# 6 Environmental Overview

This chapter provides a preliminary assessment of the environmental factors to be considered as part of the development and implementation of the proposed Master Plan (Study) projects. This review was conducted in accordance with Federal Aviation Administration (FAA) Orders 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions* and 1050.1F, *Environmental Impacts: Policies and Procedures.* This review does not provide a complete investigation sufficient for obtaining environmental permits or compliance with environmental documentation, such as an Environmental Assessment (EA) under the requirements of NEPA, as amended. Publicly available resources were relied upon to identify the potential impacts of study recommendations.

The purpose of this overview is to identify the potential environmental issues and environmentally sensitive areas that may affect future projects at Blue Grass Airport (LEX and Airport) and to identify those environmental issues that may require additional analysis and permits prior to implementation.

The environmental impact categories evaluated herein are:

- Compatible land use and zoning
- Social and economic environment
- Socioeconomic resources; environmental justice; children's health and safety
- Air quality
- Water quality
- Department of Transportation (DOT) Act, Section 303
- Section 4(f) resources
- Historical, architectural, archaeological, and cultural resources
- Biological resources
- Wetlands and watercourses
- Floodplain
- Prime and unique farmland
- Hazardous materials

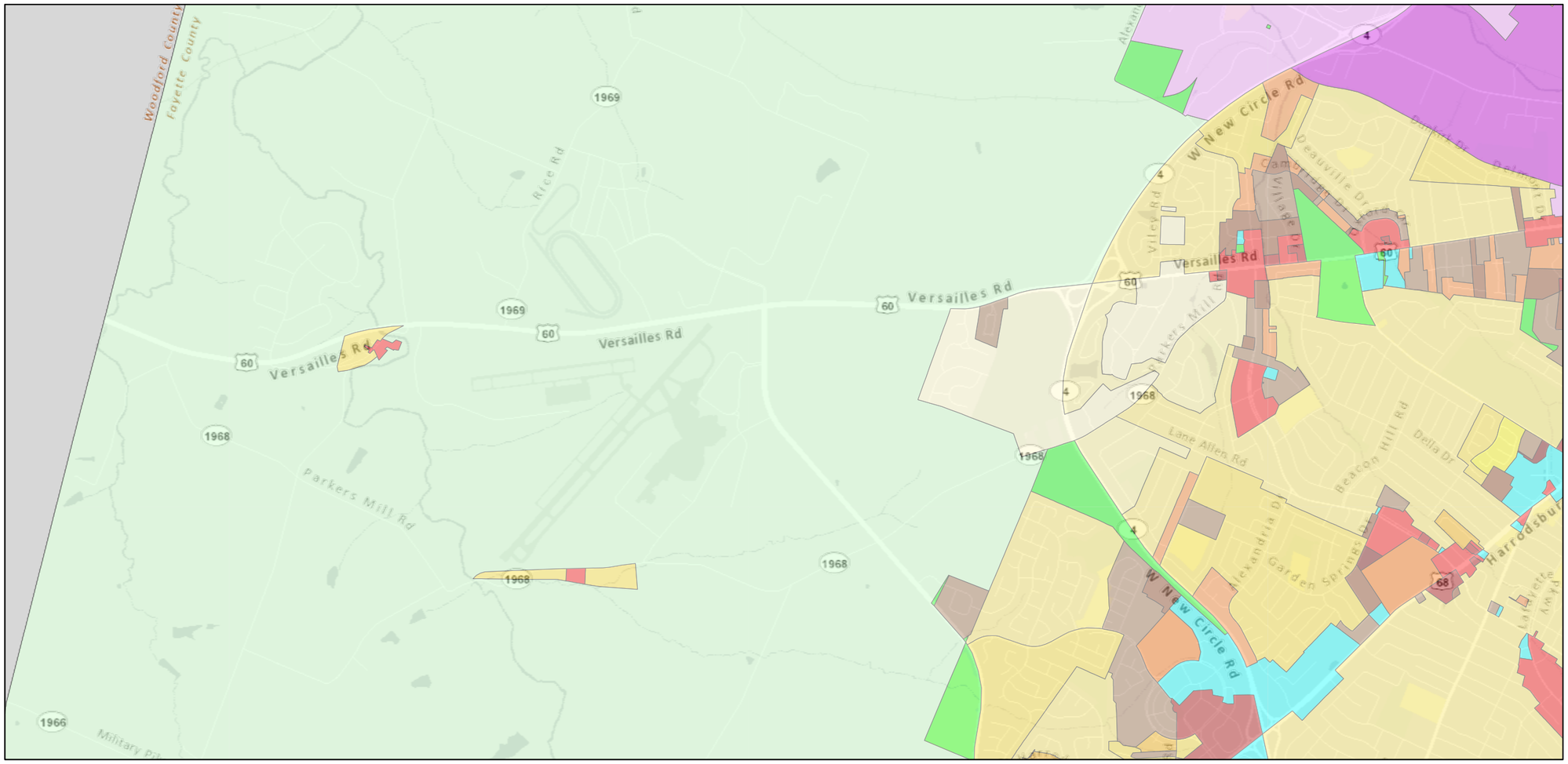
## 6.1 Compatible Land Use and Zoning

### 6.1.1 Compatible Land Use

The Airport is located four miles west of downtown Lexington in Fayette County, Kentucky. Based on a review of the area, land uses surrounding the Airport include Agricultural Rural, Neighboring Business, Single Family Residential District, Single Family Residential, and Planned Neighborhood Residential.

**Figure 6-1**
**Land Use and Zoning for LEX**

# ArcGIS Map for LEX Land Zoning

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Zoning

A-R
A-U
B-1
B-3
B-4
B-6P
I-1
I-2
P-1
R-1A
R-1B
R-1C
R-1D
R-1E
R-1T
R-2
R-3
R-4
R-5

Neighborhood Association

Polictical Information

1:36,112

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

LFUCG GIS

ArcGIS Web AppBuilder

LFUCG GIS Office | LFUCG Division of Water Quality, LFUCG GIS Office | LFUCG Division of Planning, LFUCG GIS Office | LFUCG Planning, LFUCG GIS | LFUCG GIS, LFUCG Addressing, LFUCG Planning, Fayette County Property Valuation Administrator (PVA) | LFUCG GIS |

### 6.1.2 Zoning

According to the City of Lexington mapping resources, LEX is primarily zoned as Agricultural Rural (A-R) in addition to a limited amount of Single-Family Residential (R-1D) and Neighborhood Business (B-1). The area immediately surrounding the Airport is similar in classification. Directly west of LEX are Light Industrial, Business, and Residential zoned areas. **Figure 6-1** depicts the zoning surrounding the Airport. Master Plan recommendations would be consistent with current development at LEX. Impacts on zoning are not anticipated.

## 6.2 Social and Economic Environment

### 6.2.1 Socioeconomic Resources

According to FAA Order 1050.1F, *Environmental Desk Reference*, socioeconomics is an umbrella term used to describe aspects of a project that are either social or economic in nature. A socioeconomic analysis evaluates how elements of the human environment, such as population, employment, housing, and public services, might be affected by the proposed action and alternative(s).

In general, the project area is limited to the area immediately surrounding the Airport. Social and induced socioeconomic impacts are typically defined as disruptions to surrounding communities, such as shifts in patterns of population movement and growth, changes in public service demands, loss of tax revenue, and changes in employment and economic activity stemming from airport development. These impacts may result from the closure of roads, increased traffic congestion, acquisition of business districts or neighborhoods, and/or by disproportionately affecting low-income or minority populations.

Development anticipated at the Airport does not have the potential for these types of broad impacts. There will be no impacts to housing that would result in the relocation of residents; no impacts or relocation of businesses that would create severe economic hardship on the community; no substantial loss to the community tax base. Past FAA studies have identified that the social and induced socioeconomic impacts are not normally significant unless substantial impacts are anticipated in other categories (e.g., noise, land use, property acquisition), and this would not be the case with the Master Plan projects being considered at the Airport.

### 6.2.2 Environmental Justice

The US Environmental Protection Agency (EPA) defines environmental justice (EJ) as the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Title VI of the Civil Rights Act of 1964 was enacted to protect against discrimination based on race, color, and national origin in programs and activities receiving federal financial assistance.

Executive Order 12989, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," enacted in 1994, requires all federal agencies to identify and address the disproportionately high and/or adverse human health environmental impacts of their programs and policies on minority and low-income populations and communities. The guidance provides six principles for consideration of EJ, which are: (1) composition of affected areas and whether there are low-income populations, minorities, or Indian tribes, (2) public health and industry data for assessment of environmental hazards, (3) recognition of interrelated cultural, social, occupational, historical, or economic factors that could amplify environmental effects, (4) encouragement of public participation and accommodations to overcome linguistic, cultural, institutional, geographic, and other barriers, (5) meaningful community representation with awareness of diverse constituencies, and (6) soliciting tribal representation.

The Council on Environmental Quality's (CEQ) "Environmental Justice Guidance Under the National Environmental Policy Act" provides guidance to federal agencies on how to determine the presence of low-income and minority populations within an appropriate unit of geographic analysis. The guidance defines the identification of a minority population where either "(a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate units of geographic analysis." To assess the presence of minority and/or low-income populations near the Airport, an EJ analysis was completed using data from the US Census Bureau website. Fayette County was selected as the Community of Comparison (COC) as it is both inclusive and representative of the area surrounding the Airport. Represented in **Figure 6-2**, Census tracts 37.01, 42.08, and 42.07, contain or are adjacent to the Airport and, depending on the action, could be an Affected Community (AC). Per CEQ guidance, ACs that are greater than 50 percent minority or low-income are automatically designated as EJ populations. The ACs surrounding LEX do not have minority or low-income populations greater than 50 percent. ACs are also designated as EJ populations if the low-income or minority populations are 125 percent of the COC. **Table 6-1** displays the EJ analysis for LEX. According to the US Census Bureau, 2019 American Community Survey (ACS) Five-Year Estimates, **Census Tract 42.07 represents the Airport, and Census Tract 37.01 represents an EJ population**.

**Figure 6-2**
**Environmental Justice Analysis Area**

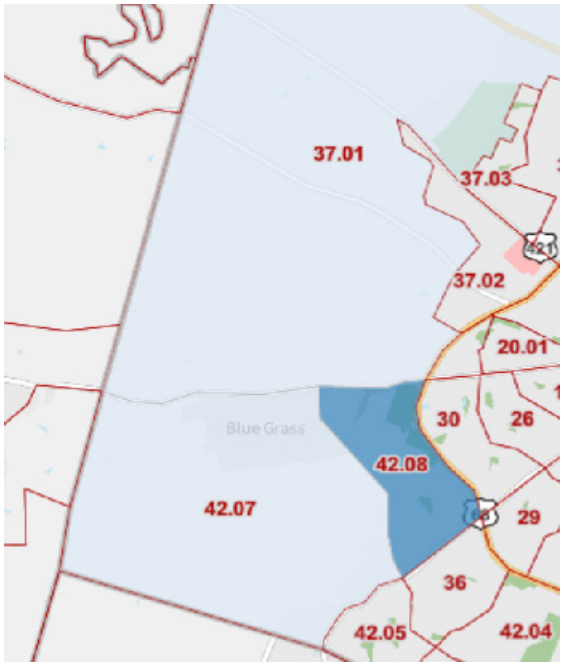



**Table 6-1**
**Environmental Justice Analysis**

| | Fayette County (COC) | Census 37.01 | Census Tract 42.05 | Census Tract 42.07 |
|---|---|---|---|---|
| Total Survey Population Determined | 320,601 | 3,162 | 3,883 | 7,116 |
| Minority Persons | 92972 | 1217 | 553 | 2144 |
| Percent Minority | 29.00% | 38.49% | 14.24% | 30.13% |
| 125% COC | 36.25% | | | |
| **Potential Minority EJ Impact?** | | **Yes** | **No** | **No** |
| Total Survey Population Determined | 307,645 | 1,237 | 3,876 | 7,006 |
| Low Income | 51,715 | 205 | 161 | 192 |
| Percent Low Income | 16.81% | 16.57% | 4.15% | 2.74% |
| 125% COC | 21.01% | | | |
| **Potential Low-Income EJ Impact?** | | **No** | **No** | **No** |

Source: US Census, 2019 ACS Survey (Five-Year Estimate). Retrieved February, 2023.

Projects and improvements proposed in this Master Plan could potentially have a disproportionately high and adverse impact on a minority population if the project impacts communities in Census Tract 37.01. The recommended projects and improvements are on LEX property and are unlikely to result in direct physical off-site impacts.

### 6.2.3 Children's Health and Safety

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks," requires that federal agencies make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children. Such disproportionate impacts would be likely to occur at schools, daycare centers, or similar facilities with higher concentrations of children. Only one such facility is located within approximately two miles of the Airport, which is Paul Laurence Dunbar High School.

While a public high school is located within two miles of LEX, the proposed projects discussed in the Study would occur primarily on Airport property and, as identified above, away from areas where children are likely to be present on a consistent basis. The Master Plan recommendations are unlikely to have any anticipated impact on children's health and their safety.

## 6.3. Air Quality

The Clean Air Act Amendments (CAAA) of 1990 require the EPA to set National Ambient Air Quality Standards (NAAQS). A "criteria" of six pollutants considered harmful to public health and the environment was identified to a measurable standard. The NAAQS identifies two types of air quality standards: primary and secondary. Primary standards provide public health protection, including protecting the health of "sensitive" populations, such as asthmatics, children, and the elderly. Secondary standards were established to provide public welfare protection, including protection against impaired visibility and damage to animals, soils, crops, vegetation, and buildings. The six "criteria air pollutants" established by the EPA to protect public health and welfare include:

- Ozone (Ozone3)
- Carbon monoxide (CO)
- Particulates (PM10 and PM2.5)
- Sulfur dioxide (SO2)
- Nitrogen dioxide (NO2)
- Lead (Pb)

Kentucky has adopted the national standards implemented by the EPA and has developed a State Implementation Plan (SIP) to attain and maintain these standards. Fayette County is in the Bluegrass, Lexington-Fayette Interstate Air Quality Control Region.[8] This agency is responsible for the SIP, designation activities for the NAAQS, transportation conformity activity, regional haze, and general air quality planning. When violations of air quality standards are detected, the Division for Air Quality is required to make plans to bring the area back into compliance with the standards; if they are not, the EPA has the authority to issue sanctions to the area. Per the data from the EPA Green Book, Fayette County is in attainment for all criteria for air pollutants.

[8] Information gathered from the EPA website and the University of Kentucky, Retrieved for 2022, https://www.uky.edu/KGS/geoky/county/fayette.htm

Section 176(c) of the CAAA requires that federal actions conform to applicable federal and state air quality plans and ensure that the actions will not:

- Cause or contribute to any new violation of any standard in any area
- Increase the frequency or severity of any existing violation of any standard in any area
- Delay timely attainment of any standard of any required interim emission reductions or other milestones in any area

No air quality modeling was conducted as part of this Study. However, it is anticipated that proposed Airport improvements may require air quality modeling that would be conducted during the preparation of environmental reviews under NEPA documentation (i.e., before construction). The results of the air quality modeling will establish if the above requirements are met and/or if any additional actions are required by LEX to ensure compliance.

In the short term, construction projects could result in minor impacts on air quality in the immediate vicinity of LEX related to the use of construction vehicles and equipment. It is anticipated that pollutants from the use of such vehicles and equipment would include volatile organic compounds (VOCs), nitrogen oxide ($NO_x$), and carbon monoxide (CO).

## 6.4 Water Quality

Water quality standards applicable to LEX are established under the federal Clean Water Act (CWA) and the Kentucky Department for Environmental Protection Division of Water (DOW). These regulations include requirements for controlling discharges into surface water and groundwater, developing wastewater treatment management plans and practices, and establishing permitting requirements for discharges (Section 402 of the CWA) and dredged and fill materials (Section 404 of the CWA). Existing surface and groundwater quality at LEX are described below.

### 6.4.1 Surface Water

The Airport is located in the Lower Kentucky watershed (HUC_8 05100205).[9] Cave Creek passes south of the airfield, running from the east to the west, flowing into South Elkhorn Creek, which is located southwest of the facility. Surface water features on and in the vicinity of the Airport are depicted in **Figure 6-3**.

The Kentucky Water Health Portal identifies each stream or lake in Kentucky based on the level at which the waterway supports six designated uses. These water uses include the following:

- Primary Contact Recreation (PCR) – Swimming
- Secondary Contact Recreation (SCR) – Wading, boating, and fishing
- Aquatic life
- Drinking water – Domestic water supply
- Fish consumption
- Outstanding state resource waters

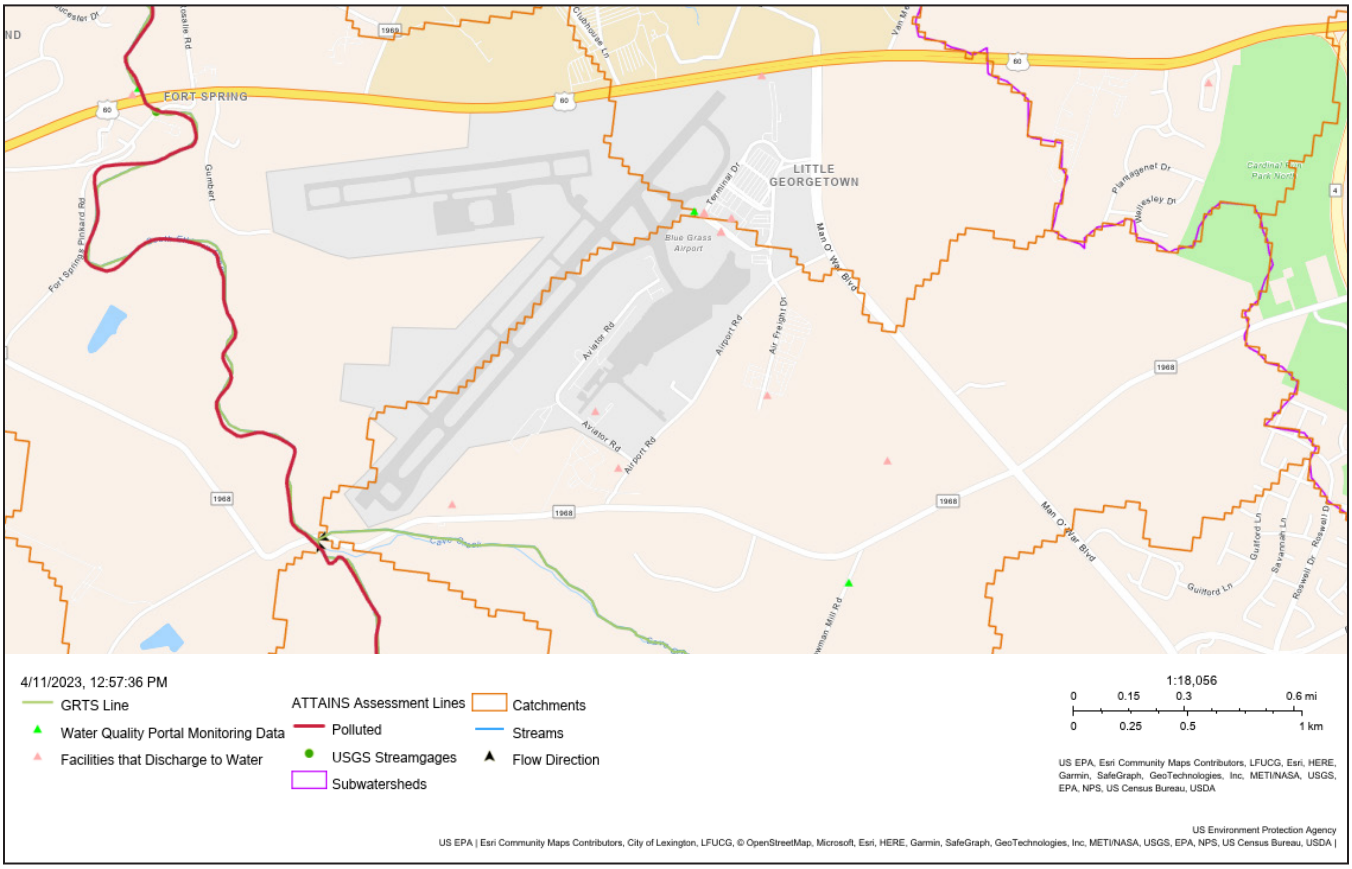
One water resource within the vicinity of the Airport has been designated as an impaired stream per the CWA Section 303(d). Impaired water is a waterbody that is threatened or needs a Restoration Plan. The Watershed of South Elkhorn Creek (ID: KY-1750) has existing plans in place for mitigation. For Airport construction disturbing one acre or more of land, a General Permit for Stormwater Discharges Associated with Construction Activity would have to be granted by the Kentucky Department for Environmental Protection. A Stormwater Pollution Prevention Plan (SWPPP) would be required for the permit.

[9] Information was provided by the Kentucky Division of Water (DOW) Water Maps Portal, Retrieved 2023, https://eppcgis.ky.gov/watershed/

### 6.4.2 Groundwater

The Airport is located within the Inner Bluegrass physiographic region of Kentucky.[10] The Inner Bluegrass occupies a circle in the middle of the Bluegrass, with its center near Lexington, and is characterized by gently rolling terrain and a thick, fertile, residual soil. Some of the limestone strata are phosphatic. The underlying limestone results in karst geology underlying the entire physiographic region.[11] Examples of the karst system and features can be seen at McConnell Springs in Lexington. Groundwater occurs in the pore spaces within rocks and alluvium, in fractures, and in solution openings or conduits in areas underlain by carbonate rocks (e.g., limestone). Surface water often enters or returns to the groundwater system through sinkholes and cave openings. Surface and groundwater supplies are susceptible to pollution from natural, agricultural, and industrial sources. Within the airport property, the general flow of groundwater is from the northeast to the southwest towards Cave Creek. The EPA's sole source aquifer mapping tool indicates that LEX is not located in a sole source aquifer.

**Figure 6-3**
**Streams and Wetland Map**




[10] Information provided by the US Fish and Wildlife Services Library, *US Geological Survey Water-Supply Paper 2425*. Retrieved 2023, https://www.fws.gov/wetlands/Data/Water-Summary-Reports/National-Water-Summary-Wetland-Resources-Kentucky.pdf.

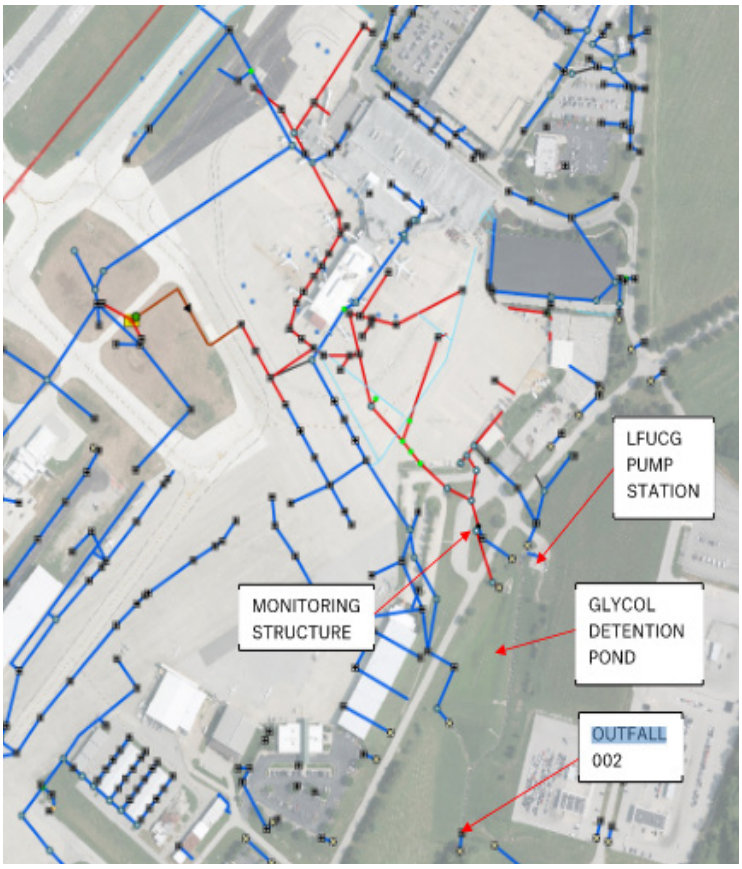
[11] Information from the University of Kentucky, *Geology of Fayette County*, Retrieved 2023, https://www.uky.edu/KGS/geoky/county/fayette.htm.

### 6.4.3 Stormwater

The stormwater at the Airport is mitigated through the Stormwater Manual for Lexington-Fayette County. This document, utilized beginning in 2005, delineates the best methods for addressing floodplain resolve, stormwater structures, and general drainage for industrial and commercial use throughout the Fayette County area.

As part of this Study, a Deicer Management System Evaluation was conducted, which reviewed stormwater runoff containing deicers managed in the Airport deicer management system. This evaluation also identified outfalls, such as that shown in **Figure 6-4**. The evaluation further delineated future development alternatives, including alternate infrastructure.

**Figure 6-4**
**Existing Stormwater Conveyance & Deicer Management Infrastructure**




Source: Gresham Smith, 2024.

In summary, the existing deicer management system has sufficient capacity and capabilities to manage stormwater runoff containing deicers from current flight operations and deicing activities, although the design and condition of the glycol detention pond and associated discharge channels do pose some risk for leaking, odors, and biofilm growth. The alternative includes a significant extension of the terminal ramp to the east that would conflict with some existing deicer management infrastructure, with some infrastructure needing to be relocated or replaced.

The full analysis of the existing system, as well as alternatives and the full list of recommendations, is provided in **Appendix M**.

***National Pollutant Discharge Elimination System (NPDES)***

Created in 1972 by the CWA, the NPDES permit program is authorized to present EPA standards by which to perform permitting, administrative, and enforcement aspects of pollution programs. Industrial wastewater is a focus area for the NPDES, which provides guidance for mitigating and controlling stormwater runoff during planned industrial activities.[12] To comply with the EPA, Kentucky's Department of Water issues wastewater discharge permits through the Kentucky Pollutant Discharge Elimination System (KPDES). The Airport is responsible for Permit No. KY0101851, authorized by the KPDES.

## 6.5 Department of Transportation Act, Section 303

Section 303 of the US DOT Act of 1966 (49 USC 303, commonly referred to as Section 4(f)) provides for the protection of publicly owned recreational resources and requires the analysis of potential impacts to these resources arising from DOT actions. Resources protected include public parks and recreation areas, as well as wildlife and waterfowl refuges or management areas of national, state, or local significance. This section also applies to historic sites of national, state, or local significance as determined by the official that has jurisdiction over these historic resources. Such sites include those that are listed or eligible for inclusion in the National Register of Historic Places (NRHP), as well as those identified by appropriate state or local agencies as having historic significance. Impacts on parks or recreational resources are not anticipated as a result of the actions proposed in the Master Plan.

A review of the Kentucky Department of Fish and Wildlife Resources website indicates that there is not a wildlife management center area near the Airport. The NRHP spatial database indicates that there are three NRHP resources near the Airport. Formal consultation with the Kentucky Heritage Council (KHC) may be required before the completion of any Master Plan recommendations to determine the presence of resources listed in the Kentucky Historic Resources Inventory (KHRI). Historic resources are discussed further in **Section 4.7**.

## 6.6 Section 6(f) Resources

The US Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreational resources. Section 6(f) of this Act prohibits the conversion of lands purchased with LWCF monies to a non-recreation use. A review of the LWCF website revealed there are no LWCF projects within a one-mile radius of the airport.

## 6.7 Historic, Architectural, Archaeological, and Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966 protects properties that are listed or determined to be eligible for inclusion in the NRHP. The NHPA requires Federal agencies to consider the effects of their undertakings on historic properties and to consult with the State Historic Preservation Office (SHPO) and other parties to develop and evaluate alternatives and modifications to the undertaking that could avoid or minimize potential impacts on historic resources.

In order to consider the effect an undertaking may have on properties that are eligible or are listed on the NRHP, an Area of Potential Effect (APE) must first be identified. According to 36 CFR Part 800.16(d), the APE is the geographic area or areas within which an undertaking may directly or indirectly alter the character or use of historic properties. Such changes may include physical destruction, damage, or alteration of a property; change in the character or the property's use or of physical features within its setting that contribute to its historic significance; and introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features. For the purposes of this environmental overview, the APE was defined as an area defined within 0.5 miles of the Air Operations Area.

[12] Information provided by the US Environmental Protection Agency, *Industrial Stormwater Overview, 2021*. Retrieved 2023, https://www.epa.gov/npdes/stormwater-discharges-industrial-activities.

Typically, in the NEPA process, an early coordination letter would be sent to the SHPO, which for undertakings at the Airport would be the KHC. This package would detail the project as well as the purpose and need and request input on potential resources within or near the project area. Once recommended resource assessments have been completed, the FAA would then conduct a formal consultation with the KHC, where the KHC would conclude if any NRHP-listed or eligible properties would be affected by the proposed undertaking. In all cases, if any archeological artifacts or human remains were uncovered during construction, demolition, or earthmoving activities, construction in the immediate area would be stopped, and the KHC would be notified immediately.

**Figure 6-5** represents a review of the NRHP spatial database and five NRHP-listed resources within a mile radius of the Airport. Coordination with the KHC will be required to determine the presence and/or absence of state-listed historic and archaeological resources on Airport property prior to planned developments/improvements.

**Figure 6-5**
**National Register of Historic Places (NRHP) Locations in Proximity to the Airport**

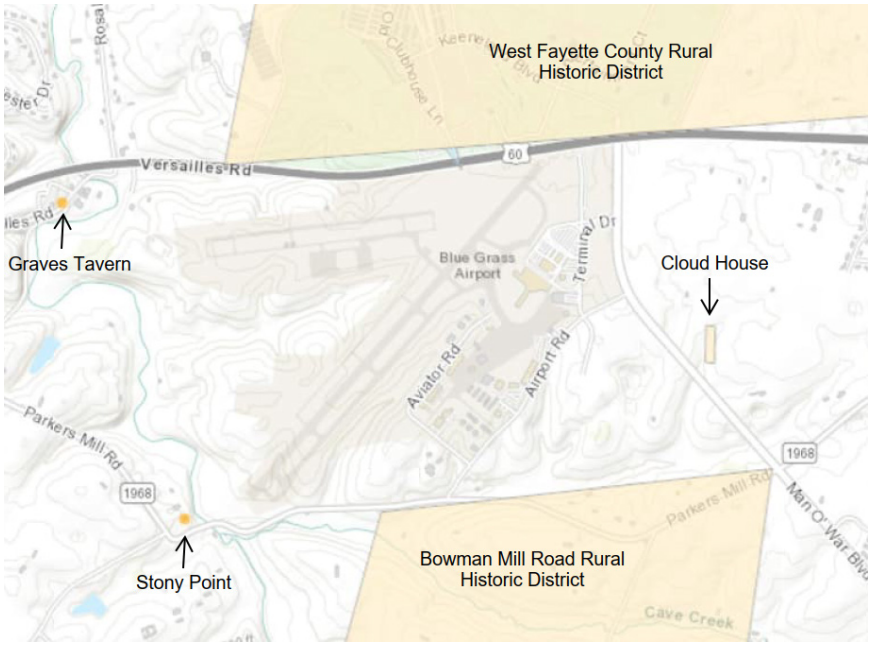



**Table 6-2**
**National Register of Historic Places (NRHP) Locations**

| Parcel ID | Resource Type | Name |
|---|---|---|
| 99000901 | District | Bowman Mill Road Rural Historic District |
| 91000154 | District | West Fayette County Rural Historic District |
| 83002766 | Building | Graves Tavern |
| 82002685 | Building | Cloud House |
| 79000981 | Building | Stony Point |

## 6.8 Biological Resources

The City of Lexington is located within the Inner Bluegrass Region of Kentucky and contains a biodiversity and heterogeneous region that is composed of low terrain and leveled floodplains. Some of the conditions associated with this area include poorly drained floodplains, undulating terraces, wetlands, ponds, abandoned channels, oxbow lakes, and low ridges. Today, some woodlands remain, but livestock, alfalfa, corn, soybean, and wheat farming are common. Land use is affected by seasonally high-water tables and localized flooding. The tall-grassed region is also a significant habitat for migratory and local birds. Upland biotic communities on Airport property are predominantly areas of maintained grass. Aquatic habitats are not abundant on LEX, and those present are limited to small ponds and wetlands that do not support an abundant habitat for obligatory aquatic wildlife. Wetlands are discussed further in **Section 4.10**.

For the implementation of Master Plan recommendations, a more detailed environmental analysis would be conducted to assess potential impacts on biotic communities in the areas where development activities and improvements are proposed. Field surveys may be required.

### 6.8.1 Threatened and Endangered Species

Section 7(c) of the Endangered Species Act of 1973 (16 USC 1531 et sec.) requires that the potential impacts on rare, threatened, and endangered species of flora and fauna and their critical habitats be identified to avoid adverse impacts on these species.

According to the USFWS Information for Planning and Conservation (IPaC) website, several federally protected species have the potential to be present at LEX. The gray bat (*Myotis grisescens*), an endangered species; the Indiana bat (*Myotis sodalis*), an endangered species; the northern long-eared bat (*Myotis septentrionalis*), a threatened species; and the monarch butterfly (*Danaus plexippus*), a candidate species, could be impacted by proposed projects at the Airport.

Additionally, the IPaC also identifies migratory birds classified as Birds of Conservation Concern within the boundaries of the Airport, these birds are as follows:

- Cerulean Warbler
  *Dendroica cerulea*
- Eastern Whip-poor-will
  *Antrostomus vociferus*
- Kentucky Warbler
  *Oporornis Formosus*
- Prairie Warbler
  *Dendroica discolor*
- Rusty Blackbird
  *Euphagus carolinus*
- Wood Thrush
  *Hylocichla mustelina*
- Black-billed Cuckoo
  *Coccyzus erythropthalmus*
- Chimney Swift
  *Chaetura pelagica*
- Field Sparrow
  *Spizella pusilla*
- Lesser Yellowlegs
  *Tringa flavipes*
- Prothonotary Warbler
  *Protonotaria citrea*
- Red-headed Woodpecker
  *Melanerpes erythrocephalus*

The Office of Kentucky Nature Preserve's Rare Plant Database identifies Short's Bladderpod (*Physaria globose*) as a state-endangered plant. Kentucky's Biological Assessment Tool indicates that the Airport is not within a critical habitat area. A more detailed environmental analysis could be conducted prior to the implementation of Master Plan recommendations, including formal consultation with federal and state agencies, confirmation of existing species within the project area through surveying, and evaluation of potential impacts to those species and their habitat areas.

## 6.9 Wetlands and Watercourses

Wetlands and watercourses at LEX are regulated and protected under both federal and state regulatory programs. It is anticipated that prior to initiating specific projects identified in the Master Plan, a current wetland delineation would be required to determine the federally and state-regulated wetland and watercourse boundaries in the project area. Work occurring within designated federal or state wetlands or watercourses will require securing the appropriate permits from the US Army Corps of Engineers (USACE) and/or the DOW, as applicable.

The US DOT Order 5660.1A, Preservation of the Nation's Wetlands, implements Executive Order 11990, Protection of Wetlands. The USACE administers Section 404 of the CWA (933 CFR 320-332), which regulates the discharge of fill into federal wetlands and the waters of the United States. Federally regulated wetlands, as defined in 33 CFR Part 328, are "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." A federal 404 permit may be required from the USACE for projects that include the discharge of dredged or fill material into waters of the United States, including wetlands. Kentucky's regulation of wetlands is limited to those areas that are deemed to be jurisdictional wetlands by the USACE. DOW's Water Quality Certification Section (WQCS) administers the state's 401-permitting process.

### 6.9.1 Wetland Mapping

To identify wetlands and watercourses occurring on the Airport property, publicly available online data was reviewed. Wetlands and watercourses were not formally delineated as part of this Study. The USFWS National Wetlands Inventory (NWI) map shows one nontidal freshwater pond (PubHh) with an unconsolidated bottom in an area where substrate is present yearly as these are modified and man-made retaining ponds or barriers are located west of Runway end 09. Additionally, at least two freshwater ravines (R4SBC) surround the west and south borders of the Airport property and flow through the Runway Protection Zones (RPZ). Refer to **Figure 6-3** for the location of each NWI wetland.

### 6.9.2 Floodplain

Executive Order 11988 defines floodplains as the "lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands," including, at a minimum, "the area subject to a one percent or greater chance of flooding in a given year." The intent of Order 11988 is to ensure that floodplains and floodways are kept clear of obstructions and facilities that could restrict or increase flow rates or volumes during flood conditions. Encroachment is defined as any action that would cause the 100-year water surface profile to rise by one foot or more. The 100-year floodplain has been adopted by the Federal Emergency Management Agency (FEMA) as the baseline for floodplain management. Both federal and state laws regulate development within floodplains and floodways.

According to FEMA's Flood Insurance Rate Maps (FIRM), dated March 4, 2014 (Panel Numbers 21006701111E and 21006701113E), LEX is primarily classified as Zone X, meaning that the airfield is not in a floodplain. The southwest portion of the Airport property, near Runway ends 04 and 09, is in proximity to areas classified as Zone AE. According to FEMA, Zone AE is "the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1 percent annual chance of flood can be carried without substantial increases in flood heights."

### 6.9.3 Prime and Unique Farmland

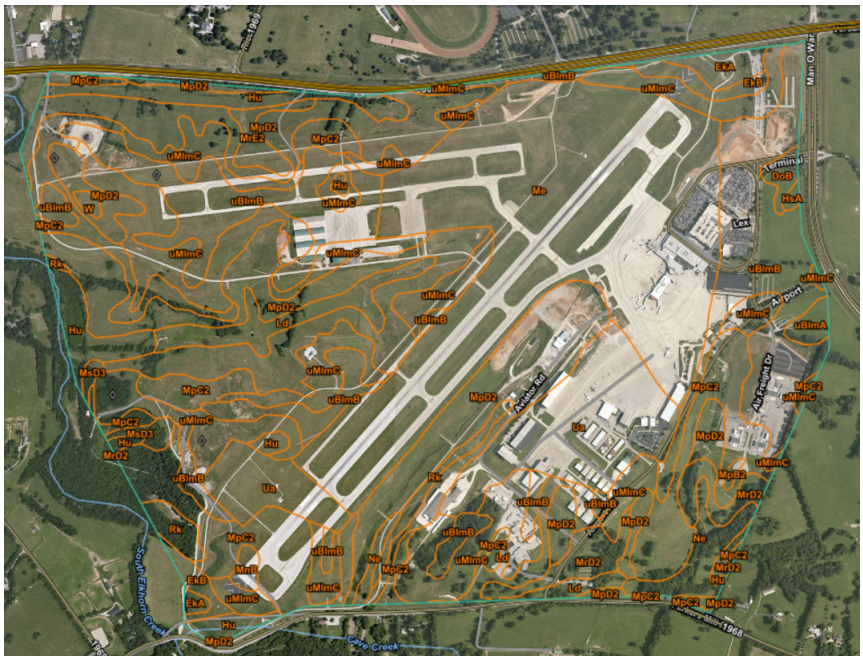
The Farmland Protection Policy Act (FPPA) limits the conversion of significant agricultural lands to non-agricultural uses as a result of federal actions (7 USC § 4201, et seq.). The determination of whether farmlands are subject to FPPA requirements is based on soil type; the land does not have to be actively used for agriculture. Farmland subject to FPPA requirements can be pastureland, forested, or other land types, but not open water or developed urban or transportation areas. The FPPA regulates four types of farmland soils:

- Prime farmland
- Unique farmland
- Farmland of statewide importance
- Farmland of local importance

Prime farmland is defined by the Natural Resources Conservation Service (NRCS) as "land that has the best combination of physical and chemical characteristics" for agriculture. This includes land with these characteristics used for livestock or timber production but not land that is already urbanized or used for water storage. Unique farmland is defined as "land other than prime farmland that is used for the production of specific high-value food and fiber crops," with such crops defined by the Secretary of Agriculture. Farmland of statewide or local importance is farmland other than prime or unique farmland that "is used for the production of food, feed, fiber, forage, or oilseed crops."

LEX property primarily consists of soil types that are considered prime farmland and prime farmland if drained by the NRCS. A map of the different soil classifications listed by the NRCS is shown in **Figure 6-6**. Prior to the implementation of the airfield recommendations, a project-specific environmental analysis can be conducted to confirm the location of the improvements relative to farmland soils, quantify potential impacts, and coordinate with the US Department of Agriculture.

**Figure 6-6**
**Prime and Other Important Farmlands**



Per a review of data from the US Department of Agriculture, the survey area of the airport has approximately 21 types of farmland classification. Of the recorded areas, **Table 6-3** will display the Map Legend and the associated classification relevant to this area of the Inner Bluegrass Region of Kentucky. Further interpretation reflects the airport is comprised of several prime farmland components, two of which have state-wide importance. The prime farmland soils listed are often associated with floodplain development, and sometimes, further studies are needed for mitigation.[13]

**Table 6-3**
**Prime and Other Important Farmlands**

| Map Unit Name | Symbol from Map | Farmland Classification |
|---|---|---|
| Donerail silt loam | DoB | Prime Farmland |
| Elk silt loam | EkA, EkB | Prime Farmland |
| Huntington silt loam | HsA, Hu | Prime Farmland |
| Lindside silt loam | Ld | Prime Farmland |
| McAfee silt loam | MnB, MpB2 | Prime Farmland |
| McAfee silty clay loam | MpC2 | Statewide Importance |
| Newark silt loam | Ne | Prime Farmland |
| Bluegrass-Maury silt loam | uBlmA, uBlmB, uMlmC | Statewide Importance |
| Water | W | Not Prime Farmland |

Source: CHA.

### 6.9.4 Hazardous Materials

Hazardous waste is a general term relating to spills, dumping, and releases of substances that could threaten human and animal life. To identify these materials and protect the environment from harmful interaction with hazardous wastes, federal laws and regulations such as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource, Conservation, and Recovery Act (RCRA) have been enacted. CERCLA prescribes a very specific process for the investigation and cleanup of sites listed on the National Priorities List (NPL), also referred to as Superfund sites. RCRA is the public law that creates the framework for the proper management of hazardous and non-hazardous solid waste. Hazardous waste impacts are typically associated with the current or future use, transfer, or generation of hazardous materials within the limits of the proposed improvements or the acquisition of properties that contain hazardous materials. Environmental concerns related to solid waste disposal range from adequate landfills for normal urban trash to the safe disposal of industrial waste.

The Airport, located in EPA Region 04, operates as an Industrial entity. Per the Facility Summary from EPA resources, there are no Superfund sites near LEX. There are no identified Corrective Action sites within a one mile radius. The airport is listed as a RCRA reporting facility due to the fuel storage and delivery systems. Modifications to existing Airport facilities should be evaluated for the potential to generate additional hazardous materials; however, it is not expected that any recommended project would produce waste that could not be properly mitigated and addressed.

[13] Information provided by the Stormwater Manual for Lexington-Fayette Co, KY., Chapter 1, 2009, Retrieved 2023, https://next.lexingtonky.gov/sites/default/files/2016-07/stormwater%20manual.pdf.

### 6.9.5 Summary

Projects recommended in this Study are anticipated to have some impacts on the environment with concerns generally focused on water quality and protected species. As noted under each of the resource-specific sections, before implementation of some of the proposed development projects, further environmental documentation would be required to document existing conditions at that time, determine impacts on each resource, and, if appropriate, identify mitigation measures to address adverse impacts. Once project dates are available, if appropriate under NEPA, Categorical Exclusions or EAs will be prepared in accordance with FAA guidance. Based on the information provided and the types of projects recommended in the Master Plan, it is anticipated that impacts can be successfully mitigated, allowing implementation of the recommended plan.

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