

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RECORD OF APPROVAL
14 CFR PART 150
NOISE COMPATIBILITY PROGRAM UPDATE



TUCSON INTERNATIONAL AIRPORT
TUCSON, ARIZONA

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9/5/13
Date

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NONCONCUR

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9/9/13
Date

APPROVED

DISAPPROVED

**Record of Approval
Tucson International Airport
Noise Compatibility Program Update**

INTRODUCTION

The Tucson International Airport (TUS) Noise Exposure Map and Noise Compatibility Program (NEM/NCP) Update dated December 2012 describes the current and future noncompatible land uses based on the parameters as established in Title 14, Code of Federal Regulations (CFR), Part 150, *Airport Noise Compatibility Planning*. On March 20, 2013, the Federal Aviation Administration (FAA) accepted the Updated NEM's. The revised NEM's update and replace the NEM's previously accepted on February 11, 1992. The NCP Update discusses the measures included in the previous NCP approved by the FAA on August 7, 1992. No FAA action is requested on any of the previous measures as discussed in Chapter 4 of the NCP Update, since they are either currently implemented, no longer applicable, or are completed. This NCP Update lists ten new measures that expand the intent of the previously approved NCP. These measures include three new recommended noise abatement elements, five new land use planning elements, and two new program management elements. These measures are summarized in Table 4-2 and on pages 4-22 to 4-28, 4-43 to 4-47 and 4-53 to 4-54 of the NCP Update.

Each measure in the airport operator's recommended NCP is identified below, which includes a summary of the recommendations (Issues), the category of the measure (Noise Abatement, Land Use and Program Management) and a cross reference to page numbers in the NCP where each measure can be found. The current Noise Exposure Map (NEM) (existing 2012) and forecast NEM (2017) are found on Exhibit 3-1 and Exhibit 3-2, respectively, of Chapter 3. The airport sponsor certified that these NEMs are representative of existing and forecast conditions as of the date of submission (see NEM-1 and NEM-2 dated November 26, 2012). Chapter 4 discusses the recommended noise abatement strategies, land use strategies, and the program management recommendations.

The approvals listed herein include approval of actions that the airport recommends be taken by the FAA. It should be noted that these approvals indicate only that the actions would, if implemented, be consistent with the purposes of 14 CFR Part 150. The approvals do not constitute decisions to implement the proposed actions or a commitment by the FAA to provide federal financial assistance for these actions. Later decisions concerning possible implementation of these actions may be subject to applicable environmental or other procedures or requirements.

The recommendations below summarize, as closely as possible, the airport operator's recommendations in the NCP Update and are cross-referenced to the program. The statements contained within the summarized recommendations and before the indicated FAA approval, disapproval or other determination, do not represent the opinions or decisions of the FAA.

NOISE ABATEMENT ELEMENTS

1. (NA-6) Study Implementing an Optimized Profile Descent (OPD) procedure for one or more runway ends.

Description: An OPD procedure combines the benefits of a steady, continuous descent with optimized flap and landing gear management to create a quieter approach for noise-sensitive communities under the approach path. Current air traffic control procedures involve a series of short descents and periods of leveling off that require reducing thrust or changing flap settings. The OPD procedure involves starting a continuous steady descent from as high as enroute altitudes (25,000-35,000 feet), which allows for a reduction in the required amount of power, thereby reducing noise exposure in two ways: by keeping the aircraft at

a higher altitude above the ground; and by stabilizing the flap settings, which reduces airframe noise, and amount of applied thrust. This alternative is recommended by the Tucson Airport Authority (TAA) for further evaluation and study at this time. It has the potential to reduce noise exposure ranging from 4 to 6 dB approximately 10 to 20 miles from the airport, however it will not reduce the number of incompatible land uses within the 65 DNL noise exposure contour at the airport. (NCP Pages 4-22 to 4-23, Exhibit 4-1 and NCP Table 4-2)

FAA Action: Disapproved for purposes of Part 150. The airport sponsor initiated this measure for purposes of studying the potential reduction in noise levels that are 10 to 20 miles away from TUS and recognizes that the measure would not reduce incompatible land uses within the TUS 65 DNL noise contour. This disapproval for purposes of Part 150 does not prohibit the airport sponsor from continuing this action to study the potential use of OPD procedures at TUS.

2. (NA-7) Formalize an agreement with the Arizona Air National Guard (AANG) to limit nighttime/early morning and weekend operations.

Description: This measure is intended to formalize existing policies between the TAA and AANG in a written agreement. The AANG currently conducts operations at night and on weekends according to the following policies; AANG typically limits weekend operations to one weekend per month; AANG typically conducts nighttime operations up until approximately 9:30 p.m. on four nights a month; AANG typically does not conduct military flight operations at between 10:00 p.m. and 6:59 a.m. (NCP Page 4-27, and NCP Table 4-2)

FAA Action: Approved as a voluntary measure. Implementation of this measure is within the authority of the sponsor and the AANG to develop a written agreement to formalize existing policies for AANG operations.

3. NA-8: Work with the AANG to develop restrictions on ground operations, including optimal orientation of aircraft during final checks prior to departure to reduce noise impacts.

Description: This measure is intended to seek possible methods for reducing noise from military ground operations while being sensitive to the training needs and the benefits of the AANG at TUS. (NCP Page 4-28, NCP Table 4-2)

FAA Action: Approved as a voluntary measure. Implementation of this measure is within the authority of the sponsor and the AANG to seek possible methods to reduce noise from military aircraft ground operations.

LAND USE PLANNING ELEMENTS

1. (LU-15) Work with the City of Tucson to review and if necessary modify the boundaries of the Airport Environs Zone (AEZ) Overlay.

Description: This measure would continue/update existing efforts to prevent new incompatible land uses within areas that are significantly impacted by aircraft noise. The City of Tucson adopted an Airport Environs Zone (AEZ) to address land use compatibility in the vicinity of TUS on May 16, 1990. Provisions of the AEZ are outlined in Section 2.8.5 of the City of Tucson Land Use Code, which establishes the district boundaries of the AEZ. The district boundaries have been updated to reflect the most recent NEMs for TUS, currently the 1994 NEM from the 1991 Part 150 Study. This measure includes working with the City of Tucson to assess the possibility of modifying the district boundaries to reflect the Future NEM that was developed for this Part 150 Study. The NCP noted that modifying the AEZ to be more restrictive could evoke a regulatory taking challenge. The recently enacted *Arizona Private Property Rights Protection Act* establishes

that "(i)f the existing rights to use, divide, sell or possess private real property are reduced by the enactment or applicability of any land use law enacted after the date the property is transferred to the owner and such action reduces the fair market value of the property the owner is entitled to just compensation from this state or the political subdivision of this state that enacted the land use law." (NCP Pages 4-43, NCP Table 4-2).

FAA Action: Approved. This measure is within the authority of the City of Tucson and local planning jurisdictions. The Federal Government has no control over local land use planning. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing noncompatible development and only preventive noise mitigation measures in areas of potential new noncompatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under Part 150.

2. (LU-16) Work with the City of Tucson to review and if necessary modify the land use regulations within the AEZ Overlay as defined in Section 2.8.5 of the City of Tucson Land Use Code.

Description: The City of Tucson adopted an AEZ to address land use compatibility in the vicinity of TUS on May 16, 1990. Provisions of the AEZ are outlined in Section 2.8.5 of the City of Tucson Land Use Code, which specific development regulations within the various districts of the AEZ overlay. This measure includes working with the City of Tucson to review the land use within the various districts of the AEZ overlay to determine if they are still effective or if any changes are warranted. The NCP noted that modifying the AEZ to be more restrictive could evoke a regulatory taking challenge. The recently enacted *Arizona Private Property Rights Protection Act* establishes that "(i)f the existing rights to use, divide, sell or possess private real property are reduced by the enactment or applicability of any land use law enacted after the date the property is transferred to the owner and such action reduces the fair market value of the property the owner is entitled to just compensation from this state or the political subdivision of this state that enacted the land use law." (NCP Page 4-44, NCP Table 4-44).

FAA Action: Approved. The Federal government has no control over local land uses. This measure is within the authority of the City of Tucson. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing noncompatible development and only preventive noise mitigation measures in areas of potential new noncompatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under Part 150.

3. (LU-17) Work with Pima County to review and if necessary modify the boundaries of the Airport Environs and Facilities Overlay Zone (AEFZ).

Description: Pima County adopted an AEFZ to address land use compatibility in the vicinity of TUS. Provisions of the AEFZ are included in Chapter 18.57 of the Pima County, Arizona Code of Ordinances, which establishes the district boundaries of the AEFZ. The district boundaries have been updated to reflect the previously-approved 1994 NEM from the 1991 Part 150 Study. This measure includes working with Pima County to assess the possibility of modifying the district boundaries to reflect the Future NEM that was developed for this Part 150 Study. The NCP noted that modifying the AEFZ to be more restrictive could evoke a regulatory taking challenge. The recently enacted *Arizona Private Property Rights Protection Act* establishes that "(i)f the existing rights to use, divide, sell or possess private real property are reduced by the enactment or applicability of any land use law enacted after the date the property is transferred to the owner and such action reduces the fair market value of the property the owner is entitled to just compensation from this state or the political subdivision of this state that enacted the land use law." (NCP Page 4-45, Table 4-2).

FAA Action: Approved. The Federal government has no control over local land uses. This measure is within the authority of the Pima County. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing noncompatible development and only preventive noise mitigation measures in areas of potential new noncompatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under Part 150.

4. (LU-18) Work with Pima County to review and if necessary modify the land use regulations within the AEFZ Overlay as defined in Pima County Code.

Description: Pima County adopted an AEFZ to address land use compatibility in the vicinity of TUS. Provisions of the AEFZ are included in Chapter 18.57 of the Pima County, Arizona Code of Ordinances, which places restrictions on the type and density of development within the various subdistricts of the AEFZ. This measure would review the land use regulations contained in that ordinance to determine if they are still effective or if any changes are warranted. The NCP noted that modifying the AEZ to be more restrictive could evoke a regulatory taking challenge. The recently enacted Arizona Private Property Rights Protection Act establishes that "(i)f the existing rights to use, divide, sell or possess private real property are reduced by the enactment or applicability of any land use law enacted after the date the property is transferred to the owner and such action reduces the fair market value of the property the owner is entitled to just compensation from this state or the political subdivision of this state that enacted the land use law." (NCP Pages 4-46, NCP Table 4-2).

FAA Action: Approved. The Federal government has no control over local land uses. This measure is within the authority of the Pima County. Beginning October 1, 1998, the FAA will approve under Part 150 only remedial noise mitigation measures for existing noncompatible development and only preventive noise mitigation measures in areas of potential new noncompatible development. As of the same date, the ability to use AIP grants to carry out such measures will be affected to the extent that such remedial measures may not be approved under Part 150.

5. (LU-19) Investigate opportunities to design Airport development in a manner that both reduces interior noise levels of the development and that acts as a barrier to shield neighboring communities from aircraft noise.

Description: On-airport buildings, by nature, are typically located within areas impacted by high levels of aircraft noise. For new development, standards of construction could be identified to ensure the appropriate level of interior sound attenuation, where feasible. In addition, new airport development can be planned in a manner that acts as a barrier to shield off-airport development from aircraft noise. For example, Terminal A at Boston Logan International Airport was developed in a manner to act as a barrier to shield aircraft noise from ground operations, in order to reduce noise levels at a nearby community. (NCP Page 4-47, NCP Table 4-2).

FAA Action: Disapproved for purposes of Part 150. This measure is disapproved due to a lack of demonstrated noise benefit to noncompatible land uses exposed to noise levels of DNL 65 dBA. The future noise exposure map (2017) does not show any noncompatible land use areas within the DNL 65 dBA noise contour that would receive a benefit from this measure. FAA recognizes that there may some potential to reduce interior noise levels from aircraft ground operations on nearby land uses and a disapproval due to lack of noise benefit information would not prohibit implementation of this measure by TUS.

PROGRAM MANAGEMENT ELEMENTS

1. (PM-6) Formalize and expand current public outreach programs.

Description: This alternative would expand on the existing program management and public outreach efforts of the TAA. Additional efforts may include the following elements; (1) Implement a “Fly Quiet” Program” – a voluntary program that encourages airlines, pilots, and air traffic controllers to ensure aircraft operations are conducted as quiet as possible; (2) Engage the assistance of local colleges and universities to conduct noise measurements, prepare supplemental analysis using supplemental noise metrics, and engage in public outreach efforts; (3) Implement a run-up monitoring program to track adherence to the approved run-up procedures; and (4) Coordinate with the Military-Community Relations Committee (MCRC) to provide additional information about military operations at TUS and in the vicinity. (NCP Page 4-53, NCP Table 4-2).

FAA Action: **Approved as a voluntary measure.** This measure is within the jurisdiction of the airport management.

2. PM-7: Periodically review and, if necessary, update the Noise Exposure Maps (NEMs) and the Noise Compatibility Program (NCP).

Description: The NEMs are likely to become outdated and will need to be updated periodically. The NEMs should be updated every two to three years to consider changes in operating levels and patterns, as well as updates of the noise modeling software. In addition, the NEMs should be updated in accordance with the Federal Aviation Administration’s (FAA’s) guidelines for determining what constitutes a potentially significant increase in operations (17 percent increase in the area impacted by 65+ DNL). The NCP should be updated every five years, or as necessary, to reflect larger changes in the nature of aircraft noise surrounding the Airport. Should any development, such as runway realignments or significant modifications to ground facilities, enlarge the area of incompatible use exposed to aircraft noise above 65 Day-Night Average Sound Level (DNL), the NCP should be updated prior to the implementation of those improvements. A full update may not be required, but rather, a targeted assessment of the changes occasioned by specific development projects may suffice to bring the NCP to conformity and to qualify additional areas for NCP programs, if appropriate. (NCP Page 4-54, Table 4-2).

FAA Action: **Approved.** Besides the Part 150 regulation’s requirement to update NEMs when noise significantly increases, Part 150 also now requires NEM amendments if noise significantly decreases.