

2.0 Introduction

When Federal Aviation Administration (FAA) funding is used for airport development projects, environmental approval is required. As part of the environmental overview process, the FAA has issued orders 1050.1F and 5050.4B to establish standardized guidelines for complying with the National Environmental Policy Act of 1969 (NEPA). While the environmental overview itself will not satisfy all the NEPA requirements, it is a tool to be utilized as a preliminary review of the environmental considerations that will be studied in detail during the NEPA process.

The purpose of the NEPA process is to identify, minimize, and mitigate potential environmental impacts as part of the initial planning process. Any time preferred development alternatives are designed at SGH, it is important to comply with the environmental overview process early on to determine the specific level of environmental analysis that will be necessary for these developments before construction can begin. NEPA provisions require federal agencies funding or approving a development proposal to make their decisions in a way that will protect, restore, and enhance the environment by first understanding the potential impacts of a proposed project.

The FAA Orders 1050.1E and 5050.4B identify specific impact categories that must be considered in the environmental review process. These categories are outlined in Table 2.0-1 below.

Exhibit 2.0-1: Impact Categories.

1.	Air Quality
2.	Biological Resources (Including Fish, Wildlife, and Plants)
3.	Climate
4.	Coastal Resources
5.	Department of Transportation Act, Section 4(f)
6.	Farmlands
7.	Hazardous Materials, Solid Waste, and Pollution Prevention
8.	Historical, Architectural, Archaeological, and Cultural Resources
9.	Land Use
10.	Natural Resources and Energy Supply
11.	Noise and Compatible Land Use
12.	Socioeconomic, Environmental Justice, and Children’s Environmental Health and Safety Risks
13.	Visual Effects (Including Light Emissions)
14.	Water Resources (Including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)
15.	Cumulative Effects
16.	Irreversible and Irretrievable Commitment of Resources

Sources: Order 1050.1F: Chapter 4, 1050.1F Desk Reference Exhibit i-1.

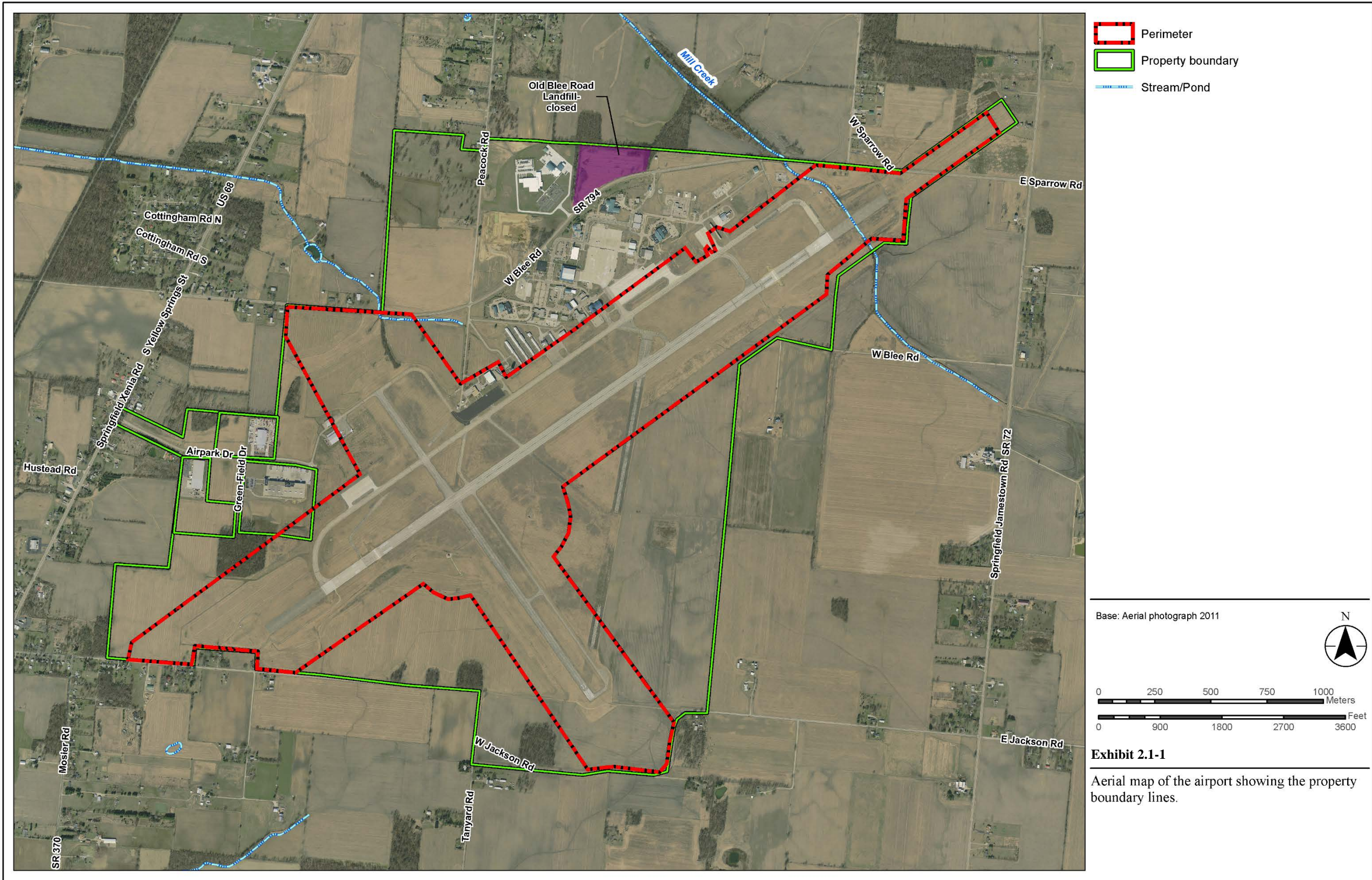
The end of this chapter will contain a summary of all of the issues identified during this overview of concerns pertinent to proposed developments on airport property.

2.1 Airport Master Plans

Change 2 to the FAA Advisory Circular AC 150/5070-6B, Airport Master Plan, provides guidance for including environmental conditions worthy of consideration when designing development alternatives at an airport. In order to reduce impacts to the environment, it is important that consideration be given to these environmental issues. As

development alternatives are designed through the planning process at SGH, the issues identified in this chapter should be incorporated into all design considerations from early on in the planning process. See attached Exhibit 2.1-1 for an aerial map of the airport showing the boundary lines for the property.

Exhibit 2.1-1: Aerial map of the airport showing the property boundary lines.



Source: 2005 Springfield Airport Masterplan - Airport Layout Plan 1995, Aviation Planning Associates; Aerofinity, Inc., 2004.

Source: 2005 Springfield Airport Masterplan - Airport Layout Plan 1995, Aviation Planning Associates; Aerofinity, Inc., 2004.

2.2 Level of Review

Upon determining that NEPA applies to a proposed action, the FAA will decide on the appropriate level of review. The three levels of NEPA review are Categorical Exclusions (CATEX), Environmental Assessment (EA), and Environmental Impact Statement (EIS). Each of the three types of review are described in the sections below in further detail.

2.3 Categorical Exclusion (CATEX)

A CATEX is a category of actions that neither individually nor cumulatively affect the human environment in a significant way, and thus neither an EA nor an EIS is required for these categories of actions. A CATEX is not an exemption or a waiver from the NEPA review process. It is itself a level of NEPA review. If a proposed action falls within the scope of a CATEX and there are no extraordinary circumstances, neither an EA nor an EIS is required. See Chapter 5 of Order 1050.1F for further information on CATEXs.

2.4 Environmental Assessment (EA)

An EA is used to determine if a proposed action has the potential to significantly impact the human environment. An EA is a concise public document that briefly provides evidence and analysis for determining whether to prepare an EIS or a Finding of No Significant Impact (FONSI). An EA must be prepared when the proposed action does not normally require an EIS and does not fall within the scope of a CATEX or falls within the scope of a CATEX but has one or more extraordinary circumstances.

2.5 Extraordinary Circumstances

Extraordinary circumstances are situations that cause a normally categorically excluded action to have a significant environmental impact that may require further analysis in the form of an EA or EIS. For all proposed actions receiving FAA funding, extraordinary circumstances exist when the proposed action fulfills both of the following criteria even if it otherwise would qualify under one or more CATEX categories (see 40 CFR § 1508.4, CEQ Regulations).

1. Action involves any of the circumstances described in Exhibit 2.5-1.
2. May have a significant impact on that resource.

Exhibit 2.5-1: Extraordinary Circumstances.

1.	An adverse effect on cultural resources protected under the National Historic Preservation Act of 1966, as amended, 54 U.S.C §300101 et seq.
2.	An impact on properties protected under Section 4(f).
3.	An impact on natural, ecological, or scenic resources of Federal, state, tribal or local significance.
4.	An impact on resources protected by the Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-667d, wetlands, floodplains, coastal zones, national marine sanctuaries, wilderness areas, National Resource Conservation Service-designated prime and unique farmlands, energy supply and natural resources, resources protected under the Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271-1287, rivers or river segments listed on the Nationwide Rivers Inventory (NRI), and solid waste management.
5.	A division or disruption of an established community, or a disruption of orderly, planned development, or an inconsistency with plans or goals that have been adopted by the community in which the project is located.
6.	An increase in congestion from surface transportation (by causing decrease in level of service below acceptable levels determined by appropriate transportation agency, such as a highway

	agency).
7.	An impact on noise sensitive areas.
8.	An impact on air quality or violations of Federal, state, tribal or local air quality standards under the Clean Air Act, 42 U.S.C. §§ 7401-7671q.
9.	An impact on water quality, sole source aquifers, a public water supply system, or state or tribal water quality standards established under the Clean Water Act, 33 U.S.C. §§ 1251-1387, and the Safe Drinking Act, 42. U.S.C. §§ 300f-300j-26.
10.	Impacts on the quality of the human environment that are likely to be highly controversial on environmental grounds. See Order 1050.1F paragraph 5-3d(10) for specifics involving the definition of “highly controversial.”
11.	Likelihood to be inconsistent with any Federal, state, tribal or local law relating to the environmental aspect of the proposed action.
12.	Likelihood to directly, indirectly or cumulatively create a significant impact on the human environment.

Source: Order 1050.1F, Chapter 5

2.6 Environmental Impact Statement (EIS)

The FAA must prepare an EIS for actions significantly impacting the quality of the human environment. An EIS is a detailed written statement required under section 102(2)C of NEPA when one or more environmental impacts would be significant and mitigation measures cannot reduce the impact(s) below significant levels. Direct, indirect and cumulative impacts must be considered when determining their significance.

2.7 Finding of No Significant Impact (FONSI)

If, during the NEPA process an FAA official reviews a proposed action and an EIS is not appropriate, a FONSI will be produced. The FONSI is a written notice from the FAA concurring with the airport’s determination that no significant environmental impacts are caused by the proposed action.

2.8 Environmental Review Categories

Any developments considered for this facility should fully consider the 16 environmental categories listed in Exhibit 2.0-1 and ensure that they are fully analyzed for potential impacts. The remainder of this chapter provides an overview of these categories and the issues to be considered during project development at SGH.

2.9 Air Quality

The Clean Air Act (CAA) of 1970 as amended in 1990, 40 CFR part 50, provides the standards by which air quality is rated. These are referred to as the National Ambient Air Quality Standards (NAAQS). These standards outline the maximum healthy concentration for criteria pollutants in the ambient air focusing only on carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead (Pb). The specific criteria limits for each of these pollutants is listed in Exhibit 2.9-1.

Exhibit 2.9-1: NAAQS for CAA Criteria Pollutants.

Pollutant	Average Time	Primary Standards		Secondary Standards	
		µg/m ³	ppm	µg/m ³	ppm
CO	1-Hour	40,000	35	None	None
	8-Hour	10,000	9	None	None
Ozone	1-Hour	235	0.12	235	0.12
NO ₂	Annual	100	0.05	100	0.05
SO ₂	3-Hour	None	None	1,300	0.5
	24-Hour	365	0.14	None	None
	Annual	80	0.03	None	None
PM ₁₀	24-Hour	150	-	150	-
PM _{2.5}	24-Hour	35	-	35	-
	Annual	15	-	15	-
Pb	Quarterly	1.5	-	1.5	-

Source: CFR, Title 40, Part 50, Section 121

The enforcement of the NAAQS was delegated to the states by the US Environmental Protection Agency (EPA) although the EPA has established general uniformity regulations including the limits for the NAAQS. Section 176(c) of the Clean Air Act Amendment 1977 required the FAA to ensure all airport improvement projects result in an increase in aircraft or automobile exhaust complying with the standards established by the EPA and the local agencies in each state.

Carbon Monoxide (CO): CO is a colorless, odorless gas emitted during certain combustion processes. Nationally, especially in metropolitan regions, the majority of CO emissions come from mobile sources. Exposure to CO can cause serious health effects by reducing overall oxygen availability to the body’s organs and tissues. At high levels, CO can be fatal to those exposed to it. Currently, none of the areas potentially impacted by projects at SGH are under a non-attainment or maintenance status for CO.

Ozone (O₃): O₃ is a major component of smog. When in the upper atmosphere, ozone occurs naturally and protects the environment from the negative impacts caused by intense ultraviolet (UV) radiation. Ozone at ground level, however, is a noxious pollutant. Ground level ozone is not directly emitted by any singular source, but it is produced from the reaction between nitrogen oxides (NO_x) and volatile organic compounds (VOC). Ozone is an irritant, responsible for the respiratory issues and eye irritation caused by high levels of smog. Currently, none of the areas potentially impacted by projects at SGH are under a non-attainment or maintenance status for Ozone.

Nitrogen Dioxide (NO₂): Scientific research correlates NO₂ exposures with adverse respiratory effects, even in otherwise healthy individuals, and increased symptoms in people with asthma. Currently, none of the areas potentially impacted by projects at SGH are under non-attainment or maintenance status for NO₂.

Sulfur Dioxide (SO₂): SO₂ is a group of highly reactive gasses generally produced by power plants and other industrial facilities. SO₂ has been linked with several negative health impacts in the respiratory system. Currently, none of the areas potentially impacted by projects at SGH are under non-attainment or maintenance status for SO₂.

Particulate Matter (PM): PM is a mixture of solid and liquid particles and droplets found in the air. They come in a vast range of sizes and can remain suspended in the air for various periods of time. PM can be either emitted directly or formed in the upper atmosphere. The EPA breaks particulate matter down into coarse particulate matter (PM₁₀) and fine particulate matter (PM_{2.5}).

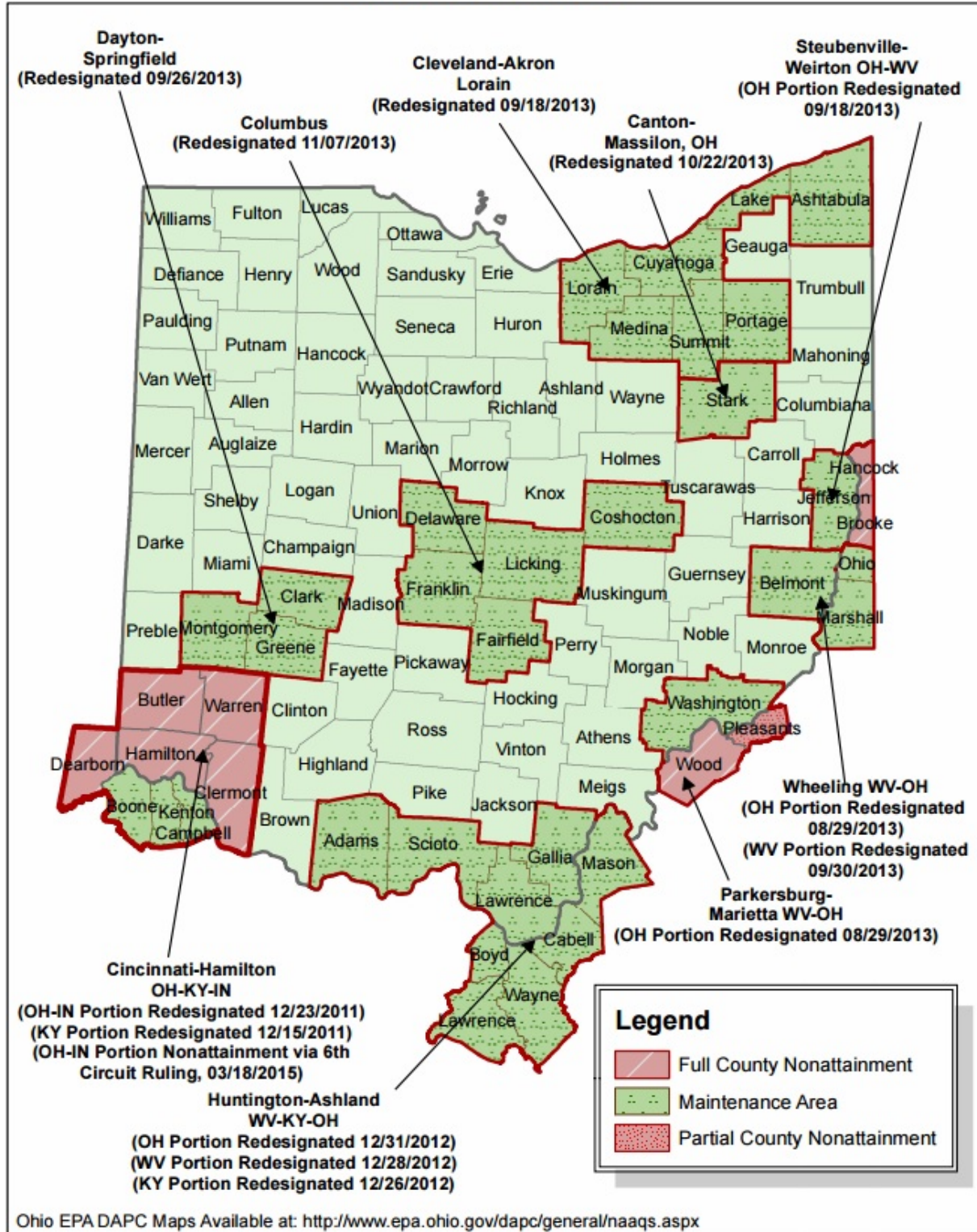
Coarse Particulate Matter (PM10): Ten micrometers is less than the width of a human hair. As a result of this, any particulate matter less than this size can get into the human respiratory tract, causing health problems for the people exposed to it. Currently, none of the areas potentially impacted by projects at SGH are under non-attainment or maintenance status for PM10.

Fine Particulate Matter (PM2.5): In 2005, EPA revised its standards for annual PM2.5 levels to 15 $\mu\text{g}/\text{m}^3$. As a result of this, Clark, Greene and Montgomery counties were placed within the Dayton-Springfield non-attainment area for PM2.5 levels due to failure to meet the revised standards. Ohio EPA worked with the local community to reduce the levels of NO₂ and SO₂ being emitted in the county as they were the primary contributors to their overall PM 2.5 level. As of 2011, Dayton-Springfield has achieved attainment of these new standards and been reclassified as the Dayton-Springfield Maintenance Area. A re-designation request and maintenance plan was published by Ohio EPA and is currently in effect for these counties. As of noon on October 26th, 2016, the Air Quality Index (AQI) for PM2.5 in the Dayton-Springfield Maintenance area was 14. All AQI scores from 0-50 are classified as good scores. See attached Exhibit 2.9-2 for a map of Ohio showing the annual PM2.5 maintenance areas for the state.

Lead (Pb): Pb is found naturally in the environment as well as being included in a number of manufactured products and lead-based paints and fuels. Exposure to Pb can have seriously adverse effects on the nervous system, kidneys, immune system, reproductive system, cardiovascular system and can reduce the oxygenation of the blood. Currently, none of the areas potentially impacted by projects at SGH are under non-attainment or maintenance status for Pb.

Exhibit 2.9-2: Map of Ohio showing the annual PM2.5 maintenance areas in the state.

Ohio 1997 Annual PM2.5 (15 ug/m3) Nonattainment Areas Effective 04/05/2005



Source: Ohio EPA DAPC Maps (<http://www.epa.ohio.gov/dapc/general/naaqs.aspx>).

2.10 Biological Resources (Including Fish, Wildlife, and Plants)

Section 7 of the Endangered Species Act of 1973 (16 USC 1531 et seq.) requires notification of Federal agencies to ensure that any impacts to rare, threatened and endangered (T&E) species of flora and fauna and their critical habitats are identified to avoid jeopardizing the existence of each species. The governing authority in the state of Ohio that has the resources to coordinate T&E species concerns with local development projects is the Ohio Department of Natural Resources (ODNR).

The Wildlife Hazard Assessment (WHA) process has been designed to give airports the tools they need to identify any potential T&E species issues. During the WHA process, a wildlife specialist will develop an inventory of wildlife species and habitats located in the WHA study area. Exhibit 2.10-1 below lists the wildlife species observed in the vicinity of SGH during the WHA process and Exhibit 2.10-2 shows their general location within the vicinity of SGH.

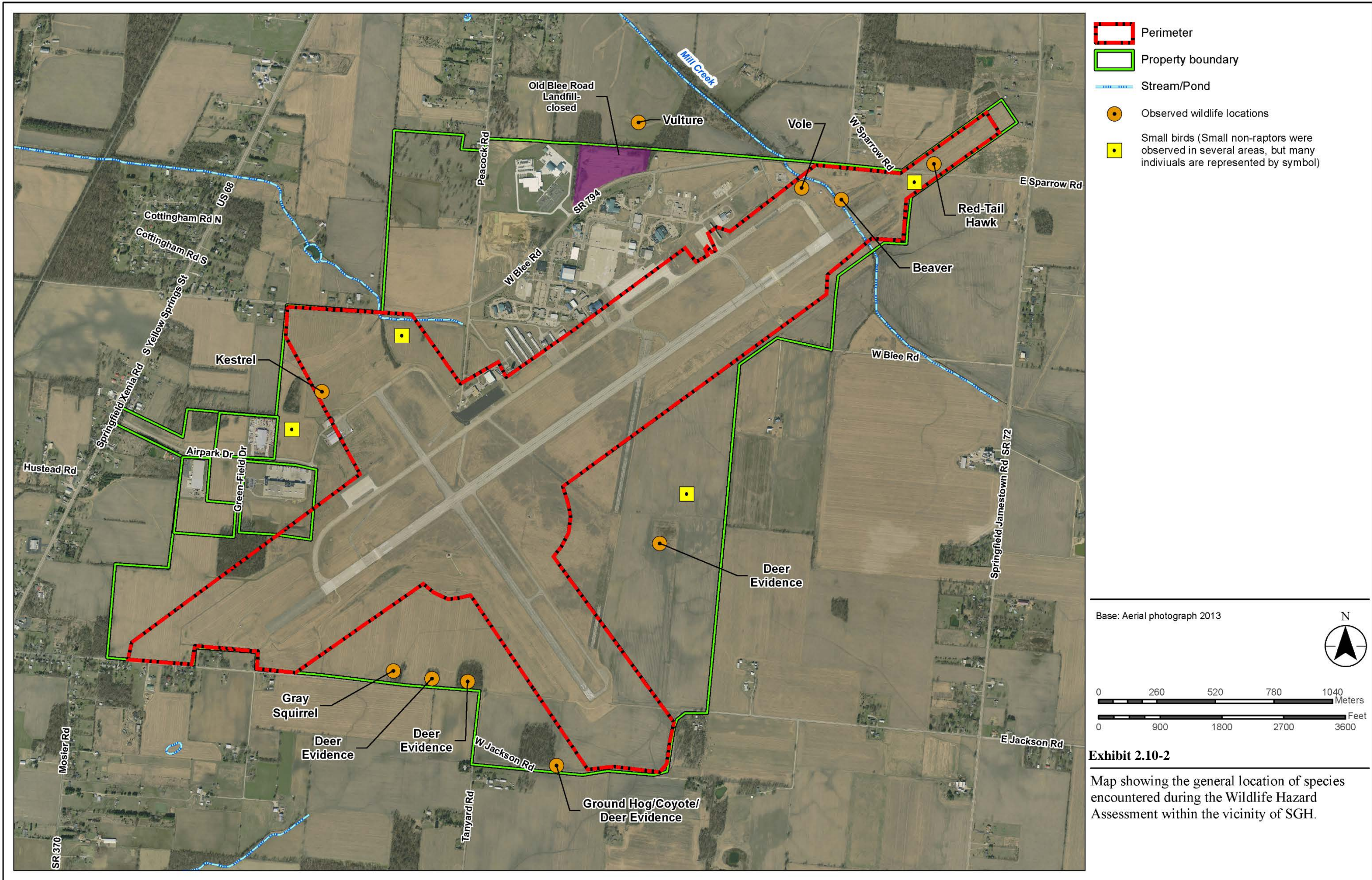
Exhibit 2.10-1: Inventory of Species or Sign of Presence* Observed During the Wildlife Hazard Assessment.

Common Name	Scientific Name	Guild
White-Tail Deer	<i>Odocoileus virginianus</i>	Mammal
Beaver	<i>Castor canadensis</i>	Mammal
Coyote	<i>Canis latrans</i>	Mammal
Groundhog	<i>Marmota monax</i>	Mammal
Vole	<i>Microtus pennsylvanicus</i>	Mammal
Gray Squirrel	<i>Sciurus carolinensis</i>	Mammal
American Robin	<i>Turdus migratorius</i>	Thrush
European Starling	<i>Sturnus vulgaris</i>	Blackbirds
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Raptor
Turkey Vulture	<i>Cathartes aura</i>	Raptor
House Sparrow	<i>Passer domesticus</i>	Fringillids
American Kestrel	<i>Falco sparverius</i>	Raptor
Mourning Dove	<i>Zenaida macroura</i>	Columbid
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Waxwing
American Crow	<i>Corvus brachyrhynchos</i>	Corvid
Common Snipe	<i>Capella gallinago</i>	Shorebird
Killdeer	<i>Charadrius vociferus</i>	Shorebird
Horned Lark	<i>Eremophila alpestris</i>	Alaudid
Meadow Lark	<i>Sturnella magna</i>	Icterid

Source: Wildlife Hazard Assessment, ASC Group, Inc. 2016.

*Sign of Presence – Hair, Prints, Den, Scat or Other Marking.

Exhibit 2.10-2: Map showing the general location of species encountered during the Wildlife Hazard Assessment within the vicinity of SGH.



Source: 2016 Wildlife Hazard Site Visit Report for SGH – Figure 10.

Source: 2016 Wildlife Hazard Site Visit Report for SGH – Figure 10.

There were no species observed during the field visit that are also listed as T&E species or species of concern. Exhibit 2.10-3 below lists the full list of species identified by ODNR as being T&E species, federally listed species, or species of concern that could potentially inhabit Clark and Greene counties.

Exhibit 2.10-3: Inventory of Federally and State Listed Species in the Airport's Vicinity.

Common Name	Scientific Name	Guild
Iowa Darter	<i>Etheostoma exile</i>	Fish
Rayed Bean	<i>Villosa febalis</i>	Invertebrate
Indiana Bat	<i>Myotis sodalist</i>	Mammal
Eastern Massasauga	<i>Sistrurus catenatus</i>	Reptile
Northern Harrier	<i>Circus cyaneus</i>	Bird
Plains Cluetail	<i>Gomphus externus</i>	Invertebrate
Snuffbox	<i>Epioblasma triquetra</i>	Invertebrate
Clubshell	<i>Pleurobema clava</i>	Invertebrate
Tonguetied Minnow	<i>Exoglossum laurae</i>	Fish
Spotted Turtle	<i>Clemmys guttata</i>	Reptile
Black Sandshell	<i>Ligumia recta</i>	Invertebrate
Eastern Cricket Frog	<i>Acris crepitans</i>	Amphibian
Sedge Wren	<i>Cistothorus platensis</i>	Bird
Northern Bobwhite	<i>Colinus virginianus</i>	Bird
Cerulean Warbler	<i>Dendroica cerulean</i>	Bird
Bobolink	<i>Dolichonyx oryzivorus</i>	Bird
Muskellunge	<i>Esox masquinongy</i>	Fish
Least Darter	<i>Etheostoma microperca</i>	Fish
Longnose Dace	<i>Rhinichthys cataractae</i>	Fish
Caddisfly	<i>Hydoptila Chattanooga</i>	Insect
Elktoe	<i>Alasmidonta marginata</i>	Invertebrate
Creek Heelsplitter	<i>Lasmigona compressa</i>	Invertebrate
Big Brown Bat	<i>Eptesicus fuscus</i>	Mammal
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Mammal
Badger	<i>Taxidea taxu</i>	Mammal
American Black Duck	<i>Anas rubripes</i>	Bird
Western Meadowlark	<i>Sturnella neglecta</i>	Bird
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	Invertebrate
Kidneyshell	<i>Ptychobranchnus fasciolaris</i>	Invertebrae
Red Bat	<i>Lasiurus borealis</i>	Mammal
Hoary Bat	<i>Lasiurus cinereus</i>	Mammal
Prairie Vole	<i>Microtus ochrogaster</i>	Mammal
Little Brown Bat	<i>Myotis lucifugus</i>	Mammal
Deer Mouse	<i>Peromyscus maniculatus</i>	Mammal
Southern Bog Lemming	<i>Synaptomys cooperi</i>	Mammal
Queensnake	<i>Regina septemvittata</i>	Reptile
Least Flycatcher	<i>Empidonax minimus</i>	Bird
Blackchin Shiner	<i>Notropis heterodon</i>	Fish
E. Prairie Fringed Orchid	<i>Platanthera leucophena</i>	Plant

Sources: ODNR State Listed Wildlife Species for Clark and Greene counties, USFWS Federally Listed Species for Ohio by County.

2.11 Climate

As federal laws are passed and policy is developed, climate is becoming a major focus of current policy and future legislation. The major contributors to human-driven climate change are carbon dioxide (CO₂) and methane (CH₄). As projects are developed at the airport and policy shifts to focus more on climate regulation, the increase of and mitigation for CO₂ and CH₄ production may want to be considered.

2.12 Coastal Resources

No coastal barriers or zones are located near SGH. The state of Ohio does have a coastal program for Lake Erie, but it will not be impacted by any potential projects at SGH.

2.13 Department of Transportation Act, Section 4(f)

The Department of Transportation Act, Section 4(f) of 1966 (re-codified and re-numbered as Section 303(c) of 49 U.S.C.) regulates the development of public land used as a public park, recreation area, waterfowl and wildlife refuge, or historic sites having national, state or local significance. Exhibits 2.13-1 and 2.13-2 list the sites of concern within the vicinity of SGH. Review of the National Park Service (NPS) database revealed zero parks of concern in the immediate vicinity of SGH. Exhibits 2.13-3 and 2.14-4 show the historic sites within a 5-mile radius of SGH.

Exhibit 2.13-1: Parks, Recreation, and Wildlife Facilities in the Vicinity of SGH.

Facility	Location
Unnamed bike trail	W Jackson Road

Source: ODNR Interactive Maps

Exhibit 2.13-2: National and State Historic Sites in the Vicinity of SGH.

Facility	Location
Marquart-Mercer Farm	North of W Blee Road

Source: NPS – National Register of Historic Places

Exhibit 2.13-3: Historic Sites within a 5-mile radius of SGH.

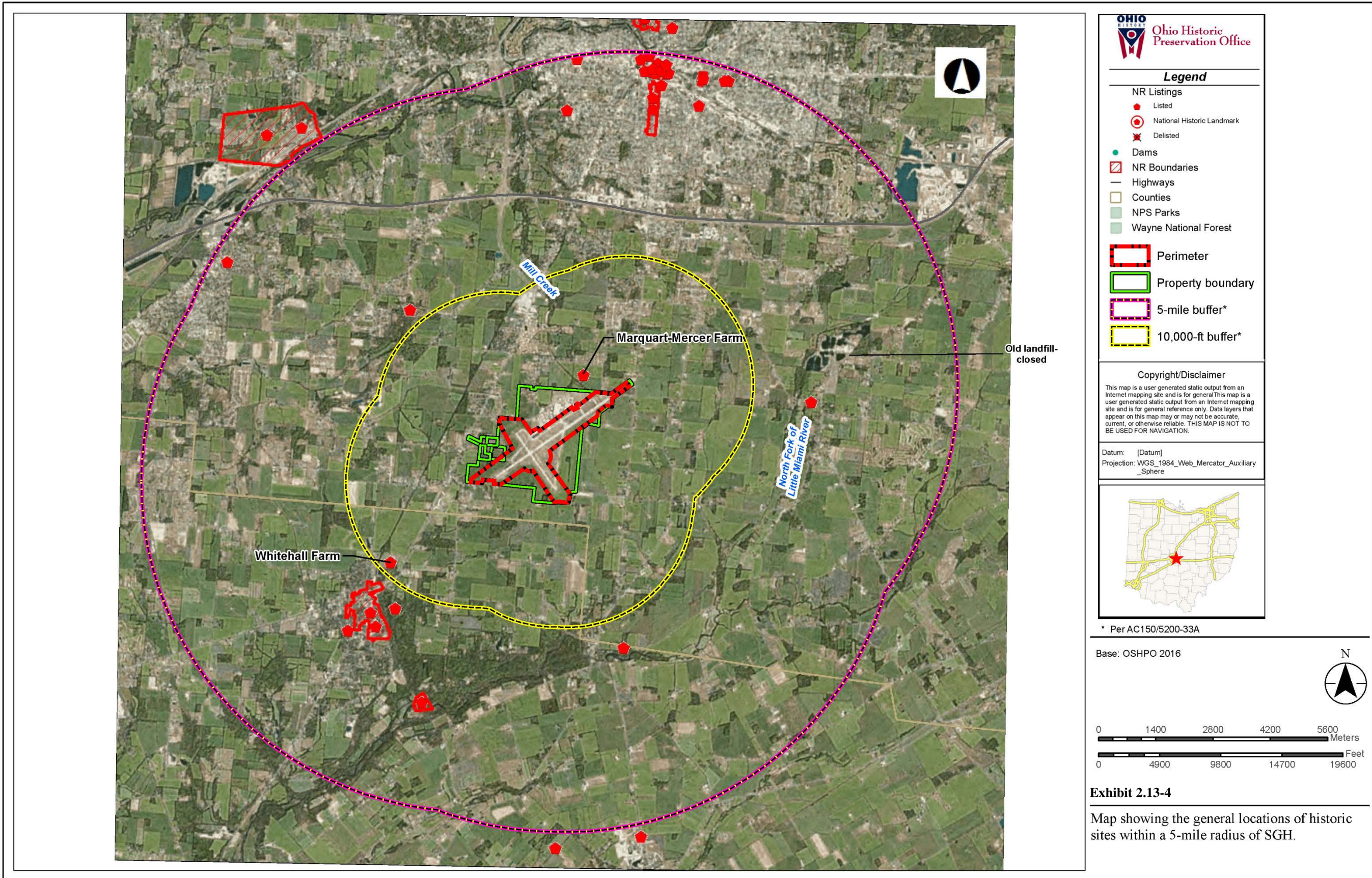
Name	NRHP Criteria	Place Name	County
Enon Mound	D	Enon	Clark
Old Enon Road Stone Arch Culvert	C	Enon	Clark
Pickaway Settlements Battlesite	A	Enon	Clark
Marquart-Mercer Farm	A and C	Springfield	Clark
Brewer Log House	C	Springfield	Clark
Pennsylvania House	A and C	Springfield	Clark
C. A. Reeser House	B	Springfield	Clark
Westcott House	C	Springfield	Clark
Pringle-Patric House	B and C	Springfield	Clark
East High Street District	C	Springfield	Clark
St. Joseph Roman Catholic Church	C	Springfield	Clark
South Fountain Avenue Historic District	A and C	Springfield	Clark
Francis Bookwalter House	B and C	Springfield	Clark

Exhibit 2.13-3: Historic Sites within a 5-mile radius of SGH.

Name	NRHP Criteria	Place Name	County
Thomas Manufacturing Company Warehouse	A	Springfield	Clark
Arcade Hotel (delisted/demolished)	A and C	Springfield	Clark
Masonic Temple	A and C	Springfield	Clark
Municipal Building	A and C	Springfield	Clark
St. John's Evangelical Lutheran Church	C	Springfield	Clark
Springfield Metallic Casket Company	A	Springfield	Clark
Tecumseh Building	A and C	Springfield	Clark
Main Street Buildings	C	Springfield	Clark
Lagonda Club Building	A and C	Springfield	Clark
Shawnee Hotel	C	Springfield	Clark
Warder Public Library	B and C	Springfield	Clark
St. Raphael Church	C	Springfield	Clark
911 Cypress St.	C	Springfield	Clark
427 E. Euclid Ave.	A and C	Springfield	Clark
605 Scott St.	A and C	Springfield	Clark
206 E. Pleasant St.	A and C	Springfield	Clark
203 1/2 E. Pleasant St.	A and C	Springfield	Clark
201 E. Pleasant St.	A and C	Springfield	Clark
453 E. Pleasant St.	A and C	Springfield	Clark
106-110 E. Mulberry St.	Not recorded	Springfield	Clark
104-110 E. Mulberry St.	A and C	Springfield	Clark
538 S. Wittenberg Ave.	A and C	Springfield	Clark
Fountain & High Sts.	Not recorded	Springfield	Clark
CLA-1234-1	A and C	Springfield	Clark
CLA-1160-1	A	Springfield	Clark
CLA-1171-1	A	Springfield	Clark
CLA-1648-1	C	Springfield	Clark
CLA-943-1	A	Springfield	Clark
CLA-1490-1	A	Springfield	Clark
CLA-944-1	A	Springfield	Clark
519 Gallagher St.	A and C	Springfield	Clark
1316 E. High St.	A and C	Springfield	Clark
Benjamin Whiteman House	C	Clifton	Greene
Grinnell Mill Historic District	A and C	Yellow Springs	Greene
Orators Mound	D	Yellow Springs	Greene
Antioch Hall, North and South Halls	B and C	Yellow Springs	Greene
Whitehall Farm	B and C	Yellow Springs	Greene
South School	A and C	Yellow Springs	Greene
Yellow Springs Historic District	A and C	Yellow Springs	Greene
Stagecoach Bridge	A and C	Yellow Springs	Greene

Source: State Historic Preservation Office (SHPO) 2016.

Exhibit 2.13-4: Map showing the general locations of historic sites within a 5-mile radius of SGH.



Source: State Historic Preservation Office (SHPO) 2016.

Source: State Historic Preservation Office (SHPO) 2016.

2.14 Farmlands

The Farmland Protection Policy Act (FPPA), Title 7 of the Code of Federal Regulations (CFR) Part 658, establishes the US Department of Agriculture (USDA) to develop criteria for identifying the potential impact of federal programs on the conversion of agricultural land to non-agricultural purposes. The FPPA generally protects prime and unique farmland. Prime farmland is defined in the FPPA as having the “best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed and other agricultural crops with minimal inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion.”

The USDA Natural Resource Conservation Service (NRCS) is the Federal agency responsible for determining if land converted by a development falls under the purview of the FPPA. Exhibit 2.14-1 shows the soil characteristics in the immediate vicinity of SGH. Soil types on and around the airport include Ko, CeA, CrA and CeB soils which are all silty soils types. Ko is a silty clay and CeA, CrA and CeB are silty loam soil types. Loamy soils are composed of a combination of clay, silt, and sand particles that vary in size from largest to smallest. This combination of various particle sizes allows for a moist soil that is also well drained, which is optimal for agricultural purposes.

Land does not need to be actively farmed for the FPPA to be under effect. The NRCS will evaluate and rate each area to be converted to non-agricultural use based upon a number of standards, including these soil characteristics, accessibility to the land, and any surrounding urbanization. As airport improvements are developed, coordination with the NRCS may be required to determine the potential for farmland impacts.

Exhibit 2.14-1: Soil map showing the soil characteristics within the vicinity of SGH.

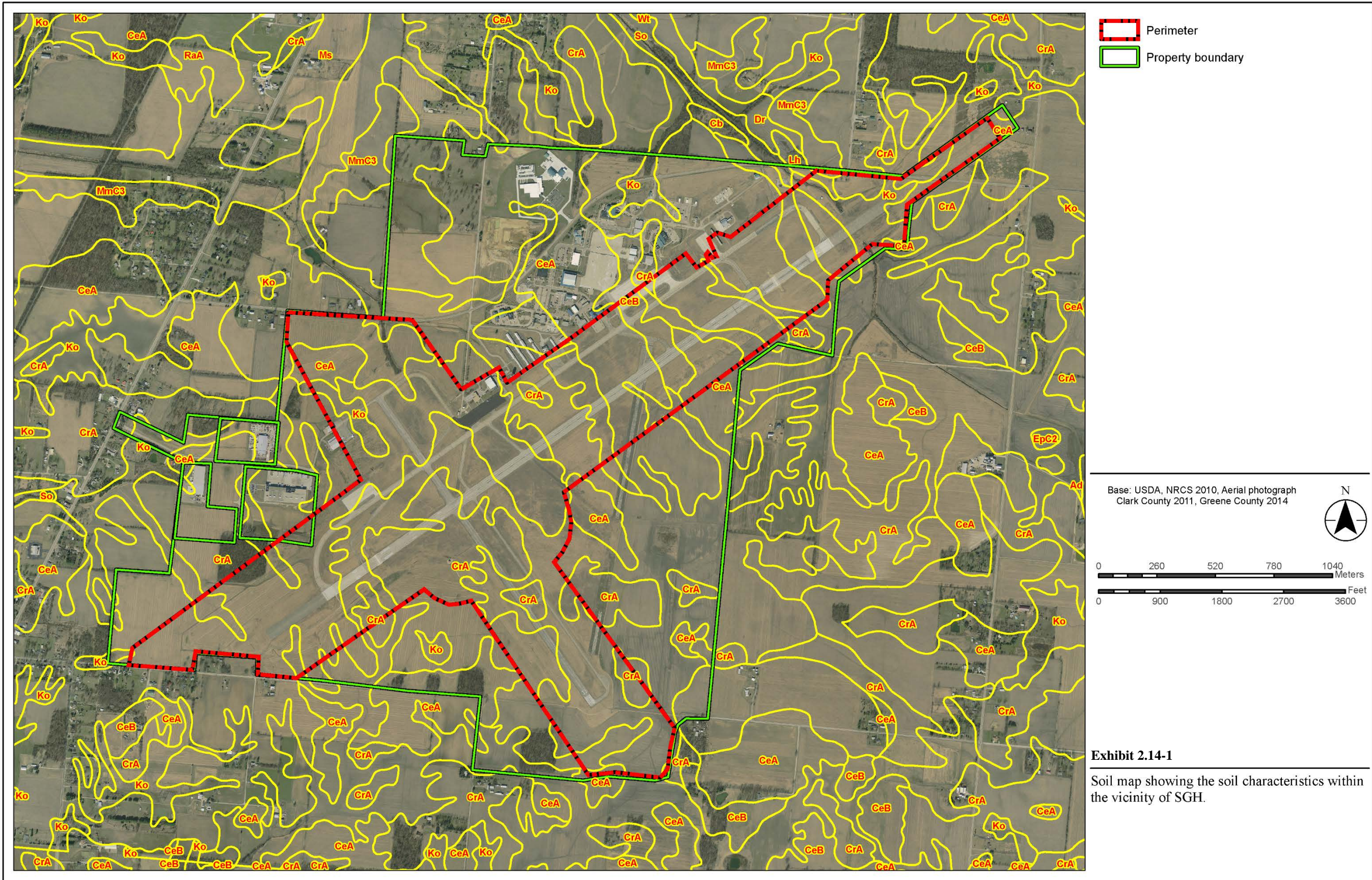


Exhibit 2.14-1
Soil map showing the soil characteristics within the vicinity of SGH.

Source: USDA, NRCS 2010, Aerial photograph Clark County 2011, Greene County 2014.

2.15 Hazardous Materials, Solid Waste, and Pollution Prevention

The Resource Conservation and Recovery Act (RCRA) [as amended by the Federal Facilities Compliance Act of 1992] and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1983 (SARA) and the Community Environmental Response Facilitation Act of 1992 are the main acts of legislation that regulate hazardous materials and waste affecting FAA projects.

RCRA establishes standards concerning the production, treatment, storage and disposal of hazardous wastes. CERCLA requires the cleanup of any release of a hazardous substance (excluding petroleum) into the environment. A project at the airport using federal funding that uses, generates or disturbs a hazardous substance must analyze the impact of that substance and provide measures for reducing that impact and controlling against the possibility of unintended contamination.

Superfund Sites – Congress established the Superfund Program (administered by the EPA) in 1980 to identify and clean up the nation’s worst uncontrolled or abandoned hazardous waste sites. A National Priority List (NPL) review should be conducted prior to any development at the airport to identify potential Superfund Site issues.

According to FAA AC 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*, landfills that have the potential to attract wildlife should not be located within 5,000 feet of an airport serving piston-powered aircraft, 10,000 feet of an airport serving turbine-powered aircraft, and within 5 miles of a runway end that could cause hazardous bird species to fly across the airport’s approach or departure lanes. There are two dormant landfills near SGH. The first is located on Blee Road and the second is located on Crabill Road.

According to the US EPA’s Oil Pollution Prevention Regulations (40 CFR Part 112), a Spill Prevention Control and Countermeasure (SPCC) Plan should be developed for the airport if one has not already been developed. A underground storage tank (UST), leaking underground storage tank (LUST) and Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database review should be conducted to identify any potential environmental hazards that might impact development at the airport during the planning process.

2.16 Historical, Architectural, Archaeological, and Cultural Resources

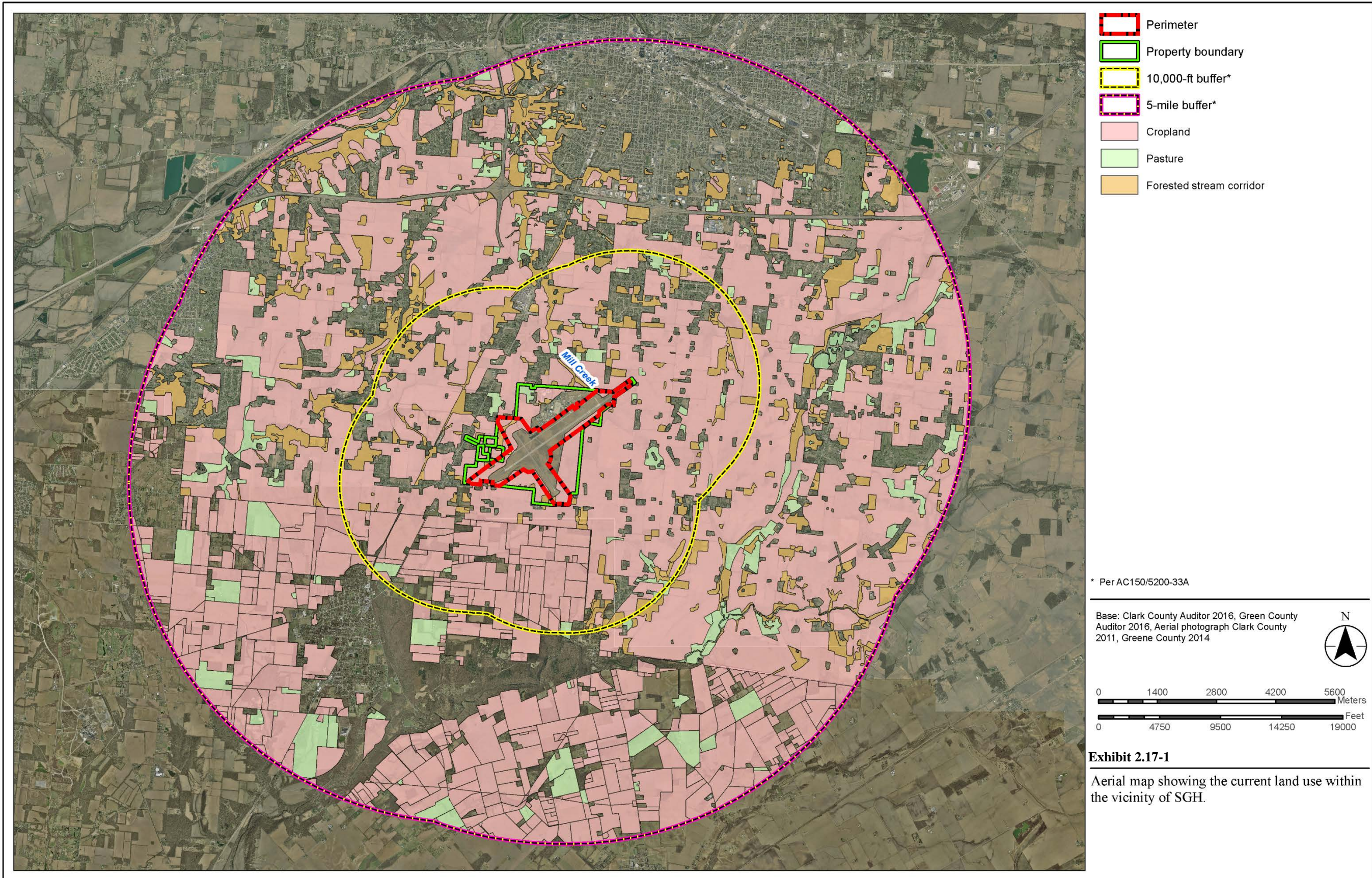
Section 106 of the National Historic Preservation Act (NHPA) of 1966 protects properties that are listed or eligible for listing in the National Register of Historic Places (NRHP). The NHPA requires Federal agencies to take into account the potential effects of their undertakings on historic properties and to coordinate with the State Historic Preservation Office (SHPO) and any other potentially impacted parties to develop and evaluate alternatives to modify the undertaking in order to avoid or minimize any potential impacts to these historic resources.

Exhibit 2.13-4 above lists the sites located within the immediate vicinity of SGH that are included on the NRHP. No sites on SGH so far are listed as historic sites. As airport improvement projects are developed, an Area of Potential Effects (APE) may need to be established to determine any potential impacts on historic, archaeological, or cultural resources. Historic sites can be added to the registry at any time. For this reason, consultants from the Ohio SHPO office should assess the potential for any impacts on an individual project basis.

2.17 Land Use

Current land use in the vicinity of the airport is primarily agricultural with some pasture, and wooded lands. The Airport and other developed areas are not highlighted in Exhibit 2.17-1. See attached Exhibit 2.17-1 for an aerial overview of the current land utilization in the vicinity of the airport. As projects are proposed and developed on airport property, community land use is one factor that should be considered.

Exhibit 2.17-1: Aerial map showing the current land use within the vicinity of SGH.



Source: Clark County Auditor 2016, Green County Auditor 2016, Aerial photograph Clark County 2011, Greene County 2014.

Source: Clark County Auditor 2016, Green County Auditor 2016, Aerial photograph Clark County 2011, Greene County 2014.

2.18 Natural Resources and Energy Supply

Executive Order 13123, *Greening the Government through Efficient Energy Management*, requires federal agencies to reduce their consumption of energy and water and to also reduce the air emissions associated with petroleum use. Federal agencies are encouraged to reduce this petroleum use through the expansion of renewable energy and sustainability practices. Most airport improvements do not result in energy demand changes, increases in water consumption levels, or the utilization of any other unusual materials or resources in limited supply. SGH has an opportunity to incorporate sustainability measures where feasible into future planning in a way that can reduce energy cost and water consumption levels.

2.19 Noise and Compatible Land Use

Noise: The Aviation Safety and Noise Abatement Act of 1979 is the primary statute covering airport noise. Day-Night Average Sound Level (DNL) is the metric most commonly used in the aviation world. It defines noise contours of equal exposure in order to analyze the area in the immediate vicinity of the airport. All federal agencies have adopted DNL as the metric for airport noise analysis. DNL is a 24-hour time-averaged sound exposure level with an additional 10 dB nighttime (10p-7a) weighting in order to adjust for subjective experiences.

No noise analysis is required for projects involving Design Group I or II aircraft (wingspan less than 79 feet) or in Approach Categories A through D (landing speed less than 166 knots) or if annual propeller operations at the facility for the time period covered do not exceed 90,000 annual (247 average daily operations) or 700 jet operations (2 average daily operations). The maximum number of general aviation (GA) propeller and jet operations result in a DNL of 60 db contours of less than 1.1 square miles that extend no more than 12,500 feet from the start of a takeoff roll. The DNL 65 dB contour areas would be 0.5 square mile or less and extend no more than 10,000 feet from the start of takeoff roll.

Compatible Land Use: Any airport project using Federal funding must be compatible with the plans of public agencies for the overall development of the area. The City of Springfield has an Airpark Development Plan in place for the Springfield area. It has created a 191-acre district zoned for light industrial in an attempt to develop a blended airport, military, and light industrial area.

Other factors that may create land compatibility issues are when a proposed development would negatively impact activities at the airport. One such example is municipal solid waste landfill facilities (MSWLF), which are a known attractant of large wildlife that may interfere with airport traffic and other airport business. As developments are developed on the airport and in the broader community, compatible land use should always be a major consideration for those designs.

2.20 Socioeconomic, Environmental Justice, and Children's Environmental Health and Safety Risks

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 requires that any time federally funded projects have the potential to cause extensive relocation or fragmentation of neighborhoods and communities, disproportionately high impacts on minority or low income communities, disproportionate health and safety risk to children, or significant community disruption, the degree of the impact and any need for mitigation or possible alternative measures must be identified. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, its accompanying presidential memorandum, and order DOT 5610.2, Environmental Justice, require the FAA to provide opportunity for meaningful public involvement by

minority and low-income populations during any proposed development that might disproportionately impact them. Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires the FAA to consider environmental health and safety risks that may disproportionately affect children.

The airport has the potential to impact Clark and Greene counties. According to US Census Bureau data, Clark County has experienced a 1.7 percent population decline and Greene County has experienced a 1.8 percent population growth from April 1, 2010 to July 1, 2015. The baseline population for these areas averages 86.4 percent to 86.9 percent people of primarily Caucasian backgrounds compared to 74.3 percent on average throughout the rest of the country. Due to this and the fact that residential development in general is absent in the vicinity of the airport, developments at the airport are unlikely to have a disproportionate negative impact on a minority community.

The median income for Greene County is \$58,775 in 2014 dollars, and it is \$43,011 for Clark County. Compared to the average of \$51,759 for the baseline for the country, the airport is less likely to have disproportionate impacts to economically disadvantaged households in Greene County than it otherwise would be. Due in general to the lack of dense housing developments, overall it is unlikely that the airport will negatively impact an economically disadvantaged community with any of its proposed developments.

2.21 Visual Effects (Including Light Emissions)

Airport-related lighting, ambient light produced by traffic, and activities could affect surrounding light-sensitive areas. Any potential impact to residential, recreational, or public land use areas must be assessed if there is a potential to disrupt those land uses.

Lighting on runways and taxiways can be shielded or controlled by pilots to minimize emissions that would impact or cause annoyance to the surrounding areas. Only in unusual circumstances should high intensity lighting at SGH result in impacts considered sufficient to warrant special analysis. As airport projects are developed, light emissions and visual effects should be reviewed to determine the potential for impact to nearby public or residential areas.

2.22 Water Resources (Including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

Wetlands: There are four primary regulations governing federal projects that impact wetlands: Executive Order 11990, ORDOR DOT 5660.1A, the Rivers and Harbors Act of 1899, and Section 404 of the Clean Water Act. This authority generally is invested in the US Army Corps of Engineers (USACE), but is often somewhat delegated at the local level depending on the agreements the state has with USACE. According to review of the US Fish and Wildlife Service National Wetland Inventory (NWI) database, there are two general NWI wetlands identified on airport property and several nearby NWI wetlands identified that may be impacted by proposed projects at the airport. See Exhibit 2.22-1 for an aerial map depicting the NWI wetlands within the vicinity of SGH.

Floodplains: Executive Order 11988, *Floodplain Management*, and US Department of Transportation (USDOT) Order 5650.2, *Floodplain Management and Protection*, ensure Federal agencies reduce flood loss risks and minimize any potential for flood impacts on human welfare, health, and safety by restoring and preserving any benefits provided by lowland and flat areas adjacent to waterways. Federal agencies are prohibited from taking any actions that impact a floodplain unless no feasible alternative exists. Encroachment is defined as any action that would cause the 100-year water surface profile to rise by one foot or greater.

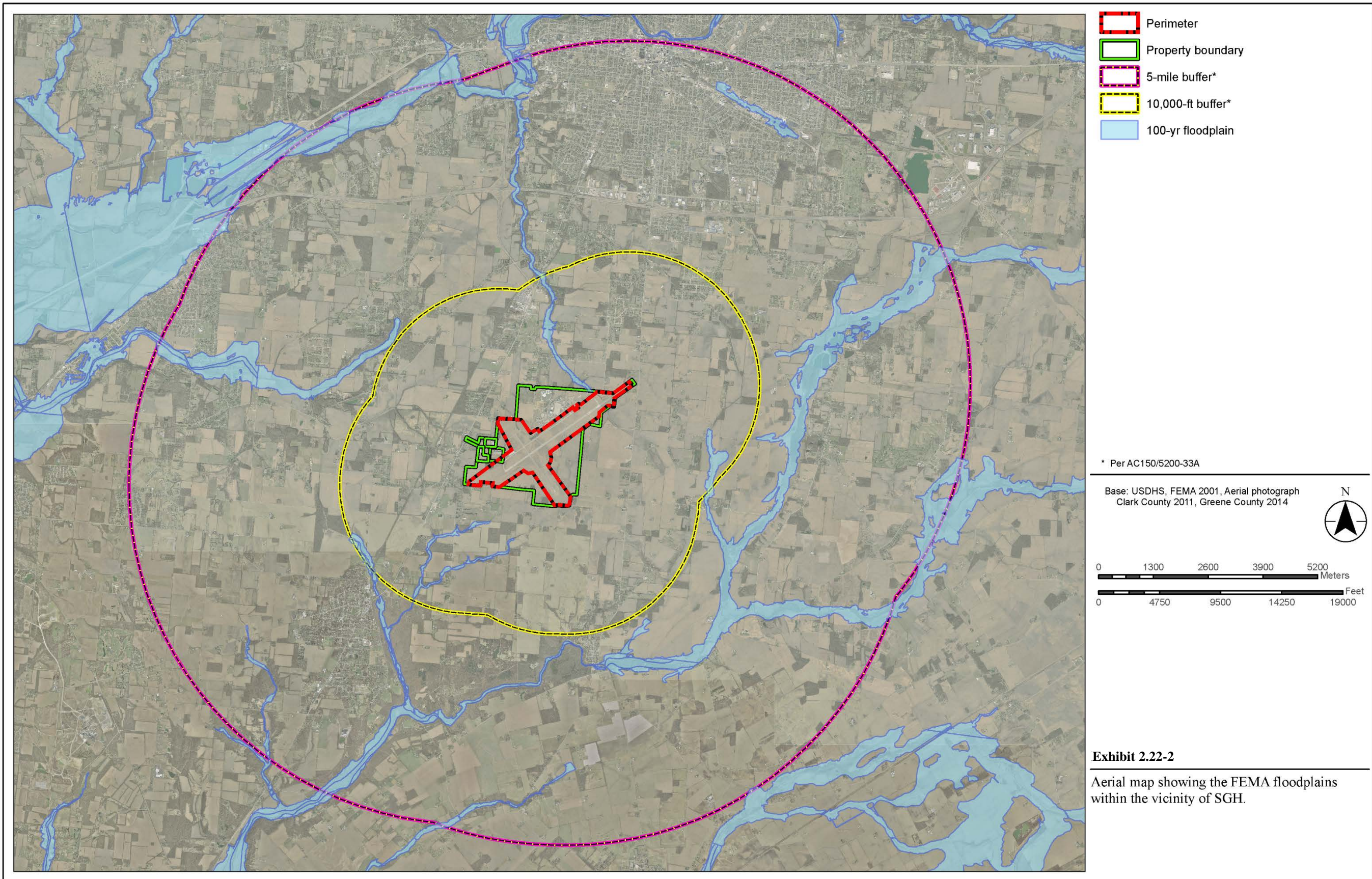
The 100-year floodplain was established by the Federal Emergency Management Agency (FEMA) as the base flood level for floodplain management. Both Federal and state laws regulate development within floodplains and floodways. The floodplains and floodways in the vicinity of SGH are shown in Exhibit 2.22-2. The potential for effects on floodplains should be reviewed as each airport improvement project is developed.

On the local level, every county in Ohio has a local designated floodplain administrator (DFPA) for that area. This individual should be contacted in each respective county before any construction is done in a floodplain. If Federal funding is utilized, other agency permits and coordination may also be necessary.

Water Quality: The Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act (CWA) of 1990, was instituted to protect water resources in the United States. It provides the US EPA with the authority to regulate water quality and to issue permits for actions that have the potential to adversely affect water quality. Compliance with these statutes is primarily achieved through the issuance of permits through the National Pollution Discharge Elimination System and for dredge and fill permitting in compliance with section 402 and 404 of the CWA.

Any modification to the existing drainage patterns near SGH should be reviewed as part of the environmental documentation for any proposed project. Also, all permits required for the proposed development should be identified in the environmental documentation.

Exhibit 2.22-2: Aerial map showing the FEMA floodplains within the vicinity of SGH.



Source: USDHS, FEMA 2001, Aerial photograph Clark County 2011, Greene County 2014.

Source: USDHS, FEMA 2001, Aerial photograph Clark County 2011, Greene County 2014.

Wild and Scenic Rivers: The Wild and Scenic Rivers Act governs federal projects that may impact river segments that possess “outstandingly remarkable” natural or cultural values believed to be of more than local or regional significance. These rivers are included in the Nationwide Rivers Inventory (NRI) maintained by the National Park Services. According to the NRI database, there are no Wild and Scenic Rivers within the immediate vicinity of the airport.

2.23 Cumulative Effects

Secondary (Induced) Impacts: Secondary or induced impacts are most commonly due to noise, land use, or socioeconomic impacts. These impacts can cause shifts in population movement or growth, changes in demand for public service, and changes in business or economic activity. Induced impacts will normally not be significant except where there are other significant impacts from multiple categories. Any proposed project at the airport should consider the effect multiple impacts might have on a property to determine if cumulative effects are likely to occur.

2.24 Irreversible and Irrecoverable Commitment of Resources

Whenever land or resources are committed to a development at the airport, the irreversible conversion of land from one suitable use to another or the irretrievable commitment of resources should be considered. The area in the vicinity of the airport is suitable for agricultural purposes and that should be a consideration any time a project is developed at the airport.

2.25 Summary of Likely Development Concerns

The major concerns at SGH during any proposed development will generally be air quality, Section 4(f) concerns, the potential for farmland conversion, hazardous material avoidance, cultural resources, conforming to community land usage, noise impacts, visual effects, and water resources. Air quality in general is a concern for airport developments, especially in Clark and Greene counties as they are in a maintenance zone for annual PM2.5 generation. SGH has two specific Section 4(f) concerns, a publicly utilized bikepath and a historic farm that is also a cultural resource concern within the vicinity of the airport. SGH sits within an agricultural area on high-quality soils with the potential for agricultural activity, so farmland conversion will be a consideration for some potential developments at the airport. Hazardous material reduction and overall pollution is a concern that any federally funded project must concern itself with, especially true for airports where fossil fuels are utilized heavily. The community has designated land within the vicinity of the airport as a light industrial zone and has development plans for creating an Airpark. The airport has several NWI wetlands and a floodplain within the vicinity of its property and will need to coordinate with federal agencies and acquire all necessary permitting going forward. These issues are each able to be addressed so long as they are included as part of the planning process at the onset of any development plans.