

# Chapter 4

## *Environmental Overview*

### 4.0 INTRODUCTION

The inherent potential associated with the operation and development of an airport to adversely affect neighboring land-use and the natural and human environments is a fundamental concern of the airport planning process. Therefore, it is imperative to identify the resources or potential impacts to the environment and surrounding community during the initial stages of 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 may have on the environment. In order to ensure that airport development complies with NEPA, the U.S Department of Transportation Federal Aviation Administration (FAA) developed *The National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions* (2006), FAA Order 5050.4B, with particular attention to Chapter 706e, “Affected Environment” for all federal actions for airport development projects. The Order describes the environmental review process, and identifies environmental categories, which must be addressed prior to implementation of a federally funded airport project. The current version of Order 5050.4B, in conjunction with FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures / Policies and Procedures for Implementing NEPA*, provides guidance for reviewing and documenting the effects of proposed airport development projects on the environment. The Orders identify specific environmental categories that must be considered in relation to a proposed action, to determine whether a significant impact would result from the proposed action, and, if so, determine what measures would be appropriate to take to avoid or minimize an impact’s effect. Order 1050.1E specifies the threshold significance for each of the categories addressed. If it is found that the impacts to affected categories are below, or if they can be mitigated to a level below their significant impact thresholds, a Finding of No Significant Impact (FONSI) can be issued for the action under review. Otherwise, a formal analysis of the project’s effect on the environment in relation to the appropriate environmental impact category or categories must be prepared in the form of an Environmental Impact Statement (EIS). It is important to note, however, that the FAA has determined that certain actions that normally do not, individually or cumulatively, have significant adverse effects on the environment, and that have been found to have no such effect, can be categorically excluded from requiring an Environmental Assessment (EA).

The following is a list of environmental impact categories as identified in the FAA’s *Environmental Desk Reference for Airport Actions (October 2007)*.

- Airport Environmental Setting
- Air Quality
- Biotic Resources
- Coastal Barriers and Coastal Zone Management
- Compatible Land Use
- Construction Impacts
- Section 4(f)
- Federally Listed Endangered and Threatened Species

- Energy Supplies, Natural Resources, and Sustainable Design
- Environmental Justice
- Farmlands
- Floodplains
- Hazardous Materials
- Historic, Architectural, Archeological, and Cultural Resources
- Light
- Noise
- Induced Socioeconomic Impacts
- Solid Waste
- Water Quality
- Wetlands
- Wild and Scenic Rivers
- Cumulative Impacts

This chapter provides preliminary insight into potential areas of environmental concern related to future development at the Buffalo Niagara International Airport (BNIA). The type and magnitude of impact is dependent upon the proposed project specifics, project alternatives and subsequent preferred alternatives. Future airport development implemented in accordance with this Master Plan Update will be reviewed in further detail in the subsequent environmental documentation satisfying the requirements of NEPA, the New York State Environmental Quality Review Act (SEQR) and any special purpose laws. Potential impacts noted in this chapter, are based on information obtained from appropriate federal, state, and local agencies, along with data collected during field investigations conducted as part of the BNIA master planning process.

BNIA is owned and operated by the Niagara Frontier Transit Authority (NFTA), a public benefit authority that provides air transportation at BNIA and the Niagara Falls International Airport, Buffalo Metro bus transportation, Metro light rail services, and marina services on Lake Erie. NFTA is committed to protect the environment and the health and safety of employees and the surrounding community. As stated in its 2006 *Environmental Achievements at BNIA Report*, NFTA is guided by highly regarded environmental principals for their daily decisions and actions. In 2004, BNIA conducted a self audit submitted to the EPA to document that all environmental requirements were being properly followed under the Clean Air Act (CAA), the Resource Conservation and Recovery Act (RCRA), the Emergency Planning and Community Right-to-Know Act (EPCRA) and other federal and state laws and regulations. This assessment concluded that BNIA has made continual progress to improve water and air quality and to reduce noise impacts. This document, as the Sustainable Master Plan for BNIA, has integrated the NEPA process into NFTA's overall planning process for the airport to go beyond the traditional Environmental Overview. See **Appendix E: Strategies for Guiding Sustainable Development at Buffalo-Niagara International Airport**. NFTA has incorporated a high degree of a sustainable environmental ethic into its current operations and has investigated numerous ways to continue the reduction of the airport's overall environmental footprint with innovative thinking and design resulting in a higher level of environmental sustainability while simultaneously extending its economic viability.

## 4.1 AIRPORT ENVIRONMENTAL SETTINGS

As shown on Figure 4-1 *Topographic Map*, BNIA is located approximately five miles north of the City of Buffalo in Cheektowaga Township, Erie County, New York. The northern edge of the airport property borders the Town of Amherst and incorporates a part of the Village of Williamsville. The airport is situated at 728 feet above mean sea level. The intersection of Runways 5/23 and 14/32 is located at 42-56.258890 North Latitude and 078-43-55.8000 West Longitude. The geographical area is part of the Lake Ontario Lake Plain Province.

The terrain is situated on a nearly level glaciated plain that is part of an abandoned ancient lake bed. The airport vicinity has largely been disturbed over the years by airport, industrial and residential related developments. Soils in the area are generally considered to be Alfisols or Inceptisols which range from poorly to moderately well drained, which are the result of surficial geological lacustrine and glacial deposition. The Natural Resource Conservation Service (NRCS) mapping shows that the soils on the airport property are mostly Urban land and Udorthents. The Urban land portions consist of at least 80% impervious materials or buildings. Udorthents soils consist of various excavated materials that have been used for fill or topdressing. The area off the Runway 23 end is relatively undisturbed and consists of Cazenovia well drained soils, Churchville poorly drained soils and Claverack moderately well drained soils.

Hydrologically, the airport is divided into two drainage areas. The northern half of the airport drains towards Ellicott Creek and consists of approximately 445 acres. The southern drainage basin is part of the U-Crest Creek watershed and consists of the remaining airport surface area of approximately 515 acres.

As part of the Niagara Frontier, the area experiences a humid, continental climate that is modified by the nearby Great Lakes that tend to buffer the climate with a maritime character. The Buffalo area is well known for its winter weather due to strong, high-intensity summer thunderstorms and copious lake-effect snows during the long, cold winters. The region receives copious amounts of snow when cold Canadian winds blow over the warmer Lake Erie when it is free of ice. The area annually receives up to 61 inches of precipitation, which contributes an average annual snowfall of 93.6 inches.

The airport has been in continuous operation at this location since 1926. When the airport was first developed, the area was dominated by numerous small agricultural operations. Residential development was later spurred by the presence of the airport and numerous World War II supporting industries. By the 1950's, the neighborhoods surrounding the airport were developed to capacity. The area preserves its residential neighborhood character despite the more recent additions along the larger roadways of restaurants, hotel establishments and small commercial operations. Genesee, Cayuga, and Holtz Streets, and Aero Drive have been widened, realigned and updated to handle the increased airport and commuter traffic prevalent to the area. Most recently the airport's immediate environs have changed from industrial land use to domination by travel related use including hotels, restaurants, gas stations, and other smaller related businesses.

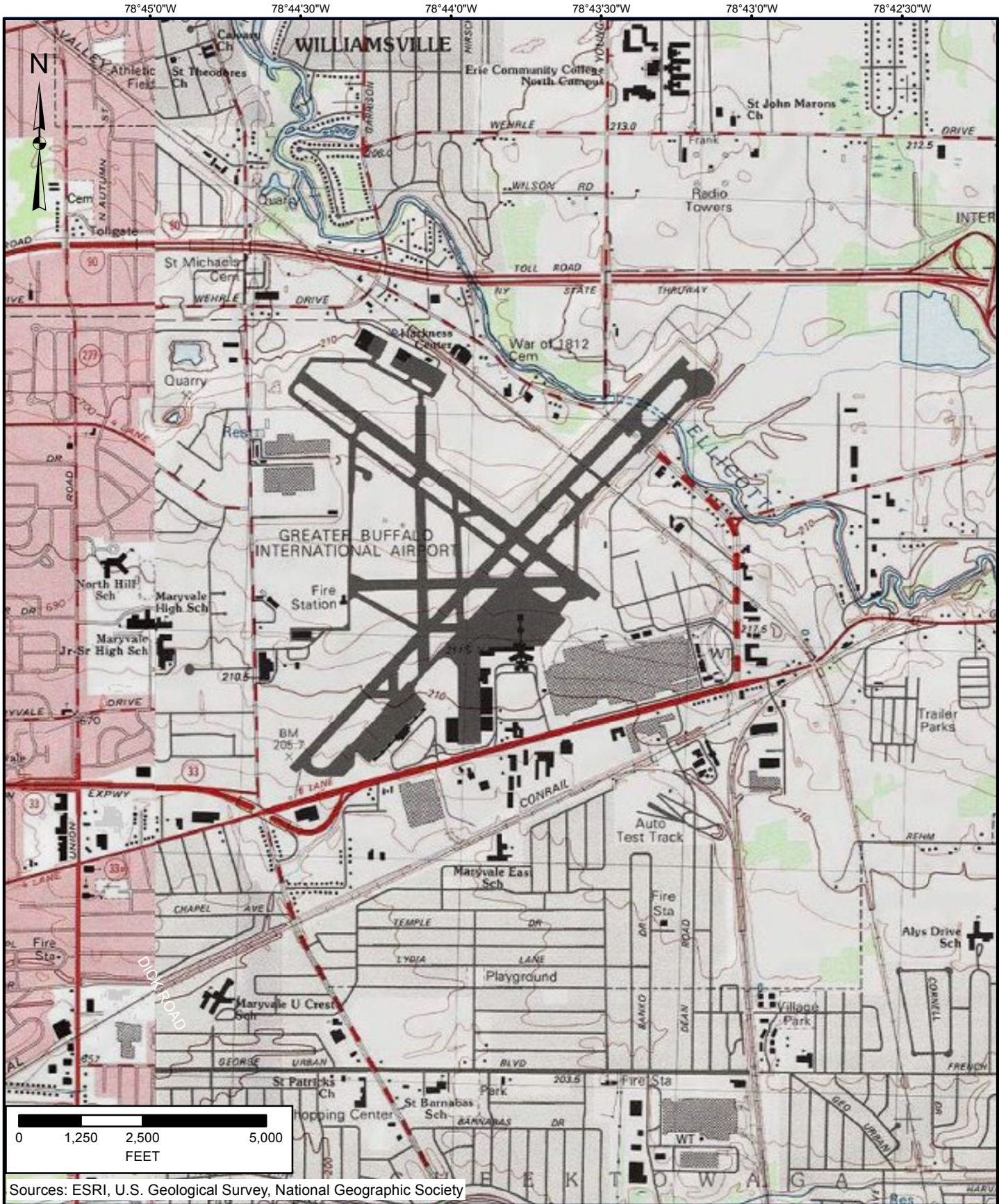
## 4.2 AIR QUALITY

Under the Clean Air Amendments of 1977 (CAA) Section 176(c), the FAA is responsible for ensuring that federal airport actions conform to the State Implementation Plan (SIP), which

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# TOPOGRAPHIC MAP

## FIGURE 4-1



Sources: ESRI, U.S. Geological Survey, National Geographic Society

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protects against area-wide air pollution impacts. The criteria and procedures for implementing this conformity are covered by the Code of Federal Regulations (CFR) 40 CFR 93.150 et. seq. Most federal actions on airport properties are considered to be general conformity actions, not transportation conformity actions which commonly include roadways, transit construction, or off-airport projects funded by the Federal Highway Administration (FHWA) or the Federal Transit Administration (FTA). Currently, the general conformity rules only apply in areas that have been determined by the Environmental Protection Agency (EPA) to be nonattainment or maintenance areas for the CAA's National Ambient Air Quality Standards (NAAQS) of the six priority pollutants (ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead). In areas that do not have indirect source review requirements for airports, such as Upstate New York, air quality analysis is not required for airport location determinations, runway development, and airside or landside improvements that increase capacity if a commercial service airport has less than 1.3 million enplanements and 180,000 annual general aviation operations.

BNIA is located in Erie County, which has been determined by the EPA to be in non-attainment for 1-Hour Ozone since 1992 and 8-Hour Ozone since 2004. However, the area received a "Clean Air Determination" on January 6, 2010 under Citation 74 FR 63993 by the EPA thereby meeting the NAAQS. The FAA's APO Terminal Area Forecast Detail Report issued in December 2009 states that in 2008 BNIA had 2,753,620 enplanements, 19,344 general aviation operations, and 113,231 total operations. Enplanements for 2010 have been predicted at 2,583,363. Existing and forecasted aviation activity at BNIA exceeds the passenger threshold; therefore, any project proposed for BNIA would need to be evaluated as to whether it would be exempted, presumed to conform to the SIP or is regionally significant. Projects exceeding these thresholds would need further analysis to determine if they would have a significant impact on the region's air quality.

If airport projects result in an increase in ground traffic coming to the airport, vehicle emissions may exceed the NAAQS thresholds. Projects to address additional ground traffic funded under the FHWA or FTA, approved as a Transportation Improvement Program (TIP), or are regionally significant may require intersection and project analysis as prescribed by the Transportation Conformity Regulations under 40 CFR 93.00 et. seq. to determine if they are exempted or presumed to conform to the SIP.

In descending order of contribution, aircraft operations, motor vehicles, and power generation are BNIA's three key sources of air pollution. To mitigate this situation, BNIA has been reducing overall emissions by changing its operational practices and logistics. Continued improvements in time management have reduced aircraft emissions by including utilization of single engine taxiing, eliminating powerback gate departures and using power from the terminal for air filtration and electronic equipment while aircraft are parked at the gates instead of using power produced via aircraft turbine engines. As needed, BNIA has been replacing the airport's gasoline fueled ground support vehicles with ones using alternate fuels, including the NFTA buses that service the airport. NFTA also provides free fare on their buses for airport personnel to encourage mass transit utilization and reduce parking related emissions. Traffic congestion related emissions have been further reduced with self-pay parking and "Express Pass" to reduce lines exiting the airport parking lots. Indoor air quality has also been improved via positive air pressure in the terminal with air curtains, filters and other measures to prevent emissions from the ramps and jet ways from entering the building.

### 4.3 BIOTIC RESOURCES

Biotic resources refer to various types of flora (plants) and fauna (fish, birds, reptiles, amphibians, marine mammals, coral reefs, etc.) in a particular area. It also includes the habitat supporting the various flora and fauna including rivers, lakes, wetlands, forests, upland communities and other ecosystems. Airport projects can affect these ecosystems and thereby affect vegetation and wildlife populations. Any major airport development that results in the loss of any habitat critical to the area's ecological stability or affects the ecosystems' ability to support species listed in Section 4.9 *Endangered and Threatened Species* will need to be assessed to avoid such impacts or mitigate such losses to the maximum extent possible.

BNIA is situated within the region's urban landscape that surrounds the airport with numerous roads; commercial and service businesses; schools; and large well established residential neighborhoods. BNIA's 1000 acre property consists of various structural and impervious development and natural landscapes. Areas that do not have structures or pavement consist of a mixture of large mowed upland expanses, small wetland areas, the banks of Ellicott Creek, and areas of shrub and tree growth. The property historically supported hardwood forest growth on upland areas or cattails and mosses on wet sites. The BNIA *Wildlife Hazard Management Plan* (WHMP), completed in accordance with the FAR Part 139 (14 CFR 139.337) regulations for airports, identified on airport wildlife species as white-tailed deer (*Odocoileus virginianus*), woodchucks (*Marmota monax*), coyote (*Canis latrans*) and red fox (*Vulpes vulpes*). There have also been reports of heavy concentrations of pigeons (or rock doves *Columba livia*), blackbirds (unspecified: *Turdus* or *Corvus* families), starlings (*Sturnus vulgaris*), various raptors and gulls (*Larus* spp.) on the airport and in the vicinity at altitudes of up to 5000 feet. The WHMP calculated that an average of 135 wildlife strikes occur at BNIA each year. In an effort to reduce these incidents to the greatest extent possible, hazardous species are managed per the WHMP employee training; security fence maintenance; nuisance animal removal under state and federal Wildlife Depredation and supporting permits. In addition, airport vegetation is maintained to reduce the amount of attractive habitat for nuisance species.

### 4.4 COASTAL BARRIERS AND COASTAL ZONE MANAGEMENT

BNIA is not located in a Coastal Barrier or Coastal Zone Management Area. Coastal Zone regulations would not apply to any proposed improvements at this airport.

### 4.5 COMPATIBLE LAND USE

Compatible land use is generally associated with noise, community disruptions, or other social or economic impacts to the surrounding community. Noise sensitive areas include residential, educational, and health care facilities; religious structures; outdoor recreation facilities such as parks and playgrounds; wildlife refuges; and cultural and historic resource sites. BNIA has long been part of the Cheektowaga and Amherst Township communities. The airport is closely surrounded by noise sensitive receptors including residences, hotels, schools and church facilities.

As shown on Figure 2-6 *Airside Layout*, each of the four runway ends has a Departure and Approach Runway Protection Zones (RPZ). RPZs are ground surface areas below airspace used for aircraft landings and takeoff procedures designated for enhanced protection of persons and property on the ground. The RPZ for Runways 23 and 32 contain roads, light industrial areas, and commercial properties. The RPZ for Runways 5 and 14 contain roads and portions



of several residential neighborhoods. As discussed in Section 4.16 *Noise*, the airport has initiated an abatement program to systematically mitigate excessive airport noise with the installation of specialized wall insulation, windows and doors. BNIA has also worked with the municipalities for traffic control and economic growth.

#### 4.6 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.

#### 4.7 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 BNIA property. However, there is the Garrison Cemetery, as discussed in Section 4.14 *Historic, Architectural, Archeological, and Cultural Resources*. Any impact to historic sites of national, state, or local significance on or near BNIA may be considered a use under Section 4(f). As specific airport development alternatives are identified, their potential to effect historic resources will be assessed on an individual basis.

#### 4.8 FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES

Consultations with the U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation (NYSDEC) were initiated to verify the existence any recorded observations in the BNIA area of federal or state listed threatened or endangered flora or fauna. The USFWS list indicates that except for occasional transient individuals, there are no federally listed species of concern in Erie County. The NYSDEC Natural Heritage Program has responded that there are no recorded observations on airport property or within its vicinity of any state listed threatened or endangered animals or plant species, or their significant habitats. However, there have been observations of Upland Sandpipers (*Bartramia longicauda*), a state threatened species, in a field near the airport's fuel farm. The population has not been studied, nor has a specific nesting site been identified. Several of these birds were observed by the study team in this same field, displaying typical colony behavior in their preferred habitat of high grasses. BNIA has initiated a Wildlife Hazard Management Plan under FAR 139.337(e) in order to minimize the dangers presented by and to birds or other wildlife on the airport property as discussed in more detail above in Section 4.3 *Biotic Resources*. (**Appendix F**: Agency Correspondence: *USFWS Correspondence, NYSDEC Natural Heritage Correspondence*)

## 4.9 ENERGY SUPPLIES, NATURAL RESOURCES, AND SUSTAINABLE DESIGN

Construction of airport improvements and maintenance will require use of energy and natural resources. Currently, such resources are in ample supply for the area. However, BNIA has been changing its operations and plans in order to make it a more sustainable entity that uses much less energy and resources than it has in the past or is typical for an airport of its size.

Since BNIA has utilized the Green Airport Initiative (GAI) developed by the Clean Airport Partnership (CAP) as a tool to guide its growth and development BNIA has simultaneously been enhancing its operations to improve environmental quality, increase efficiency, reduce operational costs, obtain air emission credits for future projects and pursue stronger community relationships. The *Strategies for Guiding Sustainable Development at Buffalo-Niagara International Airport*, as copied in **Appendix E**, has updated these operational strategies and will be utilized by the airport management to guide BNIA’s future efforts. BNIA reports it has increased its passenger enplanement numbers by 58% from 1990 to 2008. This trend is expected to continue with 3,523,100 enplanements predicted for 2020, a 65% increase over 2000 numbers. During this same period, BNIA’s electrical and gas utilization were decreased by 10%. To further reduce power consumption for lighting, heating and cooling, BNIA has installed window treatments to decrease solar heating of the terminal, temperature controls, efficient lighting units, utilization sensors, and other building management systems thereby significantly reducing the airport’s electrical and natural gas use by at least 10% from pre-construction in the new terminal.

The airport has also:

- converted from ethylene glycol to the less toxic propylene glycol for aircraft deicing
- instituted better methods for the capture of post application glycol to reduce runoff
- constructed an “subsurface engineered wetland” to biologically treat the captured glycol to reduce biological oxygen demand (BOD) levels in waters where runoff is released
- increased the number of NFTA diesel/electric buses in operation to service the airport and the surrounding area
- committed over \$50 Million on noise abatement procedures that will over time add insulation to over 1,800 houses, two schools and a church
- purchase of aviation easements
- use of a management system to maximize energy efficiency for airport buildings
- installation of the automated baggage handling system for all checked luggage
- utilization of the Capacity Enhancement System to reduce aircraft emissions by reducing taxiing times and gate delays

Typically, future increases in airport operations increase the use of energy products and natural resources. BNIA is committed to continually improving environmental quality and reducing its impact on natural resources. Specific proposed projects will be evaluated for the potential effect upon these resources and methods to reduce potential energy usage.

## 4.10 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, BNIA is within the Town of Cheektowaga and is bordered to the north by the Town of Amherst and the Village of Williamsville. Although the New York State Thruway Route (Interstate-90) functionally and visibly divides the airport from

these two communities, Amherst has been included in this discussion due to BNIA’s flight patterns over the southeastern part of the Township.

As shown in the following **Table 4-1: Demographic Profile of Surrounding Area**, the 2000 U.S. Census recorded Cheektowaga as having a total population of 90,348 with 89.8% white and 8.1% below the poverty level. Amherst is similar with a population of 120,064 with 86.1% white and 8.9% below the poverty level. The Village of Williamsville has a population of 5,573 with a higher percentage of whites at 97.3% and only 4.5% below the poverty level. Each of these communities is above the national 74.3% white population and below the 13.2% national population below the poverty level. The disabled populations of Erie County and the Town of Cheektowaga are approximately the same as the national average of 19.3%, while Amherst and Williamsville are slightly below this average. Each of the communities is below the national average of individuals listed below the poverty line, except Erie County as a whole is above the national average of 13.2%.

The NYSDEC Environmental Justice Preliminary Mapping showing the locations of such minority populations was referenced on July 10, 2010. This mapping did not identify either Cheektowaga or Amherst as areas of concern for populations that are potentially sensitive to environmental justice issues. There are no known concentrations of minority, handicapped or economically deprived populations within the BNIA vicinity. Therefore, there are no Environmental Justice issues anticipated as a result of projects or activities at BNIA.

**Table 4-1 Demographic Profile of Surrounding Area**

Census Category	National Percentages	Erie County	Town of Cheektowaga	Town of Amherst	Village of Williamsville
Total Population		913,071	90,348	120,065	5,573
White Population	74.3%	81.3%	89.8%	86.1%	97.3%
Minority Population	25.7%	18.7%	10.2%	13.9%	2.7%
Population Under 5 Years	6.9%	5.3%	4.6%	5.0%	5.0%
Population 65 years and older	12.6%	15.5%	20.0%	17.1%	25.8%
Individuals Below Poverty Level	13.2%	13.9%	8.1%	8.9%	4.5%
Median Household Income	\$52,175	\$46,814	\$46,249	\$64,216	\$41,994
Non-English Speaking Households	19.6%	8.6%	7.3%	12.6%	5.4%

Source: US Census Bureau, US Census 2000

#### 4.11 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 US Natural Resource Conservation Service (NRCS) *Web Soil Survey* accessed on July 17, 2010, approximately 31% the airport property is classified as prime farmland soils or farmland soils of statewide importance. 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, BNIA property is not subject to the FPPA regulations.

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. No BNIA property or any adjoining acreage is listed as part of an Agricultural District and therefore the properties are not subject to Article 25-AA.

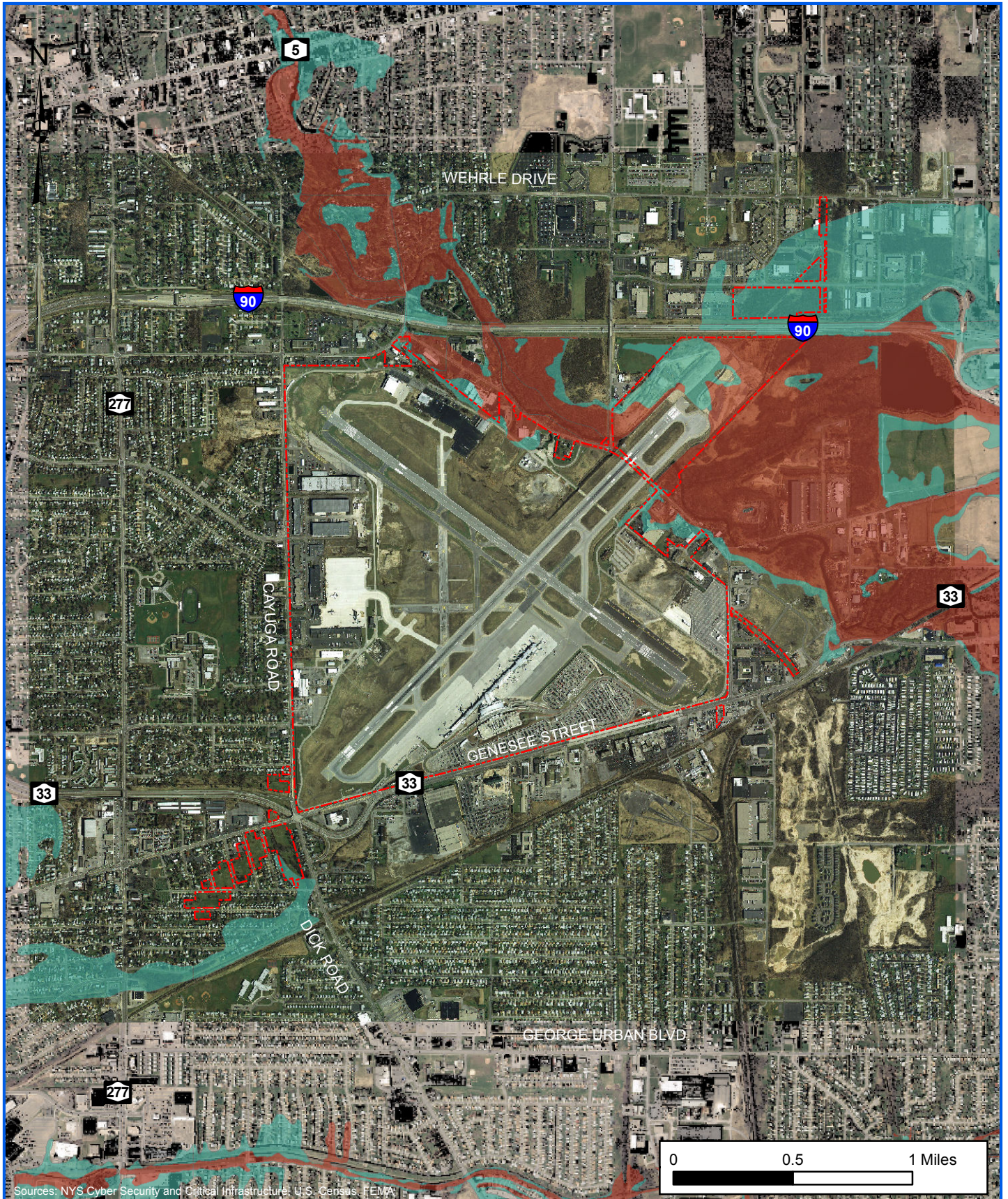
## 4.12 FLOODPLAINS

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. Therefore, a storm with a magnitude that can be expected once every five years produces a flood of 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.

FEMA published a Flood Insurance Study (FIS) for the Town of Cheektowaga in 1981 and the Town of Amherst in 1992. According to FEMA Region II, the Erie County Draft Flood Insurance Rate Maps have been released for public comment with an expected effective date in late 2011. According to the current Flood Insurance Rate Maps (FIRM) depicting the airport (Panels 36029C0228G, 36029C0229G), most of BNIA is out of the floodplain as shown on Figure 4-2 *Floodplains*. However, much of the Runway 23 end is surrounded by Ellicott Creek’s floodplain which is classified as a Zone AE. This zone is defined by FEMA as a special flood hazard area inundated by 100-year flood where Base Flood Elevations (BFE) have been already calculated and shown on the FIRM. A BFE is the expected water level elevation of a 100-year flooding event. The BFE determined for this portion of the airport property ranges between 695 feet and 684 feet, from east to west along the Creek adjacent to BNIA property. The Town of Cheektowaga Code Article III § 125 *Flood Damage Prevention Law* specifies design and permitting requirements for development in floodplains. Cheektowaga’s town code states that any development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any location.

## 4.13 HAZARDOUS MATERIALS

A Hazardous Waste/Contaminated Material (HWCM) preliminary screening was conducted as part of this report to determine the potential for the presence of HWCM on airport property. The screening involved a search of available environmental databases and a field investigation. The Resource Conservation and Recovery Act (RCRA) governs the generation, treatment, storage, and disposal of hazardous wastes. The Environmental Response, Compensation, and Liability



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- Airport Property Line
- 100-Year Floodplain
- 500-Year Floodplain



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Act provides for cleanup of any release of a hazardous substance, excluding petroleum, in the environment.

Publicly available information was obtained from various state and federal sources that maintain environmental regulatory databases. These databases provide information about the regulatory status of a property and any past incidents involving use, storage, spilling or transportation of hazardous wastes. Information and mapping available from the Environmental Protection Agency (EPA) databases indicated that a number of RCRA hazardous waste generators are located in the vicinity of the airport and that these are generally in compliance with state and federal regulations. There are two Toxic Release Inventory (TRI) reporting sites that are registered by the EPA along Genesee Street across from BNIA. There are over sixty sites within one mile of BNIA, including the airport itself, that report to various EPA programs the handling and or disposal of hazardous materials.

Since BNIA produces less than 2,200 pounds of hazardous waste per month, it is classified as a “small quantity generator.” This material is typically generated by normal aircraft and ground vehicle maintenance activities. The wastes generated include oil-base paints, waste paint solids, waste mineral spirits, oil contaminated solvents, aerosol cans of hazardous materials, and jet fuel filters. These materials require specialized handling, tracking records, and disposal at specially licensed hazardous waste disposal facilities.

A July 2010 reconnaissance of the airport property verified the location of the former Westinghouse Electric Corporation facilities on the current BNIA property between the Runway 32 end and Genesee Street. These facilities had been used for the manufacture of industrial motors, electric motors, and generators until 1984 when operations were closed at the site. In 1980, the site was listed as a suspected depository of cyanide salt from the manufacturing processes. It was later concluded that the site was significantly contaminated by undeterminable amounts of TCA<sup>1</sup> and TCEs<sup>2</sup>. The site remediation was initiated with the removal of remaining facility structures for the extension of Runway 32 and Taxiway “A” and was augmented with groundwater pumping and treatments. The EPA considers public exposure to the contaminants to be unlikely because the causative structures have been removed and area residents and businesses use municipal water supplies that do not pull water from nearby groundwater sources.

The Pfohl Landfill is located 0.5 miles to the east of the Runway 23 end and drains into Ellicott Creek upstream from BNIA property. Ellicott Creek flows through a multi-piped culvert under the Runway 23 end. From 1932 through 1971, the landfill accepted solid and liquid chemical waste and sludges, including heavy metals and volatile organic compounds (VOCs) from local businesses including paint manufacturers, electroplaters, printers, and other industries that used various toxic solvents and petroleum products. After the landfill closed, it was considered both a federal and a state Superfund site. Remediation on the site has been completed by the federal and state agencies, but the site still requires EPA reviews every five years. In 2008, the site was removed from the EPA’s National Priority List for Superfund Sites. New York State considers 31 acres of the former landfill along Pfohl Road eligible for development.

As projects are proposed, they will be evaluated for their specific potential to encounter hazardous materials. In the event that hazardous waste, asbestos, or other contaminated

<sup>1</sup> 1,1,1-Trichloroethane (methyl chloroform)

<sup>2</sup> Trichloroethene and Trichloroethylene

materials are encountered during the construction of any projects, the hazardous waste will be handled and disposed of in accordance with all applicable federal, state, and local regulations. No impacts are expected from the construction and operation of any proposed airport improvements from any known hazardous wastes.

#### **4.14 HISTORIC, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES**

According to 36 CFR Part 800, an 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 such historic properties via consultation with the State Historic Preservation Office (SHPO). The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) on-line mapping shows portions of BNIA property are considered archaeologically sensitive due to their proximity to the War of 1812 Garrison Cemetery and the thirteen houses in the Cayuga Road Historic District. The cemetery is the final resting place for 202 American and British soldiers who died at the local U.S. Army hospital and was listed in the National Register of Historic Places in 2002. The duplex houses on the west side of Cayuga Road were built during World War II for Buffalo Airport employees. Previous airport development projects have received determinations of No Effect on this area from the SHPO.

The potential of an archaeological site on or adjacent to airport property may have no effect on development alternatives. In addition to the Garrison Cemetery and the Cayuga Road Historic District, the Cultural Resource Study completed for the BNIA property in 2000 identified as National Register Eligible Properties (NRE) the Buffalo Weather Observatory on the airport property and a house converted to apartments at 452 Cayuga Road. The Curtiss-Wright Aircraft Hangar was mentioned in the report as being over 50 years in age, but not a NRE property and has since been demolished. Correspondence dated August 26, 2010 from the OPRHP states that a determination of impact/effect will be provided only when a specific project is identified and all the required documentation is provided to their offices. When a specific airport development is proposed, the required documentation will be sent to the OPRHP for a determination of that project’s potential to effect to historic or cultural resources.

#### **4.15 LIGHT**

BNIA is classified as a Part 139 Class I (Commercial) Airport that is therefore required to follow the Airport Safety program guidelines as stated in 14 CFR Part 139. These guidelines cover lighting and signage used by aircraft both on the ground and in the air as well as other airport procedures. Airport improvements may initiate the installation of additional lighting or change the location of lighting on airport grounds to meet Part 139 requirements. Such installations could alter existing lighting conditions on and in the vicinity of the airport. Light emissions are generally of greatest concern for adjacent residential areas and other areas of incompatible land use. Given the airport’s size, location, history and surrounding land use, an increase in light emissions is unlikely to be significant. BNIA is situated in an urban community and surrounded by residential properties along Cayuga Street that have been there since the 1940’s; commercial development and street lighting on Genesee Street, Holtz Road and Aero Drive; and an industrial development on the north side of the New York State Thruway.



## 4.16 NOISE

Noise is inherent to the operation of an airport and can, based on significant impact thresholds as detected from the ground level, adversely affect land-use compatibility and/or noise sensitive receptors. Churches, hospitals, schools, amphitheatres, and residential districts are examples of receptors that can be adversely affected by noise levels produced above the significant impact threshold. Some recreational and commercial land-uses are not as sensitive toward elevated noise levels. Therefore, it is important to predict changes in noise levels associated with airport development in relation to a particular land use or known receptors to determine the significance of any effect. If needed, abatement measures can be incorporated into airport development plans to either eliminate or reduce the effects of noise to levels below the significant impact threshold.

In order to evaluate the effects of noise generated by aviation activity on surrounding land-use and/or receptors, the FAA developed the Integrated Noise Model (INM), a computer model that calculates cumulative aircraft noise energy at ground level, expressed in decibels (dBA), using the Day-Night Average Level (DNL). The DNL is the average daily noise level with a 10 dB weight added to compensate for the perception that aircraft operations are “louder” at nighttime because ambient noise levels are lower at night. Decibels are measured in A-weighted units, which approximate the range of human hearing. The FAA considers the 65 dBA DNL level to be the significant impact threshold for noise-sensitive areas. In order to help put the 65 dBA DNL significant impact threshold into perspective, the typical ambient noise level in suburban residential areas is 55 dBA DNL.

Below and on the following page are tables depicting various noise level thresholds. **Table 4-2: Typical Outdoor Day-Night Noise Levels** below shows the typical noise levels associated with specific areas commonly encountered everyday.

**Table 4-2 Typical Outdoor Day-Night Noise Levels**

DNL Day-Night Noise Level (dBA)	Location
50 dBA	Small town residential area or quiet suburban area
55 dBA	Suburban residential area
60 dBA	Urban residential area
65 dBA	Noisy urban residential area
70 dBA	Very noisy urban residential area
80 dBA	City noise (downtown of major metropolitan area)
88 dBA	3 <sup>rd</sup> floor apartment in a major city next to a freeway

Source: Noise Fundamentals Training Document, Highway Noise Fundamentals, USDOT, FAA.

A review of aerial photography, along with land use and zoning maps of the area, indicates that most of the properties surrounding BNIA are noise sensitive. The airport is surrounded on all sides by high density residential development, except for the area directly east of BNIA between the New York State Thruway and Genesee Street. There are narrow strips between the airport and the residential areas of commercial and light industrial properties along Aero Drive, Holtz Road and Genesee Street. These commercial areas are not considered particularly noise sensitive, but the residential areas behind them are considered sensitive.

In 2005, the airport completed a FAA Part 150 Noise Compatibility Study. As part of the study process, NFTA created a Community Advisory Committee and a Technical Advisory Committee in order to receive community input on minimizing impacts from aircraft generated noise.

Concluding that “the manner in which an airfield is operated is also an important factor influencing the shape of the airport’s noise contours,” the study recommended that BNIA initiate a noise abatement program along with noise compatibility, implementation and monitoring action plans. The noise abatement program was launched in 2006 under the *QuieterHome* Buffalo Program to reduce aircraft noise in homes and schools around BNIA that fall within the 65 dBA DNL contour as determined via the 2005 INM modeling.

Below in **Table 4-3: Land Use Compatibility**, the Day-Night average noise levels (DNL, dBA) are presented that are used by the FAA to evaluate land use compatibility with respect to airports.

**Table 4-3 Land Use Compatibility**

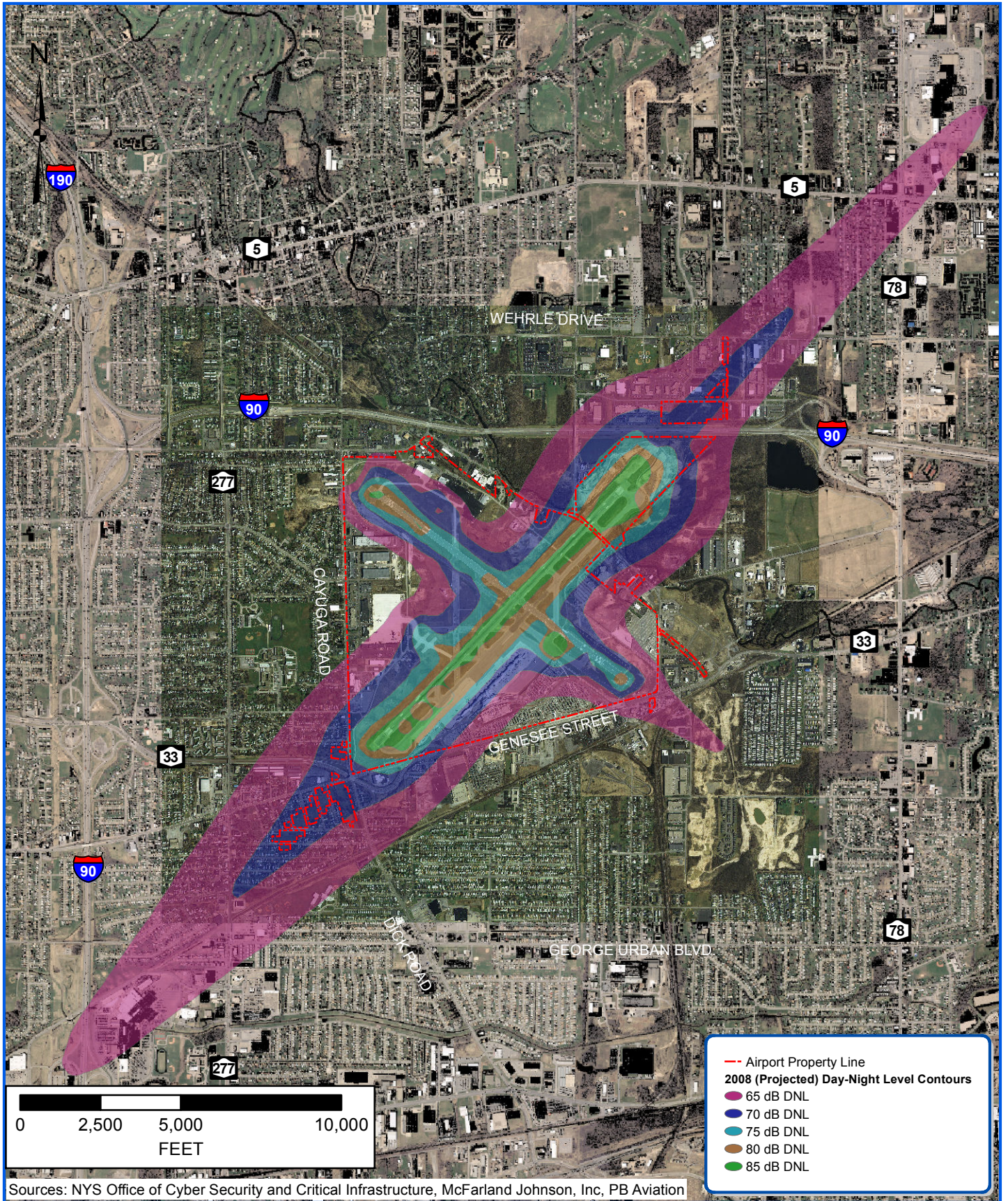
Land Use	Yearly Day-Night Average Noise Level (DNL, dBA)		
	Compatible Below 65 (YES or NO)	Compatible Below 65-70 (YES or NO)	Compatible Below 70-75 (YES or NO)
Residential Use	YES	NO*	NO*
Public Use			
Schools	YES	NO*	NO*
Hospitals, Churches	YES	NO*	NO*
Roads, Parking	YES	YES	YES*
Commercial Use			
Office, Retail, Business	YES	YES	NO*
Utility, Wholesale	YES	YES	YES*
Manufacturing	YES	YES	YES*
Recreation			
Outdoor Sport Arenas	YES	YES*	YES*
Nature Exhibits, Zoos	YES	YES	NO
Music Shells	YES	NO	NO

*Source: 14 CFR Chapter 1 Part 150 – Airport Noise Compatibility Planning Measures can be incorporated into the design of the structure or use that will allow this activity to continue at the indicated noise exposure level.*

Under the study, INM contour mapping was completed, including additional noise studies for that incorporated the predicted aircraft operations for 2008, as shown on Figure 4-3 *Noise Contours Map 2008*. This study was completed to meet the FAA guidelines found in 14 CFR 150 *Airport Noise Compatibility Planning*. Part 150 is a voluntary FAA program to study airport induced noise levels and surrounding land use compatibility.

Since completion of the 2003 studies, there have been changes in the BNIA aircraft mix including the reduction of large military aircraft; the addition of newer commercial aircraft with reduced noise levels during takeoff and landing procedures; fewer large body freight aircraft; and fewer nighttime operations. The general trend at BNIA is for the noise contours to shrink due to the factors already listed. Industry experts expect continued improvements in noise characteristics of aircraft as the fleet continues to modernize. BNIA used the contours developed from these studies to designate the houses that were eligible at the time for the *QuieterHome* project.

BNIA’s noise abatement program under the *QuieterHome* project is also voluntary. Homeowners must choose to sign-up for the customized noise abatements that include sound barrier wall insulation; new windows and doors; and air ventilation and conditioning systems.



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The program is scheduled to modify 200 to 250 residences per year over a ten year period starting with installations in 2007. To date, approximately 320 residences have been subject to abatement project completions along with a local elementary school and an historic church.

Future BNIA projects will be assessed for their potential to increase noise levels either directly or by changing the fleet mix using the facility. At that time, additional operational or structural mitigations will be investigated.

#### 4.17 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 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). 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. Proposed projects would need to be especially evaluated for the potential affects to children attending the Maryvale School District complex and its associated playing fields located to the west of BNIA off Cayuga Road.

#### 4.18 SOLID WASTE

BNIA has to manage solid waste from multiple sources included that material generated by its own offices, passengers, airlines, maintenance facilities, terminal food services, deicing procedures, and various construction and demolition projects. Items included in the waste stream include reading materials, office papers, aluminum, glass, food, cooking oil, tires, filters, pavement, concrete, and many other non-hazardous materials. The airport management strategies are applied to the management of its hazardous materials generated by airport operations, as discussed in Section 4.13 *Hazardous Materials*, and to its non-hazardous municipal solid wastes generated by employees, passengers and terminal area concessions.

The Clean Airport Partnership estimates that 2.09 pounds of solid waste are generated on average per passenger while on airport grounds at each commercial airport. With an estimated 2,759,515 enplanements in 2010, BNIA can expect to dispose of approximately 2,885 tons of municipal waste in that time period. BNIA initiated a terminal recycling program that is expected to dramatically reduce the volume of waste sent to their contracted landfill; however the amount has not been quantified. Solid waste disposal for individual aircraft are not included in this waste stream as this is managed separately by each airline.

Airline and terminal tenants are required to manage their own wastes. BNIA estimates in 2010 that their own offices and support facilities will produce 17.16 tons of material to be landfilled or incinerated and 22.5 tons of recycled paper, plastic, glass and cardboard materials.

BNIA has set up several management strategies to reduce their own waste footprint and that of their tenants. These include a growing list, including:

- Waste minimization by the reduction of materials used, especially office related paper
- Recycling in the terminal areas for newspapers, magazines, cans, and bottles
- Recycling of metals or other materials from construction demolition
- Collection of grit and sands used on runways and distributed to local municipalities for sifting and reuse on local roadways in winter
- Utilization of New York State Department of Transportation (NYSDOT) acceptable materials as fill in airport projects, with over 130,000 yds<sup>3</sup> used to date
- Collection of “Universal Wastes” (batteries, pesticides, thermostats, light bulbs, and electrical equipment, tires, used oils, pallet, etc.) for special disposal
- Maintaining a list of non-appropriate materials to be disposed of in BNIA dumpsters or recycle bins. These items include, but are not limited to, paints, paint thinners, oily clothes, pressurized containers, gasoline, chemicals, electrical equipment, florescent lights and many other items that must be separately disposed.
- The airport also distributes an “approved chemical” catalogue to not only ensure that certain chemicals are prevented from entering their waste system, but that certain chemicals do not present a hazard to employee or passenger health.

The airport’s municipal waste is collected by a contracted private hauling company. Non-hazardous solid waste is transported to the Model City, NY landfill for final disposal. The facility is 31 miles north of BNIA. This is a privately owned facility with ample capacity to handle BNIA’s waste volume.

#### 4.19 WATER QUALITY

BNIA is serviced by the municipal Cheektowaga Water District for potable water. Waste and stormwater are sent to the Buffalo Sewer Authority for management via the Cheektowaga Sewer District facilities.

##### Surface Water

BNIA is situated in the western portion of the Eastern Lake Section of the Central Lowland Province of the Interior Plains. As such, the region possesses a very low relief typical of an abandoned glacial lakebed. The area has a moderate slope that eventually drains into the Niagara River and then into Lake Erie.

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 and other contact recreation, but not for drinking water. Classification C is for waters supporting fisheries. The lowest waters classification is D. 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," and are subject to the stream protection provisions of the New York State Department of Environmental Conservation (NYSDEC) Protection of Waters regulatory program. Ellicott Creek flows along the airport's northeast property line and under the Runway 23 end. The Creek is a NYSDEC Class "B" stream with no designated trout supporting standard. Despite the lack of a standard, the Ellicott Creek water quality is sufficient for annual rainbow trout (*Oncorhynchus mykiss*) stocking by NYSDEC within the Amherst town limits.

Ellicott Creek is listed on the New York State Section 303(d) listing of impaired waters for 2010. This listing indicates that the lower sections of the Creek in Erie County have been impaired by phosphorus and silt sediments due to urban runoffs. The Creek is not listed on the Army Corps of Engineers (USACE) Buffalo District list of Traditional Navigable Waters.

### **Stormwater**

BNIA is within the Buffalo Urban Area and therefore included in the area's Municipal Separate Storm Sewer Systems (MS4s) under the National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II permit program. 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. BNIA is therefore required to manage its stormwater runoff from the airport's developed areas. 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. Currently the airport has seven discharge points functioning permitted under the airport's SPDES General Permit #0171409.

Stormwater runoff during construction is permitted in New York State under SPDES Construction Activities Permit GP 0-01-001, also administered by the NYSDEC. During construction, stream turbidity is the parameter that is of the greatest for water quality. NYSDEC regulations do not allow an increase in the visible turbidity of water when compared to preconstruction conditions. Permitting requires that during the construction period, erosion and sediment control measures would be implemented, as prescribed in a site specific Stormwater Pollution Prevention Plan (SWPPP), to avoid or minimize impacts to water quality.

In addition, all SPDES permitted sites must develop an Erosion and Sediment Control Plan (ESCP) to identify the nature, placement, and capacity of runoff control measures for implementation during construction. The ESCP consists of temporary and permanent 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 Best Management Practices (BMPs), which will serve to protect the water quality of Ellicott Creek, area wetlands, and any other bodies of water in the area.

If a proposed project includes ground disturbances greater than five acres or is within the Ellicott Creek watershed portion of the airport property, a full SWPPP including a Water Quality and Quantity Control plan must be developed 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 is required to be implemented during construction and then properly maintained thereafter for water quality assurance. The increase in stormwater runoff resulting from the expansion or creation of additional impervious surfaces during development would be required to be mitigated by implementation of the SWPPP. BMPs designed to accommodate an increase in quantity of runoff generally meet water quality objectives by default. The SWPPP would also need to comply with FAA Order 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports* so as not to create areas that attract wildlife.

### **Groundwater**

According to NYSDEC, the airport is situated within the Niagara River/Lake Erie Basin aquifer. BNIA is not located over 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 nor is it located over an identified New York State primary aquifer. The most significant threats to ground water quality in the BNIA vicinity include a history of industrial utilization with abandoned or improperly plugged oil and gas wells; hazardous waste sites; pesticide applications; animal feeding operations; failed individual waste water treatment systems; and spills.

The airport has two above ground facilities for fuels. The first is the fuel farm which house above ground storage tanks containing 100LL and Jet-A fuels. Fuel is transferred under the BNIA perimeter road to the fueling station where tanker trucks are filled to fuel aircraft on various parts of the airport. The jet fuel farm is fenced and bermed to trap any spills. The second facility is a combination of storage tanks by the airport maintenance building stores diesel fuel for ground vehicles and spent oils. These tanks are protected by diking or vaults. Both facilities meet all EPA and NYSDEC requirements.

All deicing procedures are conducted on common area on the aprons adjacent to the passenger terminal, air cargo, general aviation and the commercial remain overnight (RON) areas. All materials are stored on a designated apron beyond the western terminal gates with a secondary containment system in place. BNIA now uses Propylene glycol for deicing aircraft because of its lower toxicity than the previously used ethylene glycol. Spent deicing fluids are collected via vacuum trucks and controlled storm drains where it is kept separated from normal stormwater runoff. The recovered glycol is stored on airport grounds in underground storage tanks. The material is then directed to an engineered subsurface “dry wetland” where an aerobic biological treatment breaks the glycol down into non-toxic substances and compounds that do not increase the biochemical oxygen demand (BOD) in the receiving U-Crest stream above acceptable regulatory levels. According to airport personnel overseeing the recovery process, the system is now being optimized at an estimated 95% breakdown of the glycol into non-toxic substances. Annually, BNIA now recovers for treatment over 45% of the 300,000 gallons of glycol sprayed onto aircraft. Runways and taxiways also need deicing during the winter months. BNIA uses heated sands and grit traction plus sodium formate (HCOONa) to melt ice formations. Due to concerns about runoff corrosion, the airport does not use salts or urea to keep areas ice free.



The airport makes continual efforts to protect the area’s groundwater; however, it inherited groundwater contamination problems when BNIA acquired the former Westinghouse property. The acquired site has a long history of chlorinated organic materials spills and leaks as a result of its electric motor manufacturing as discussed in Section 4.13 *Hazardous Materials*. Groundwater treatments under EPA and NYSDEC direction that were initiated in 2000 have resulted in an 87% reduction of detectable organic compounds compared to pretreatment levels. Currently, Westinghouse is covering the treatment costs; however BNIA has plans to continue the treatment process beyond the private funding.

Airport development will comply with all applicable water quality regulations, to minimize the effect on groundwater resources during the construction phase. The airport’s SWPPP for the SPDES permit would need to be updated to adequately protect surface resources if airport development significantly alters the amount of impervious surfaces or other stormwater related facilities.

## 4.20 WETLANDS

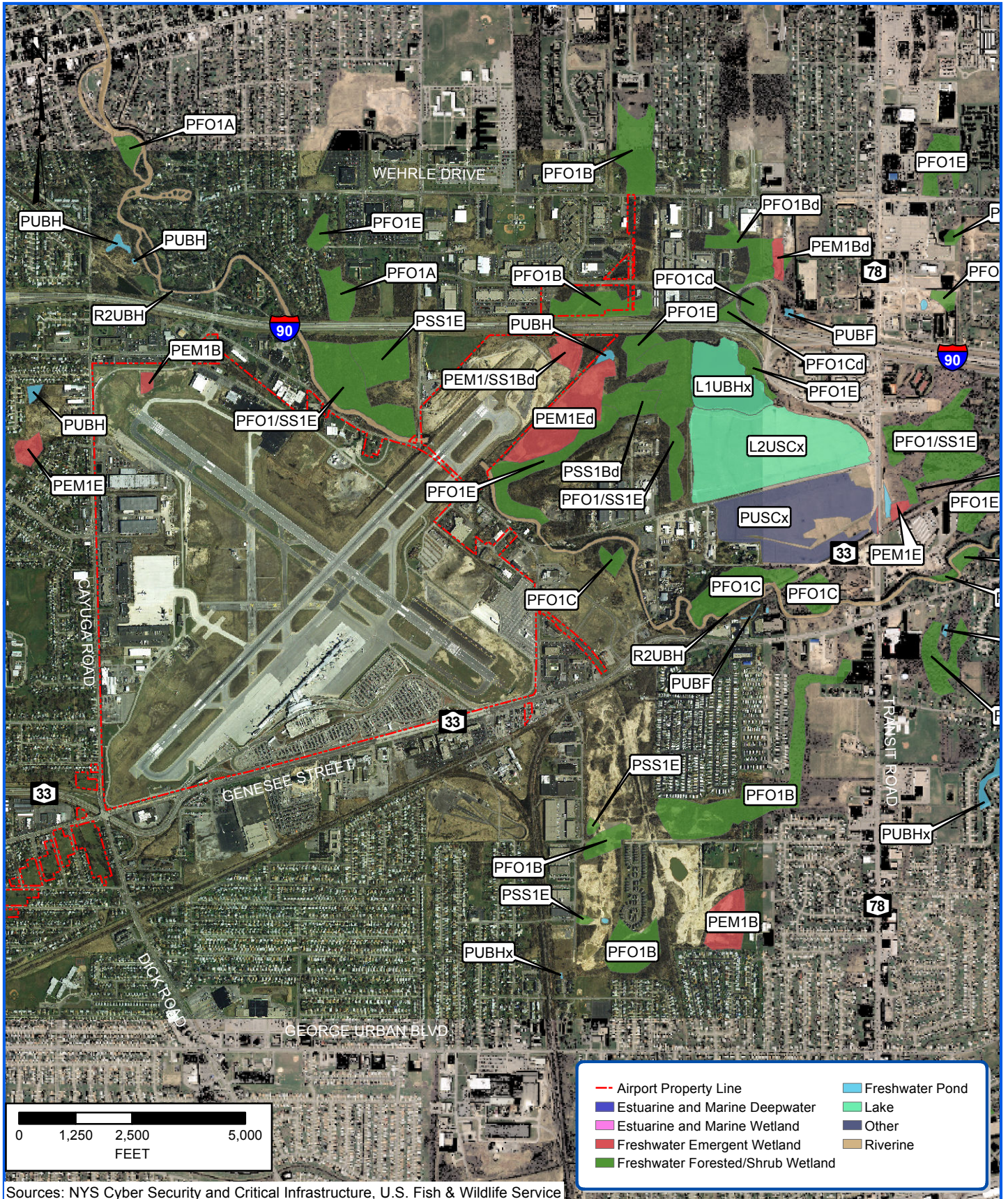
As is typical of many airports, BNIA has several portions of its property that naturally consist of wetlands. Approximately ten acres were classified as jurisdictional wetlands as a result of the wetland delineation completed for the BNIA Master Plan in 2000. Identified wetland areas on the airport property are natural wetlands, constructed retention basins, or drainage swales.

The National Wetlands Inventory (NWI) maps are issued by the U.S. Fish and Wildlife Service (USFWS). These maps are primarily based on the interpretation of aerial photographs; therefore they are used for the preliminary location of wetlands. NWI maps also display the wetlands classifications under the Cowardin classification system. NWI maps for the BNIA area were referenced for the verification of wetlands on and around airport property. As shown on Figure 4-4 *National Wetland Inventory Map*, several areas are identified as wetlands on airport property and on adjacent properties. The NWI wetlands closest to airport property are concentrated off the Runway 23 end and near the perimeter road fuel farm north of the intersection of Runways 14/32 and 5/23 and are classified as Palustrine wetlands with emergent, scrub-shrub, or forested vegetation growing on saturated soils.

New York State regulates wetlands under Article 24 *Freshwater Wetlands*. State regulated wetlands are required to be at least 12.4 acres (or smaller if of unusual local importance) and be shown on the NYSDEC Wetlands Maps. The state also regulates activities in the 100 foot adjacent areas measured from the outer delineated boundary of a state regulated wetland. As shown on Figure 4-5 *NYSDEC Freshwater Wetlands*, there are no NYSDEC state-regulated wetlands mapped on airport property. Off of airport property to the east of the Runway 23 end is a state regulated wetland identified as L-5, which is an 81.4 acre wetland complex that includes part of Aero Lake and then follows an unnamed tributary flowing from the Lake to Ellicott Creek near the Runway 23 end culvert for the Creek.

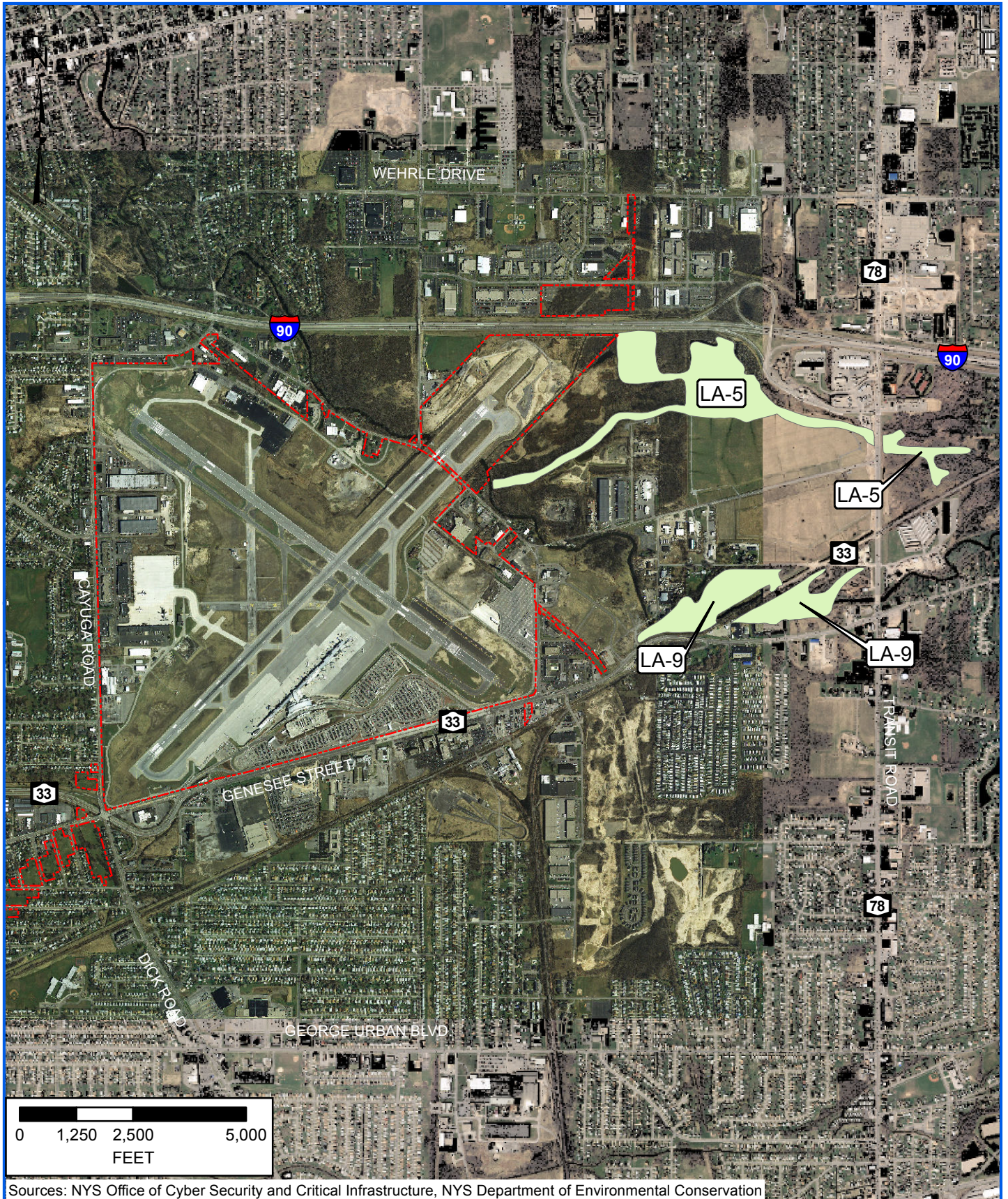
The U.S. Army Corps of Engineers (USACE) regulates impacts to all waters of the U.S., except “isolated” wetlands, under Section 404 of the Clean Water Act. The USACE issues activity specific Nationwide Permits (NWP), for wetland disturbances meeting specified conditions. If a proposed project exceeds the conditions of any of the Nationwide Permits, a USACE Individual Permit is required. Projects must receive permit authorization before any work causing disturbance affecting protected wetlands can commence. Compensatory wetland mitigation

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Sources: NYS Office of Cyber Security and Critical Infrastructure, NYS Department of Environmental Conservation

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-- Airport Property Line  
NYSDEC Freshwater Wetlands



may be required as a permit condition depending on the specific details of the proposed project(s) and the quality of the wetland. All federal wetland permit applicants must demonstrate sequencing of wetland impacts which is a review to assess the efforts made by the applicant to follow, in descending order: avoidance, minimization, reduction or elimination of impacts over time, and as last resort, replacement of lost wetland acreage and value.

As mentioned, the airport property was the subject of a delineation of wetlands in 2000. The property was revisited in 2010 for this Master Plan Update to confirm the conclusions of the previous delineation and to discover if there were any additional areas in need of delineation or changes to the previous delineation. The findings of the 2010 study are contained in detail in the **Appendix F: Wetland Report**. No changes were observed in the previously identified wetlands except for the larger wetland area to the northeast of the Runway 23 end and the channel to the Runway 23 end's northwest. The Runway 23 end wetland seemed to be functioning in a similar manner as described in the 2000 report. This area was identified as Palustrine emergent or scrub-shrub wetlands (PEM/SS) on the NWI mapping and by the previous delineation. However, since there was a large dirt mound placed adjacent to the wetland boundary and was suspected of potentially altering some of the area's hydrology, the area was studied in more detail, reflagged and the points recorded with a Trimble GPS unit. The recorded points were used to better define this particular wetland as shown on Figure 4-6 *Delineated Wetlands*. The channel runs parallel to the south side of the New York State Thruway eastbound lanes where it drains surface runoff from the Runway 23 surfaces and the lower elevation of airport property between the runway and highway. The channel is obviously manmade as it is long, straight, and trapezoidal. Since it was constructed, it appears to have filled with sediment and homogenous cattail (*Typha latifolia*) vegetative growth.

There are three stormwater management basins located on airport property, which may be regulated as wetlands, dependant on confirmation by the USACE of a nexus of these sites to jurisdictional waters. If future plans call for the expansion of existing facilities or new development in areas with wetlands, a detailed delineation of wetlands and aquatic habitats will be conducted. The delineation would include the collection of data pertaining to soils, hydrology, and vegetation, as well as, flagging, and surveying of wetland boundaries.

#### 4.21 WILD AND SCENIC RIVERS

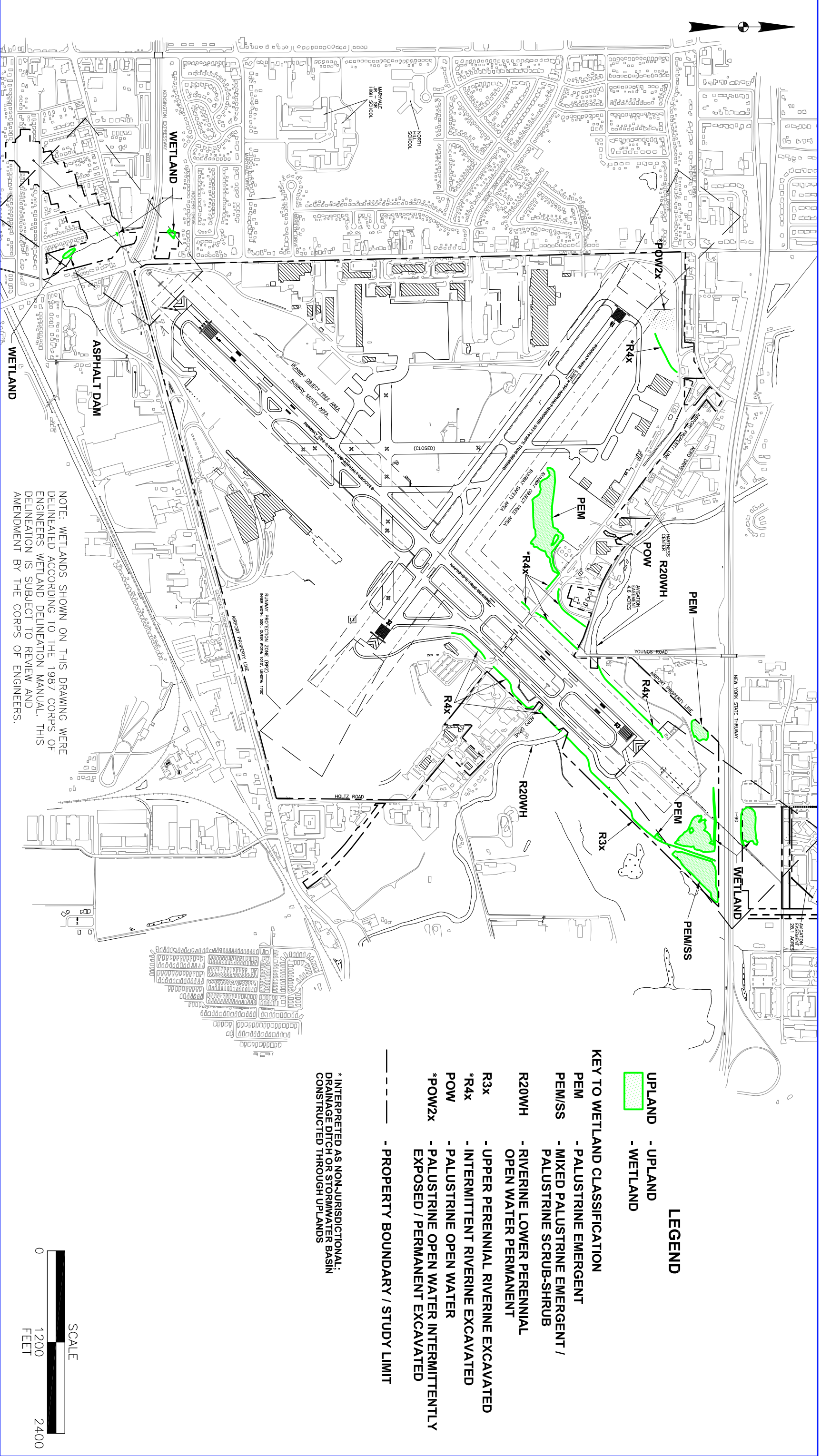
The Wild and Scenic Rivers Act (Public Law 90-542) describes river areas eligible to be included in a system afforded protection under the Act as free flowing and possessing "...outstanding remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or similar values." There are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

#### 4.22 CUMULATIVE IMPACTS

The Federal Council of Environmental Quality regulations contained in 40 CFR 1508.7 define 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 both BNIA projects to improve and upgrade its facilities and equipment as well as off airport developments within the airport's vicinity. However, on and off-airport development will remain consistent with current local planning and zoning laws, as well as the state and federal environmental permitting process.

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# DELINEATED WETLANDS



NOTE: WETLANDS SHOWN ON THIS DRAWING WERE DELINEATED ACCORDING TO THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL. THIS DELINEATION IS SUBJECT TO REVIEW AND AMENDMENT BY THE CORPS OF ENGINEERS.

**KEY TO WETLAND CLASSIFICATION**

PEM - PALUSTRINE EMERGENT  
 PEM/SS - MIXED PALUSTRINE EMERGENT / PALUSTRINE SCRUB-SHRUB  
 R20WH - RIVERINE LOWER PERENNIAL OPEN WATER PERMANENT  
 R3X - UPPER PERENNIAL RIVERINE EXCAVATED  
 \*R4X - INTERMITTENT RIVERINE EXCAVATED  
 POW - PALUSTRINE OPEN WATER  
 \*POW2x - PALUSTRINE OPEN WATER INTERMITTENTLY EXPOSED / PERMANENT EXCAVATED

--- - PROPERTY BOUNDARY / STUDY LIMIT

\* INTERPRETED AS NON-JURISDICTIONAL: DRAINAGE DITCH OR STORMWATER BASIN CONSTRUCTED THROUGH UPLANDS

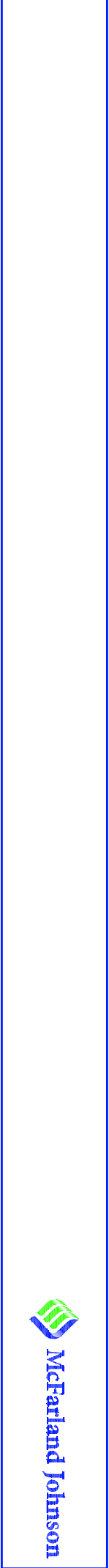
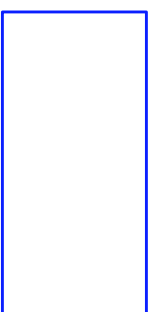
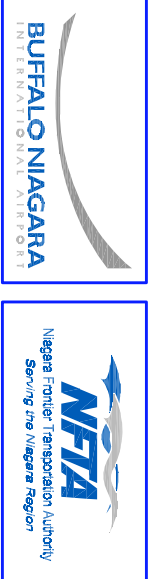
**LEGEND**

UPLAND - UPLAND  
 WETLAND - WETLAND

**SCALE**

0 1200 2400  
 FEET

FIGURE 4-6



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As reported by the Town of Cheektowaga Office of Building Inspections, several structures have either been built within the airport vicinity since 2007, are under construction or are planned for the near future. See **Appendix F: Agency Correspondence**, for a map detailing the projects.

Projects that have been completed include:

- a vehicle service center;
- a car rental facility building combined with a fast food restaurant;
- an office building,
- a warehouse;
- a new gas/convenience store; renovation of another gas/convenience store;
- additional parking area for an established hotel.

Currently, under construction or in process is

- multi story hotel facility;
- change in zoning for one parcel with no structure committed to the property.

Proposed construction plans for the near future include:

- Three more hotels along Genesee Street;
- A 92 unit manufactured home park off of Genesee Street;
- A veterinary clinic office;
- A warehouse facility along Aero Drive;
- The rezoning to facilitate the expansion of a hotel parking area;
- 2011 New York State Thruway Williamsville Toll Barrier Improvements Project to relocate and improve the facilities.

The Town of Cheektowaga issued its *Final Draft Comprehensive Plan* in June 2010. The Plan states that the Town has designated the Cayuga Road and Genesee Street corridors as Commercial Character Corridors. These areas are prone to dense commercial development with high traffic volumes. The Aero and Holts Road areas have been designated as Suburban Character Corridors. These areas are largely residential subdivisions and handle large volumes of non-resident traffic. The developments listed in the previous paragraph fit the character and use of the surrounding properties and neighborhoods. Since BNIA and its surrounding area are fundamentally fully developed in line with each area's zoning and corridor character, future development is not expected to significantly change the character of the airport or its surrounding communities.

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