

Affected Environment

3.1 Introduction

The purpose of this chapter is to describe the characteristics of the environment in which the Proposed Action may occur. This chapter follows guidance set out in 1050.1G, 5050.4B, and the accompanying 1050.1 Desk Reference.

1050.1G provides an overview of thirteen (13) environmental resource categories to be analyzed, and, where applicable, provides a threshold for potential impacts. The categories for potential analysis are as follows:

- Aviation Emissions and Air Quality
- Biological Resources
- Coastal Resources
- Department of Transportation, Section 4(f) and Section 6(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics and Children's Environmental Health and Safety Risks
- Visual Effects
- Water Resources

3.2 Project Setting

BHM is a public use commercial service airport that opened in 1931. The Airport is surrounded by the City of Birmingham, as illustrated in **Figure C1**, located in Appendix C. The region has many local attractions including the Southern Museum of Flight, the Birmingham Art Museum, and the Birmingham Civil Rights Institute. This community has rich cultural and historical significance and is a center for business activity.

The Airport serves a dual role in the region, functioning as both a commercial service airport and a cargo operations provider. As the largest international airport in Alabama, BHM is a critical transportation asset, significantly contributing to the local economy. By facilitating substantial cargo movement and supporting more than 18,000 jobs, the Airport generates approximately \$1.6 billion to the local economy each year.¹

Huntsville is located approximately 100 miles to the north of the Airport, and Montgomery is approximately 90 miles to the southeast of the Airport. The Airport's relative location is illustrated in **Figure A1**, located in Appendix A. The Airport property and associated project

¹ Flybirmingham.com/economicimpact

area is approximately 650 feet above mean sea level (AMSL) and is surrounded by urban residential, commercial and industrial properties, as well as major transportation corridors (e.g., Interstate 20), as shown in **Figure C2**. The Airport is positioned within the Ridge and Valley physiographic province of Alabama, known for its long, parallel ridges and valleys. Specifically, BHM is located within the southern portion of the Ridge and Valley District in the Ridge and Valley Province. The Southern Ridge and Valley District is distinguished by various topography containing folded and faulted sedimentary rocks, including sandstone, shale, and limestone. Surface water runoff generally flows into Village Creek, a stream of the Black Warrior River, located within the Upper Black Warrior Watershed.

The Proposed Action utilizes the same boundary for the Study Area and the Area of Potential Effect (APE). The Study Area and APE encompasses approximately 378 acres of land within the airport property boundary. The Proposed Action necessitates the realignment and relocation of Taxiway A, Village Creek, and the parallel VSR. The Study Area includes the areas that may be impacted during the construction and operation of the Proposed Action and its alternatives, as well as staging areas and haul routes. The Study Area is the same boundary for the Proposed Action and all the alternatives carried forward for analysis. Additionally, all the environmental resource categories, except for noise and air quality, utilize the same Study Area or fall within the Study Area. Noise and air quality are the exception because these categories do not require disturbance- or footprint-based analysis; noise analysis is based on contours and air quality analysis is based on national standards. The Study Area and APE is illustrated on aerial imagery in **Figure C3**, located in Appendix C. The area potentially affected by the implementation of the Proposed Action is entirely within airport property, including both paved and unpaved areas that have already been disturbed due to the construction of airport facilities and ongoing vegetation maintenance practices at the Airport. Impacts to Village Creek are anticipated as a result of the Proposed Action.

3.3 Environmental Impact Categories Not Affected

Per FAA Order 1050.1G, “Effects or Impacts” are defined as impacts to the human environment from the Proposed Action or its alternatives that are reasonably foreseeable or have a reasonably close link to the Proposed Action or its alternatives.² The following list identifies six (6) resource categories that are determined to not be affected by the Proposed Action or its alternatives. Therefore, these categories are excluded from further analysis because no reasonably foreseeable impacts to the human environment are anticipated.

3.3.1 Coastal Resources

Coastal Resources include “all natural resources occurring within coastal waters and their adjacent shorelands such as islands, transitional and intertidal areas, salt marshes, wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as fish and wildlife and their habitats in these areas.” Jefferson County

² FAA Order 1050.1G 6.1 (i)

is not located within the Coastal Barrier Resource System as defined by the Coastal Barrier Resources Act of 1982. According to the Alabama Department of Environmental Management, the Coastal Zone Management Act of 1972, administered by the National Oceanic and Atmospheric Administration (NOAA), is not applicable to Jefferson County. The Alabama Coastal Area Management Program (ACAMP) states that “enforceable policies of the program regulate various activities on coastal lands and waters seaward of the continuous 10-foot contour in Baldwin and Mobile counties³.” Additionally, the Marine Sanctuaries Act is not applicable to the water resources of Jefferson County, Alabama. Therefore, Coastal Resources are not relevant to this assessment.

3.3.2 Department of Transportation, Section 4(f) and Section 6(f)

Section 4(f) properties are defined as “resources that include publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance; and publicly or privately owned land from a historic site of national, state, or local significance.” The closest Section 4(f) properties are the Inglenook Park and the Wahouma Park, located approximately 0.82 and 1.5 miles to the northeast and east of the proposed project area, respectively. Land and Water Conservation Fund (LWCF) mapping indicates that no land within the study area has been acquired with a land conservation grant, consequently, there are no impacts related to Section 6(f). As a result, and because the proposed project is located entirely within Airport property, the Proposed Action will not affect Section 4(f) or 6(f) properties, and therefore, are not relevant to this assessment.

3.3.3 Farmlands

The Farmland Protection Act (FPPA) regulates all federal actions that may have the potential to convert farmland to non-agricultural uses. The Farmland category is defined by “those agricultural areas considered important and protected by federal, state, and local regulations. Important farmlands include pasturelands, croplands, and forests that are considered to be prime, unique, or of statewide or local importance.” Because the Proposed Action will be implemented within the boundary of existing Airport property and will not include the conversion or acquisition of farmland, there are no anticipated impacts to farmlands, and therefore, farmlands are not relevant to this assessment. The United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) concurred with this determination. On June 2, 2025, the USDA NRCS provided a letter stating, “Based on the nature of the project, the site is exempted from the FPPA.” The USDA Concurrence Letter is located in Appendix C.

³ <https://adem.alabama.gov/coastal>

3.3.4 Land Use

According to the 1050.1 Desk Reference, assessing land use involves determining whether current and proposed land uses align with an aeronautical or aerospace proposal. Impacts on land use may include disruption or relocation of communities. Runway and taxiway separation improvements associated with the Proposed Action will not result in adverse impacts to the land use surrounding the Airport. The implementation of the Proposed Action will not require the acquisition of land and will occur entirely within the boundary of existing Airport property. Therefore, Land Use is not relevant to this assessment.

3.3.5 Natural Resources and Energy Supply

The Natural Resources and Energy Supply resource category “evaluates a project’s consumption of natural resources, including water, asphalt, aggregate, wood, and the use of energy supplies, such as coal, natural gas, electricity, and other fossil fuels.” This evaluation considers all stages of the Proposed Action, including construction, operation, and maintenance. The Proposed Action is anticipated to utilize commonly available construction materials within Jefferson County, such as concrete, gravel, and fuels for powering construction equipment. Although there will be a temporary increase in energy demand during construction, it is not anticipated to exceed available or future supplies of natural resources. Therefore, the Proposed Action will have minimal impacts to Natural Resources and Energy Supply.

3.3.6 Visual Effects

The Visual Effects resource category examines “the extent to which the Proposed Action would produce light emissions that create annoyances, interfere with activities, or contrast with the visual resources of the existing environment.” Visual resources include buildings, sites, cultural properties, or other landscape features that are visually important or possess unique characteristics. Temporary light emission impacts are expected during construction; however, no long-term impacts on visual resources are anticipated. Two structures will be demolished as part of the Proposed Action; however, these structures are not visually important, and they do not possess unique characteristics, therefore the demolition of the structures is not considered a significant impact. Village Creek is an important landscape feature within and near the project area. The Proposed Action will relocate Village Creek; however, the relocation will, at a minimum, maintain the existing conditions of Village Creek. Based on these considerations, the Proposed Action will have minimal impact to Visual Effects.

3.4 Environmental Impact Categories Potentially Affected

After a comprehensive analysis of the project site and consultation with regulatory agencies, the environmental resource categories listed below are or may be present within the Study Area. These categories are carried forward for further analysis in the following chapter, **Chapter 4, Environmental Consequences and Mitigation**.

- Aviation Emissions and Air Quality
- Biological Resources
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archeological, and Cultural Resources
- Socioeconomics and Children's Health and Safety Risks
- Noise and Compatible Land Use
- Water Resources
 - Wetlands
 - Floodplains
 - Surface Waters
 - Ground Water
 - Wild/Scenic Rivers