

Chapter 3

Environmental Overview

3.1 INTRODUCTION

The inherent potential associated with the operation and development of an airport to adversely affect neighboring land-use and natural and human environments is a fundamental concern during the airport planning process. Therefore, it is imperative to identify environmental resources and/or potential impacts to the environment and surrounding community during the initial stages of airport planning. This allows planners to incorporate measures, in accordance with federal, state, and local rules and regulations, which could avoid or minimize potential impacts.

The National Environmental Policy Act (NEPA) of 1969 requires that all federal agencies consider the potential impacts their projects and policies have on the environment. In order to ensure that airport development complies with NEPA, the Federal Aviation Administration (FAA), an agency of the United States Department of Transportation (USDOT), developed the *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Projects*, also referred to as FAA Order 5050.4B. The Order describes the environmental review process and identifies environmental categories which must be addressed prior to implementation of a federal action at an airport, including the funding of a development project. The current version of FAA Order 5050.4B, dated April 2006, in conjunction with *Policies and Procedures for Considering Impacts*, also known as FAA Order 1050.1F and dated June 2004, provides guidance for reviewing and documenting the effects of proposed airport development projects on the environment. FAA Orders 5050.4B and 1050.1F identify specific environmental categories that must be considered in relation to a proposed action to determine whether a significant impact would result and, if so, determine what reasons would be appropriate to avoid or minimize an impact's effect. FAA Order 1050.1F specifies the threshold of significance for each of the categories addressed.

The following is a list of environmental impact categories identified in Orders 5050.4B and 1050.1F that are commonly associated with airport development projects:

- Air Quality
- Coastal Resources
- Compatible Land Use
- Construction Impacts
- Cumulative Impacts
- Environmental Justice
- Farmlands
- Fish, Wildlife, and Plants
- Floodplains
- Hazardous Materials
- Historic and Cultural Resources
- Light Emissions and Visual Impacts
- Natural Resources and Energy
- Noise
- Secondary Impacts
- Section 4(f) Resources
- Socioeconomic Impacts
- Solid Waste
- Water Quality
- Wetlands
- Wild and Scenic Rivers

This chapter provides a summary of potential areas of environmental concern related to future development at the Niagara Falls International Airport (NFIA). The type and magnitude of impact is dependent upon the proposed project specifics, project alternatives, and the selected preferred alternatives. Future airport development implemented in accordance with this Sustainable Master Plan will be reviewed in further detail in the subsequent environmental documentation to satisfy the requirements of NEPA, the New York State Environmental Quality Review Act (SEQR), and any other special purpose laws. The information provided in this chapter is based on information obtained from appropriate federal, state, and local agencies along with data collected during field investigations.

This document, as the Sustainable Airport Master Plan for NFIA, will integrate the NEPA process into NFTA's overall planning process to go beyond the traditional Environmental Overview provided in an Airport Master Plan. NFTA has incorporated a high degree of a sustainable environmental ethic into its current operations, and has investigated and implemented numerous ways to reduce the overall environmental footprint of the airport, through innovative thinking and sustainable design that has resulted in a higher level of environmental sustainability, while concurrently extending its economic viability.

3.2 AIR QUALITY

Under Section 176(c) of the Clean Air Act (CAA), the FAA is responsible for ensuring that federal airport actions conform to New York's State Implementation Plan (SIP), which protects against regional air pollution impacts. The United States Environmental Protection Agency (EPA) has established the criteria and procedures for implementing this conformity in Title 40 of the Code of Federal Regulations, Part 93, *Determining Conformity of Federal Actions to State or Federal Implementation Plans* (40 CFR Part 93).

Under 40 CFR Part 93, the EPA further defined two types of conformity actions, "Transportation Conformity" and "General Conformity". Transportation Conformity actions are those that are considered "regionally significant" highway or transit projects funded by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA), while General Conformity actions are applicable to all other federal actions. Most federal actions on an airport are considered to be General Conformity actions.

The FAA has determined that the Transportation Conformity and General Conformity rules currently only apply in areas that have been determined by the United States Environmental Protection Agency (EPA) to be in nonattainment or maintenance for the CAA's current (2008) National Ambient Air Quality Standards (NAAQS) of the six priority pollutants (ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead). Niagara County is currently in attainment for current (2008) NAAQS.

In addition, the area received a "Clean Air Determination" on January 6, 2010 under Volume 74 of the Federal Register, Page 63993. The Clean Air Determination reduces requirements related to the State Implementation Plan, including the requirement to submit an attainment demonstration, a reasonable further progress plan, and contingency measures.

The EPA has several other potentially applicable CAA programs to control air emissions that are carried out through the SIP. These programs include the Indirect Source Review (ISR) programs and New Source Review (NSR) programs. The SIP ISR program does not currently apply to Niagara County. The SIP NSR program applies to new major stationary sources and

existing major sources that make modifications. All future actions at NFIA will comply with applicable SIP rules and regulations.

The FAA must also consider an action's potential to violate current (2008) NAAQS standards under NEPA. Qualitative air quality assessments are required for all actions that are not likely cause or create a reasonably foreseeable increase in air emissions. Quantitative air quality analyses are required for all actions that will cause or create a reasonably foreseeable increase in air emissions.

3.3 BIOTIC RESOURCES

Biotic resources refer to the various types of flora (plants) and fauna (fish, birds, reptiles, amphibians, mammals, etc.) in a particular area. It also includes the habitat supporting the various flora and fauna including rivers, lakes, wetlands, forests, and other ecological communities. Airport projects can affect these ecological communities and thereby affect vegetation and wildlife populations.

The majority of the habitat at NFIA consists of maintained grassland and wet meadow, interspersed with paved airfield surfaces. All habitats identified at NFIA are common and secure within New York State. There are no habitats located at NFIA that are designated as "critical habitat" for any state or federally-listed threatened or endangered species, or species of special concern. State or federally-listed threatened or endangered species, or species of special concern are discussed in Section 3.8. Further information regarding federally regulated waterways and wetlands is presented in Sections 3.19 and 3.20.

3.4 COASTAL BARRIERS AND COASTAL ZONE MANAGEMENT

The airport is located approximately two miles east of the Niagara River, which is included within New York's Coastal Area Boundary, created under the Coastal Zone Management Act. However, NFIA is not located within a Coastal Zone Management Area or a Coastal Barrier. As a result, Coastal Zone Management Act and Coastal Barrier regulations will not apply to proposed improvements at NFIA.

3.5 COMPATIBLE LAND USE

When considering improvement projects that meet airport development goals, it is important early in the planning process to identify potential impacts to existing land uses on airport property and in the surrounding area and to determine how potential airport projects will affect future land use and development patterns. If necessary, this will enable the plan to incorporate measures into the future design and layout of airport developments that will avoid or minimize land use conflicts as well as improve on existing conflicts.

The NFIA was originally constructed in 1928 and has been located at its current location, with several expansions, since. Land use adjacent to the airport varies significantly, and includes mainly commercial and industrial developments, with some residential and recreational and public services interspersed along Porter Road and Walmore Road. Land uses along Lockport Road and Packard Road show a greater concentration of residential development. In addition, residential neighborhoods are located beyond the primary surface roads surrounding the airport.

Land uses that are considered more susceptible to airport development include, but are not limited to, residential areas, schools, religious institutions, hospitals, and public places including recreational areas and parks. Potential impacts to these land uses result from exposure to elevated noise levels generated by aircraft and automobile traffic, as well as community disruption and safety hazards. Additionally, some land uses can negatively impact the operation of the airport and are also considered incompatible with airport activity. These land uses could include, but are not limited to, recreational areas that contain wildlife habitat that attract birds and other animals, and commercial and industrial facilities that generate high-voltage electricity, utilize bright lights, or create a significant amount of smoke or steam.

NFIA currently includes a retention pond, several streams, is within ten miles of Lake Erie and Lake Ontario, and is located within close proximity to several active agriculture fields. These features all attract wildlife that are not compatible with aircraft operations. Similarly, the Pine Avenue Landfill in Niagara Falls is located approximately one mile southwest of the Runway 10L end and two miles directly west of the Runway 10R end. According to FAA Wildlife Strike Database, between 2005 and 2015, there were 85 reported wildlife strikes at NFIA. All 85 reported strikes were with birds, of which 19 strikes did not report the species or species group involved. Of the 85 reported wildlife strikes in which the species or species group involved were identified, the top three species groups involved in reported strikes included raptors (hawks, eagles and falcons) at 17 strikes, gulls at 11 strikes, and swallows at 9 strikes.

The presence of the Pine Avenue Landfill and other wildlife attractants in the vicinity of NFIA, and impacts associated with the attraction of birds to NFIA, will be considered during the development of alternatives as part of this Sustainable Master Plan Update.

FAA Advisory Circular (AC) 150/5300-13A, *Airport Design*, identifies several land uses that are compatible with an airport's runway protection zone (RPZ). These land uses include agriculture meeting the minimum specified buffers, irrigation channels that do not attract birds, airport service roads, underground facilities, and unstaffed navigational aids and facilities. Other uses, including buildings and structures (including residences, schools, churches, hospitals, and industrial buildings), recreational areas, transportation facilities (including roads), fuel and hazardous materials storage facilities, wastewater treatment facilities, and above-ground utility infrastructure, are all land uses that are not recommended within RPZs as part of AC 150/5300-13A. Currently at NFIA, several runway ends are not consistent with the recommendations of the advisory circular. These include the Runway 24 end, where Walmore Road, several commercial structures, and overhead utility lines are located within the RPZ. Within the Runway 28R RPZ are several other non-compatible land uses, including Walmore Road, commercial facilities, and railroad tracks. Within the Runway 6 RPZ includes several residential structures (including an apartment building), a commercial structure, and Niagara Falls Boulevard. As future improvements are considered as part of this Sustainable Master Plan Update, the presence of these structures and transportation facilities within the current RPZs, as well as potential additional impacts should the RPZs be adjusted, will be considered.

3.6 CONSTRUCTION IMPACTS

Construction activities may produce temporary environmental impacts such as noise, dust, soil erosion, and negative effects on water quality. Noise impacts will be mitigated to the extent possible through the use of Best Management Practices (BMPs), such as requiring the use of properly mufflerized equipment or the implementation of work hour limitations if necessary. Dust, soil erosion, and water quality impacts are mitigated by implementation of an Erosion and

Sediment Control Plan (ESCP) containing BMPs inclusive of site specific temporary and permanent measures to limit erosion and off-site migration of materials. BMPs that may be incorporated include, but are not limited to, grass-lined ditches, dikes, berms, temporary sediment basins, fiber mats, and re-vegetation during construction as appropriate. When implemented properly, BMPs are generally sufficient to mitigate potential construction impacts.

3.7 DEPARTMENT OF TRANSPORTATION SECTION 4(F) RESOURCES

Section 4(f) of the Department of Transportation Act of 1966 protects publicly owned parks, recreation areas, wildlife and waterfowl refuges, and historic sites of national, state, or local significance from development unless there are no feasible alternatives. There are no parks, recreation areas, or conservation lands on or immediately adjacent to NFIA property. As the airport houses facilities for the United States Army and Air Force, as well as the New York Air National Guard, the facilities are secure and not intended for recreational use by the general public.

An impact to historic sites of national, state, or local significance on or near NFIA may be considered a use under Section 4(f). There are two properties within a half mile of the airport that are listed on the National Register of Historic Places (NRHP). However, it is not anticipated that future airport developments considered as part of this Sustainable Master Plan will affect the two sites. In addition, there are two buildings adjacent to the airport that will require additional consideration. The former Bell Aircraft facility has been identified by the State Historic Preservation Office (SHPO) as eligible for the NRHP, and the Saint-Gobain facility has been identified as potentially eligible for the NRHP. See Section 3.14 for mapping and further information regarding historic sites of national, state, or local significance.

As specific airport developments are identified and analyzed as part of this Sustainable Master Plan their potential to affect historic resources or other resources protected under Section 4(f) will be assessed on an individual basis through future NEPA documentation requirements.

3.8 FEDERALLY & STATE LISTED THREATENED AND ENDANGERED SPECIES

The Endangered Species Act (ESA) directs all federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the ESA. Section 7 of the ESA, titled "Interagency Cooperation," is the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species. Endangered species are those which are in danger of extinction throughout their range or a significant portion of its range. Threatened species are those which are likely to become endangered within the foreseeable future throughout all or a significant portion of their range. Candidate species are species for which the U.S. Fish & Wildlife Service (USFWS) has sufficient information on the biological vulnerability and threats to support issuance of a proposal list, but issuance of a proposed rule is currently precluded by higher priority listing actions. Candidate species do not receive substantive or procedural protection under the ESA. However, USFWS does encourage federal agencies and other appropriate parties to consider these species in the planning process.

New York State regulation 6 NYCRR Part 182 prohibits the take or engagement in any activity that is likely to result in a take of any State-listed threatened or endangered species. Species listed as endangered in New York are native species in imminent danger of extirpation or extinction in New York, or are species listed as endangered by the United States Department of

the Interior. Species listed as threatened in New York are native species that are likely to become an endangered species within the foreseeable future in New York. Species listed as species of special concern are native species that are at risk of becoming threatened in New York. Fauna classified as species of special concern do not qualify as either endangered or threatened, but have been determined by the New York State Department of Environmental Conservation (NYSDEC) to require some measure of protection to ensure that the species does not become threatened in the future. Species of special concern are considered “protected wildlife” under Article 11 of the Environmental Conservation Law (ECL).

Consultations with the USFWS and the NYSDEC were initiated to determine the existence of any recorded observations in the vicinity of the Niagara Falls International Airport of federal or state listed threatened or endangered flora or fauna.

An Official Species List from the USFWS was obtained on April 27, 2015 and is included in Appendix E. The list indicated that the recently federally-listed threatened species, northern long-eared bat (*Myotis septentrionalis*), has the potential to occur within the vicinity of NFIA. Long-eared bats generally prefer mature forested areas. There are no forested areas on NFIA property, and therefore no on-airport projects are likely to have a significant effect on northern long-eared bats. As specific airport development alternatives are identified and considered, the potential to affect northern long-eared bats, particularly off-airport obstruction removal projects, will be assessed on an individual basis and in consultation with the USFWS.

A response from the NYSDEC, dated January 22, 2013, identified one state-listed threatened species, northern harrier (*Circus cyaneus*), and one unlisted species of conservation concern, devil crawfish (*Cambarus diogenes*), as known to occur in the vicinity of NFIA. Refer to **Table 3-1**. A copy of the response received from NYSDEC is included in Appendix E.

Table 3-1 NYSDEC Threatened & Endangered Species in the Vicinity of NFIA

Common Name	Scientific Name	State Status	Habitat on Airport
Northern Harrier	<i>Circus cyaneus</i>	Threatened	Yes
Devil Crawfish	<i>Cambarus diogenes</i>	Unlisted	Yes

Source: NYSDEC Correspondence dated January 22, 2013

Breeding and foraging habitat for northern harrier (*Circus cyaneus*) is present at NFIA in the form of maintained and unmaintained grasslands and emergent wetlands. The majority of available breeding habitat at the airport is located on the western side of the airport on lands owned by the Niagara Falls Air Reserve Station. Suitable nesting habitat at NFIA includes unmaintained, or non-frequently maintained, grasslands and emergent graminoid (grasses, sedges and rushes) dominated wetlands. The presence of large birds of prey at NFIA presents clear hazards to aircraft operations. In accordance with FAA CertAlert No. 06-07, *Requests by State Wildlife Agencies to Facilitate and Encourage Habitat for State-Listed Threatened and Endangered Species and Species of Special Concern on Airports*, NFIA should not consider any request by state agencies to adopt habitat management techniques that may increase wildlife hazards and be inconsistent with safe airport operations. The presence of northern harriers at NFIA should be discouraged using non-lethal measures in accordance with existing state and federal depredation permits.

The NYSDEC indicated that an individual devil crawfish (*Cambarus diogenes*) was observed within a drainage ditch at Niagara Falls Air Reserve Station. Devil crawfish are semi-terrestrial burrowing crawfish that prefer wetlands and moist areas adjacent drainage ways, streams, and ponds. Potential habitat at NFIA includes drainage ditches, wetlands, Cayuga Creek, and its tributaries. NFTA was required to relocate and monitor Devil crawfish as a result of impacts to Cayuga Creek as part of the Runway 6-24 Safety Area improvements. It is likely that any project that disturbs Cayuga Creek will require similar measures. As specific airport development alternatives are identified and considered, the potential to affect these habitats will be assessed on an individual basis and in consultation with the NYSDEC.

3.9 ENERGY SUPPLIES & NATURAL RESOURCES

Use of energy supplies and natural resources is closely linked to construction of airport improvements and operations. Energy and natural resources are relatively abundant in Western New York and planned growth at the airport is not of sufficient magnitude to alter regional energy demand or limit natural resource availability.

However, anticipated growth and development of NFIA is likely to increase the use of energy and natural resources at the airport. Implementation of the sustainability recommendations will assure that those resources are utilized efficiently. Each proposed project, including those that will lead to an increase in aircraft operations, will be evaluated for the potential effect upon these resources and methods to reduce potential energy uses will be developed and considered during the design process.

3.10 ENVIRONMENTAL JUSTICE

An environmental justice analysis considers the potential of federal actions, including those involving federally obligated airports, to cause a disproportionate and adverse effect upon low-income or minority populations. Physically, NFIA is within the Towns of Niagara and Wheatfield and is bordered in part to the south by the City of Niagara Falls. All three of these municipalities will be considered in this discussion as potential changes to the operations at NFIA could have an impact on any of three communities that house the airport or are adjacent.

As shown in **Table 3-2**, the 2010 U.S. Census recorded the Town of Niagara as having a total population of 8,378 with 88.9% white and 12.4% below the poverty level. The Town of Wheatfield has 18,117 residents, 94.7% of which are white and 4.9% of the population is below the poverty level. The percentage of residents who classify themselves as white is above the national average, as well as above the percentage for all of Niagara County. In addition, the percentage of residents below poverty level is below the national average and the average of Niagara County. However, when considering median household income, the median in Wheatfield, \$62,841, is above the national median and the median for Niagara County, while the median in the Town of Niagara, \$40,761, is below both averages.

Conversely, the population of the nearby City of Niagara Falls, where a minimal portion of the City (approximately 1,300 linear feet) directly borders the airport, the economic conditions are different. The population of Niagara Falls was reported at 50,193, where the percentage of residents that classify themselves as white is below the national average at 69.1%. Additionally, 21.8% of the population is below the poverty level, which is approximately 50% above the national average. The median household income in Niagara Falls, \$31,452, is below both the national median household income and the median household income in Niagara County.

The NYSDEC Environmental Justice Preliminary Mapping showing the locations of such minority population was referenced on December 3, 2012. The mapping did not identify any locations in Niagara or Wheatfield as areas of concern for populations that are potentially sensitive to environmental justice areas. However, the mapping did identify several neighborhoods in the City of Niagara Falls as potentially sensitive. These neighborhoods, however, are not adjacent or within the nearby vicinity of NFIA. The closest neighborhoods

Table 3-2 Demographic Profile of the Municipalities Surrounding NFIA (2010)

Census Category	National Average	Niagara County	Town of Niagara	Town of Wheatfield	City of Niagara Falls
Total Population	N/A	216,469	8,378	18,117	50,193
White Population	71.5%	88.9%	91.8%	94.7%	69.1%
Minority Population	28.5%	11.1%	8.2%	5.3%	30.9%
Population Under Age 5	6.0%	5.3%	4.2%	5.1%	6.1%
Population Age 65 & Older	13.7%	16.1%	18.2%	18.8%	15.5%
Individuals Below Poverty Level	14.2%	12.8%	12.4%	4.9%	21.8%
Median Household Income	\$55,603	\$45,964	\$40,761	\$62,841	\$31,452
Non-English Speaking Households	29.2%	6.0%	10.2%	9.3%	6.2%

Source: U.S. Census Factfinder, 2010 Census

identified are located nearly 1.5 miles to the west and southwest of the airport, including a portion of Hyde Park west of Interstate 190. In addition, the NYSDEC mapping also identified an area approximately two miles north of NFIA, within the Town of Lewiston, as a potential environmental justice area. This area also includes a portion of the Tuscarora Indian Reservation. There are no other known concentrations of minority or economically deprived populations within the NFIA vicinity.

Due to the location of the airport, and the layout of the current facilities at NFIA in relation to the potential environmental justice areas identified within a two-mile radius, disproportionately high and adverse human health or environmental effects are not anticipated to occur among minority or low-income populations as a result of potential airport development.

3.11 FARMLANDS

Prime Farmland Soils are soils best suited for the production of feed, forage, fiber, and oilseed and can be very productive when properly managed. The Farmland Protection Policy Act (FPPA), 7 CFR Part 658, requires the consideration of project alternatives that will minimize impacts to such soils. According to the U.S. Natural Resource Conservation Service (NRCS) *Web Soil Survey* accessed on December 3 2012, approximately 51% of the property encompassing the Niagara Falls International Airport is classified as prime farmland soils or farmland soils of statewide importance, and an additional approximately 47% is classified as prime farmland if drained. FPPA does not apply to land already committed to “urban development or water storage” (i.e. airport developed areas), regardless of the NRCS designation. Currently, the airport property is not utilized for any active agricultural production,

but is dedicated to airport utilization. Therefore, NFIA property is not subject to the FPPA regulations. In addition, the NRCS notes in their “Farmland Protection Policy Act Manual” that lands identified by the United States Census Bureau as an urbanized area are not subject to the provisions of FPPA. According to the 2010 Census, all areas directly to the north, south, and west of NFIA, including all of the airport property, are within a designated urbanized area. Land east of the railroad tracks near the eastern property boundary is not considered urbanized and is subject to the requirements of FPPA should future airport development occur within that area.

Article 25-AA of the New York State Agricultural and Markets Law, Section 305(4), protects farmlands by requiring a notice of intent and public review procedure for acquisition of more than one acre from any actively operated farm in an Agricultural District or a cumulative total of more than ten acres in any Agricultural District. While no NFIA property is located within an Agricultural District, adjacent parcels are located within Niagara County Agricultural District #7. If future development is proposed as part of this Sustainable Master Plan to include the acquisition of the land identified within the district, the Notice of Intent requirements of Section 305(4) will occur as part of the future NEPA documentation that will be required for project funding through the FAA. **Figure 3-1** depicts Niagara County Agricultural District #7 in relation to the Niagara Falls International Airport.

3.12 FLOODPLAINS

Floodplains are land areas associated with bodies of water (lakes, rivers, and wetlands) that are likely to become inundated during a flooding event. The area or magnitude of a floodplain will vary according to the magnitude of the storm event as determined by the storm interval occurrences. For example, a five-year storm has a magnitude that can be expected once every five years. Typically, the Federal Emergency Management Agency (FEMA) utilizes a 100-year storm interval for flood preparation. Flooding related to a 100-year storm statistically has a 1-percent chance of occurring during any given year. The 100-year period has been selected as having special significance for floodplain management because it is the maximum level of flooding that can reasonably be expected and planned for during a project’s expected life span.

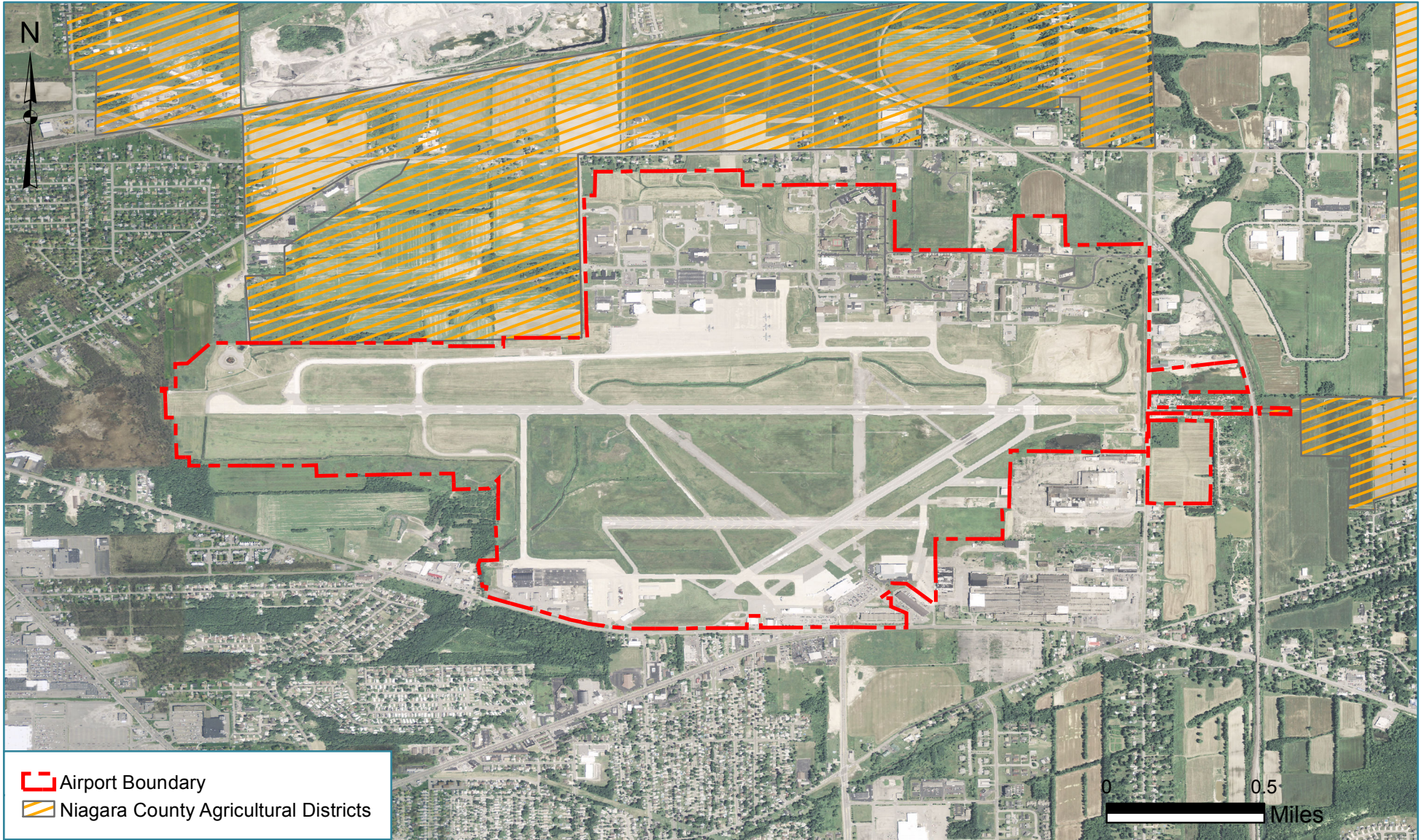
A Flood Insurance Study (FIS) for all jurisdictions within Niagara County, including the Towns of Niagara and Wheatfield, was published by FEMA on September 17, 2010. According to the Flood Insurance Rate Map (FIRM) panel depicting NFIA (FIRM 360630327E), also published September 17, 2010, the majority of NFIA is classified as Zone X, or “Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.” Several areas of NFIA, however, have been identified within Zones A, AE, and X500. Zone A is identified by FEMA as “Areas with a 1% annual chance of flooding, and a 26% chance of flooding over the life of a 30-year mortgage...No depths or base flood elevations are shown within these zones.”¹ Zone AE is similar to Zone A, however, Base Floodplain Elevations (BFE) are provided within Zone AE. A BFE is the expected elevation above sea level of the 100-year flood. The BFE determined for this portion of airport property ranges between 574 feet and 595 feet. Zone X500 is identified by FEMA as an “area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods.”²

¹ “Definitions of FEMA Flood Zone Designations.” Federal Emergency Management Agency. Accessed: January 16, 2013. <https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%2520Flood%2520Zone%2520Designations>

² Ibid.

NFIA AGRICULTURAL DISTRICTS MAP

FIGURE 3-1



A designated floodway has been determined for Cayuga Creek, which flows parallel to Runway 10L-28R before crossing the runway near Taxiway A2 and flowing south off airport property. Cayuga Creek was recently relocated as part of an extension to Runway 24. In addition, a floodway has also been identified for the Cayuga Creek West Tributary along the western property boundary of NFIA before flowing into Cayuga Creek near the Runway 10R end, near the southwestern boundary of NFIA property. The floodway is the high hazard portion of the floodplain, which includes the channel of the watercourse and the portion of adjacent floodplain that are required to carry and discharge 100-year flood levels. **Figure 3-2** depicts the location of floodplains and floodways at NFIA.

3.13 HAZARDOUS MATERIALS

A Hazardous Waste/Contaminated Material (HWCM) desktop screening was conducted to determine the potential for the presence of HWCM on airport property. The screening involved the review of a governmental environmental database report, dated February 06, 2013, consistent with ASTM E1527-05 standards and U.S. EPA All Appropriate Inquiry (AAI) guidelines provided by FirstSearch Environmental Information, Norwood, Massachusetts.

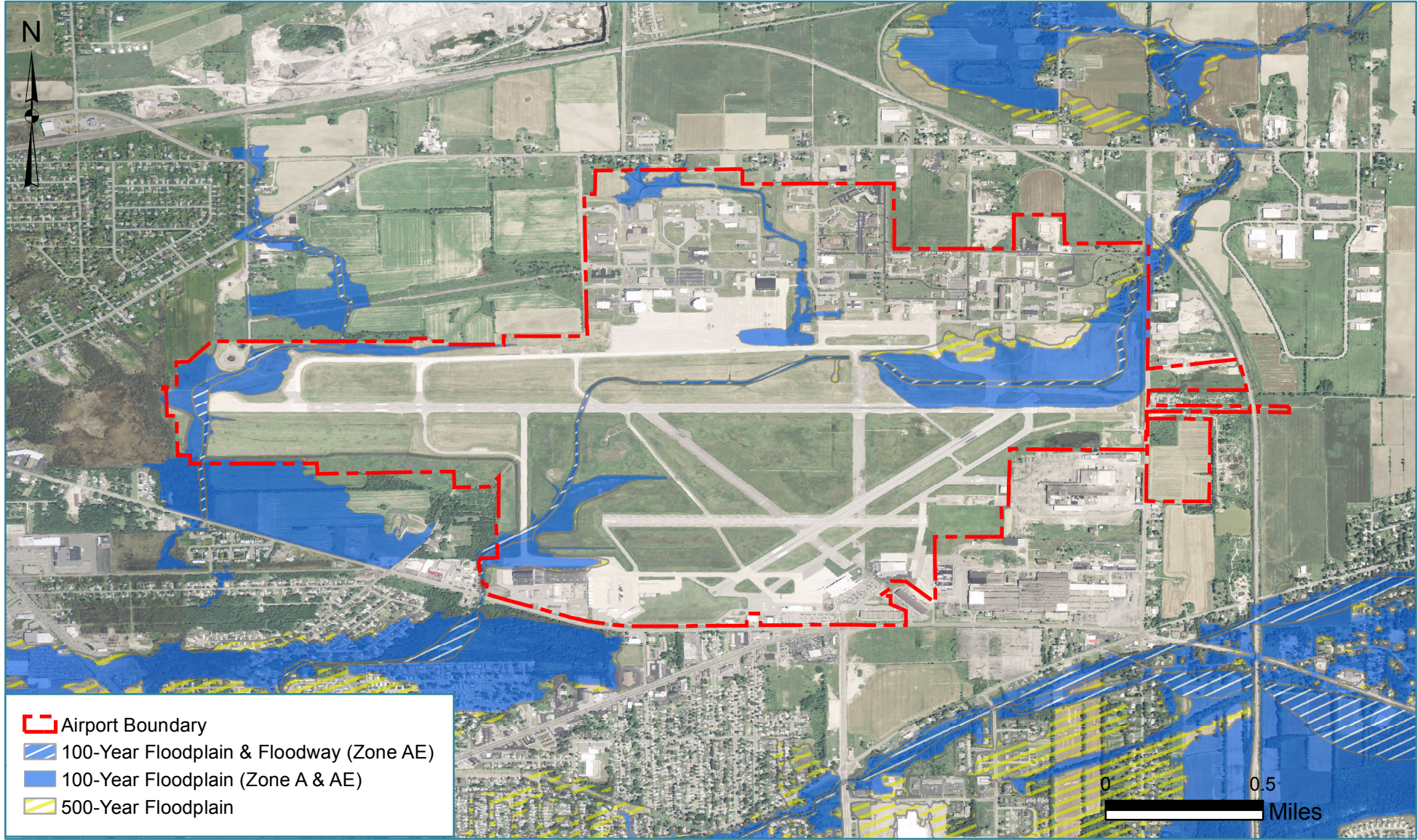
Review of the governmental records report indicated a long history of chemical and petroleum releases at, or in, the immediate vicinity of NFIA. Although the majority of these releases are reported to have been attended to, or remediated to, regulatory recommendations or guidelines, there are several areas that are deemed to be of environmental concern given the high probability that chemical and/or petroleum impacted sediment, soil, and/or groundwater still remains. The general locations of these sites are shown on **Figure 3-3**.

Based on the 2013 database report the Niagara Falls Air Reserve Station has ten Installation Restoration Program (IRP) sites reported in the Resource Conservation and Recovery Act (RCRA) Corrective Action Activity Database. The IRP was developed by the Department of Defense (DOD) to identify, evaluate, and clean up contamination from past operations on military bases worldwide. The primary contaminants of concern are volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) which have been reported in the soil, and overburden and bedrock groundwater. According to more recent correspondence, dated August 1, 2016, from Kim Powell the 914th MSG/CEV Environmental Site Manager- Niagara Falls Air Reserve Station, there are specifically thirteen sites currently under a remediation responsibility consent order with the NYSDEC. Twelve of these sites are located within the Niagara Falls Air Reserve Station property boundaries, while the thirteenth, referred to as Site No. 9- Fire Training Area No. 3, is located within the airfield near the approach end of RW-10L. Three of the sites, including Site No. 9- Fire Training Area No. 3, have undergone remedial actions and have institutional controls in place to limit potential human exposures. Of the ten remaining sites located on Niagara Falls Air Reserve Station property, three have undergone remedial actions and are in a post-closure status, while seven are currently undergoing remedial actions.

The former Bell AeroSpace Textron facility, located at 9812 Niagara Falls Boulevard, is reported under multiple state and federal environmental databases. The EPA has identified 20 solid waste management units (SWMUs) at the facility that previously handled hazardous wastes. The primary contaminants of concern are VOCs which have been reported in the soil, and overburden and bedrock groundwater. Based on the data provided by the EPA, the site has both institutional and engineering controls in place to limit potential human exposures.

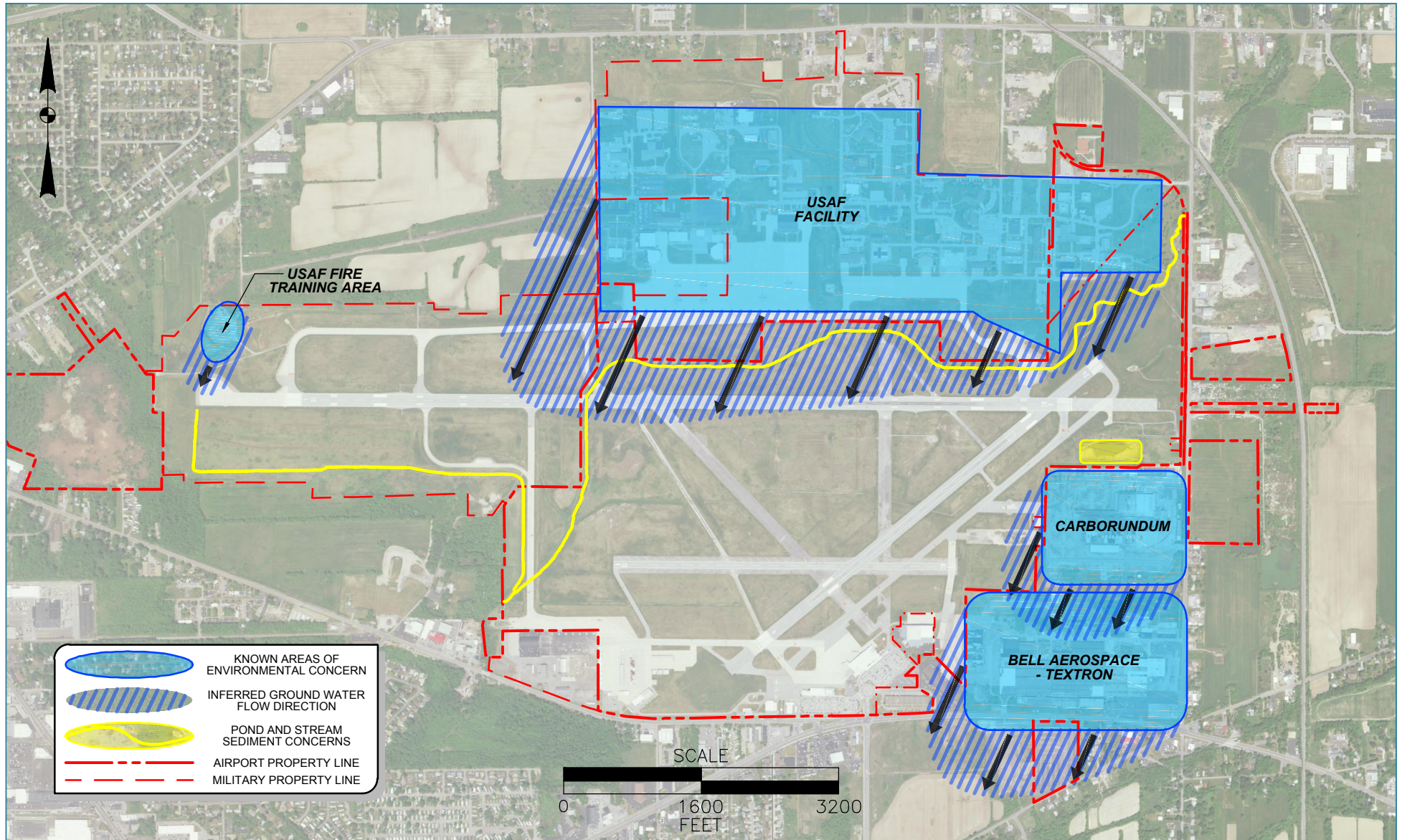
NFIA FLOODPLAINS MAP

FIGURE 3-2



KNOWN AREAS OF ENVIRONMENTAL CONCERN

FIGURE 3-3



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The former Saint-Gobain facility, located at 6600 Walmore Road, is listed under multiple state and federal environmental databases. The records indicate VOCs and SVOCs at high concentrations in the soil, and overburden and bedrock groundwater. Based on the data provided by the NYSDEC, the site has both institutional and engineering controls in place to limit potential human exposures.

Portions of Cayuga Creek and several of its tributaries are located on airport owned property. Cayuga Creek and its minor tributaries are listed on the New York State Section 303(d) listing of impaired waters for 2012. The listing indicates that the impairment is due to dioxins laden sediments. It is also likely that given the historic use of the airport and surrounding properties, that other contaminants of concern are likely to exist.

As projects are proposed, they will be evaluated for their specific potential to encounter chemical, petroleum, or hazardous materials in direct consultation and coordination with the NYSDEC, USEPA and USAF.

It is possible that there were incidents on or near the airport property involving hazardous materials that were not reported. This is evident by the discovery of nine abandoned, buried 55-gallon drums of material containing high levels of phenol during the runway extension project in 2011. In the event that previously unidentified chemical, hazardous, or petroleum related wastes are encountered during the construction of any future proposed projects, the wastes will be handled and disposed of in accordance with all applicable federal, state, and local regulations.

3.14 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

According to 36 CFR Part 800, a historic property is “any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places (NHRP).” The National Historic Preservation Act (NHPA) Section 106 requires that federal agencies such as the FAA consider the effects of their actions on historic properties via consultation with the State Historic Preservation Office (SHPO).

SHPO was consulted regarding potential or known cultural resources, historic places, or archeological resources that may be affected by proposed development at the airport. SHPO responded in a letter dated March 11, 2013 that they had no concerns regarding archeological resources on Airport property. SHPO also indicated that there are no properties currently listed in the State or National Register of Historic Places within or adjacent the Airport, however that the area has not been comprehensively surveyed for historic resources. A copy of the correspondence received from SHPO is included in Appendix E.

The area surrounding the airport was reviewed using SHPO’s online Cultural Resource Information System (CRIS). The CRIS also indicated several known archeological sensitive areas located within the vicinity of airport property. Due to the public sensitivity of this information, no further details, location descriptions, or mapping is provided in the MPU per the direction of SHPO. There are also two NHRP sites are located within a half mile of the airport. The first site is the Town of Niagara District School No. 2 (04NR05293) located at 9670 Lockport Road in the Town of Niagara. The site is approximately 500 feet, and across Lockport Road, from property utilized by the United States Air Force for their mission at Niagara Falls International Airport. The site is approximately a half mile north of the closest aircraft apron. The

second site identified is the Johann Williams Farm (90NR01968), located at 10831 Cayuga Drive in the City of Niagara Falls. The site is approximately a half mile south of the airport and the facilities utilized by NFTA, including the passenger terminal and parking facilities. It is not anticipated that any airport improvements considered as part of this Sustainable Master Plan will have an impact on these sites and no development will occur on these properties.

Additionally, a former plant operated by Bell Aircraft is located adjacent to the airport, east of the passenger terminal at the intersection of Niagara Falls Boulevard and Walmore Road. The plant has been indicated by SHPO as National Register Eligible (NRE) in correspondence related to the construction of the nearby passenger terminal dated September 5, 2007, and was designated by the American Institute of Aeronautics and Astronautics (AIAA) as a historic aerospace site in October 2012. According to AIAA, the plant produced several important World War II era aircraft including the P-39 Airacobra and the P-63 Kingcobra fighters, the P-59A Airacomet, the first U.S. manufactured jet aircraft, and the Bell 47, the first commercially certified helicopter, among other key contributions to aerospace in the United States. The site is one of eleven sites identified by AIAA in its Historic Aerospace Sites Program.³ In the same correspondence dated September 5, 2007 from SHPO, the Saint-Gobain building located east of the former Bell Aircraft facility was identified as potentially NRE and would require further review if any physical impacts were to occur to the building. While the sites have not been included on the national, state, or local registers of historic places, the determination that the Bell Aircraft facility is NRE and the Saint-Gobain building may be NRE will be considered as factors when selecting the preferred development alternatives as part of this Sustainable Master Plan.

The general locations of NHRP, NRE and potential NRE sites are shown on **Figure 3-4**.

When a specific airport development projects are proposed, additional documentation will be required, including detailed descriptions and pictures of structures to be affected, in order for SHPO to provide a determination of that project's potential effect on historic resources as part of future studies to comply with NEPA.

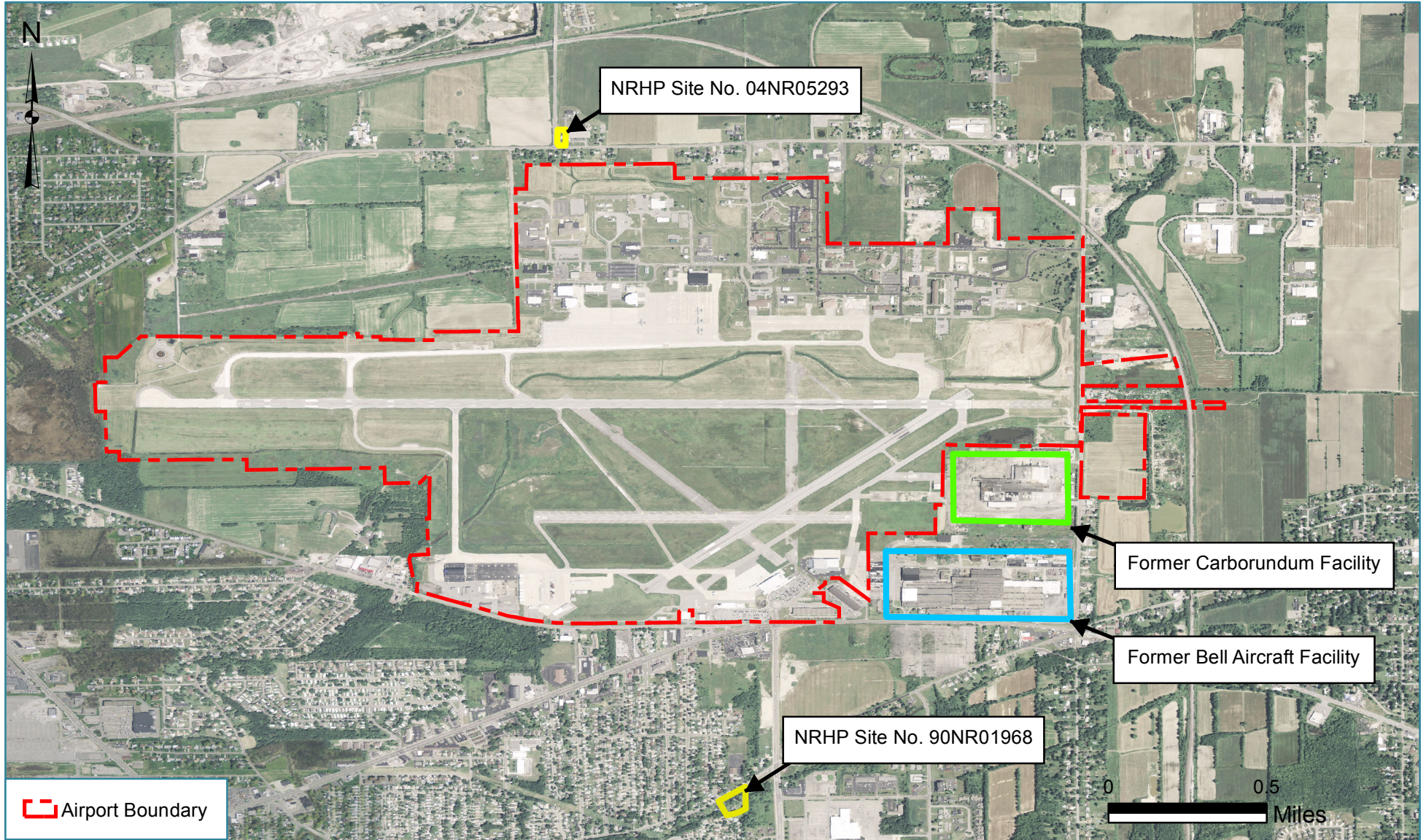
3.15 LIGHT EMISSIONS & VISUAL IMPACTS

Niagara Falls International Airport is classified as a Part 139 Class I (Scheduled Large Air Carrier Aircraft) and is required to follow the Airport Safety guidelines as stated in 14 CFR 139. These guidelines include lighting and signage utilized both on the ground and in the air, as well as other airport procedures. Airport improvements may include the installation of additional lighting, or change the location of lighting, on airport property to meet the requirements of 14 CFR 139, or to accommodate the construction of the infrastructure improvement. These installations can alter the existing lighting conditions both on-airport and in the vicinity of the airport. Light emissions are typically one of the greatest concerns for residents in neighborhoods, as well as users of other incompatible land uses, adjacent to an airport that could be directly impacted by a change in lighting. Given the airport's size, location, history, and surrounding land use, an increase in light emissions is unlikely to be significant for the installation or replacement of lighting on airport, with the exception of the installation of

³ "Bell Aircraft Plan to be Designated a Historic Aerospace Site." The American Institute of Aeronautics and Astronautics (AIAA). Released: October 2, 2012. Accessed: January 15, 2013. <https://www.aiaa.org/Secondary.aspx?id=14063>

NFIA HISTORIC RESOURCES MAP

FIGURE 3-4



approach lighting systems on runways where the technology is not currently available. In some instances, these lighting systems could extend beyond airport property into neighborhoods where impacts to residential land uses could occur and would require further analysis during the completion of required NEPA documentation prior to installation.

3.16 AIRCRAFT NOISE

Aircraft noise emissions, inherent to the operation of an airport, can adversely impact land use compatibility between an airport and surrounding properties, particularly in the presence of noise-sensitive receptors. Churches, hospitals, schools, amphitheatres, and residential districts are receptors that are sensitive to elevated noise levels. Recreational areas and some commercial uses are moderately sensitive to elevated noise levels. Therefore, it is important to predict any change in noise levels associated with airport development, to determine the significance, if any, of the impact to noise sensitive land-uses. Then, abatement measures can be incorporated into airport development plans to avoid or minimize the impacts.

In order to evaluate the noise impacts of aviation activity on surrounding areas, the FAA has developed the Integrated Noise Model (INM). This computer model calculates cumulative aircraft noise at ground level expressed in decibels (dB), using the Day-Night Average Level (DNL). The DNL is the average daily noise level, with an additional 10 dB weight for nighttime aircraft operations. Decibels are measured in A-weighted units, which approximate the range of human hearing. The FAA considers the 65 dB DNL level to be the threshold of impact for noise-sensitive areas. In order to help put the 65 dB DNL into perspective, the typical ambient noise level in suburban residential areas is 55 dB DNL. **Table 3-3** shows the typical noise levels associated with specific areas commonly encountered every day. **Table 3-4** presents the Day-Night average noise levels (DNL, dB) that are used by the FAA to evaluate land use compatibility with respect to airports.

Table 3-3 Typical Outdoor Day-Night Noise Levels

DNL Day-Night Noise Level (dB)	Location
50 dB	Small town residential area or quiet suburban area
55 dB	Suburban residential area
60 dB	Urban residential area
65 dB	Noise urban residential area
70 dB	Very noisy urban residential area
80 dB	City Noise (Downtown of a Major Metropolitan Area)
88 dB	3 rd Floor Apartment in a Major City Next to a Freeway

Source: "Noise Fundamentals Training Document, Highway Noise Fundamentals", U.S. Department of Transportation, Federal Highway Administration

A review of aerial photography, along with land use and zoning maps of the area, indicates that much of the land surrounding NFIA would not be identified as noise sensitive. There are, however, several potential non-compatible land uses along Porter Road in the vicinity of the Runway 6 end, as depicted in Figure 2-17. These land uses include several residential structures, as well as a mobile home park and several motels. A noise analysis will be completed as part of Land Use Plan included in the Airport Layout Plan set. This analysis will include the forecasted number of future operations and will utilize a fleet mix anticipated to occur at NFIA, and will be based on the final infrastructure improvements recommended as part of this Sustainable Master Plan. The Land Use Plan will identify land uses of adjacent properties

and the noise contours generated will be utilized to identify any potential impacts associated with the proposed development at NFIA.

3.17 INDUCED SOCIOECONOMIC IMPACTS

Under the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Part 1502.1), federal agencies are required to consider the effects to the area population's health, safety risks to children, and socioeconomic impacts. Under 40 CFR 1508.14 the CEQ requires that the human environment be considered for federal projects to address the relationship of people with their natural and physical environments. Therefore, social impacts are required to be considered as an effect of any proposed airport project. Principal impacts to be considered include the displacement of families or businesses, effects to neighborhood characteristics, dividing or disrupting established communities, changing ground transportation

Table 3-4 Land Use Compatibility

Land Use	Yearly Day-Night Average Noise Level (DNL, dB)		
	Compatible Below 65	Compatible Between 65 and 70	Compatible Between 70 and 75
Residential	YES	NO*	NO*
Mobile Home Parks	YES	NO	NO
Transient Lodgings	YES	NO*	NO*
Schools	YES	NO*	NO*
Hospitals/Nursing Homes	YES	YES*	YES*
Churches/Auditoriums	YES	YES*	YES*
Governmental Services	YES	YES	YES*
Transportation/Parking	YES	YES*	YES*
Offices/Business/Professional	YES	YES	YES*
Wholesale and Retail	YES	YES	YES*
Utilities	YES	YES	YES*
Communications	YES	YES	YES*
Manufacturing	YES	YES	YES*
Photographic/Optical	YES	YES	YES*
Agriculture and Forestry	YES	YES*	YES*
Livestock Farming	YES	YES*	YES*
Mining/Fishing	YES	YES	YES
Outdoor Sports Arenas	YES	YES*	YES*
Outdoor Music Shells	YES	NO	NO
Nature Exhibits/Zoos	YES	YES	NO
Amusements/Parks/Camps	YES	YES	YES
Golf Courses/Stables	YES	YES	YES*

Source: 14 CFR 150, Airport Noise Compatibility Planning

* Measures must be incorporated into the design of the structure or use that will allow this activity to continue at the indicated noise exposure level

patterns, disruption of orderly planned community developments, or creating measurable changes in employment. If land acquisition were necessary for proposed airport development alternatives, it would be accomplished in accordance with 49 CFR Part 24, *Uniform Relocation Assistance and Real Property Acquisition Policies Act* (Uniform Act) and FAA Advisory Circular 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program*

Assisted Projects. The Uniform Act standardizes real property acquisition policies and requires the uniform and equitable treatment of persons relocated due to a federally assisted project. Proposed projects need to be evaluated for the potential effects to the community economy, social structure, and necessary community health and safety services.

Pursuant to Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, federal agencies are directed to make identification and assessment of environmental health and safety risks that may disproportionately affect children a high priority. Federal agencies are encouraged to ensure that their policies, programs, and activities address any disproportionate risks children may incur from environmental health and safety risks. These risks are generally attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreational waters, soil, or products they might use or to which they may be exposed. Proposed projects will be assessed for the potential to impair the ability of neighborhood children to access clean breathable air, healthy food, potable water, and appropriate recreation sites.

3.18 SOLID WASTE

An increase in number of airport users or activity changes at the airport may increase the quantity of refuse generated. However, any increase in solid waste attributable to development at NFIA is expected to be negligible and will not over burden the capacity of local solid-waste facilities.

Solid waste facilities inherently attract wildlife, particularly birds and, therefore, can increase the aircraft-bird strike hazard. NFIA's solid waste is shipped to the Modern Landfill located approximately six miles northwest of NFIA. Several additional landfills are located in the vicinity of NFIA, including the Pine Avenue Landfill and the Niagara County Landfill. With the number of facilities available within the vicinity of NFIA, adequate space for the disposal of solid waste attributable to development is available.

3.19 WATER QUALITY

3.19.1 Surface Waters (Excluding Wetlands)

The United States Army Corps of Engineers (USACE) regulates water bodies under Section 10 of the Rivers and Harbors Appropriation Act (RHA) that are considered to be a Traditionally Navigable Water of the United States (TNW) as defined specifically there within. The USACE also regulates water bodies through Section 404 of the Clean Water Act (CWA) that have a significant nexus to a TNW as defined in Section 10 of the RHA or a TNW as defined Section 404 of the CWA. A significant nexus is generally defined as having more than an insubstantial or speculative effect on the chemical, physical, or biological integrity of a downstream TNW.

The NYSDEC regulates activities in water bodies that are considered to be "protected streams" or "Navigable Waters of the State" under the Article 15 of the ECL. Fresh surface waters in New York State are assigned a classification based on their existing or expected best usage. The classification of AA or A is assigned to waters used as a source of drinking water. Classification B indicates a best usage for swimming, fishing and other contact recreation, but not for drinking water. Classification C is for waters supporting fisheries and that is suitable for other non-contact recreational activities. The lowest classification is D. Class D waters are similar to Class C waters, however stream flow or stream bed conditions are not typically

suitable to support game fisheries or fish propagation. Waters with a classification of A, B, or C may also have a standard of (T) or (TS), indicating the capacity to support trout or trout spawning. Streams and small water bodies located in the course of a stream that are designated as C(T) or higher (i.e., C(TS), B, or A) are collectively referred to as “protected streams”. “Navigable Waters of the State” are defined as all lakes, rivers, streams and other bodies of water in the state that are navigable in fact or upon which vessels with a capacity of one or more persons can be operated notwithstanding interruptions to navigation by artificial structures, shallows, rapids or other obstructions, or by seasonal variations in capacity to support navigation.

A wetlands and waterways delineation of NFTA owned property at NFIA was performed by McFarland Johnson in October 2012. The USACE Ordinary High Water (OHW) and NYSDEC Mean High Water (MHW) marks for any streams or other water bodies located within the project study areas were field delineated in accordance the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328 (33 CFR 328), and the procedures outlined in Title 6 of the Codes, Rules, and Regulations of the State of New York, Part 608, Use and Protection of Waters (6 NYCRR 608). See Appendix D for a copy of the complete Wetlands and Waterways Delineation Report.

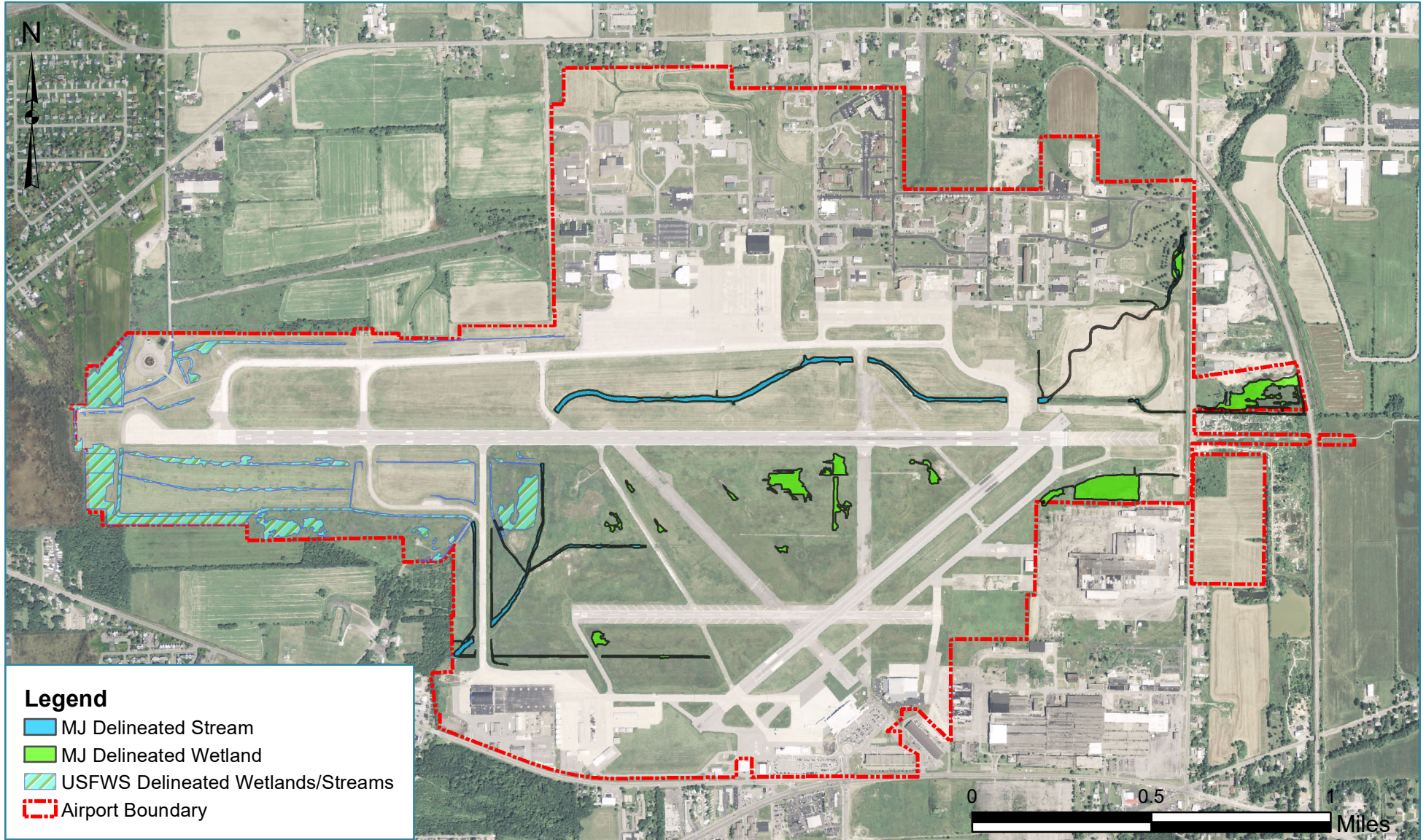
Cayuga Creek and its tributaries were the only surface water bodies identified on the airport during the delineation effort performed by McFarland Johnson. The waterways located on the Niagara Falls Air Reserve Station owned property at NFIA were delineated by the USFWS in the summer of 2008. The locations of the surface waters identified during these two delineations are shown on **Figure 3-5**. Cayuga Creek has a NYSDEC water classification of C. Cayuga Creek’s perennial tributaries located on the airport have water classifications of C, and its intermittent and ephemeral tributaries have classifications of D. The portions of Cayuga Creek and its tributaries located on the airport are not considered to be “protected streams” under Article 15 of the ECL. The portions of Cayuga Creek and its tributaries located on the airport are not considered navigable by NYSDEC standards, and therefore are not considered to be “Navigable Waters of the State” under Article 15 of the ECL.

Downstream of the project study area, Cayuga Creek is considered to be a TNW under Section 10 of the RHA. The portion of Cayuga Creek that is considered to be a TNW is from its confluence with the Little River to the Buffalo Avenue Bridge. Based on this information, the portion of Cayuga Creek located at NFIA is regulated by the USACE under Section 404 of the CWA. All tributaries to Cayuga Creek located on the airport are also considered to be regulated by the USACE under Section 404 of the CWA. The portions of Cayuga Creek and its tributaries located on the airport are not defined as TNWs under Section 10 of the RHA, and therefore are not regulated under Section 10 of the RHA. The Section 303(d) of the CWA requires states to periodically identify impaired waters, where designated uses of the waters are not fully supported. For these impaired waters, states must consider the development of a Total Maximum Daily Load (TMDL) or other strategy to reduce the input of the specific pollutant(s) restricting the water bodies’ uses, in order to restore and protect such uses. Cayuga Creek and its minor tributaries are listed on the New York State Section 303(d) listing of impaired waters for 2012. This listing indicates that Creek in Niagara County has been impaired by dioxins as a result of contaminated sediments.

Future proposed projects will take measures in design and construction to avoid, minimize, or mitigate any possible adverse direct impacts to regulated surface water resources to the degree possible. The use of Best Management Practices (BMPs) during construction project will

NFIA DELINEATED WETLANDS MAP

FIGURE 3-5



minimize indirect impacts to regulated surface water resources at NFIA. Projects that have no practicable alternatives to avoid direct impacts to regulated surface waters will require Section 404 permits from USACE. The USACE issues activity specific Nationwide Permits (NWP), for stream disturbances meeting specific conditions. If a proposed project does not meet the conditions of any of the Nationwide Permits, a USACE Individual Permit is required before any work that causes disturbance in or near protected streams can commence. Compensatory stream mitigation may be required as a permit condition depending on the specific details of the proposed project(s). All USACE permit applicants must demonstrate sequencing (i.e., avoidance, minimization, and mitigation) of wetland impacts.

Section 401 of the CWA provides states with the authority to ensure that federal agencies do not issue permits or licenses that violate their water quality standards. The NYSDEC implements Section 401 compliance through a certification process called Water Quality Certification (WQC). The NYSDEC has issued blanket WQC for many of the NWPs, providing certain special conditions are met. Individual WQCs are required from the NYSDEC for USACE Individual Permits and for those NWPs where the NYSDEC has not issued blanket WQCs, and on projects qualifying for a NWP, but where the blanket WQC special conditions cannot be met.

3.19.2 Stormwater

The Town of Niagara is within the Niagara Falls Urban Area and therefore is considered an Automatically Designated Urbanized Area under the Municipal Separate Storm Sewer Systems (MS4s) as part of the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II permit program. The Town of Wheatfield is not included within the MS4 area. NPDES permitting limits pollution of the nation's lakes, rivers, streams, and estuaries. Urbanized municipalities, publically funded institutions, and other public entities must follow MS4 regulations for discharges from their facilities that are outlet into surface waters. The airport is therefore required to manage its stormwater runoff from the airport's developed areas within the Town of Niagara. NYSDEC has been delegated to enforce the federal MS4 Phase II regulations in New York State under its State Pollutant Discharge Elimination System (SPDES) General Permit program.

NYSDEC regulations do not allow an increase in the visible turbidity of water when compared to preconstruction conditions. If one or more acres of land are disturbed during construction, a State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities, issued by the NYSDEC, is required. During the construction period, erosion and sediment control measures would be implemented, as prescribed in a Stormwater Pollution Prevention Plan (SWPPP), to avoid or minimize impacts to water quality.

Construction of the proposed development alternatives outlined in the Sustainable Master Plan will likely disturb one or more acres of land. Therefore, a SPDES permit for stormwater discharges associated with construction activities would be required. The SPDES permit requires implementation of a SWPPP, developed specifically for the site, in order to minimize and mitigate any impacts due to erosion and sedimentation during the construction period. As part of the SWPPP, all SPDES permit sites must develop an Erosion and Sediment Control Plan (ESCP) to control stormwater discharge during the construction phase.

The ESCP consists of temporary and permanent Best Management Practices (BMPs) intended to reduce erosion, control siltation and sedimentation, and ensure that sediment-laden water

does not leave the site. As each proposed project is progressed to the final design phase, an ESCP will be developed for implementation during construction to address water quality concerns and avoid significant impacts on water quality. The plans will incorporate acceptable BMPs, which will serve to protect the water quality of Cayuga Creek, area wetlands, and other bodies of water in the area.

If the ground disturbance is greater than five acres, or the ground disturbance is within the Cayuga Creek watershed, a full SWPPP including a Water Quality and Quantity Control plan must be implemented for the project. The Water Quality and Quantity Control portion of the SWPPP consists of permanent BMPs intended to enhance water quality and provide water quantity control through peak flow attenuation. To meet the goal of no net increase in peak stormwater runoff from pre-project conditions, BMPs must compensate for the increase in runoff resulting from additional impervious surfaces.

The full SWPPP would be implemented during construction and then properly maintained thereafter. This would ensure that water quality standards are met. The increase in runoff resulting from the expansion or creation of impervious surfaces during development would be mitigated by the SWPPP. Any proposed BMPs would be designed to accommodate an increase in stormwater volume. BMPs designed to accommodate an increase in quantity of runoff, generally meet water quality objectives by default. The SWPPP will comply with FAA Order 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*.

3.19.3 Groundwater

According to the U.S. Geological Survey, the airport is situated within the Lake Erie-Niagara River Basin and the Lockport aquifer, which is not considered a sole-source aquifer as defined by the United States Environmental Protection Agency (EPA) pursuant to Section 1424(e) of the Safe Drinking Water Act. The Lockport aquifer is also not considered a primary or principal aquifer as defined by the NYSDEC under Section 2.1.3 of the Division of Water Technical & Operational Guidance Series.

Future proposed projects will take measures in design and construction to avoid, minimize or mitigate any possible adverse impacts to the aquifer.

3.20 WETLANDS

The USACE regulates activities in wetlands that have a significant nexus to TNWs under Section 404 of the CWA. The USACE requires that an area have hydrophytic vegetation primacy, hydric soils, and wetland hydrology present in order to be considered a wetland.

The NYSDEC also regulates certain wetlands within New York State under the Article 24 of the ECL, often referred to as the “Freshwater Wetlands Act”. The NYSDEC regulates those wetlands within in the state that are larger than 12.4 acres (5 hectares) in size, and certain smaller wetlands of unusual local importance. The NYSDEC also regulates an adjacent area of 100 feet to provide protection for the wetland. The Freshwater Wetlands Act requires the NYSDEC to map those wetlands protected by the state on New York State Freshwater Wetland Maps in order to be provided protection.

In addition, is included in Appendix E *Protection of Wetlands*, states that federal agencies shall provide leadership and shall take action to the destruction, loss or degradation of wetlands, and

to preserve and enhance natural and beneficial values of wetlands in carrying out the agency's responsibilities. Under EO 11990, wetlands are defined as those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.

A wetlands and waterways delineation of NFTA owned property at NFIA was performed by McFarland Johnson in October 2012. The wetland delineation was conducted through field investigations of vegetation, soils and hydrology in accordance with the 1987 *United States Army Corps of Engineers Wetlands Delineation Manual* (1987 USACE Manual) and 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (2012 Regional Supplement). See Appendix D for a copy of the complete Wetlands and Waterways Delineation Report. The delineation identified a total of 18 wetlands, hereafter referred to alphabetically as Wetland A through Wetland R within NFTA owned property at NFIA. The locations of these wetlands are shown on **Figure 3-5**.

The wetland jurisdictional statuses under Section 404 of the CWA have been officially determined by the USACE. Wetlands A, B, C, G, H, I, N, P, Q, R, and S are regulated by the USACE under Section 404 of the CWA, while Wetlands D, E, F, J, K, L, M and O are not. Based on a review of the New York State Freshwater Wetland mapping of the project study area, none of the delineated wetlands are regulated by the NYSDEC under Article 24 of the ECL. All 18 wetlands delineated by McFarland Johnson are subject to provisions of EO 11990.

The wetlands and waterways located on the Niagara Falls Air Reserve Station owned property at NFIA were delineated by the USFWS in the summer of 2008. The wetland delineation was conducted only utilizing the 1987 USACE Manual. The locations of these wetlands based on the information provided by the Niagara Falls Air Reserve Station are also shown on **Figure 3-5**.

Future proposed projects will take measures in design and construction to avoid, minimize or mitigate any possible adverse impacts to wetland resources to the degree possible. The use of Best Management Practices (BMPs) during construction project will minimize indirect impacts to wetland resources at NFIA.

Projects that have no practicable alternatives to avoid direct impacts to wetlands will require Section 404 permits from USACE. The USACE issues activity specific Nationwide Permits (NWP), for wetland disturbances meeting specific conditions. If a proposed project does not meet the conditions of any of the Nationwide Permits, a USACE Individual Permit is required before any work that causes disturbance in or near protected wetlands can commence.

Compensatory wetland mitigation may be required as a permit condition depending on the specific details of the proposed project(s). Wetland mitigation can come in the form of restoration, establishment, enhancement, and/or preservation of wetlands. Typical mitigation ratios recommended by the USACE are shown in **Table 3-5**.

Based on regulations promulgated by the Department of Defense and Environmental Protection Agency in *Mitigation for Losses of Aquatic Resources, Final Rule* (Fed. Reg. Vol. 73, No. 70, April 10, 2008), the hierarchy of preferred wetland mitigation options for impacts to federally regulated wetlands follows.

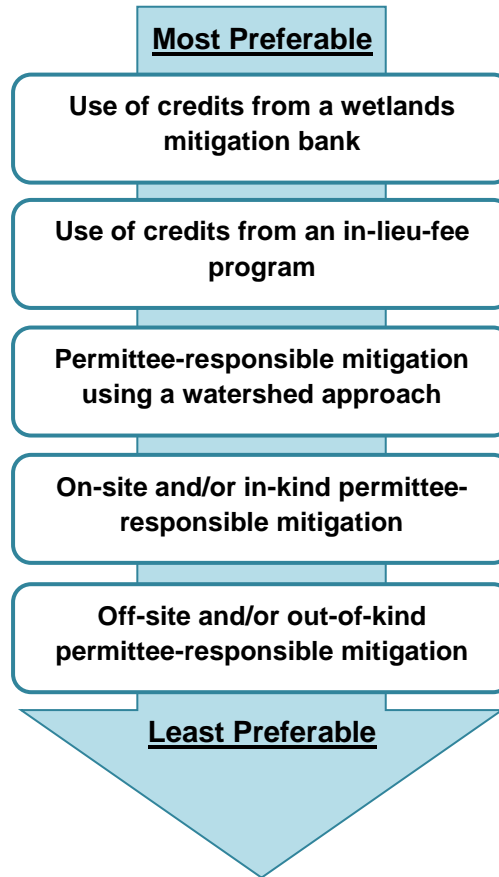


Table 3-5 Typical USACE Recommended Wetland Mitigation Ratios

Wetland Type	Restoration (Re-Establishment)	Creation (Establishment)	Enhancement (Rehabilitation)	Preservation (Protection/Management)
Open Water (PUB)	1:1	1:1	Project Specific	Project Specific
Emergent (PEM)	2:1	2:1 to 3:1	3:1 to 10:1	15:1
Scrub-Shrub (PSS)	2:1	2:1 to 3:1	3:1 to 10:1	15:1
Forested (PFO)	2:1 to 3:1	3:1 to 4:1	5:1 to 10:1	15:1

Source: Excerpted from USACE's "New England District Compensation Mitigation Guidance" dated July 20, 2010

It should be noted that five federal agencies, including the FAA and USACE, signed a Memorandum of Agreement (MOA) in July 2003 to facilitate interagency cooperation on aircraft-wildlife strikes related issues, including wetland management at airports. As part of the MOU, the signatory agencies are required to diligently consider the siting criteria recommendations as

stated in FAA Advisory Circular (AC) 150/5200-33 *Hazardous Wildlife Attractants On or Near Airports*.

FAA AC 150/5200-33B recommends separation distances between an airport's air operations area (AOA) and potential wildlife hazards, including proposed wetland mitigation sites. These siting distances are:

- 5,000 feet of a runway that serves piston-powered aircraft
- 10,000 feet of a runway that serves turbine-powered aircraft
- 5 statute miles if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace

The above siting criteria will also be taken into consideration when considering potential wetland mitigation options and site selection.

Section 401 of the CWA provides states with the authority to ensure that federal agencies do not issue permits or licenses that violate their water quality standards. The NYSDEC implements Section 401 compliance through a certification process called Water Quality Certification (WQC). The NYSDEC has issued blanket WQC for many of the NWP, providing certain special conditions are met. Individual WQCs are required from the NYSDEC for USACE Individual Permits and for those NWP where the NYSDEC has not issued blanket WQCs, and on projects qualifying for a NWP, but where the blanket WQC special conditions cannot be met.

In addition, when impacts to wetlands cannot be avoided, an EO 11990 "Wetland Finding" must be prepared to document compliance with the order and that the wetland impacts are justified.

3.21 WILD AND SCENIC RIVERS

The Wild and Scenic Rivers Act (Public Law 90-542) describes river areas eligible to be included in a system afforded protection under the Act as free flowing and possessing "...outstanding remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or similar values." There is no state or federal Wild and Scenic Rivers on or adjacent to the airport property.

3.22 CUMULATIVE IMPACTS

The Federal Council of Environmental quality regulations contained in 40 CFR 1508.7 defines cumulative impact as the impact on the environment which results from incremental impact of the action(s) when added to other past, present, and reasonably foreseeable future actions. This takes into account recent airport projects, and any past, present, and reasonably foreseeable future projects located in the project vicinity.

As Niagara Falls International Airport improves and upgrades its facilities and equipment, additional development in the vicinity of the airport may occur. However, this development is anticipated to remain consistent with current local planning and zoning laws, as well as the State and Federal environmental permitting process. Federal, state, and local oversight will ensure that cumulative environmental impacts are not a result of future growth and development in the vicinity of the airport.

Sustainable Airport Master Plan

The projects to be proposed as part of this Sustainable Master Plan are not anticipated to entail any substantial environmental impacts that would result in cumulative impacts when considered in combination with the environmental impacts of other planned projects in the vicinity.