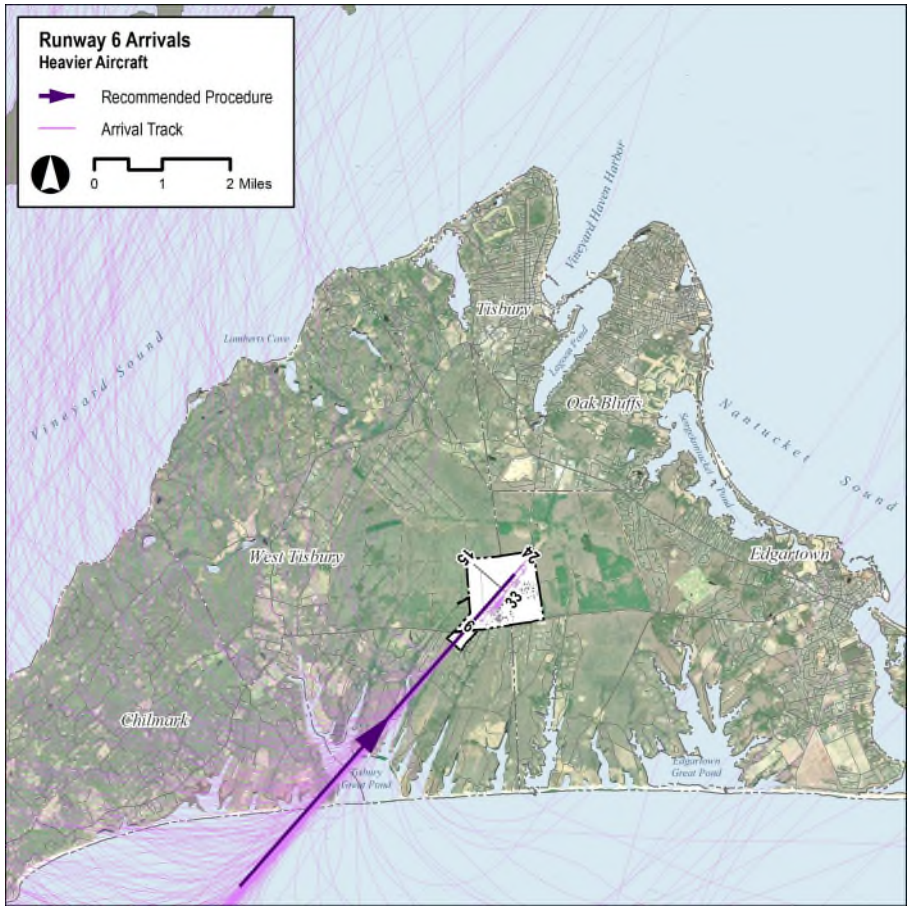


Light (<12,500 lbs)

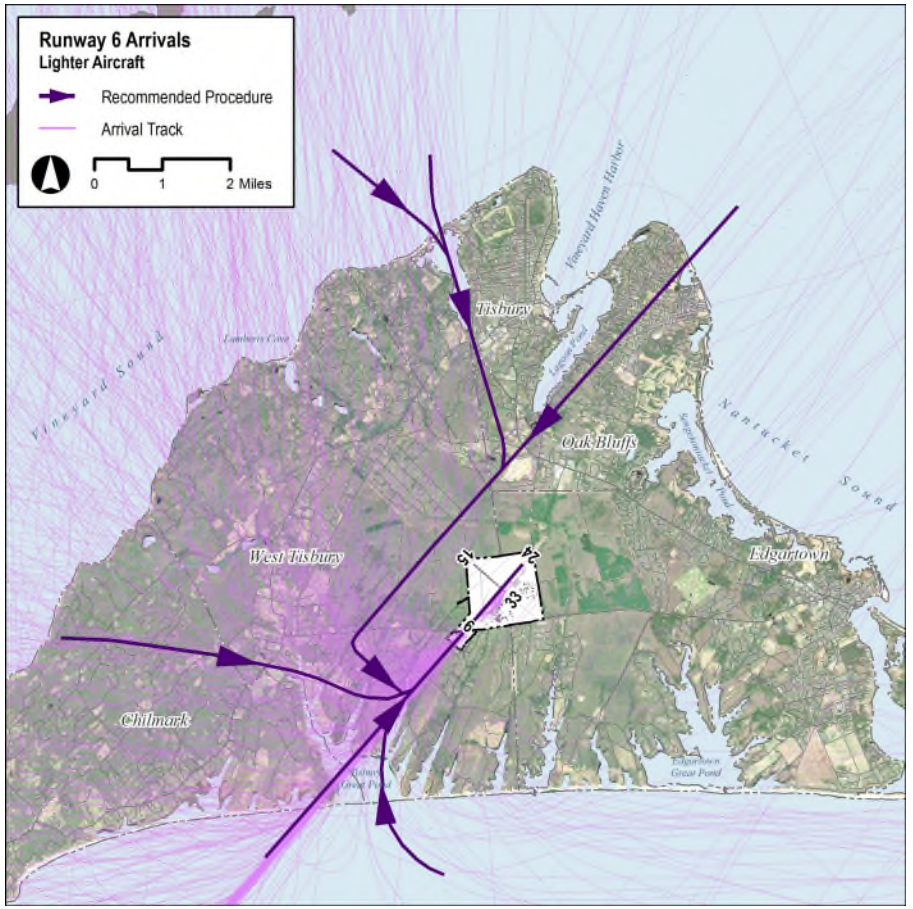


Flight Track Assessment (Runway 6 arrivals)

Heavy (>12,500 lbs)

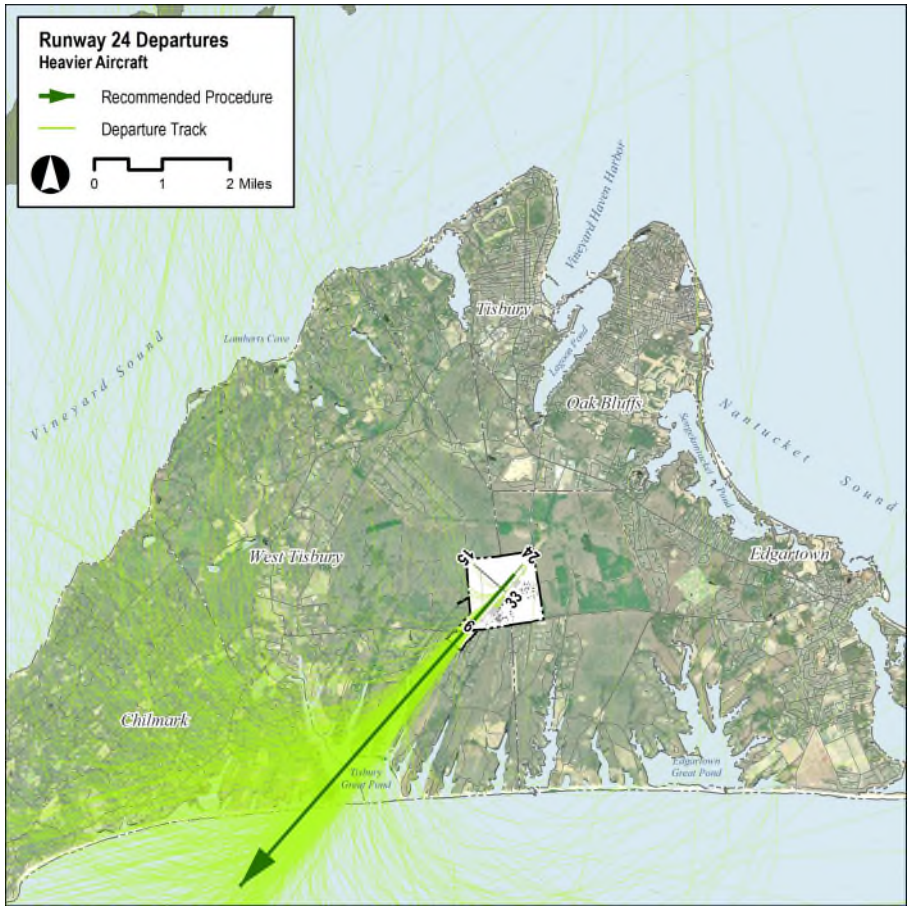


Light (<12,500 lbs)

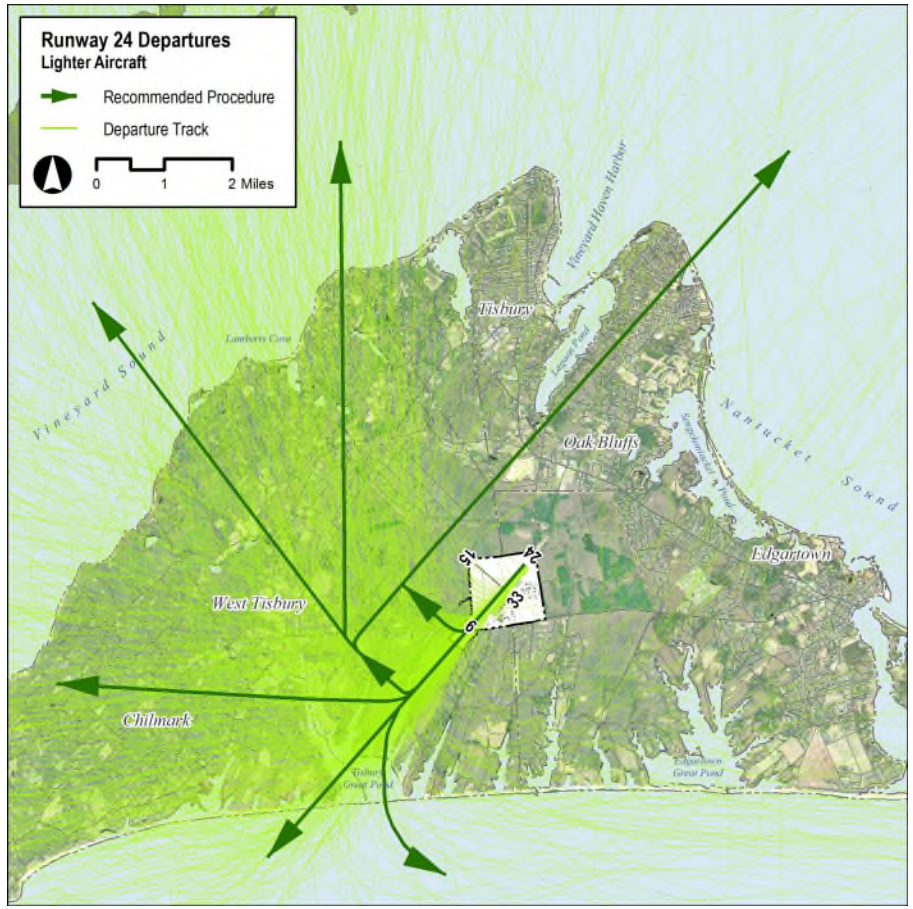


Flight Track Assessment (Runway 24 departures)

Heavy (>12,500 lbs)

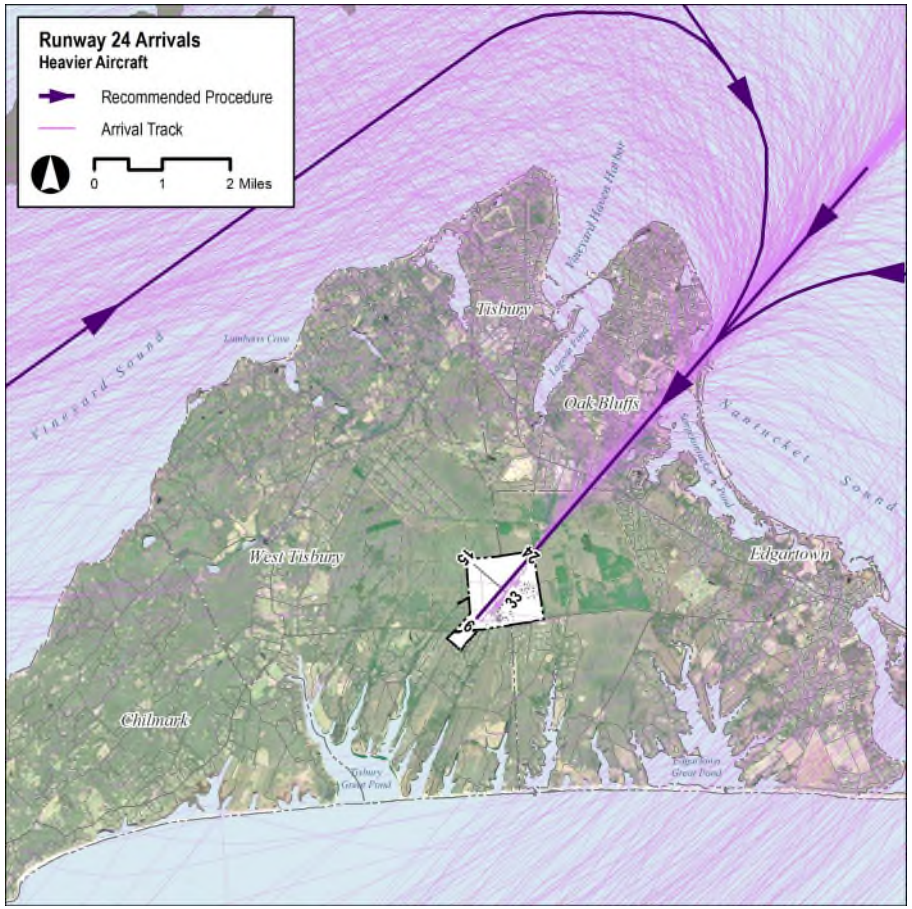


Light (<12,500 lbs)

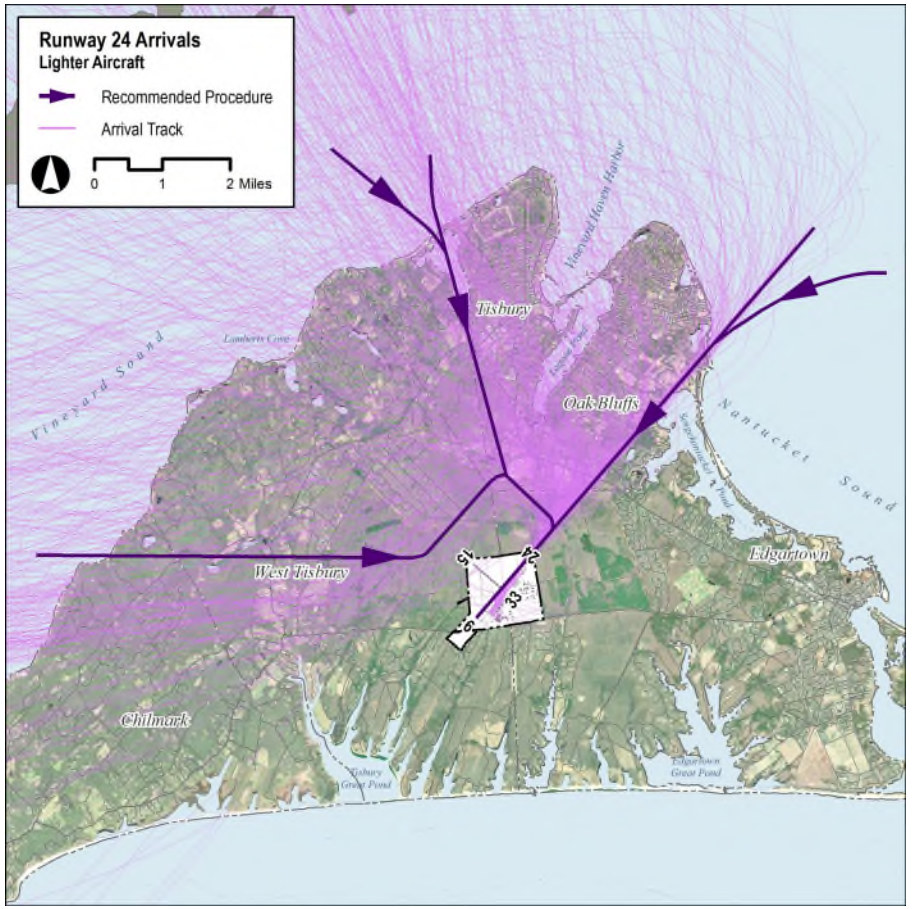


Flight Track Assessment (Runway 24 arrivals)

Heavy (>12,500 lbs)

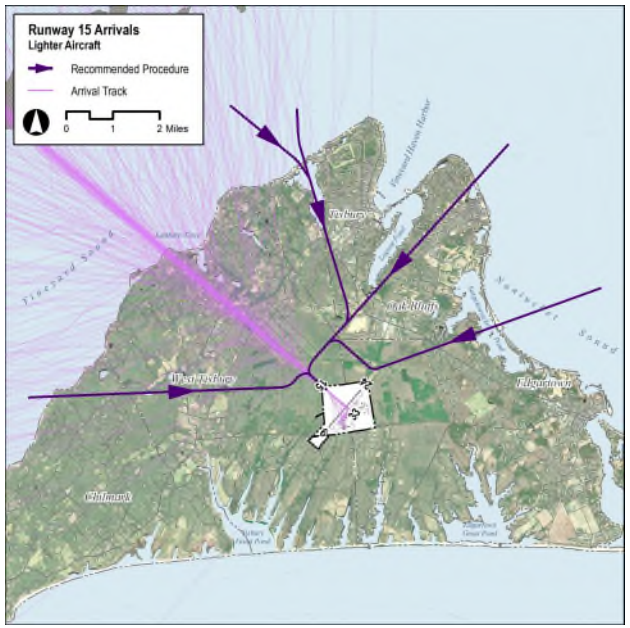


Light (<12,500 lbs)

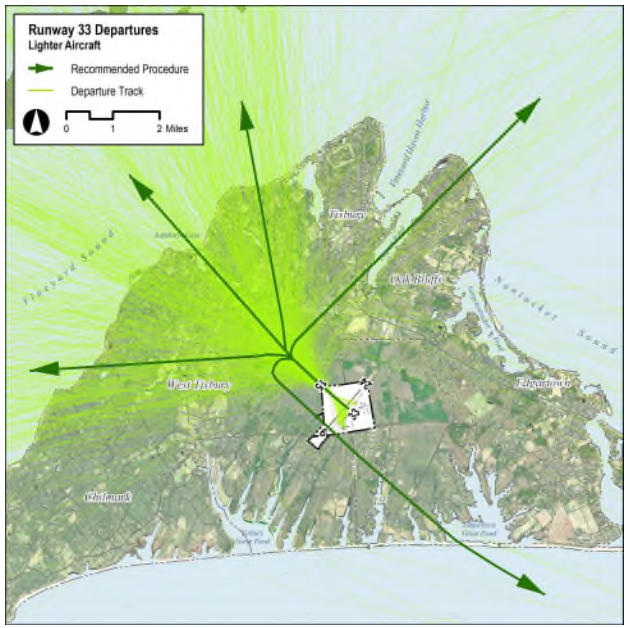


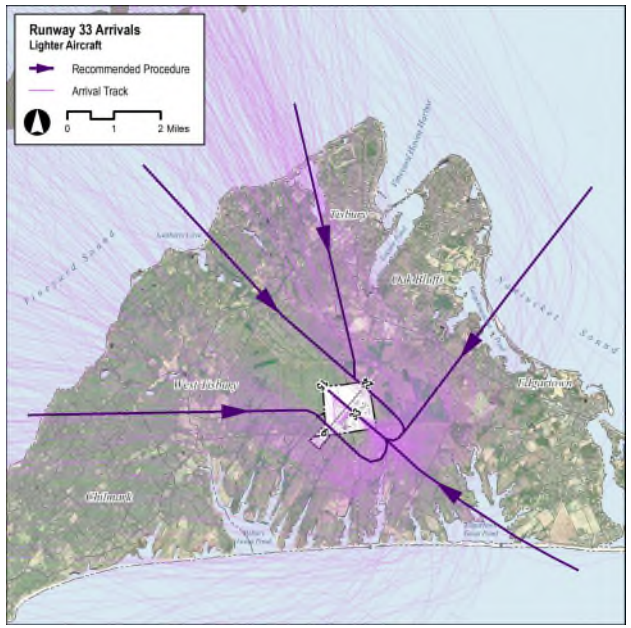
Flight Track Assessment (Runway 15/33 light aircraft)

Runway 15



Runway 33





Additional Fly Friendly Measures

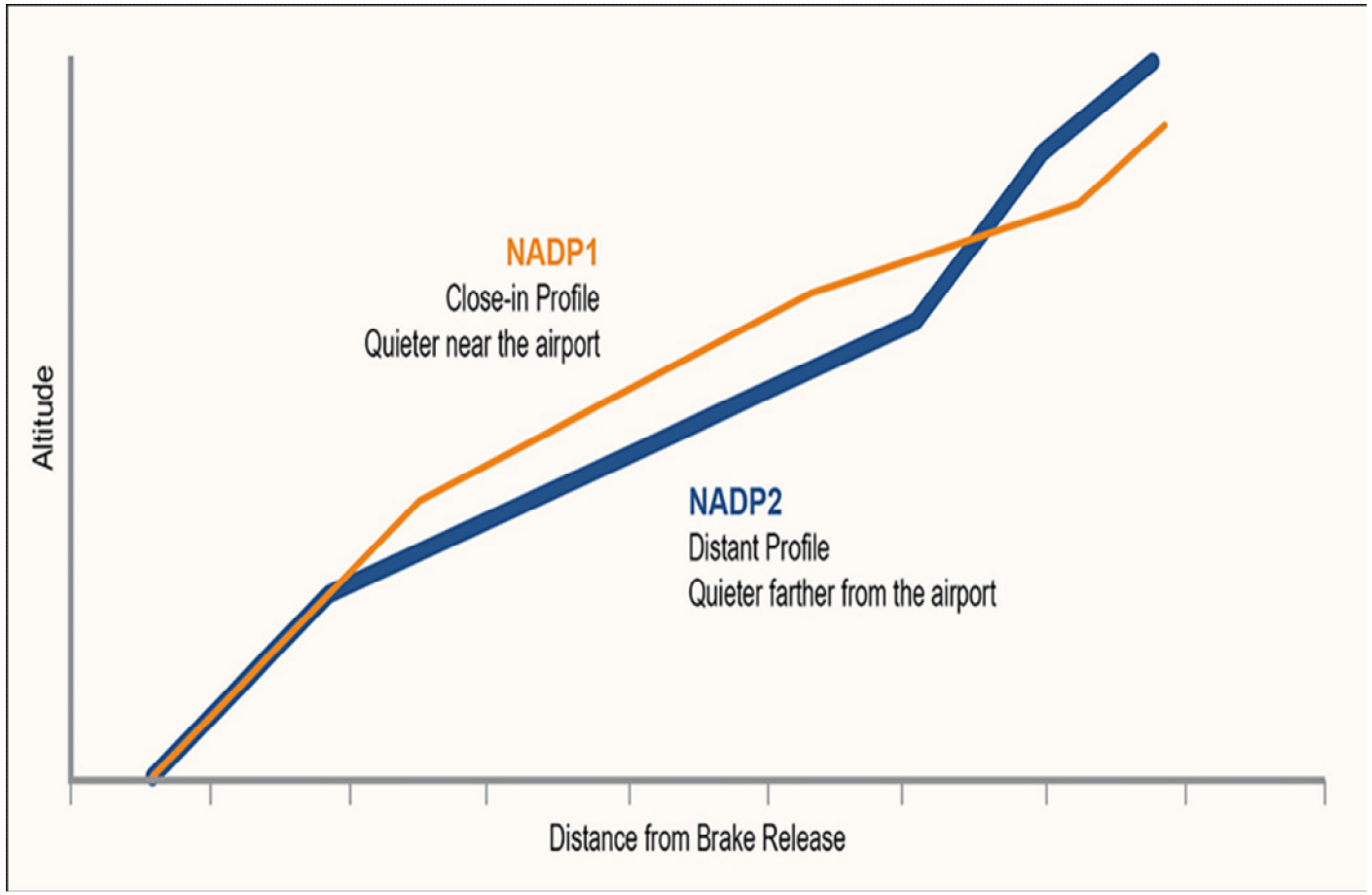
- Measure 2: No departures exceeding 75dB between 2200 and 0600 local time
  - In effect 10 pm to 6 am during May 15–October 31, and 5 pm to 7 am during November 1–May 14

- Measure 3: All aircraft to avoid intersection departures
  - Departing aircraft utilize full runway length to maximize altitude once off airport property

Measure information obtained from https://mvyairport.com/noise-abatement-fly-friendly/
Numbering of measures is for the purposes of this evaluation; the measures are not numbered on the Fly Friendly program description published on the airport website

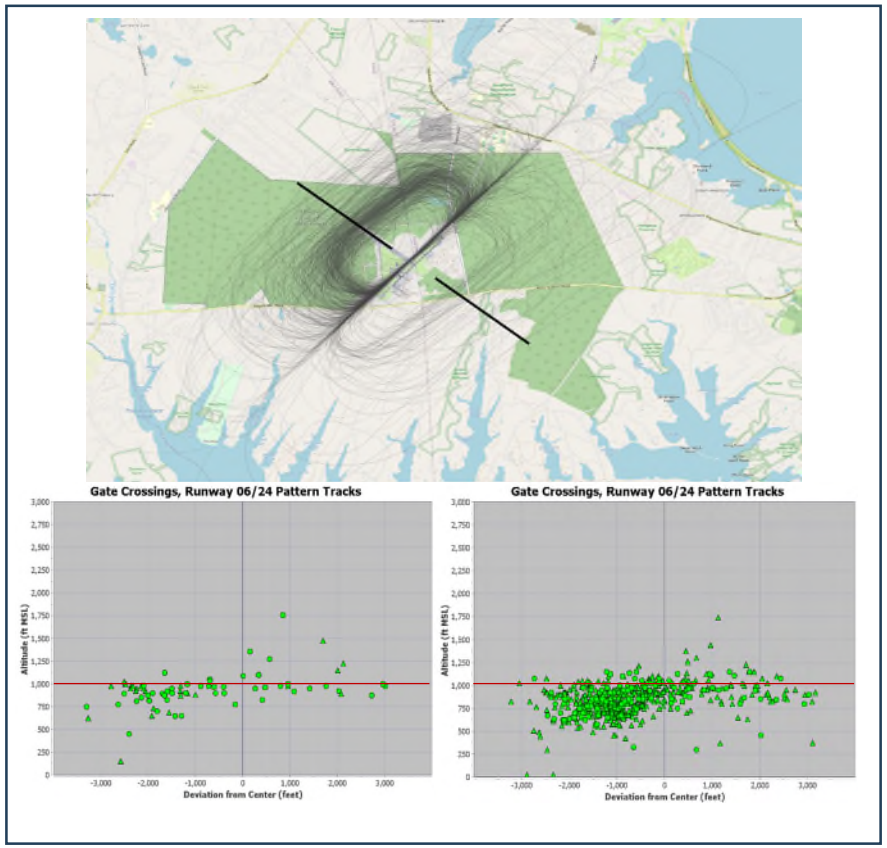
Additional Fly Friendly Measures

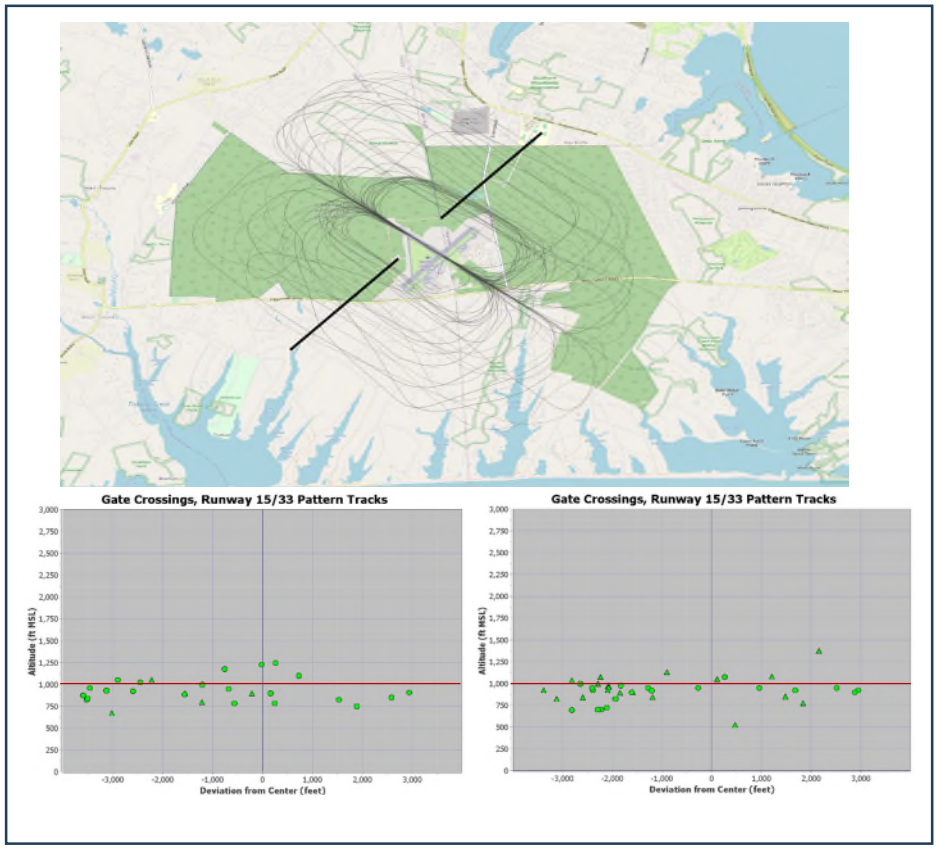
- Measure 4: Use NBAA Noise Abatement Profiles (“Close-in”)
  - Noise benefit to areas adjacent to the airport
  - MVY has not formally recommended corporate aircraft operators to implement close-in procedures
- Measure 5: Preferred runway for noise abatement is Runway 06
  - Utilization of Runway 6 is 23.4%
- Measure 6: Use Over-water Approaches/Departures (06/24) to Reduce Noise Over Residential Areas, Especially at Night and Early Mornings



Additional Fly Friendly Measures (cont.)

Measure 7: Pattern Altitudes (light aircraft: 1,000 ft; large and turbine powered aircraft: 1,500 ft)

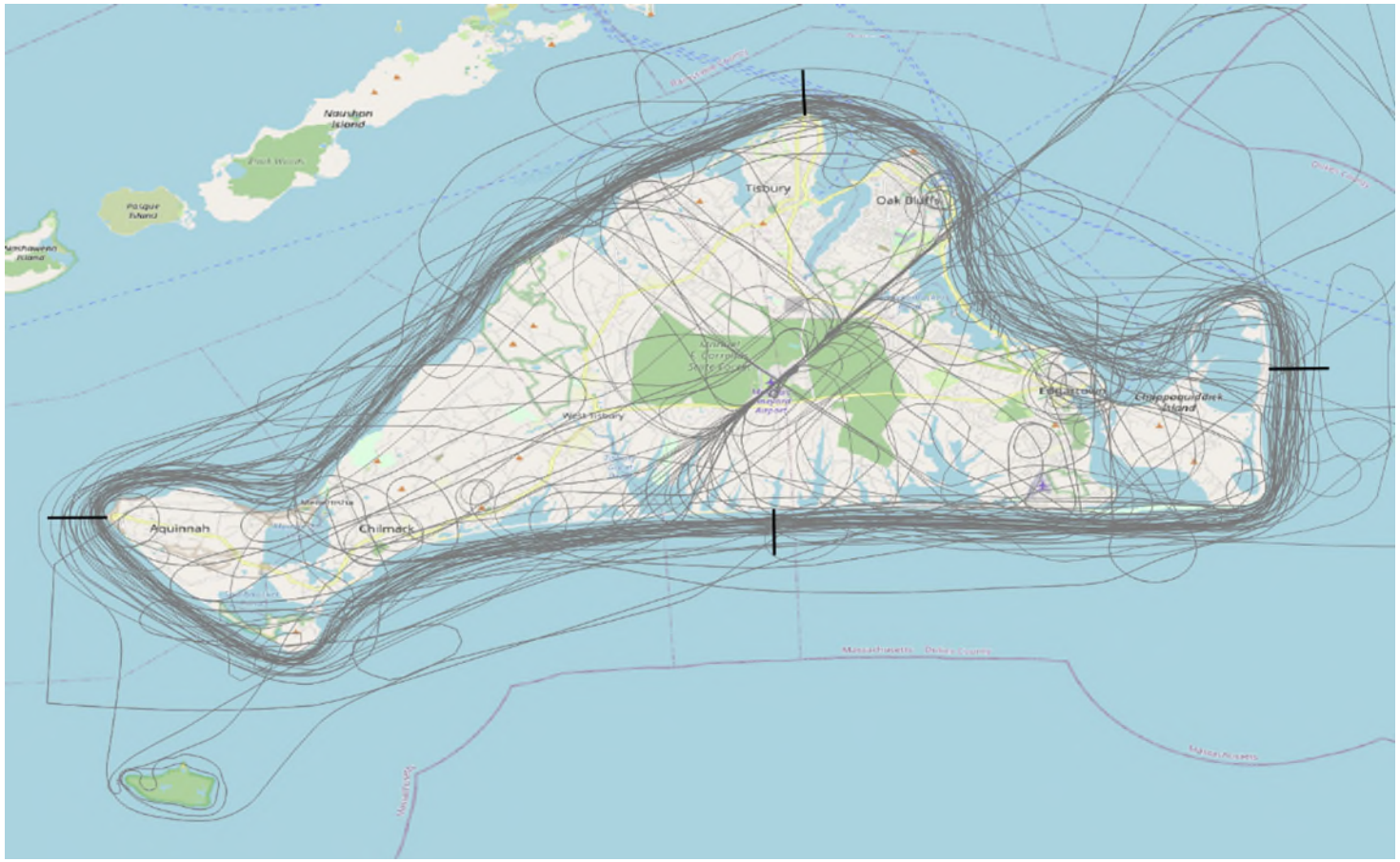




Additional Fly Friendly Measures (cont.)

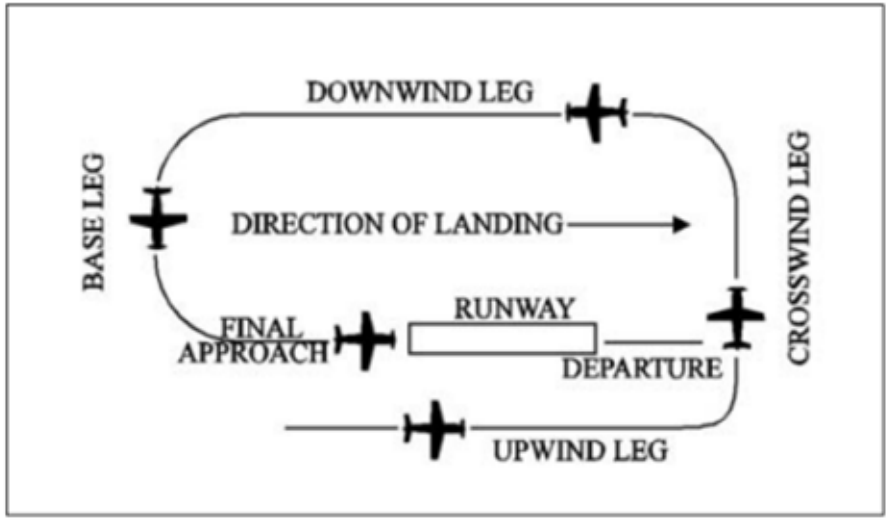
Measure 8: Remain 1 Mile Offshore When Circumnavigating the Island

- Compliance: 0%



Additional Fly Friendly Measures (cont.)

- Measure 9: Use FAA Advisory Circular AC90-66A
  - Recommended traffic patterns and procedures at airports without control towers or when control tower isn't operating

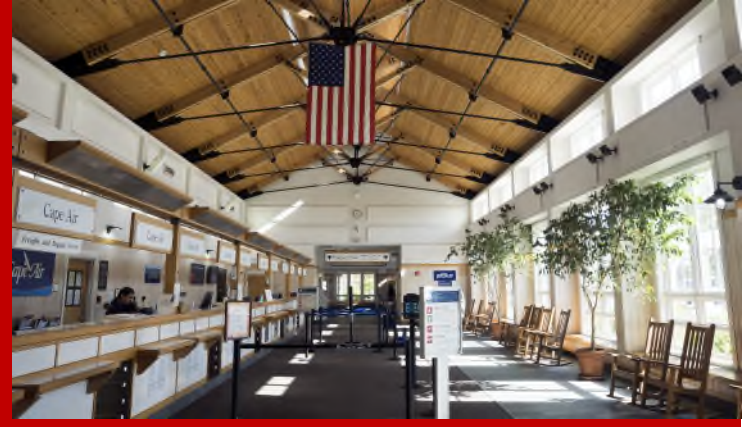


- Measure 10: Noise Reductions on the Ground
  - Limit APU use to 15 minutes

Next Steps

- Public information workshop on October 10th (today) from 6 to 8 pm
  - Martha's Vineyard Airport terminal
- Public comment period ends November 6
- The final report to be submitted to FAA by December 15
  - FAA will publish a record of acceptance of the NEMs and Report in the Federal Register
- MVY will use the information to
  - Communicate with pilots and ATCT on voluntary measures
  - Potential approach plate formalization – utilize waypoints
  - Communicate with town planning boards





TAC Member Discussion

Any comments on the NEM report should be addressed to HMMH by November 6, 2023.

Adjournment

- Thank you for your participation in this process!
- Project contacts and websites
  - Kate Larson, Project Manager – Part 150 Study
    - Address emails to KLarson@hmmh.com
  - Part 150 Website (https://mvyairport.com/mvypart150-faa-noise-study/)
    - Provides the most relevant information to this study
    - Will be updated regularly for public outreach purposes
    - TAC will receive direct notices
  - MVY Noise Abatement 'Fly Friendly' website
    - https://mvyairport.com/noise-abatement-fly-friendly/

Thanks for attending and participating!

Peak Season

Peak season (for noise modeling purposes) is defined as July and August