

Appendix F

General Comment Category Definitions and Topical Responses for Comment Categories

**Final Environmental Review Step 1B
Proposed Categorical Exclusion
May 2018**

For

**The Proposed West Flow Area Navigation Standard Instrument Departure Procedures
at Phoenix Sky Harbor International Airport as per the Memorandum Regarding
Implementation of Court Order per *City of Phoenix, Arizona v. Huerta*, 869 F.3d 963
(D.C. Circuit 2017)**



Des Moines, WA

1.0 Public Involvement

On February 01, 2018, the FAA released a draft environmental review document for the *Proposed West Flow Area Navigation Standard Instrument Departure Procedures at Phoenix Sky Harbor International Airport as per the Memorandum Regarding Implementation of Court Order per City of Phoenix, Arizona v. Huerta, 869 F.3d 963 (D.C. Circuit 2017)* for public review and comment.. The FAA held a public comment period from February 1 to February 16, 2018. The FAA received approximately 1,100 comments from private citizens and groups, elected officials, municipalities, and local, state and federal agencies. The FAA accepted comments at the workshops, online using the FAA Phoenix Community Involvement Website, through e-mail, and through regular mail. The FAA recognizes the importance and value of public input. All comments received during the public comment period have been considered in issuance of the Final Environmental Review document.

2.0 Comment Category General Definitions and Topical Responses

The FAA has recognized that in the comments submitted, multiple commenters raised many of the same issues. The FAA will not respond individually to each comment, the FAA has prepared the topical responses for each comment category. To respond to the comments, eight topical responses were prepared that provide a single comprehensive response to the issues of concern. Below are the general definitions and topical responses used to categorize the Step One comments. The assignment of a comment to a category occurred if there was a direct reference to that category or definition.

2.1 Air Quality/Emissions

2.1.1 Air Quality General Definition

A reference to airborne pollutants and/or claims of breathing issues caused by the introduction or existence of aircraft, etc. The FAA received twenty (20) comments on potential air quality impacts. Some commenters wanted to know whether the Proposed Action would result in the exceedance of one or more of the National Ambient Air Quality Standards, established by the Environmental Protection Agency (EPA), for any time period analyzed, or a reference, or references, were made to pollutants directly related to jet exhaust, including soot, fuel (either visible residue or vapor odor), etc. There were seventeen (17) comments related to potential greenhouse gases (GHG) emissions or other pollutants resulting from the Proposed Action. Some commenters wanted more information on the level of GHG emissions and what potential harm could be caused by these impacts including on global climate change.

Examples of comments received related to this category:

“Planes have flown ever since route change right over my house and pool the noise and health, mental stress and air quality breathing issues have made life living here awful due to saving fuel costs.”

“Complaints of respiratory health concerns in the south phoenix flight path is nothing new to the FAA and yet you consistently target lower income neighborhoods for your flight paths.”

2.1.2 Air Quality Topical Response

The air quality analysis in section 5.2 of the Final Environmental Review document discusses the existing air quality conditions and possible impacts from the Proposed Action in the General Study Area. Typically, significant air quality impacts would be identified if an action would result in the exceedance of one or more of the National Ambient Air Quality Standards (NAAQS), established by the Environmental Protection Agency (EPA), for any time period analyzed. According to FAA Order 1050.1F, Exhibit 4-1, an emissions impact is significant if “[t]he action would cause pollutant concentrations to exceed one or more of the NAAQS, as established by the EPA under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.”

Section 176(c) (commonly referred to as the General Conformity Rule), of the Clean Air Act (CAA) requires that federal actions conform to the appropriate State Implementation Plan (SIP) in order to attain the air quality goals identified in the CAA. A conformity determination is not required if the emissions caused by a federal action would be less than the *de minimis* levels established in regulations issued by EPA. FAA Order 1050.1F provides that further analysis for National Environmental Policy Act (NEPA) purposes is normally not required where emissions do not exceed the EPA’s *de minimis* thresholds. The EPA regulations identify certain actions that would not exceed these thresholds, including air traffic control activities and adoption of approach, departure, and en route procedures for aircraft operations above the inversion base for pollutant containment, (commonly referred to as the “mixing height”) specified in the applicable SIP (or 3,000 feet Above Ground Level (AGL) in places without an established mixing height). In addition, the EPA regulations allow federal agencies to identify specific actions as “presumed to conform” (PTC) to the applicable SIP.

In a notice published in the Federal Register, the FAA has identified several actions that “will not exceed the applicable *de minimis* emissions levels” and, therefore, are presumed to conform, including air traffic control activities and adoption of approach, departure, and en route procedures for air operations.¹ The FAA’s PTC notice explains that aircraft emissions above the mixing height do not have an effect on pollution concentrations at ground level. The notice also specifically notes that changes in air traffic procedures above 1,500 feet AGL and below the mixing height “would have little if any effect on emissions and ground concentrations.”²

FAA determined that project-related aircraft emissions released into the atmosphere below the “mixing height,” (generally 3,000 feet above ground level) can be presumed to conform when modifications to routes and procedures are designed to enhance operational efficiency (i.e., to reduce delay), increase fuel efficiency, or reduce community noise impacts by means of engine thrust reductions.³ Therefore, the Proposed Action is covered by the Presumed to Conform notice. Because it is presumed to conform under the General Conformity Rule, there are no effects under NEPA.

¹ Federal Presumed to Conform Actions under General Conformity, 72 Fed. Reg. 41565 (July 30, 2007).

² Id.

³ 72 Fed. Reg. 41578.

More specifically, the Proposed Action would not affect the number or type of aircraft operations in the Phoenix area, or the time aircraft spend below the mixing height. As a result, it would not change the total emissions of air pollutants below the mixing height.

2.1.3 Emissions Topical Response

Greenhouse gases (GHG) are naturally occurring and man-made gases that trap heat in the earth's atmosphere. The potential effects of proposed GHG emissions are by nature global and cumulative impacts. An appreciable impact on global climate change would only occur when proposed GHG emissions combine with GHG emissions from other human-made activities on a global scale. According to the EPA, the General Accounting Office (GAO) in 2009 reported that domestic aviation contributed approximately three percent of total national carbon dioxide (CO₂) emissions. Similarly, in its 2010 Environmental Report, the International Civil Aviation Organization (ICAO) estimated that aviation accounted for approximately three percent of all global CO₂ emissions resulting from human activity. The FAA considers CO₂ emissions from aircraft to be the primary GHG of concern.

There are currently no accepted methods of determining significance applicable to aviation projects given the small percentage of emissions they contribute, nor has the FAA identified specific factors to consider in making a significance determination for GHG emissions.

The estimated level of GHG emissions can serve as a reasonable proxy for assessing potential climate change impacts. The process used to analyze the emissions impact of the Proposed Action is based on the analysis of the proposed flight procedures using the approved Aviation Environmental Design Tool (AEDT) Flight Performance module which employs aircraft fuel flow equations. Historical radar track data was used to generate the calculation for the baseline emissions scenario. Aircraft operations assigned to the proposed procedures were modeled as flying the proposed procedures instead of their historical tracks to generate the calculation for the alternative emissions scenario.

The Proposed Action described in Section 4.0 of the Final Environmental Review document is not likely to have an appreciable effect on climate change. Under the Proposed Action, departing aircraft will reach the RNAV “engagement point” at the same distance and altitude as aircraft flying today. While the location of the initial procedure turns moves to approximately six nautical miles west from the end of the runways at Phoenix Sky Harbor, the associated increase in total annual emissions are likely to be *de minimis* based on the results of the AEDT Flight Performance calculations. Therefore, cumulative impacts to global climate change from implementation of the Proposed Action would be less than significant.

2.2 Biological

2.2.1 General Definition

Referencing wildlife and/or habitats. The FAA received five (5) comments related to biological resources. Some of these comments related to the potential for bird or bat strikes by aircraft. Some commenters also asked whether the Proposed Action could impact endangered or threatened species.

Examples of comments received related to this category:

“The proposed westerly departure flight path that is to be implemented in March 2018 has aircraft flying west along the Salt River. This path is used daily by hundreds of ducks and geese, flying east. There is concern regarding aircraft using a flight path that is know to be used by wild life.”

“After studying the Environmental Impact Study by ADOT, PHX Mtn Preserve Comments, City of PHX and the FAA reports, THE IMPACT if the traffic, destruction and increased noise levels (however slight the FAA claims it to be) fall short of the safe guards for the rural South Mountain Preserve. The Park is home to various species of aquatic, plants, animals and other micro organisms which will be grossly injured by the overwhelming environmental and chemical changes to the area. The noise level alone, will cause the migration of the ducks and falcons.”

2.2.2 Topical Response

The Endangered Species Act (ESA) directs all Federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the Act. The Proposed Action is intended to provide interim relief from aircraft noise, while segregating arrivals and departures to maintain safe aircraft operations. The Proposed Action does not entail any ground-based development that could destroy or modify critical habitat for any protected fish, wildlife or plant species. The greatest potential for impacts to wildlife species would result from wildlife strikes on avian and bat species at altitudes below 3,000 feet AGL.

The decline in the number of strikes reported above 3,000 feet AGL indicates that there is less likelihood of bird/bat strikes at these altitudes. Under the Proposed Action, the majority of changes to proposed flight paths would occur above 3,000 feet AGL and no significant changes to arrival and departure corridors below 3,000 feet AGL would be expected. None are located in unique avian or bat habitats. In addition, under the Proposed Action, the FAA anticipates increased use of the narrower departure corridors associated with the RNAV procedures. As narrower corridors would reduce the area in which RNAV equipped aircraft operate, the Proposed Action would not be expected to result in increased impacts to avian and bat species when compared to the No Action Alternative. Therefore, there would be no significant impacts to avian and bat species under the Proposed Action compared with the No Action Alternative.

2.3 Environmental Justice

2.3.1 General Definition

References and/or claims to a decision to place flight paths or aircraft over low income or minority neighborhoods. The FAA received seven (7) comments on potential environmental justice impacts including more information on the location of environmental justice communities. The environmental justice analysis considered the potential of the Proposed Action to cause disproportionately high and adverse effects on low-income or minority populations due to significant impacts in other environmental impact categories.

Examples of comments received related to this category:

“I want to urge you to return to the pre-September 2014 flight paths. I am concerned with the proportional noise and air pollution in the West Phoenix area. The fact that residents are predominately-low income and minority does not mean they deserve a lower air quality.”

“It was informative and eye opening to attend this workshop after hearing everything its pretty disheartening to know that the more affluent historic neighborhoods will experience little to no positive change. Where is the justice for these areas? It seems like blatant disregard for non-white communities. I encourage FAA officials, who think its acceptable to constantly bombard a specific neighborhood with constant noise, to live my reality for one day. I'm pretty sure sweeping changes would rapidly occur. the proposed changes seem to pacify and not adequately relief the burden of all. Better needs to happen for more than the historic and predominantly white areas.”

2.3.2 Topical Response

The environmental justice analysis discussed in Section 5.5 of the Final Environmental Review, document considers the potential of the Proposed Action to cause disproportionately high and adverse effects on low-income or minority populations due to significant impacts in other environmental impact categories. The Proposed Action study area was analyzed utilizing the Aviation Environmental Design Tool (AEDT) Environmental Justice module to identify these populations in the vicinity of Phoenix Sky Harbor. The AEDT Environmental Justice module relies on U.S. Census demographic data to identify communities that may be candidates for meaningful involvement in project communication and/or outreach activities. The intent of this analysis is to identify potential populations based on readily available U.S. Census data using standard techniques. Under the Proposed Action, no areas within the Proposed Action study area would experience a change in noise exposure or other relevant impact category (such as air quality, hazardous materials, and water quality) that would exceed applicable thresholds of significance (e.g., 1.5 dB in the DNL 65 dB and greater contours). The Proposed Action would not affect low income or minority populations at a disproportionately higher level than other population segments. Therefore, no adverse direct or indirect effects would occur to any environmental justice populations within the study area under the Proposed Action.

2.4 Noise

2.4.1 General Definition

A reference to noise directly related to aircraft that is either preexisting, or is expected to occur with the implementation of the proposed procedures. The majority of public comments on a specific environmental impact category related to noise impacts. This is normally the case for air traffic procedure changes or runway projects.

Examples of comments received related to this category:

“I am very pleased about the old paths being implemented...my neighborhood and home is in historical Sunburst farms ...my home was built in 1969...I have lived in the 85306 neighborhood since 1979 and has always been a quiet environment. Since the 2014 next-gen changes the noise has been very stressful and rattling.on some days and nights a constant roar..Thank you! Steve”

“I support reverting back to the pre-2014 paths. We noticed a significant increase in noise after this change. When we purchased our home in 2011 we never heard anything. 2- why can't the paths be moved south over the reservation which is wide open space instead of directly over Ahwatukee which is basically high density residential.”

2.4.2 Topical Response

The noise and noise compatible land use analysis in section 5.1 of the Final Environmental Review document discusses information regarding noise and land use compatibility criteria applicable to the evaluation of noise impacts. The compatibility of existing and planned land uses with aviation actions is usually determined in relation to the level of aircraft noise by comparing the Day-Night Average Sound Level (DNL) values to the land use compatibility guidelines in FAA's regulations at 14 CFR Part 150. Part 150 identifies a DNL level of 65 decibels (dB) and below as compatible with residential and most other uses. The DNL does not measure sound as it occurs in real time, but represents noise as it occurs over an averaged 24-hour period, with one important exception: DNL treats noise occurring at night differently from daytime noise. In determining DNL, the metric assumes that the A-weighted decibel noise levels occurring at night (defined as 10 p.m. to 7 a.m.) are 10 dB louder than they actually are. This 10 dB increase is applied to account for the fact that there is a greater sensitivity to nighttime noise, and the fact that events at night are often perceived to be more intrusive because nighttime ambient noise is less than daytime ambient noise.

To determine whether aircraft noise impacts are significant under NEPA, the FAA considers whether predicted increase in noise associated with the Proposed Action exceed defined thresholds of significance. For aircraft noise, that threshold is an increase of DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the No Action Alternative for the same timeframe.

The FAA Order 1050.1F notes that special consideration needs to be given to the evaluation of the significance of noise impacts on certain noise sensitive areas (including, but not limited to, noise sensitive areas within national parks; national wildlife and waterfowl refuges; and historic sites, including traditional cultural properties) where the land use compatibility guidelines in 14 CFR Part 150 may not be sufficient to determine the noise impact.

To identify the potential for impacts on noise levels of noise sensitive areas, the FAA conducts an initial noise analysis using a “screening tool.” Screening tools use simplified but conservative modeling assumptions to provide estimates of where noise increases may occur. The noise screening identifies areas that may be exposed to significant noise impacts (i.e., an increase of DNL 1.5 dB or more in an area that is exposed to noise at or above the DNL 65 dB noise exposure level). The noise screening tool also identifies certain areas with potential increases in areas exposed to lower levels of noise, specifically:

- For DNL 60 dB to less than 65 dB: ± 3 dB
- For DNL 45 dB to less than 60 dB: ± 5 dB

The FAA refers to any change in noise exposure levels meeting this criteria as “reportable.” Although they do not exceed the threshold of significance for most land uses, for certain land uses where the Part 150 land use guidelines may not be sufficient to account for the noise impact, they are factors to consider in whether there are extraordinary circumstances rendering a categorical exclusion inapplicable.

The noise screening analysis indicates that the Proposed Action would not result in a significant noise impact on land uses covered by the Part 150 noise compatibility guidelines. However, the Proposed Action noise screening scenario when compared to the No Action noise screening scenario identified an approximately 22 square mile area of reportable change in noise of at least DNL 5 dB between the DNL 45 dB to 60 dB noise exposure level located approximately 3 nautical miles southwest of Phoenix Sky Harbor.

The FAA is further reviewing individual resources within this area, including parks and historic properties, to determine whether the Part 150 land use guidelines are sufficient to determine the noise impact. As part of this further review, the FAA has initiated consultation with local interested parties having jurisdiction by law or special expertise in order to make a final determination regarding the reportable noise impacts and is considering comments from the public. Their conclusions and recommendations will be included in the Final Environmental Review.

2.5 Section 106

2.5.1 General Definition

A reference to a specific resource or location that may require special consideration under Section 106 of the National Historic Preservation Act (i.e., historic or culturally significant properties). There were two (2) comments related to the potential impacts of Step One on historic properties. These issues included how potential noise impacts might affect historic properties.

Examples of comments received related to this category:

“It should be noted that the Pioneer Cemetery & Memorial Park, located at Jefferson and 15th Ave used to be a very tranquil, peaceful, quiet, reflective place to enjoy contemplating our historic past and honoring those who came before us. The flight paths of the last 3 years not only destroy that ambience, they also violate the provisions protecting historic properties that have an expectation of quiet. This historic property cannot be lumped in and treated like one of the hundreds of historic homes in the area further to the north (excluded from consideration unfortunately); it must be treated specially. You should go visit and see for yourself the difference between the old flight paths and new flight paths. Another historic landmark that falls into a similar category is Historic Encanto Park, with its lake, canoes, waterfowl, and other barely surviving urban wildlife. Thanks for your consideration of my concerns which are also shared by my neighbors.”

2.5.2 Topical Response

Section 5.4 of the Final Environmental Review document assesses the effects of the Proposed Action on resources protected under Section 106 of the National Historic Preservation Act. Section 106 requires the FAA to consider the effects of its undertakings on properties listed or eligible for listing in the National Register of Historic Places (National Register). In assessing whether an undertaking, affects a property listed or eligible for listing on the National Register, FAA must consider both direct and indirect effects.

No land acquisition, construction, or other ground disturbance activities would occur under the Proposed Action; therefore, the Proposed Action would not directly (i.e., physically) affect any historical, architectural, archaeological, or cultural resources. Indirect effects include changes in the environment of the historic resource that could substantially alter the characteristics that made it eligible for listing on the National Register. The assessment under Section 106 focused on the potential for indirect adverse effects to historic and cultural resources that may result from changes in air traffic routes, such as aircraft noise and visual impacts.

The FAA consulted with the Arizona State Historic Preservation Office (SHPO), the City of Phoenix Historic Preservation Office (CHPO), Historic Neighborhood Petitioners, the Gila River Indian Community Tribal Historic Preservation Office (THPO) and other tribes who were identified as consulting parties, on the effects of the undertaking to determine if any noise, atmospheric or visual effects on historic properties would be adverse. Such effects are considered “adverse” if they would diminish the integrity of a property’s significant historic features, (including its setting, provided the setting has been identified as a contributing factor to the property’s historic significance).

To assess the potential indirect effects of the Proposed Action on historic resources, two areas of potential effects (APE) were defined; the noise-based APE, and the overflight-based APE. The noise-based APE consisted of an area that would receive noise increases that could alter historic properties where a quiet setting is a characteristic that qualify it for the National Register. The FAA’s noise guidelines for compliance with the NEPA define a significant impact as an increase of a day-night average sound level (DNL) 1.5 dB in areas exposed to aircraft noise of DNL 65 and higher. Using these criteria, this undertaking is not expected to result in significant noise impacts. However, the FAA recognizes that this standard may not be sufficient to account for noise impacts to certain historic sites. Therefore, the FAA also considered areas with lower levels of aircraft noise exposure which would experience a noticeable increase in noise – specifically, an increase of DNL +5 dB or more within areas exposed to the DNL 45 - 60 dB.

The FAA also considered the potential for the introduction of visual, atmospheric, or auditory elements that could diminish the integrity of the property’s historic features based on the additional overflight-based APE proposed by the SHPO and the CHPO. The overflight-based APE consisted of a two-mile buffer zone on the proposed west flow RNAV SIDs where the assessment of effects was limited to the introduction of atmospheric, audible or visual features resulting from aircraft overflights.

The FAA consulted with the SHPO, CHPO, the Gila River Indian Community THPO, and other consulting parties on the effects of the undertaking to determine if noise or the introduction of atmospheric, audible or visual elements would adversely affect historic properties. On April 9, 2018, the FAA notified the SHPO, the CHPO, the Gila River Indian Community THPO, and the Historic Neighborhood Associations of the above-described Proposed Action and proposed a finding of “no adverse effects” to historic properties for the nine proposed RNAV SIDs. The FAA received separate response letters dated XXXX XX, 2018, XXXX, XX, 2018 and XXX XX, 2018, from these consulting parties. The consulting parties concurred with the FAA’s finding that the Proposed Action presents no adverse effects on cultural resources and historic properties, thereby completing the consultation process under Section 106 of the NHPA for Step 1B.

2.6 Other

2.6.1 General Definition

A comment or portion of a comment that did not fall into any of the other categories. This also includes comments that solely described support or opposition to Step One. With respect to Step One, the FAA, City of Phoenix and historic property groups agreed that revising western RNAV departure procedures at Phoenix Sky Harbor to approximate the western departures that were in place before the September 2014 RNAV procedures was an acceptable compromise for all parties. The FAA received 384 comments that were in favor of this agreement. FAA also received 244 comments that did not agree with this agreement, with some indicating that the current routes should remain in place.

Other commenters wanted new routes developed all together. Some commenters also wanted procedures beside the western departure procedures changed. The remaining 33 comment categorized as “Other” included a reference or references that did not meet a definition described above for Air Quality/Emissions, Biological, Environmental Justice, Noise or Section 106.

Examples of comments received related to this category:

“Please don't send east and west heading flights north and south.”

“We are homeowners in the Sandpiper Development.”

2.6.2 Topical Response

The Proposed Action involves air traffic control routing changes for airborne aircraft only. The United States Government has exclusive sovereignty of airspace in the United States [49 U.S.C. Section 401 03(a)]. Congress has provided extensive and plenary authority to the FAA concerning the efficient use and management of the navigable airspace, air traffic control, air navigation facilities, and the safety of aircraft and persons and property on the ground [49 U.S.C. Sections 401 03(b)(1) and (2)]. To the extent applicable, and as there are no significant impacts to any of the environmental impact categories identified by FAA Order 1050.1F, the Proposed Action is consistent with the plans, goals, and policies for the area and with the applicable regulations and policies of federal, state, and local agencies.

2.7 Workshop Feedback

2.7.1 General Definition

The FAA received 42 comments directly pertaining to the workshops (i.e., not related to air traffic, the proposed procedures, or the project itself).

Examples of comments received related to this category:

“We walked thru the display and it was somewhat difficult to follow at First Shawn was very helpful in helping ID what affect us and how. We are now used to the traffic but don't like it at night. Looking forward to seeing the proposal implemented.”

“I wish I could understand what was proposed changes mean. Simple language would be better instead of the technical language. I just want to stop the flights going north over 51 avenue. Planes either go left to the west or straight north or right to the east continuously, one right after the other (2-3 minutes apart).”