

PAGE MUNICIPAL  
AIRPORT  
**MASTER PLAN  
UPDATE**  
2000-2020



**Environmental Evaluation**

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## Chapter 7

## Environmental Evaluation

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### 7.1 INTRODUCTION

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The purpose of this environmental evaluation is to identify potential adverse environmental impacts, which may be related to the continued operation and maintenance of the Page Municipal Airport. In accordance with FAA guidelines, this environmental evaluation considers twenty specific impact categories, ranging from noise to construction impacts. These categories have been adapted from FAA Order 5050.4A, the Airport Environmental Handbook (FAA, 1985). These subjects must be addressed in any project that involves any of the following:

- Airport location
- New runway
- Major runway extension
- Runway strengthening creating specific noise conditions within specified boundaries
- Major change of entrance or access roads
- Land acquisition
- Establishment or relocation of an instrument landing system, or an approach lighting system
- Development involving historic sites, Section 4(f) land, farmland, wetlands, coastal zones, floodplains, or endangered or threatened species

Under the current Master Plan Update, the following actions are proposed for the Page Municipal Airport:

- Runway extension - 450 feet, including taxiway extension
- Pavement strengthening to accommodate helicopter parking
- Aircraft Apron/Tiedown Expansion
- Aircraft Hangar Development - 16 new hangars
- Auto parking expansion
- Controlled "Fire Access" road between aircraft apron area and property fence.

### 7.2 ENVIRONMENTAL EVALUATION CATEGORIES

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#### 7.2.1 Noise

The Page Municipal Airport, currently bases 54 aircraft. Operations for 1998, the base year of the master plan, totaled nearly 58,000 while 1999 estimates were closer to 40,000. (See Chapter 3 for additional discussion). Projected total operations for the year 2020 are 84,150. Based on these forecasts, potential areas of impact related to noise were examined through the development of noise exposure patterns or contours. To identify the land uses potentially impacted, aircraft noise contours are overlaid on current and future land use maps for the airport and vicinity. The operational levels and aircraft mix in Chapter 3, Aviation Demand Forecasts, were used in the database which produced the contours presented in Chapter 6, Airport Plans.

The methodology for analyzing aircraft noise for any Master Plan involves the following:

- The use of noise descriptors developed for airport noise analysis (i.e. *Day-Night Average Sound Level* (DNL) expressed as an average noise level on the basis of annual aircraft operations for a calendar year). DNL is considered to be the best methodology available for depicting aircraft noise exposure.
- Development of basic data and assumptions as input to the Integrated Noise Model (INM)
- Application of the INM that generate noise exposure contours (estimates for aircraft noise levels at finite points). After computing the noise level at each point, the INM produces contours by “connecting the dots.”

In relation to the FAA’s aircraft noise exposure (DNL contour) maps results, they developed standards of airport land use compatibility planning for use in the development of airports. An example of the ‘generalized land use compatibility guidelines’ is listed below:

Land use guidance zone	Noise exposure class	DNL	Acceptable land use
<b>A</b>	Minimal exposure	0 to 55	All uses acceptable
<b>B</b>	Moderate exposure	55 to 65	Residential, Public Use, Recreational
<b>C</b>	Significant exposure	65 to 75	Commercial/Office, Manufacturing, Recreational
<b>D</b>	Severe exposure	Above 75	Manufacturing, Limited Commercial

According to FAA Order 5050.4A (Airport Environmental Handbook, p. 28), no noise analysis is needed for proposals involving Design Group I and II airplanes on utility or transport type airports whose forecast operations in the period covered by the environmental assessment do not exceed 90,000 adjusted propeller operations or 700 annual adjusted jet operations. These numbers of propeller aircraft operations result in cumulative noise levels, which do not exceed 60 DNL more than 5,500 feet from start of takeoff roll or 65 DNL on the runway itself.

There are no non-airport related activities present on the site or within the airport boundaries. However while Page Municipal Airport’s primary runway (15-33) is generally oriented north-south, there is residential development located along the western boundary of the airport. Airplanes approaching from or departing to the north do not fly over any residential development, but overfly the Glen Canyon National Recreation Area. Airplanes approaching from or departing to the south fly along the boundary of a small section of residential development. Residential overflight is primarily avoided using the airport’s designated traffic pattern for Runway 15-33, which is a standard left pattern on Runway 15 and a non-standard right pattern on Runway 33. Crosswind Runway 07-25 also has a standard left on Runway 07 and non-standard right on Runway 25. While approaches to Runway 07 and departures on Runway 25 include residential overflight to the west of the airport, the designated traffic pattern does minimize this overflight.

Currently, the land uses adjacent to the Page Municipal Airport are marginally compatible with airport operations. While the existing (1998) and future (2020) 65 DNL contours (see Chapter 6, Airport Plans) fall within the airport boundary off both runway ends, the existing and future 60 DNL contours extend beyond the north and south boundaries of the airport. Further, the existing and future 65 and 60 contours run along the western boundary of the airport adjacent to Sage Avenue and residential development.

The 55 DNL contour actually runs outside the western airport boundary for the same area. Nevertheless, DNL contours can be used to (1) highlight the existing or potential aircraft noise problem that requires attention, (2) assist in the future noise compatibility and mitigation programs, and (3) provide continued guidance in the development of land use controls, such as zoning ordinances, subdivision regulations, and building codes.

### **7.2.2 Compatible Land Use**

The compatibility of existing and planned land uses in the vicinity of an airport is generally associated with the level of noise impact related to the airport. The FAA has developed guidelines for land-use compatibility based on noise levels and the nature of the land use being impacted. Commercial, industrial, and most public uses are considered compatible with airport operations, as long as they are consistent with performance standards of Federal Aviation Regulation (FAR) Part 77 relative to height and safety. Residential use is compatible in areas with less than 65 DNL noise. Therefore, as described in Section 7.2.1, the land use in the vicinity of the Page Municipal Airport is marginally compatible with current and forecast airport operations since the 65 DNL runs along the west boundary of the airport where residential development is located.

### **7.2.3 Social Impacts**

Based on the preferred alternative selected by the Planning Advisory Committee (PAC) for the 20-year planning period, the continued operation of the Page Municipal Airport will not require relocation of residences or businesses, and surface transportation routes will not be altered outside the airport grounds. No adverse social impacts or community disruptions are anticipated. The overall effect of the proposed improvements and the continued operation of the airport will be the continued availability of air access to the Page area for private, corporate, and commercial aircraft.

### **7.2.4 Induced Socioeconomic Impacts**

This category refers to impacts such as shifts in business and economic activity, demands on public services, or patterns of population growth associated with major airport development proposals. There are no plans for major development of the Page Municipal Airport. The purpose of the proposed improvements is to meet the design standards for aircraft (B-II) currently operating at the airport and to accommodate the growing demand for fixed wing and rotorcraft operational needs, hangars, and parking/ tiedowns.

### **7.2.5 Air Quality**

National Ambient Air Quality Standards (NAAQS) have been established by the Environmental Protection Agency (EPA) for seven criteria pollutants; carbon monoxide, lead, nitrogen dioxide, ozone, PM2.5, PM10 and sulfur dioxide. For each of these (except carbon monoxide), the EPA has adopted Primary standards to protect public health and Secondary standards to protect public welfare. Each state must adopt standards at least as strict as the federal standards. The standards adopted by Arizona are the same as those utilized by EPA. The Page Municipal Airport is located within an area that complies with all NAAQ Standards.

Arizona does not have indirect source review (ISR) requirements. Because the Page Municipal Airport has less than 180,000 operations forecast annually, it is not subject to air quality analysis (FAA Order 5050.4A, Airport Environmental Handbook, p. 33). No impacts to air quality are anticipated to result from the proposed improvements and the continued operation of the Page Municipal Airport.

### **7.2.6 Water Quality**

The Page Municipal Airport property drains northerly and easterly which flows off of the mesa and empties into the east rim above Antelope Valley at the foot of the mesa. Normal contaminants from airport operations are petroleum products, but the Page Municipal Airport has been successful in handling and controlling such contaminants. The potential for degradation of local water quality resulting from the proposed improvements and continued operation of the Page Municipal Airport is negligible.

### **7.2.7 Special Land Uses, DOT Section 4(F)**

Section 4(f) of the Department of Transportation (DOT) Act specifies that no project will be approved that requires use of any publicly owned land from a Public Park, recreation area, or wildlife refuge. There are no special land uses, as defined by the Department of Transportation that exist within the potential impact area of the Page Municipal Airport. The proposed improvements and the continued operation of the Page Municipal Airport will have no impacts on Special Use land or Section 4(f) lands.

### **7.2.8 Cultural Resources**

The State Historic Preservation Officer (SHPO) has been contacted for information regarding potential significant cultural resources in or near the project area to determine whether the airport project area has been surveyed for cultural resources. The agency's response, once received, will be incorporated into the Master Plan. While it may be determined that no impacts are anticipated from the proposed improvements, the land-disturbing activities proposed may require cultural resource surveys under the National Historic Preservation Act.

### **7.2.9 Biotic Communities**

The Page Municipal Airport, sited on a mesa, is surrounded by residential development and undisturbed natural terrain. None of the proposed plans for improvement or expansion of airport facilities would disturb the surrounding landscape and habitat.

### **7.2.10 Threatened and Endangered Species**

The U.S. Fish & Wildlife Service (USFWS) and the Arizona Game & Fish Department (AG&FD) were contacted for information regarding threatened, endangered, candidate, or special status species in the project area. The agency's response is included in the Appendix. Although a number of species are listed as Threatened or Endangered on a county basis, it is unlikely that habitat utilized by these species is contained within the Page Municipal Airport area. It is unlikely that the proposed improvements or the continued operation of the Page Municipal Airport will impact Threatened or Endangered Species.

### **7.2.11 Wetlands**

Airport property has not been evaluated for the presence of wetlands. However, neither the proposed improvements nor the continued operation of the Page Municipal Airport are anticipated to result in disturbance of any wetlands. The Army Corps of Engineers has been contacted and their response is contained in the Appendix G.

### **7.2.12 Floodplains**

Page Municipal Airport is situated atop a mesa at an elevation of approximately 4,313 feet. It is not located within or adjacent to a floodplain. The proposed improvements and continued operation of the Page Municipal Airport will not indirectly support secondary development within a floodplain. There will be no floodplain impacts.

### **7.2.13 Shoreline Management**

A shoreline management program does not cover the vicinity of Page; thus, evaluation under this category is not applicable.

### **7.2.14 Coastal Barriers**

This impact category refers exclusively to islands on the Atlantic and Gulf coasts; thus, it is not applicable to development at the Page Municipal Airport.

### **7.2.15 Wild and Scenic Rivers**

There are no wild or scenic rivers in the vicinity of the Page Municipal Airport which could be impacted by its continued operation or any future modification or expansion.

### **7.2.16 Farmland**

The Farmland Protection Policy Act (FPPA) directs federal agencies to take into account the adverse effects of federal programs on the preservation of Prime or Unique Farmland. The Act protects such farmland from being converted, directly or indirectly, to nonagricultural uses. No farmland adjoins the Page Municipal Airport property. Neither the proposed improvements nor the continued operation of the Page Municipal Airport will impact farmland in the Page area.

### **7.2.17 Energy Supply and Natural Resources**

The operation of the Page Municipal Airport requires minimal consumption of energy resources. Power generating capacity in the Page area is sufficient to support the increased power needed for the proposed airport improvements. The proposed improvements do not require any special natural resources.

### **7.2.18 Light Emissions**

The Page Municipal Airport is currently lighted by a medium intensity runway lighting (MIRL) system, medium intensity taxiway lighting (MITL) system and a runway end identifier light (REIL) system on the primary runway. The proposed runway and taxiway extension will increase marginally the emission of light from the Page Municipal Airport. An environmental evaluation of the impacts of the proposed lighting modifications may be required as part of the evaluation of the proposed runway extension prior to proceeding with the extension/relocation of the systems.

### **7.2.19 Solid Waste Impacts**

The activity generated by the proposed improvements or the continued operation of the Page Municipal Airport is not expected to create an increase in solid waste sufficient to cause an adverse impact on disposal facilities.

The FAA and EPA regulations indicate that solid waste sites should not be located within 5,000 feet of an airport utilized by smaller piston-engine aircraft nor within 10,000 feet for turbine-powered aircraft. No landfills have been identified within these distances from the Page Municipal Airport.

### **7.2.20 Construction Impacts**

The volume of construction activity required to implement the proposed improvements to the Page Municipal Airport is small. However, the sites of the proposed construction are near residential development so some noise and dust are likely to impact some Page residents. In order to minimize construction impacts, the proposed construction projects will incorporate in their plans and specifications the provisions of FAA Advisory Circular 150/5370 10, Standards for Specifying Construction of Airports, (change 10, Item P 156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control).

## **7.3 CONCLUSION**

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Based on the review of potential environmental impacts and considerations anticipated as a result of the construction and development of Page Municipal Airport, the major issues identified are summarized below. Mitigation measures may be recommended to limit the potential impacts related to a number of these resources.

The proposed projects, which will require an environmental assessment or further environmental evaluation are the following:

- Extend Runway 15-33 and parallel Taxiway A to the south (by 450 feet) to accommodate the majority of the B-II aircraft fleet currently operating at the airport. This extension includes the associated lighting systems.
- Construct additional aircraft parking apron area and hangars to the north of the existing apron and hangar development.