

SECTION 1

INTRODUCTION

1.1 THE PART 150 PROCESS

The *Aviation Safety and Noise Abatement Act of 1979* (ASNA), signed into law by the President on February 18, 1980, addresses the impact of aircraft noise on communities and ensures continued safety in aviation. Under ASNA, the Secretary of Transportation was charged with the responsibility of establishing a single system to measure aircraft noise at airports, determine noise exposure, and identify compatible land uses. Implementation of noise compatibility planning under the ASNA Act was delegated to the Federal Aviation Administration (FAA). The Federal regulation, known as Part 150, *Airport Noise Compatibility Planning*, is codified in 14 CFR § 150. The final rule was issued on January 18, 1985 (49 FR 49260) and has been amended several times. The Part 150 process is a balanced approach for mitigating the noise impacts of airports upon their neighbors while protecting or increasing both airport access and capacity as well as maintaining the efficiency of the national aviation system.

The Part 150 regulation:

- establishes standard noise methodologies and units,
- requires use of an FAA- approved model as the standard noise modeling methodology,
- identifies the land uses which normally are compatible or noncompatible with various levels of airport noise,
- provides standards for preparing Airport Noise Exposure Maps (NEMs) and Airport Noise Compatibility Programs (NCPs) by airport operators,
- provides for review of NEMs to ensure compliance with the Part 150 regulations,
- provides for review and approval or disapproval of NCP measures submitted to the FAA by airport operators, and
- establishes procedures and criteria for making projects eligible for funding as noise projects through the Airport Improvement Program (AIP).

The NEM is designed to clearly identify an airport's present and future noise patterns and the land uses which are not compatible with those noise patterns. An NEM consists of two maps of the airport with noise contours plotted over land uses, plus supporting documentation. The noise contours for the yearly day-night average aircraft sound levels (DNLs) of 65, 70, and 75 decibels (dB) are shown on these maps. The first map indicates the current conditions and, in effect, identifies the airport's noise compatibility problems. The second map projects the noise contours which can reasonably be predicted five years in the future taking into account changes in land use and in airport operations, plus any improvements in compatibility from noise mitigation actions which may be planned for that five-year period. An NEM is prepared in consultation with the airport's users, the public, local governments, land use control agencies, and the FAA. When reviewed and found in compliance with applicable rules and regulations, an airport's NEM serves as a standard reference to the airport's existing and future noise impacts for anyone proposing noise sensitive

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development in the vicinity of the airport. Under the Part 150 process, the FAA will indicate, upon receipt and review, whether the NEMs are in compliance with Part 150. If determined to comply, the FAA publishes a notice of acceptance in the Federal Register.

The purpose of the NCP for an airport is to show what measures the airport operator has taken or proposes to take to reduce noncompatible land uses and for preventing the introduction of additional noncompatible uses within the area covered by the airport's NEM. The NCP serves as the primary vehicle for guiding and coordinating the efforts and actions of all the agencies and individuals whose combined efforts are essential to achieving the maximum degree of noise compatibility between an airport and its neighbors while taking into account the requirements of the national aviation system.

The regulations contained in Part 150 are voluntary and airport operators are not required to participate. However, up-to-date Part 150 NEMs and an approved Part 150 Noise Compatibility Program (NCP) are the primary vehicle for gaining approval of applications for Federal grants for noise mitigation projects.

Details of the data and analysis used to develop the NEMs for Key West International Airport (EYW) are included in Sections 3.0, 4.0, and 5.0 of this document.

1.2 KEY WEST INTERNATIONAL AIRPORT NEM UPDATE

EYW is owned and operated by Monroe County, Florida. It is located on the southeast corner of the island of Key West, within the city limits of Key West, Florida. In the FAA's National Plan of Integrated Airports Systems (NPIAS), which defines the role of an airport, EYW is classified as a Non-Hub Primary Service airport enplaning more than 10,000 passengers per annum.

Monroe County has a long-established goal to provide aviation facilities to all residents and guests in a manner that maximizes safety, convenience, economic benefit, and environmental compatibility. As part of the plan to achieve its goal, Monroe County conducted a Part 150 Study in the mid to late 1990s to explore the impact of aircraft noise on the surrounding community. This Part 150 Study culminated with FAA approval of NEMs and an NCP on May 7, 1999.

The FAA Reauthorization Act of 2018 amended Section 47503(b) of title 49, United States Code. This revision requires airport operators that have submitted NEMs under §47503(a) to submit a revised map to the Secretary of Transportation "if, in an area surrounding an airport, a change in the operation of the airport would establish a substantial new noncompatible use, or would significantly reduce noise over existing noncompatible uses, that is not reflected in either the existing conditions map or forecast map currently on file with the Federal Aviation Administration.: Updated NEMs shall be required only if the relevant change in the operation of the airport occurs during:

- (A) the forecast period of the applicable noise exposure map submitted by an airport operator under subsection (a); or
- (B) the implementation period of the airport operator's noise compatibility program."

In addition to required updates to the NEM for the above reasons and in compliance with FAA Order 5100.38, the Airport Improvement Program Handbook, if a NEM is more than five years old and an airport sponsor desires to implement a noise compatibility project from their NCP that is funded by the FAA, the

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sponsor must provide written confirmation that the NEMs upon which the NCP-related project is based continue to be a reasonable representation of current and/or forecast conditions for the airport.

The FAA will not program (i.e., fund) noise compatibility projects using noise exposure maps that are more than five years old unless this process has been completed.

To remain in compliance with Part 150 and FAA Order 5100.38, Monroe County has prepared periodic updates to EYW's NEMs. Most recently, on December 19, 2013, the FAA determined that the NEMs submitted by the Monroe County Board of County Commissioners were in compliance with the applicable requirements. This current update is necessary due to changes in aircraft operational levels and the aircraft fleet mix operating at the airport. This current update will document if these changes have an influence on the size and shape of the EYW noise contours and will also document if there are any new noncompatible land uses within the updated DNL 65+ dB contours.

Part 150 requires the submission of two maps, an existing condition map and a future condition map. The existing NEM must be based on current data as of the year of submission to the FAA or be representative of existing conditions. For this update, the existing condition noise contours are based on data for the average annual day during the 12-month period from October 1, 2020, through September 30, 2021 (Federal Fiscal Year 2021). As documented in Section 6.7 of this report, the existing condition noise contours are identified and certified by the airport operator as the 2022 Existing Condition NEM. The airport operator has verified and certified that the 2022 Existing Condition NEM accurately represent the existing condition as of the date of submission of this report to the FAA.

In accordance with Part 150, the future condition NEM must be based on the aircraft operational levels and fleet mix that are forecast to occur at least 5 years after the year of submission. In addition to the operational levels and fleet, the future NEM must be based on reasonable assumptions concerning nighttime operations, flight patterns, airport layout (including any planned airport development), planned land use changes, and demographic changes in the areas surrounding the airport. The Future Condition NEM in this report utilizes the number of operations for the year 2028 in FAA's 2020 Terminal Area Forecast (TAF) for EYW. The fleet mix is based upon the fleet mix used for the Existing Condition with appropriate adjustments for changes in aircraft types known at this time. As documented in **Section 6.7** of this report, the future condition noise contours are identified and certified by the airport operator as the 2028 Future Condition NEM.

In summary, this Noise Exposure Maps and Supporting Documentation report documents the methods and data that were used to prepare the 2022 and 2028 NEMs and identifies the compatible and noncompatible land uses within the noise contours. The 2022 and 2028 NEMs are an update to the EYW NEMs that were accepted by the FAA on December 19, 2013.

1.3 HISTORY AND SUMMARY OF THE NOISE COMPATIBILITY PLANNING PROCESS AT EYW

The objective of the noise compatibility planning process at EYW is to prevent future noncompatible land uses and improve the compatibility between aircraft operations and existing noise-sensitive land uses, while allowing the airport to continue to serve its important role in the community. Numerous operational, land use, and program management alternatives have been evaluated over the course of the noise compatibility

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planning process at EYW, and the recommended NCP is comprised of several measures aimed at reducing the noise impacts caused by aircraft operations.

At the request of the Monroe County Ad Hoc Committee on Noise, a complete history of the noise compatibility planning process at EYW was prepared. Questions regarding this history are frequently asked during the Ad Hoc Committee meetings, and it was felt that easily accessible documentation of this history would be beneficial to the public.

Appendix A provides a history of the noise compatibility planning process at EYW beginning with the original Part 150 Study in the mid-1990s. The history of the Noise Insulation Program from its inception in the year 2000 up until the present time is also provided.