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7 ENVIRONMENTAL OVERVIEW

Consistent with FAA AC 150/5070-6B *Airport Master Plans*, environmental factors have been considered throughout the preparation of this Master Plan Update. Sensitive environmental resources and known concerns were inventoried at the beginning of the study. Environmental considerations were incorporated into the evaluation of alternative development concepts and subsequent facility recommendations. Land use compatibility was evaluated for the Master Plan Study and the concurrent Part 150 Noise Compatibility Study. The purpose of this chapter is to provide:

- National Environmental Policy Act (NEPA) information to help expedite subsequent FAA environmental processing and approval of the recommended airport development projects.
- An assessment of stormwater management practices to support the preferred development program at CAK.
- A summary of the Authority's Sustainable Management Plan prepared concurrently with this Master Plan Update.

7.1 PRELIMINARY NEPA EVALUATION

In 1969, U.S. Congress passed the National Environmental Policy Act (NEPA) with the purpose of protecting the natural and human environment and overall quality of life. NEPA requires all federal agencies to assess and disclose – to the public – significant environmental impacts relating to federally funded or federally approved actions. Due to the FAA's participation in airport planning and development projects, airport sponsors are obligated to incorporate the NEPA process into their development programs. The FAA provides guidance for such evaluation and integration through FAA Order 5050.4B *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions* and FAA Order 1050.1E *Environmental Impacts: Policies and Procedures*.

As described in these orders, proposed airport development projects subject to NEPA guidelines are evaluated, based on their potential to result in significant environmental impact. There are three levels of NEPA processing:

- Categorical Exclusion (CatEx) – For actions that do not individually or cumulatively have a significant adverse effect on the environment and have been found by the FAA to have no such effect.

- Environmental Assessment (EA) – For actions that do not qualify as a CatEx, the EA process is used to evaluate the potential environmental risks and impacts of proposed projects to determine if an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) should be prepared.

- Environmental Impact Statement (EIS) – The process to evaluate major actions, likely resulting in significant environmental impacts.

Pending further coordination with the FAA and barring any unforeseen extraordinary circumstances, it is anticipated that several recommended improvements will be pursued under the CatEx designation (e.g., minor expansions of terminal, roadway and airfield facilities in previously developed areas) while larger projects – such as new parallel taxiways, land acquisition, terminal/gate expansions and the remote automobile parking lot – would require a more thorough EA prior to development. The development strategy presented in **Chapter 6** and financial planning in **Chapter 8** includes provisions for performing a comprehensive Environmental Assessment, for all projects recommended in the short-term planning horizon.

FAA Order 1050.1E and the *Environmental Desk Reference for Airport Actions* describe 23 environmental impact categories that must be considered in the FAA's NEPA review process:

- Air Quality
- Biotic Resources
- Coastal Barriers
- Coastal Zone Management
- Compatible Land Use
- Construction Impacts
- Section 4(f) Resources
- Federally-Listed Threatened and Endangered Species
- Energy Supplies, Natural Resources and Sustainable Design
- Environmental Justice
- Farmlands
- Floodplains
- Hazardous Materials
- Historic Properties
- Induced Socioeconomic Impacts
- Light Emissions and Visual Effects
- Noise
- Social Impacts
- Solid Waste
- Water Quality
- Wetlands
- Wild and Scenic Rivers
- Cumulative Impacts

Though not evaluated to the level of detail required for official NEPA processing, the following subsections explore the potential for impacts of the preferred development program in these environmental categories. Guidance provided in Orders 5050.4B and 1050.1E and other federal, state and local laws – and previous environmental assessments for CAK – were referenced for this evaluation.

7.1.1 Air Quality

The two primary federal regulations that apply to air quality are NEPA and the Clean Air Act (CAA). Under NEPA and the CAA, a detailed air quality analysis is needed for airport development projects that have a scope or location that has the potential to adversely affect air quality, due to their size. While the requirements under NEPA and CAA differ in certain aspects, the same process will typically fulfill both requirements.

In accordance with the CAA Amendments of 1990, the U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six criteria pollutants that are considered harmful to public health and the environment. These include carbon monoxide (CO), sulfur oxides (SO_X) lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

Under the CAA, each state is responsible for classifying areas, with respect to compliance or degree of noncompliance with the NAAQS. These designations include attainment, non-attainment and maintenance. An area with air quality better than the NAAQS is designated as attainment, while one with air quality worse than the NAAQS is designated as non-attainment. Non-attainment areas are further classified as extreme, severe, serious, moderate and marginal. A maintenance area is one previously designated as non-attainment, but re-designated as a maintenance area, because air pollution levels have improved above levels that would place the area in non-attainment status. An area may remain in maintenance status for up to 20 years before being re-designated as attainment. The states are also required to develop EPA-approved State Implementation Plans (SIPs) that describe how they will attain or maintain NAAQS compliance.

The CAA includes provisions to ensure that emissions from federal actions or project approvals in non-attainment or maintenance areas do not interfere with the SIPs ability to meet the NAAQS. These provisions require the sponsoring federal agency to evaluate the potential for significant air quality impacts associated with their actions. In support of this requirement and to avoid unreasonable administrative burdens on the sponsoring agency, the EPA has implemented the General Conformity Rule. This Rule establishes *de minimis* thresholds for the net increase in project-related criteria and precursor pollutant emissions that have been determined to be negligible (i.e., *de minimis*). The *de minimis* thresholds are relevant only for those pollutants or precursor pollutants for which the area is in non-attainment or maintenance.

Under the Conformity Rule, the EPA and FAA have also identified several actions that are considered to be exempt or presumed to conform, due to their minimal emission levels. These generally include administrative, maintenance, property transfer/acquisition, security and actions initiated in response to specific environmental laws and regulations. If the action is not considered exempt or presumed to conform, an emissions inventory is used to determine whether or not the net emissions caused by the project would exceed the applicable *de minimis* thresholds. If the project's emissions exceed the threshold, the FAA would need to issue a Conformity Determination to demonstrate how the project will conform to the SIP's purpose. This may require additional detailed analysis such as dispersion modeling.

Potential Impacts

According to the Ohio Environmental Protection Agency (OEPA)[1], Summit County is designated as a marginal non-attainment area for ozone. Stark and Summit counties are in a maintenance area for $PM_{2.5}$. As a result, the CAA General Conformity regulations do apply to FAA approval and funding of development projects at CAK. According to FAA regulations, an air quality analysis for NEPA purposes would only be required if CAK experienced more than 1.3 million annual enplanements, more than 180,000 general aviation operations or if the action would increase automobile traffic congestion at off-airport road intersections to a level of service of D,

[1] Ohio EPA, http://www.epa.ohio.gov/dapc/general/naaqs.aspx, accessed 7/11/14

E or F.[2] According to the activity forecasts presented in **Chapter 3**, CAK enplaned 942,343 passengers and had 47,854 general aviation operations in 2012. At the forecast growth rates, the 1.3 million enplanement threshold could be realized in the 2021-2022 timeframe. However, the general aviation aircraft operations threshold is not anticipated during the 20-year planning horizon.

None of the proposed Airport improvements are considered "major" development projects (i.e., new airport, new runway or major runway extension). The recommended taxiway projects are not intended to increase capacity or accommodate larger aircraft, but to improve operational safety and taxiing efficiency. The total area of new non-runway pavements (e.g., taxiways and aprons) accounted for in the Preferred Development Strategy is less than what the FAA presumed to conform the project limit of 243,700 square feet.[3] The total proposed terminal expansions are also less than the 185,000 square-foot, presumed-to-conform limit. However, consideration of the heating and cooling systems – such as a new or expanded boiler – may require of an additional air quality analysis. FAA approval of the remote parking lot may also require some level of additional air quality evaluation. The property acquisitions, ILS improvement, minor roadway improvements and minor building expansions are also anticipated to conform. A baseline airport emissions inventory is being prepared by the Authority, as part of its Sustainability Management Plan, described in **Section 7.3**.

7.1.2 Biotic Resources

The FAA must determine if the proposed improvements will significantly affect biotic resources. Biotic resources include various types of flora (plants) and fauna (fish, birds, reptiles, amphibians, marine mammals, coral reefs, etc.) in a particular area. Biotic resources also include rivers, lakes, wetlands, forests, upland communities and other habitat types supporting the identified flora and fauna. This analysis includes state-listed rare or unique species or their habitats. This does not include effects on federally-listed endangered and threatened species, addressed separately in **Section 7.1.7**. Under Section 662(a) of the Fish and Wildlife Coordination Act (FWCA), any airport action that threatens these resources must be addressed through coordination with the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) and state wildlife agencies.

In an effort to determine what state-listed species might be found in and adjacent to Airport property, the Ohio Department of Natural Resources (ODNR) – Division of Wildlife, Natural Heritage Database, was consulted. The database identified approximately 370 species for Ohio that fall into six status categories: endangered, threatened, species of concern, special interest, extirpated and extinct. These species are listed in the following table.

[2] FAA Environmental Desk Reference for Airports Actions, 2007

[3] FAA Presumed To Conform Actions Under General Conformity, Federal Register Vol. 72, No. 145, July 30, 2007

Table 7-1 – State-Listed Species

Taxon	Endangered	Threatened	Concern	Special Interest	Extirpated	Extinct
Mammals	4	2	19	1	10	0
Birds	14	5	14	33	5	2
Reptiles	4	4	11	0	0	0
Amphibians	5	1	2	0	0	0
Fishes	20	13	9	0	8	2
Mollusks	24	4	8	0	11	6
Crayfishes	0	2	3	0	0	0
Isopods	2	1	0	0	0	0
Psuedoscorpions	1	0	0	0	0	0
Dragonflies	13	3	1	0	0	0
Damselflies	3	3	0	0	0	0
Caddisflies	3	6	3	0	0	0
Mayflies	2	0	1	0	0	0
Midges	1	3	1	0	0	0
Crickets	0	0	1	0	0	0
Butterflies	8	1	2	1	1	0
Moths	14	4	22	11	0	0
Beetles	2	2	6	0	1	0
Total	**121**	**54**	**103**	**46**	**35**	**11**

Source: Ohio Department of Natural Resources – Division of Wildlife, 2012

However, only 55 of the species were identified in Stark County and 156 species were identified in Summit County.

As described in **Section 7.1.20**, wetland areas are known to exist on and near Airport property. These wetlands could serve as favorable habitat for wetland species. In addition, the areas surrounding CAK include waterways, forests and other diverse terrains which also serve as favorable habitat for various species.

Potential Impacts

Chapter 2 and previous studies reveal that the land on and surrounding CAK property has diverse terrain elevations, several water bodies, open fields, wetland areas and forested areas. The flora and fauna found on CAK and surrounding areas are typical of those indigenous to the northeast Ohio region. The proposed Airport development projects and any non-aeronautical business park development by Airport tenants have the potential to alter these various

environments. The recommended terminal expansion and taxiway improvement projects will occur in previously graded and developed areas of the airfield and will have little to no effect on the biotic resources of the area. Much of the land within the business park areas of the Airport is currently undeveloped and contains vegetation. Airspace protection or tree removal projects, either on or off the Airport property that may be needed for the safe passage of aircraft, have the potential to affect forest stands and associated biotic communities.

Highly vegetated areas and most wildlife habitats are considered incompatible with providing a safe environment for aircraft operations. Any development that would impact jurisdictional wetlands on Airport property would be appropriately permitted and mitigated through the U.S. Army Corps of Engineers and Ohio EPA, resulting in a lack of significant, long-term wetland impact. As described in **Section 7.2**, the Authority maintains a stormwater management plan and National Pollutant Discharge Elimination System (NPDES) permit to protect water quality and downstream quantity. The Authority also maintains a Spill Prevention Containment and Countermeasures (SPCCC) plan to control the accidental release of hazardous materials into the environment. While additional coordination with the USFWS and the ODNR to identify potential impacts to these habitats and potential state-listed species will be needed, projects in the preferred development strategy are not anticipated to result in any lasting adverse effects.

7.1.3 Coastal Barriers and Coastal Zone Management

Coastal barriers are geologically-unstable islands that cannot support development, but protect the mainland, fish, wildlife, human life and property along the coastline. These islands are inventoried in the Coastal Barrier Resource System (CBRS) and are precluded from any development action, per Section 5 of the Coastal Barrier Resources Act of 1982 (CBRA).

Coastal zones are waters and bordering areas in states along the coastlines of the Atlantic Ocean, Pacific Ocean, Gulf of Mexico and the Great Lakes. The Coastal Zone Management Act of 1972 (CZMA) governs all development actions.

Potential Impacts

While nine counties within Ohio border Lake Erie and are governed by the CZMA, neither CAK nor its host municipalities, Stark and Summit counties, are located within close proximity of a coastal zone or barrier. Therefore, these requirements do not apply to any proposed improvements.

7.1.4 Compatible Land Use

Figure 5-1 in **Chapter 5** depicts a generalized view of the land uses surrounding CAK, including a mix of commercial, industrial, recreational, public and residential uses. Although residential uses are not typically considered compatible with airports, the residential areas surrounding CAK are generally protected by land and roadway buffers. The area is not within the typical close-in aircraft approach or departure paths.

Most of CAK's property is located in the City of Green in Summit County; except for the southernmost portion of the airfield, which extends into Jackson Township in Stark County.

Each jurisdiction has its own comprehensive planning processes, but both have been supportive of the Airport and have taken strides to prevent the encroachment of incompatible land uses. In the City of Green, the Airport has its own zoning district – B-5 Airport Commerce. The City created this district to accommodate Airport-related business activities including, but not limited to: hotels, car rental facilities, restaurants and other compatible uses — commercial, industrial, office, public, institutional, etc. In Jackson Township, most of the Airport property is zoned I1 – Industrial, while a few of the undeveloped parcels are zoned RR – Rural Residential, R1 – Single Family Residential or B3 – Commercial Business. The residential areas are undeveloped and buffered by industrial zones.

As described in **Chapters 5** and **6**, the recommended actions in this Master Plan and the 2014 Part 150 Noise Study include four fee-simple property acquisitions and the establishment of an Airport Overlay Zone. The fee-simple acquisitions are needed to positively control the land uses within the Runway 23 RPZ (see **Section 4.4.3**). These four of these parcels are located in the City of Green. The purpose of the overlay zone is to define an area within which the local jurisdictions and the Authority would cooperatively review proposed developments to ensure that all stakeholder interests are adequately protected. This would ensure that all decision makers have the best available information on relevant noise and airspace considerations to prevent future land use compatibility concerns.

Potential Impacts

None of the proposed improvements include major airfield changes. While the recommended fee-simple acquisitions are to protect Runway Protection Zones (RPZs), most of these areas are already protected by avigation easements. Fee-simple ownership of this land would give the Authority further control and protection over it. The avigation easement and overlay zone are preventive in nature. There are no anticipated adverse impacts to compatible land uses.

7.1.5 Construction Impacts

Implementation of the proposed improvements may cause temporary construction impacts to air quality, water quality, local traffic patterns and ambient noise levels due to heavy equipment operations, pavement demolition and movement and removal of certain organic materials. To the extent necessary, mitigation measures will need to be addressed by incorporating the provisions of FAA AC 150/5370-10G, *Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution Soil Erosion and Siltation Control*, into any future project construction plans. Stormwater Best Management Practices (BMPs) will also need to be implemented to limit the extent of impacts.

It should be noted that construction activities would require the presence of workers and equipment in the aircraft operations area (AOA). Guidance for addressing this is found in FAA AC 150/5370-2F, *Operation Safety on Airports*, *During Construction*.

Potential Impacts

Any construction impacts related to the preferred development program are anticipated to be minimal and temporary in nature. Incorporation of sound engineering design principles and effective construction control measures will alleviate the potential for lasting adverse effects.

7.1.6 Section 4(f) Resources

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303(c) and 23 USC 138, declares that "[I]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges and historic sites." Section 4(f) specifies that the Secretary of Transportation will not approve a transportation program or project requiring the use of these lands or sites unless:

- There is no prudent and feasible alternative to using that land.
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge or historic site resulting from the use.

In general, a Section 4(f) use occurs with a Department of Transportation-approved project or program when:

1. Section 4(f) land is permanently incorporated in a transportation facility.
2. There is a temporary occupancy of Section 4(f) land that is adverse in terms of the statute's preservation purpose as determined by the criteria in 23 CFR 774.13(d).
3. Section 4(f) land is not incorporated into the transportation project, but the project's proximity impacts are so severe that the protected activities, features or attributes that qualify a resource for protection under Section 4(f) are substantially impaired, due to constructive use.

Several public parks owned and maintained by the Cty of Green are located near CAK. Boettler Park is a 62.5 acre recreational facility located approximately 0.75 mile to the west of CAK on Massillon Road. In addition, 205 acre Southgate Park is comprised of natural landscapes including wetlands, forestland and stocked ponds. It is accessed from Boettler Park to the

south. Greensburg Park is a nearly 28-acre facility located immediately to the northwest of the Airport property near the intersection of Greensburg and Massillon Roads. This park consists of several outdoor recreational areas including a soccer field, playground, baseball and softball fields and batting cages.

As noted in the Historic Properties (**Section 7.1.13**), several potentially historic properties are located around CAK. This includes one property listed on the National Register of Historic Places (NRHP), the Levi J. Hartong House and Farm. This site is located to the southwest of CAK in the northwest quadrant of Massillon Road and Mt. Pleasant Street NW.

Potential Impacts

The nearby historic and Section 4(f) resources are identified in **Figure 7-1**. It is unlikely that any of the short- or long-term improvements in the Master Plan will result in a direct conversion of Section 4(f) property to a transportation use. It is even more unlikely that any of the short- or long-term improvements will result in an indirect conversion or constructive use. Should it be determined that a public park or a NRHP listed/eligible property may be impacted, a full Section 4(f) evaluation would need to be completed in coordination with the FAA.

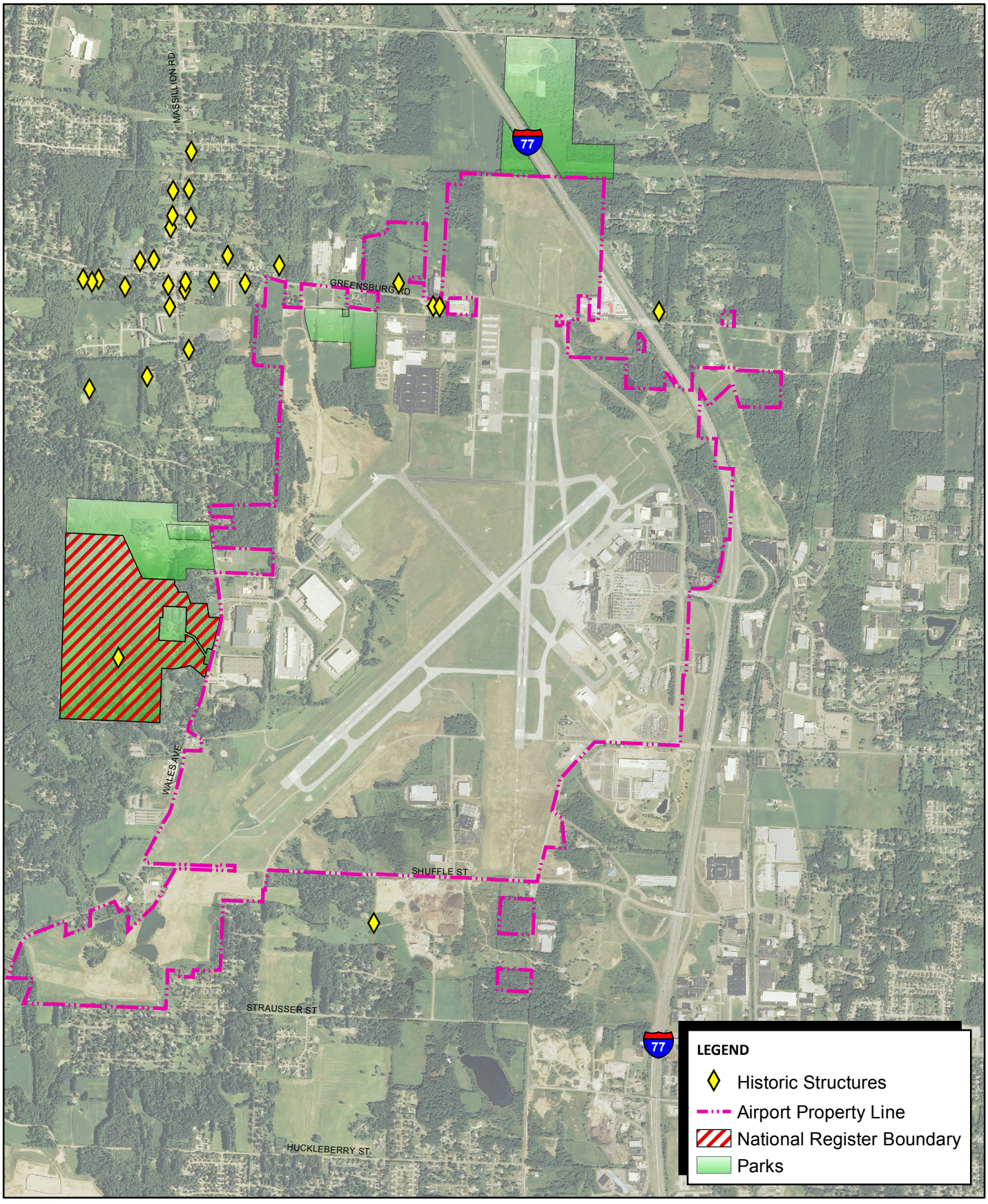

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Figure 7-1
Section 4(f) Map

7.1.7 Federally-Listed Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 requires that the potential impacts to rare, threatened and endangered species and their critical habitats be identified to avoid adverse impacts. According to the USFWS, two species located in Summit and Stark counties were designated as threatened or endangered and may be affected by any development at CAK. The species are the Northern Wild monkshood (*aconitum noveboracense*-threatened) and the Indiana bat (*myotis sodalist*-endangered).

In addition, Stark and Summit counties are within the range of the Bald Eagle – an identified Species of Concern. The Bald Eagle was removed from the Federal Threatened and Endangered Species list on August 8, 2007. However, it is still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. These laws prohibit the take and disturbance of nesting eagles.

Potential Impacts

Please reference **Section 7.1.2** for discussion regarding threatened, rare and endangered species listed by the state of Ohio. It is unlikely that any of the federally-listed species would be present in the areas proposed for construction and development. However, wooded areas should be surveyed and evaluated for Indiana bat roosting habitat. Coordination should then be undertaken with the USFWS and NMFS to confirm the findings.

7.1.8 Energy Supplies, Natural Resources and Sustainable Design

Energy requirements associated with projects involving airfield expansion and landside facilities normally fall into two categories: those related to increased consumption from stationary facilities (i.e., additional buildings requiring heating, cooling and other energy-consuming systems) and those involving substantial increases in aircraft and ground vehicle movement and their related fuel consumption.

Consistent with the NEPA requirement for agencies to use a systematic interdisciplinary approach to ensure the integrated use of the natural and social sciences, and the environmental design arts in planning and decision making, the FAA has supported the Authority's development of a Sustainable Management Plan, as described in **Section 7.3**. This Plan presents strategies for conserving resources, preventing pollution, minimizing aesthetic effects and addressing public sensitivity to these concerns.

Potential Impacts

Increases in energy consumption caused directly and indirectly by the proposed improvements will not result in significant impacts to energy supply or natural resources. The proposed projects will not involve the use of any unusual or scarce materials and will not cause a demand for the use of any unusual natural resources or any resources that are in short supply. Additionally, there are no known deposits of valuable natural resources located in or in the vicinity of the Airport that will be affected by the proposed improvements.

7.1.9 Environmental Justice

Environmental justice laws, regulations and policies are found in: Title VI of the Civil Rights Act of 1964; NEPA of 1969; Title 23 of the United States Code, Section 109(h); the Uniform Relocation Assistance and Real Properties Acquisitions Policy Act of 1970; and the 1994 Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low Income Populations*.

Executive Order 12898 directs each federal agency to develop a strategy addressing environmental justice concerns in its programs, policies and regulations. The purpose of this order is to avoid disproportionately high and adverse human health or environmental impacts on minority and low-income populations. On July 16, 1997, the U.S. Department of Transportation (DOT) issued its Final Order on Environmental Justice as Executive Order 5610.2 – updated in 2012. This order is specific to the DOT, outlining their commitment to environmental justice principals and defining a program specifically created to implement these principals department-wide – including the FAA.

Consistent with the federal goals of Order 12898, 2012 U.S. Bureau of Census data was reviewed to determine the presence of minority and/or low-income populations in and around the Airport. An analysis of the census data revealed that the Airport and all associated proposed projects are located within Census Tracts 7113.11, 5314.01 and 5329.99.

Table 7-2 – Minority and Low-Income Population Groups by Census Tract

	CENSUS TRACT	TOTAL POPULATION	MINORITY PERSONS	PERCENT MINORITY	PERCENT BELOW POVERTY
Affected Community	7113.11	7,970	714	9.0%	3.9%
	5314.01	7,238	218	3.0%	4.9%
	5329.99	5,661	415	7.3%	10.3%
Community of Comparison	Stark County	375,593	46,069	12.3%	14.5%
	Summit County	541,788	110,755	20.4%	14.8%

Minority Populations: The DOT Order 5610.2 defines a minority population as “any readily identifiable group of minority persons who live in geographic proximity who would be similarly affected by a proposed program, policy or activity.” The Council on Environmental Quality (CEQ) Environmental Justice Guidance under NEPA states that minority populations should be identified where either: the minority population of the affected area exceeds 50 percent; or the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population.

Low-Income Populations: The U.S. Bureau of Census follows the Office of Management and Budget’s Statistical Policy Directive 14 and uses a set of income thresholds that vary by family size and composition to determine poverty and low income thresholds.

Potential Impacts

Based on these criteria, the proposed projects would not disproportionately impact any minority populations, as the impacted Census Tracts – 7113.11, 5314.01 and 5329.99 – have a minority percentage below CEQ's recommended threshold of 50 percent and are less than the minority population percentage found in the general population (i.e., community of comparison).

As indicated in **Table 7-2**, the low income populations found in each of the Census Tracts were less than those found in the communities of comparison. Therefore, the proposed projects are not anticipated to disproportionately impact a low-income population.

7.1.10 Farmlands

The Farmland Protection Policy Act (FPPA) (7 USC 4201-4209) of 1984 was established to protect and preserve farmland for agricultural use, as part of the 1980 Farm Bill (PL 97-98, Title XV, Subtitle I; 7 USC 4201-4209). However, this policy does not apply to land already committed to urban development or water storage, regardless of its importance as defined by the Natural Resource Conservation Service (NRCS). The U.S. Department of Agriculture (USDA) has defined prime farmland as land that has chemical and physical characteristics that support food production, feed and fiber production.

In addition, the state of Ohio enacted Ohio Revised Code (ORC) 929.05 – appropriation of agricultural land. This law enables the creation of agricultural districts. To qualify, the land in question must have at least 10 acres and be devoted exclusively to agricultural purposes for three years before a landowner's application for such status. Under the law, the Ohio Department of Agriculture requires justification for the taking of 10 percent or 10 acres, whichever is greater, from any individual property within an agricultural district. This justification is to include an evaluation of alternatives that would not require land from the agricultural district.

Potential Impacts

Minimal impacts to farmland are anticipated as part of the proposed improvements at CAK. Approximately 19 acres of land within the Runway 23 RPZ are recommended to be acquired within the near-term planning horizon. A portion of this property east of I-77 is currently being farmed. Once purchased by the Authority, the land would remain undeveloped to ensure compatible land use within the approach to Runway 23. Pending coordination with the FAA, it is possible that this land could remain in agricultural as long as it did not become an attractant to wildlife that could adversely affect the safety of aircraft operations. The Authority should coordinate with the Ohio Department of Agriculture to determine if any of the parcels to be acquired are part of an Agricultural District. Additionally, during any future formal NEPA process, coordination should be undertaken with the NRCS to identify the presence of prime farmland. A Farmland Conversion Impact Rating Form (AD-1006) may need to be completed.

7.1.11 Floodplains

Executive Order 11988, *Floodplains,* and the DOT Order 5650.2, *Floodplain Management and Protection* state that all airports should avoid development in a floodplain if a practicable alternative exists. Any proposed action that must be in a floodplain should be designed to minimize the adverse impact to the floodplain's natural and beneficial values and to flood-related property loss and human safety.

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

Potential Impacts

Figure 7-2 shows the information available from the Flood Insurance Rate Maps (FIRM) for the Airport property. As illustrated, a large portion of the property is in an area where no floodplain panels have been printed. As confirmed by a review of the index map for Summit County, Map Number 39153CIND0A, this means that "No Special Flood Hazard Areas" have been identified. Therefore, no floodway impacts are anticipated within this area. However, the floodplain of Nimisila Creek was identified traversing the southern portion of the Airport property south of Shuffel Street, between SR 241 and Strausser Street. Based on the proposed improvements, no impacts are anticipated to the identified floodplain. If at any time, it is determined that impacts to the floodplain are required, the ODNR should be contacted to determine the applicable permit requirements.

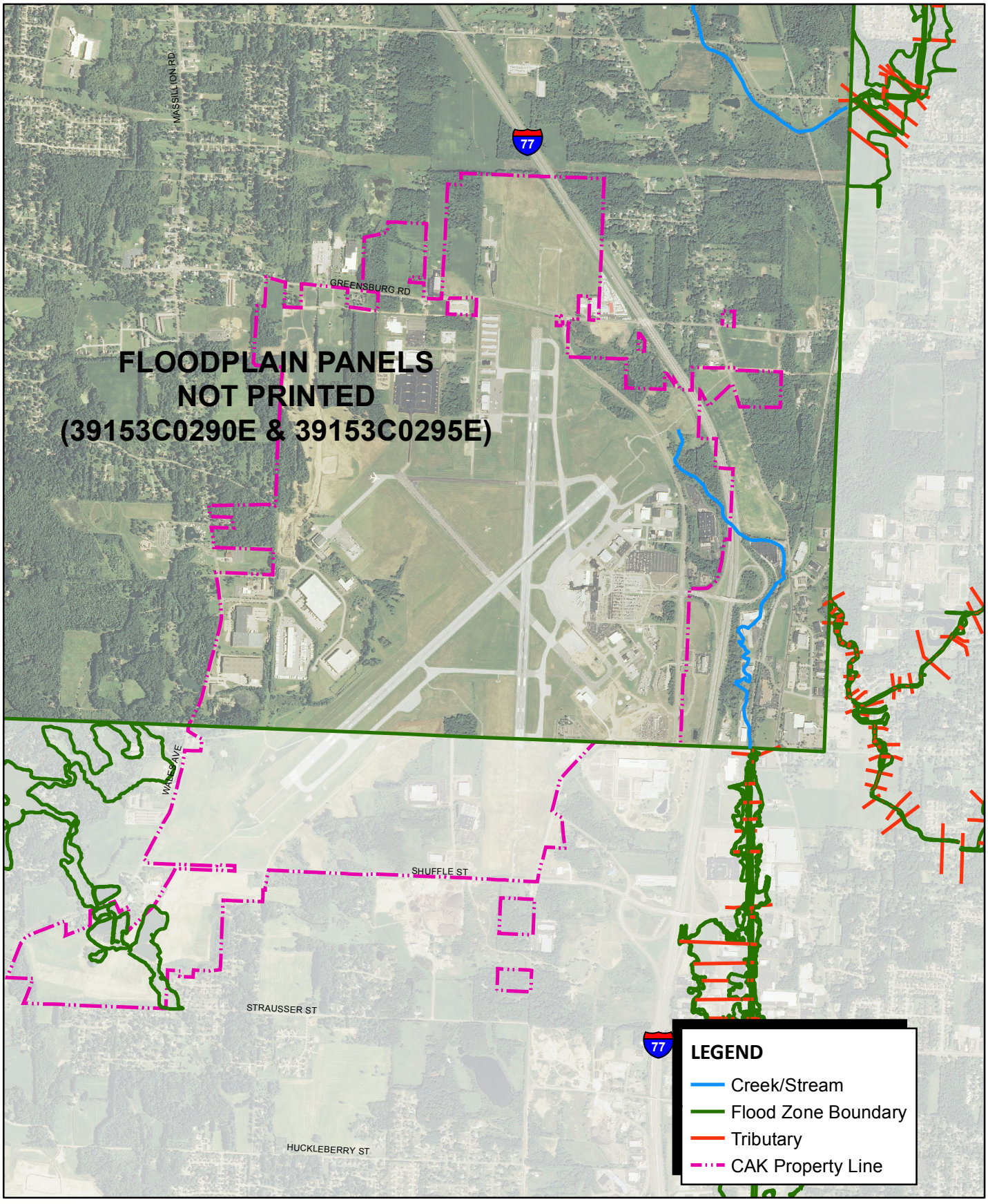

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Figure 7-2
Floodplain Map

7.1.12 Hazardous Materials

Generally, the terms hazardous materials, hazardous waste, and hazardous substances are associated with industrial wastes, petroleum products, dangerous goods or other contaminates. The statutory framework governing and regulating hazardous materials as it applies to airport development actions is found in the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the Community Environmental Response Facilitation Act (CERFA). These statutes focus on the use, storage and disposal of hazardous materials and the environmental threats caused by mishandling these materials. To help protect from potentially excessive cleanup costs and legal liabilities, airport sponsors should – to the extent possible – avoid hazardous waste sites and environmentally contaminated property that could hinder, affect or be affected by an airport project. For environmental analysis purposes, there are several regulatory agencies and programs that govern and monitor the handling of hazardous materials.

Utilizing the U.S. Environmental Protection Agency (U.S. EPA) Envirofacts website, the following databases identified facilities or sites in the vicinity of the Airport that could contain hazardous material concerns. Please note that the "facility names" within the databases may not reflect current facility ownership.

- Air Facility System (AFS) – Lists stationary sources of air pollution (such as electric power plants, steel mills, factories and universities) regulated by the U.S. EPA, state and local air pollution agencies.

Table 7-3 – Air Facility System

Facility Name	Facility Address
BF Goodrich Co. Aircraft Service Center	6032 W Airport Dr
Earth 'N Wood Products Inc.	5335 Strausser NW
Harbor Castings Inc.	4321 Strausser St
Phoenix Packaging Corp	3075 Brookline Rd NW

- Hazardous Waste Report (Biennial Report) (BR) – Collection of data on the generation, management and minimization of hazardous waste. Identifies large quantity generators and waste management practices from treatment, storage and disposal facilities.

Table 7-4 – Hazardous Waste Report (Biennial Report)

Facility Name	Facility Address
Army Aviation Support Facility	5989 Airport Dr NW
Hoover Co Industrial Park	8200 Freedom Ave
Severn Trent Services	4101 Shuffel Dr NW
Sherwin Williams No 1138	4988 Aultman Rd

- Permit Compliance System (PCS) and Integrated Compliance Information System (ICIS) – Database providing information on companies that have been granted permits to discharge wastewater into rivers.

Table 7-5 – Permit Compliance System/Integrated Compliance Information System

Facility Name	Facility Address
Akron-Canton Regional Airport	5400 Lauby Rd NW
McCann Plastics Inc.	5600 Mayfair Rd
Timken Co The Research Ctr	4500 Mount Pleasant Rd

- Resource Conservation and Recovery Act Information (RCRA Info) – National program management and inventory system regarding hazardous waste handlers. All generators, transporters, treaters, storers and disposers of hazardous waste are required to provide information.

Table 7-6 – RCRA Info Facilities

Facility Name	Facility Address
AJAX TOCCO	8948 Meridian Circle NW
Akron-Canton Regional Airport	5400 Lauby Rd NW
American Business Machines	5701 Mayfair Rd
American Sand & Gravel 241 Plant	8188 Wales Ave NW
Army Aviation Support Facility	5989 Airport Dr NW
BF Goodrich Co Aircraft Service Center	6032 W Airport Dr
Camelot ENT	7835 Freedom Ave
Camelot Music	8000 Freedom Ave
Castle Aviation Inc.	5430 Lauby Rd
Continental Express	5400 Lauby Rd Site A
Custom Aero Refurbishing Inc.	5000 W Airport Dr
Custom Auto Body Inc.	4160 Kevin NW
Design Restoration	4305 Mt. Pleasant St NW, Ste 103
Diebold Inc.	5571 Global Gateway
Diebold Inc.	5995 Mayfair Rd
Disttech Inc.	4366 Mt. Pleasant St NW
Dominion East Ohio – 1429 Heiser	8550 Wales Ave
East Ohio Gas Co	5400 Mt. Pleasant Rd
East Ohio Gas Well 2307	8421 Wales Rd
Federal Express Corp	4250 Strausser St NW
First Energy Flight Operations	5430 Lauby Rd Bldg #10
GE Special Pack Inc.	5555 Massillon Rd
Gencorp Inc. Flight Operations	5430 Lauby Rd, Bldg 10
Glitsch Field Services NDE Inc.	5250 Mayfair Rd
Goodyear Tire and Rubber Co	2575 Greensburg Rd
Harbor Castings Inc.	4321 Strausser St
Hoover Co Industrial Park	8200 Freedom Ave
Jetstream Airlines Hangar	5430 Lauby Rd Bldg #3
Lectrotherm Inc.	8984 Meridian Circle NW
Liquid Control Corp	7576 Freedom Ave
Liquid Control Corp	8400 Port Jackson Ave N
North Canton Army Reserve Center	3688 Highland Park St
Phoenix Packaging Corp	3075 Brookline Rd NW
Seiple Lithograph Co	4390 Mount Pleasant Rd
Severn Trent Services	4101 Shuffel Dr NW
Sherwin Williams No 1138	4988 Aultman Rd
Timken Co The Aviation Dept	5430 Lauby Rd
Timken Co The Research Ctr	4500 Mount Pleasant Rd
Trans Security Adm TSA @ Akron-Canton Reg	5399 Lauby Rd
Wales Body and Paint Shop	7484 Wales Rd
Xcel Mold & Machine Co	7661 Freedom Ave NW

- Toxics Release Inventory (TRI) – Database tracking the management of more than 650 toxic chemicals that pose a threat to human health and the environment.

Table 7-7 – Toxics Release Inventory

Facility Name	Facility Address
AJAX TOCCO Magnethermic Corp. North Canton	8948 Meridian Circle NW
Diebold Inc.	5571 Global Gateway
Goodyear Tire & Rubber Co	2575 Greensburg Rd
Graco Inc. North Canton	8400 Port Jackson Ave NW
Hoover Co Industrial Park	8200 Freedom Ave
Liquid Control Corp	7576 Freedom Ave
Phoenix Packaging Corp	3075 Brookline Rd WN
S&S Car Care Inc.	5340 Mayfair Rd
The Timken Co – North Canton Technology Center	4500 Mt. Pleasant Rd NW

The U.S. EPA also maintains a list of enforcement and compliance data through the Enforcement and Compliance History Online (ECHO). The following facilities listed in ECHO are within half a mile of CAK.

Table 7-8 – Enforcement and Compliance History Online

FRS ID	Facility Name	Facility Address	Current Significant Violations?	Quarters Non-Compliant (3 yrs)
110008117858	Air BP Fuel Farm Akron Canton	Akron Canton Airport	No	0
110031019573	AJAX TOCCO Magnethermic Corp North Canton	8984 Meridian Circle	No	0
10004705249	Akron-Canton Regional Airport	5430 Lauby Road, #18	No	9
110015927504	Army Aviation Support Facility	5989 Airport Dr NW	No	0
110009617511	BF Goodrich Co Aircraft Service Center	6032 W Airport Rd	No	0
110004604508	Camelot Music	8000 Freedom Ave NW	No	0
110009617771	Castle Aviation Inc.	5430 Lauby Rd	No	0
110004697089	Continental Express	5400 Lauby Rd Site A	No	0
1100004657103	Custom Aero Refurbishing Inc.	5000 W Airport Rd	No	0
110009636929	Custom Auto Body Inc.	4160 Devin NW	No	0
110043586401	Design Restoration	4305 Mt. Pleasant St NW Ste 103	No	0
110022921463	Diebold Inc.	5571 Global Gateway	No	0
110022921463	Diebold Inc.	5995 Mayfair Rd	No	0
110043553721	Disttech Inc.	4366 Mt. Pleasant St NW	No	1
110013300221	Dominion East Ohio – 1429 Heiser	8550 Wales Ave	No	0
110055610156	Earth'N Wood Products, Inc.	5335 Strausser NW	No	2
110004666031	Federal Express Corp	4250 Strausser St NW	No	0

110032990958	First Energy Flight Operations	5430 Lauby Rd Bldg #10	No	12
110009426184	Gencorp Inc. Flight Operations	5430 Lauby Rd Bldg 10	No	0
110007711627	Goodyear Flight Operations	Akron Canton Airport	No	0
110006269439	Greentree Place #4866	4866 Massillon Rd	No	6
110004736938	Harbor Castings Inc.	4321 Strausser St	No	3
110001624519	Hoover Co Industrial Park	8200 Freedom Ave	No	0
110004574354	Jetstream Airlines Hangar	5430 Lauby Rd Bldg #3	No	1
110004736849	Lectrotherm Inc.	8984 Meridian Circle NW	No	0
110004733851	Liquid Control Corporation	8400 Port Jackson Ave N	No	0
110009633218	McCann Plastics Inc.	5600 Mayfair Rd	No	4
110024444378	North Canton Army Reserve Center	3688 Highland Park St NW	No	0
110001129813	Phoenix Packaging Corp	3075 Brookline Rd NW	No	0
110000391219	Powell Electrical Systems Inc. – North Canton Division	8967 Pleasantwood Ave	No	0
110000815556	Severn Trent Services	4101 Shuffel Dr NW	No	1
110037438234	Sherwin-Williams #9161	6483 Dressler Rd NW	No	0
110004682077	Signa Stortech Inc.	8990 Pleasantwood Ave NW	No	1
110017776263	Summit Co Sheriff's Office Training Fac	2825 Greensburg Rd	No	0
110007716631	Timken Co The Aviation Dept	5430 Lauby Rd	No	0
110001244911	Timken Co The Research Ctr	4500 Mt. Pleasant Rd	No	0
110017867824	Trans Security Adm TSA@Akron Canton Reg	5399 Lauby Rd	No	0
110004635486	XCEL Mold & Machine Co	7661 Freedom Ave NW	No	1

In addition to the facilities listed on the U.S. EPA EnviroFacts website, the Ohio Environmental Protection Agency (Ohio EPA) website was searched for identified facilities within the vicinity of CAK. The Ohio State Fire Marshal, Bureau of Underground Storage Tank Regulations (Regulated Underground Storage Tanks and Leaking Underground Storage Tanks) identified the following facilities within the area of CAK.

- **Table 7-9** lists facilities that are currently registered and active.
- **Table 7-10** lists the facilities that have had releases that have not yet been fully remediated.
- **Table 7-11** lists the facilities that have contained underground storage tanks in the past and are now identified as inactive (which includes *closed-in-place* or *removed* systems).

Table 7-9 – Registered Underground Storage Tank Facilities

Facility Number	Facility Name	Facility Address	Status
77003321	Akron Canton Airport	5430 Lauby Road	Currently In Use
77003795	Akron Canton Regional Airport	5430 Lauby Road, Building #25	Currently In Use
77003799	Zellair Properties LLC	5430 Lauby Road, #18	Currently In Use
77004637	North Canton Transfer Co.	2515 Greensburg Road	Currently In Use
77009374	Ultimate JetCharters LLC	6061 West Airport Road	Currently In Use

Table 7-10 – Facilities with Active Releases

Release Number	Facility Name	Facility Address	Status
76000769	The Timken Company Research	4500 Mt Pleasant Rd NW	SUS/CON from regulated UST
76000770	The Timken Company Research	4500 Mt Pleasant Rd NW	SUS/ CON from regulated UST
76000806	American Sand & Gravel	8188 Wales Rd NW	SUS/ CON from regulated UST
76000811	Rentwear, Inc.	7944 Whipple Ave NW	Closures of regulated USTs
76002030	Earth 'N Wood Landscaping Supply	5335 Strausser NW	Closure of regulated USTs
76002335	Airport Outpost	8655 Frank Ave NW	Closure of regulated USTs
7601008	Morwin Office Supply	5801 Mayfair Rd NW	Closure of regulated USTs
76010072	Admiral Equip	5103 Stoneham Rd NW	Closure of regulated USTs
76010155	McKinley Air Transport	Akron Canton Airport	Closure of regulated USTs
77000010	Goodyear Flight Operations	Akron Canton Regional Airport	Closure of regulated USTs
77000137	ODOT Greensburg Outpost	4377 Mt Pleasant Rd	Closure of regulated USTs
77000180	S/S Carcare	5340 Mayfair Rd	SUS/CON from regulated UST
77000180	S/S Carcare	5340 Mayfair Rd	Closure of regulated USTs
77000307	Akron Canton Airport	5400 Lauby Rd NW #9	Closure of regulated USTs
77001525	Hertz Area 1575-11	5400 Lauby Rd NW	Closure of regulated USTs
77001525	Hertz Area 1575-11	5400 Lauby Rd NW	SUS/CON from regulated UST
77001739	Akron-Canton Airport	5400 Lauby Rd #4	Closure of regulated USTs
77002922	Con-Way Central Express	3448 Greensburg Rd	SUS/CON from regulated UST
77003791	Air Camis, Inc./NW Cor Bldg 11	5430 Lauby Rd	Closure of regulated USTs
77004128	Air BP Akron Canton Airport	5430 Lauby Rd	SUS/CON from regulated UST
77004349	First Energy Corp	5430 Lauby Rd – Bldg 10	Closure of regulated USTs
77009374	Ultimate JetCharters LLC	6061 W Airport Rd	SUS/CON from regulated UST
77010064	Rapid Air Freight	5430 Lauby Rd (Fuel Farm)	SUS/CON from regulated UST
77010110	Flyco/Div of Bremlin Corp Bldg	Akron Canton Airport, Bldg 13	Closure of regulated USTs
77010186	Vacant Land (Avis Car Rental)	5400 Lauby Rd #21	SUS/CON from regulated UST
77010187	Gencorp Flight Ops	3023 Jupiter NW (94 Removal)	SUS/CON from regulated UST
77010267	UAL – Akron Canton Airport	6430 Lauby Rd #13	SUS/CON from regulated UST
77010274	Akron Canton Airport	5430 Lauby Rd	SUS/CON from regulated UST

77010324	BF Goodrich Aviation Services	5430 Lauby Rd Bldg 10	SUS/CON from regulated UST

Table 7-11 – Inactive Underground Storage Tanks

Facility Number	Facility Name	Facility Address	Facility Type
76000769	The Timken Co. Research	4500 Mt Pleasant Rd NW	Unknown
76000806	American Sand & Gravel	8188 Wales Rd NW	Commercial
76002030	Earth 'N Wood Landscaping Supply	5335 Strausser NW	Commercial
76002335	Airport Outpost	8655 Frank Ave NW	Government
76004517	Gen Corp.	3023 Jupiter NW	Airline
77000137	ODOT Greensburg Outpost	4377 Mt Pleasant Rd	Government
77000180	S/S Carcare	5340 Mayfair Rd	Unknown
77001739	Akron-Canton Airport	5400 Lauby Rd #4	Airline
77002922	Con-Way Central Express	3448 Greensburg Rd	Trucking/Transportation
77003791	Air Camis, Inc./NW Cor. Bldg 11	5430 Lauby Rd	Airline
77004128	Air BP Akron Canton Airport	5430 Lauby Rd	Distributor
77004349	First Energy Corp	5430 Lauby Rd – Bldg 10	Airline
77010064	Rapid Air Freight	5430 Lauby Rd (Fuel Farm)	Trucking/Transportation
76009791	Ohio Army National Guard	5989 Airport Dr NW	Government
76009906	FAA CAK Airport	Akron Canton Regional Airport	Government
77000010	Goodyear Flight Operations	Akron Canton Regional Airport	Gas Station
77000307	Akron Canton Airport	5400 Lauby Rd NW #9	Government
77001525	Hertz Area 1575-11	5400 Lauby Rd NW	Unknown
77001739	Akron-Canton Airport	5400 Lauby Rd #4	Airline
77004637	North Canton Transfer Co.	2515 Greensburg Rd	Industrial
77010902	Maps Air Museum	2260 International Pkwy	Government

The Ohio EPA Division of Materials and Waste Management establishes and enforces standards for waste management. The listing of waste management sites was reviewed. There were no facilities identified on the lists managed by the Ohio EPA that are within the vicinity of CAK.

The Ohio EPA also maintains permits for dischargers covered under the non-stormwater National Pollutant Discharge Elimination System (NPDES) program. These are facilities permitted to discharge to surface waters of Ohio. There were many households within a 0.5 mile search radius of the Airport whose sewage treatment systems discharge into surface water bodies. However, there were no facilities identified within the vicinity of CAK on the following lists: Small Sanitary Discharges, Small Sanitary Discharges that cannot meet BADCT Standards, Non-Contact Cooling Water, Petroleum Bulk Storage Facilities, Petroleum-Related Corrective Action, Water Treatment Plant Discharges, Temporary Discharges or Hydrostatic Test Water.

The Ohio EPA also issues air permits to facilities that are stationary sources of air contaminants. The issued permits specify limits on the quantity of air contaminants emitted and requirements for construction and operation of regulated air contaminant sources. Permit conditions also

specify the emission testing, monitoring, record keeping and reporting requirements applicable to each source. **Table 7-12** lists the facilities within the vicinity of CAK who have applied for or obtained an Ohio EPA Air Permit

Table 7-12 – Ohio EPA Air Permits

Facility Number	Facility Name	Facility Address
15-76-17-1157	Northstar Asphalt, Inc.	7345 Sunset Strip
16-77-00-0199	McCann Plastics, Inc.	5600 Mayfair Rd
16-77-00-0520	Air BP	Akron-Canton Airport
16-77-00-0573	Belden & Blake Corp	5200 Stoneham Rd
16-77-94-0011	Belden Blake Corp Portable 19 Brookfield	5200 Stoneham Rd
16-77-94-0007	Belden Blake Corp Portable 9	5200 Stoneham Rd
16-77-94-0002	Belden Blake Corp, Swartzen Triber	5200 Stoneham Rd
16-77-94-0008	Belden Blake Portable 18	5200 Stoneham Rd
15-77-00-0240	Clerac LLC DBA Akron Airport Prep Facility	5400 Lauby Rd
15-77-00-0221	Diebold, Inc.	5995 Mayfair Rd
16-77-00-0239	Goodrich Corp. – Aircraft Service Center	6051 West Airport Dr
16-77-00-0223	Sonoco Phoenix Inc. – Brookline Plant	3075 Brookline Rd NW
15-76-17-5012	Earth'N Wood Products, Inc.	5335 Strausser NW
15-76-00-1049	Hoover Industrial Park Plant	8200 Freedom Ave
15-76-00-0615	Timken Company Res-19	4500 Mt. Pleasant Rd
15-76-17-1547	Powell Electrical System – NCD	8967 Pleasantwood Ave NW

Potential Impacts

As evidenced in the preceding tables, various federal and state databases identified sites in and adjacent to the Airport that could potentially contain hazardous materials issues. Care must be exercised during the design of Airport improvement projects that will develop, redevelop or demolish facilities on Airport property to ensure that the unintentional release of hazardous materials will not cause significant impacts to soil, surface water, groundwater, air quality or human health. Additional site investigations may be needed.

An Environmental Due Diligence Audit (EDDA) is required for any purchase of property using FAA funds. It is also recommended for any real property acquisitions the Authority may pursue. An EDDA is a systematic investigation of real property to determine if activities involving hazardous materials have occurred at a site or resulted in environmental contamination. An EDDA is also a form of pre-acquisition protection against CERCLA/RCRA liability and a defense in lawsuits addressing contaminated lands. If the Phase I EDDA indicates that the land is, was or has the potential for such activities or occurrences, a Phase II EDDA attempts to verify and identify the existence of the materials. If necessary, a Phase III EDDA delineates the amounts or limits of hazardous materials or contamination and provides preliminary cleanup plans and cost

estimates, if applicable. Personnel specializing in performing EDDAs should conduct the investigations, due to the potential liabilities and risks associated with these assessments.

7.1.13 Historical Properties

Section 106 of the National Historic Preservation Act (NHPA) requires airports to consider the effects of development actions on historical property, defined as "any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP) maintained by the Secretary of the Interior." The procedures for implementing Section 106 are in the Advisory Council on Historic Preservation (ACHP) regulations 36 CFR Part 800, *Protection of Historic Properties*.

The Ohio Historic Preservation Office Online Mapping System was reviewed to determine if any known historic resources are present in or near the airport. No known resources were identified on Airport property. However, several properties listed in the NRHP or identified as historic structures on the Ohio Historic Inventory (OHI) are located directly adjacent to the Airport property, as shown on **Figure 7-1** (**Section 7.1.6**).

Potential Impacts

It is unlikely that the proposed Airport improvements would have an adverse impact on any known historic resources. A records review and possible surveys would need to be conducted by qualified professionals who meet the *Secretary of Interior's Professional Qualification Standards* to further verify that historic resources will not be impacted. Additionally, this information would have to be coordinated with the State Historic Preservation Office (SHPO) and local authorities to ensure they concur with the findings.

7.1.14 Induced Socioeconomic Impacts

An airport project may have induced socioeconomic impacts to surrounding communities if it results in shifts in patterns of population movement and growth, public service demands, changes in business and economic activities or other factors identified by the public. These factors are typically interrelated and may cause adverse domino effects should one or more be altered. For this reason, per CEQ regulations for implementing NEPA, airports should consider the effects any proposed action will have on surrounding communities. Additionally, coordination with entities like the local planning commission's housing and business departments and public service utilities should be established.

Potential Impacts

The proposed improvements at CAK were developed in response to the growing demand for air travel facilities and services within the region. They were also developed with the intent of minimizing secondary impacts, while positively contributing to the area's overall business and economic climate. Because minimal property acquisitions are proposed, the proposed improvements are not anticipated to have significant adverse impacts on the patterns of population movement, public service demands or changes in business and economic activity. Instead, the recommended developments at the Airport will have beneficial socioeconomic

impacts and will positively contribute to the region's business and economic climate due to attracting businesses and increased local employment.

7.1.15 Light Emissions and Visual Effects

Light emissions related to an airport typically include glare or flashing of airfield and terminal lighting, aircraft lights, NAVAIDs, obstruction lighting, parking and roadway facilities and other equipment associated with airport operations. Many of these lighting systems are needed to ensure the safe operation of aircraft in the air and on the ground. Others are needed to enhance safety and customer convenience within the terminal area and adjacent roadways. These emissions can potentially disturb surrounding residences, businesses, parks or recreational areas. In order to promote good neighbor relationships with the surrounding community, design and construction of airport facilities should give consideration to the potential impact of light emissions on nearby sensitive receptors.

Potential Impacts

The proposed improvements include expansion of the terminal building, automobile parking facilities, aircraft apron and hangar areas and extensions to the taxiway system. Each of these includes various lighting systems. In many instances, the design of these systems incorporate directional shielding to minimize errant emission. The majority of these improvements are located in the northern and eastern portions of Airport property, which are bounded by roadways – including Interstate 77 – and predominately commercial land uses. There are no recommended changes to the configuration of the runways. Considering the expanse of Airport property, the terrain and the surrounding land uses, no off-Airport impacts are anticipated as part of the proposed improvements.

7.1.16 Noise

Aircraft noise is generally one of the largest concerns for land users surrounding an airport, particularly residents. The most formal way that an airport can address noise issues is through the performance of a comprehensive noise study under the voluntary Federal Aviation Administration (FAA) Part 150 program. The program provides airports with access to related FAA funding, planning and implementation support. This program has a process for airport sponsors to follow by developing and obtaining FAA approval of programs to reduce or eliminate incompatibilities between aircraft noise and surrounding land uses. The regulation is formally codified under Title 14 of the Code of Federal Regulations (14 CFR Part 150).

To date, CAK has completed two voluntary noise studies – one in 1989 and in 1997. Since the completion of these studies, the Airport and local jurisdictions have taken numerous steps to minimize and prevent noise impacts, including property acquisitions, rezoning and the establishing an Airport Commerce Zoning District in the City of Green.

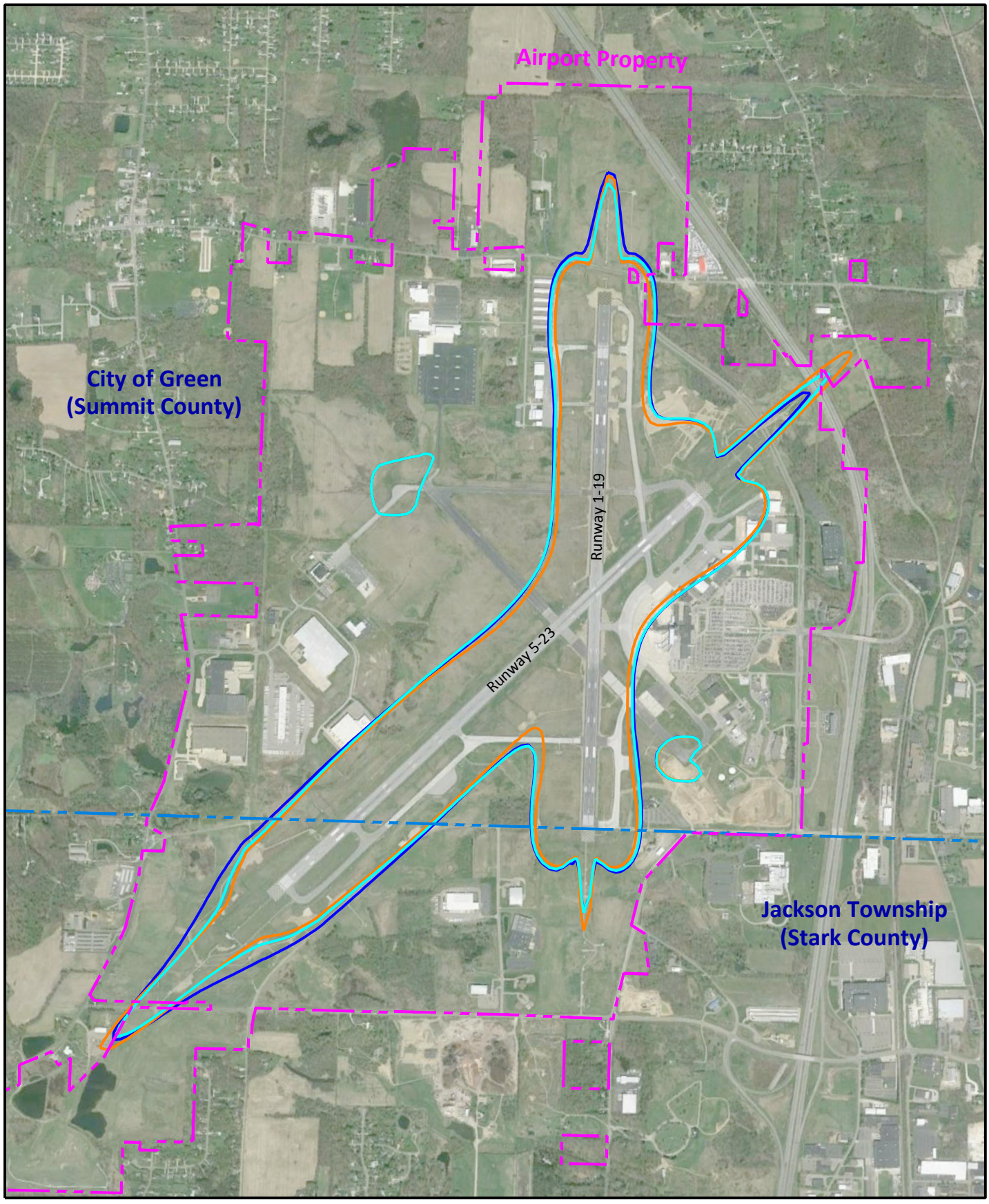
A new noise study is currently underway and will be completed in 2014. The Noise Compatibility Program (NCP), developed as a result of this study, will contain noise abatement measures that will be proposed to reduce existing incompatible land uses and prevent additional incompatible land uses in noise exposure areas.

The FAA requires that airports use a decibel (dB) based measure of noise exposure, called the Day-Night Average Sound Level (DNL), to describe exposure to airport-related noise when conducting any federal planning or environmental study. In simple terms, DNL is the average noise level over any number of days with the exception that noises occurring at night – defined as 10 p.m.-7 a.m. – are artificially increased by 10 dB. This weighting reflects the added intrusiveness of nighttime noise events attributable to community background noise levels decreasing at night. FAA almost universally requires airports to consider total annual exposure in planning and environmental studies. Generally speaking, all land uses are acceptable in areas with noise exposure less than 65 dB DNL. The FAA land use compatibility guidelines are summarized in **Table 5-1** (**Chapter 5**).

Noise contours were developed for the ongoing 2014 Part 150 Noise Study and are depicted in **Figure 7-3**. As shown, the 2014, 2019 and 2034 65 DNL noise contours are mostly on Airport property. The Akron-Canton Airport Authority and local governmental jurisdictions have adopted the FAA guidelines, in which all land uses are compatible outside of the 65 dB DNL contour. There are no potentially incompatible land uses in the contour line for projected 2014, 2019 and 2034 operations. There are also no discrete sensitive receptors in those contours (i.e., schools, health care facilities, places of worship, etc.). The recommendations of the Part 150 Noise Study – airport overlay zone – are intended to prevent future incompatibility issues.

POTENTIAL IMPACT

None of the proposed improvements include major airfield or facility changes resulting in additional aircraft noise, aside from increases associated with the incremental growth in operations. Due to changes in the fleet mix and improvements to aircraft technology, the contours developed in the 2014 study have decreased significantly since the previous noise studies. No adverse noise-related impacts are anticipated over the 20-year planning horizon.



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65 dB DNL (2014)
65 dB DNL (2019)
65 dB DNL (2034)

Figure 7-3
65 DNL Noise Contours

7.1.17 Social Impacts

Consistent with CEQ regulations 40 CFR 1508.14, airports must conduct a social impact analysis when evaluating proposed development under NEPA. Specifically, the analysis must evaluate the development's potential effects on the human environment. This includes health and safety risks to children and socioeconomic impacts such as the relocation of homes or businesses; dividing or disrupting established communities; changing surface transportation patterns; disrupting orderly, planned development; or creating a notable change in employment.

Potential Impacts

Due to the limited land acquisition proposed, including two residential relocations, availability of comparable housing should not be an issue. The proposed Airport improvement projects are consistent with the local land-use and transportation planning objectives. The results of the proposed development projects would not exceed the capacities of the existing public service providers, infrastructure, utilities or local economics that sustain the area's quality of life. In addition, anticipated project-related impacts do not have potential to disproportionately affect children's health or safety. Therefore, no adverse social impacts are expected from the proposed development projects.

7.1.18 Solid Waste

The Solid Waste Disposal Act notes the term solid waste includes garbage, refuse or sludge from a waste treatment plant, water supply treatment plant or an air pollution control facility (42 USC Section 6903(27)). According to that act, solid waste also includes solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining, agricultural or community activities.

Terminal development typically generates more solid waste than airfield development. Projects related to airfield components (runways, taxiways, etc.) do not typically result in any direct impact on solid waste collection, control or disposal, other than that associated with demolition and clearing of land and the construction itself.

Potential Impacts

While solid waste generated by the Airport will increase slightly due to future growth in passenger activity, the levels of additional daily waste are not expected to be significant as a result of the proposed improvements. As described in **Section 7.3**, the Authority is developing a Sustainable Management Plan to identify ways to increase recycling and reduce the amount of solid waste transported to area landfills. Solid waste generated by construction will be transported and disposed of, as directed by appropriate local authorities. None of the solid waste generated from construction at the Airport is anticipated to create capacity problems at the local landfill or require scheduled solid waste removal.

7.1.19 Water Quality

The Federal Water Pollution Control Act of 1972 – as amended by the Clean Water Act (CWA) of 1990 – protects the water resources of the United States. It also provides the U.S. EPA with the authority to regulate water quality and require permits for actions that could adversely affect water quality. Compliance with the CWA is achieved primarily by issuing permits through the National Pollutant Discharge Elimination System (NPDES) and for dredge and fill permitting, respectively in compliance with Section 401 and 404 of the CWA.

Potential Impacts

The U.S. EPA requires a NPDES permit for all stormwater runoff from industrial activities. This includes Airport activities such as deicing, fueling and maintaining aircraft. This Industrial Stormwater General Permit (OHR 000005) requires an approved Stormwater Pollution Prevention Plan (SWPPP) that satisfies the NPDES General Permit by: identifying all potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges associated with the facility; describing practices to be used in reducing pollutants; and helping assure compliance with the terms and conditions of the permit. CAK's current plan was approved in January 2008 and covers all areas of the Airport generating stormwater associated with industrial activity. The SWPPP must be amended whenever there is a change in design, construction, operation or maintenance at the Airport that may affect the discharge of pollutants.

Construction activities that loosen soil and potentially cause sedimentation in downstream water bodies during precipitation must also be considered. This could result in increased water temperature and lower concentrations of dissolved oxygen, which could be detrimental to aquatic life. However, considering that construction activities associated with the proposed improvements are limited – geographically and temporally – and that required mitigation efforts will be employed, it is unlikely that impacts to water quality during construction will be significant. Because more than one acre of land will be impacted by the proposed improvements, an NPDES Construction Site Stormwater Permit (OHC 000004) must be obtained from the Ohio EPA. It should be noted that this permit requires the development of a SWPPP specifically for construction-related impacts and is required for each project that disturbs one or more acres of ground.

7.1.20 Wetlands

Wetlands are defined as lowlands covered with shallow and sometimes temporary or intermittent waters. This includes, but is not limited to: swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, tidal overflows, estuarine areas and shallow lakes and ponds with emergent vegetation. Areas covered with water for such a short time that there is no effect on moist-soil and vegetation are not included in the definition. The wetlands ecosystem includes those areas that affect or are affected by the wetland area itself (e.g., adjacent uplands or regions up and down stream). An activity may affect the wetlands indirectly by impacting regions up or down stream from the wetland or by disturbing the water table of the area in which the wetland lies.

Section 404 of the CWA establishes a program to regulate the discharge of dredge and fill material into U.S. water, including wetlands. Activities in U.S. waters are regulated under this program include: fill for development; water resource projects – such as dams and levees; infrastructure development – such as highways and airports; and conversion of wetlands to uplands for farming and forestry. According the U.S. EPA's Section 404(b) 1 guidelines, project proponents must avoid and minimize impacts to U.S. waters at the project site to the maximum extent practicable. For those unavoidable impacts to U.S. waters – including wetlands – compensatory mitigation may be required either through regional conditioning or on a case-by-case basis.

Potential Impacts

In an effort to determine if wetland areas may be impacted by the proposed improvements, information from the USFWS wetland mapper was overlaid with a map of delineations already completed on Airport property, **Figure 7-4**. Numerous wetlands were identified in and adjacent to Airport property. As some of these wetlands would be directly impacted by the proposed improvements, these areas should be evaluated and delineated as part of any future environmental studies (NEPA process) to be completed for each improvement. If it is confirmed that wetlands exist within the project area during the environmental process, the identified impacts must be permitted for, in accordance with Sections 401 and 404 of the CWA. It should be noted that the Ohio EPA issues Section 401 Water Quality Certifications. Early coordination with this agency and the U.S. Army Corps of Engineers is always highly recommended.

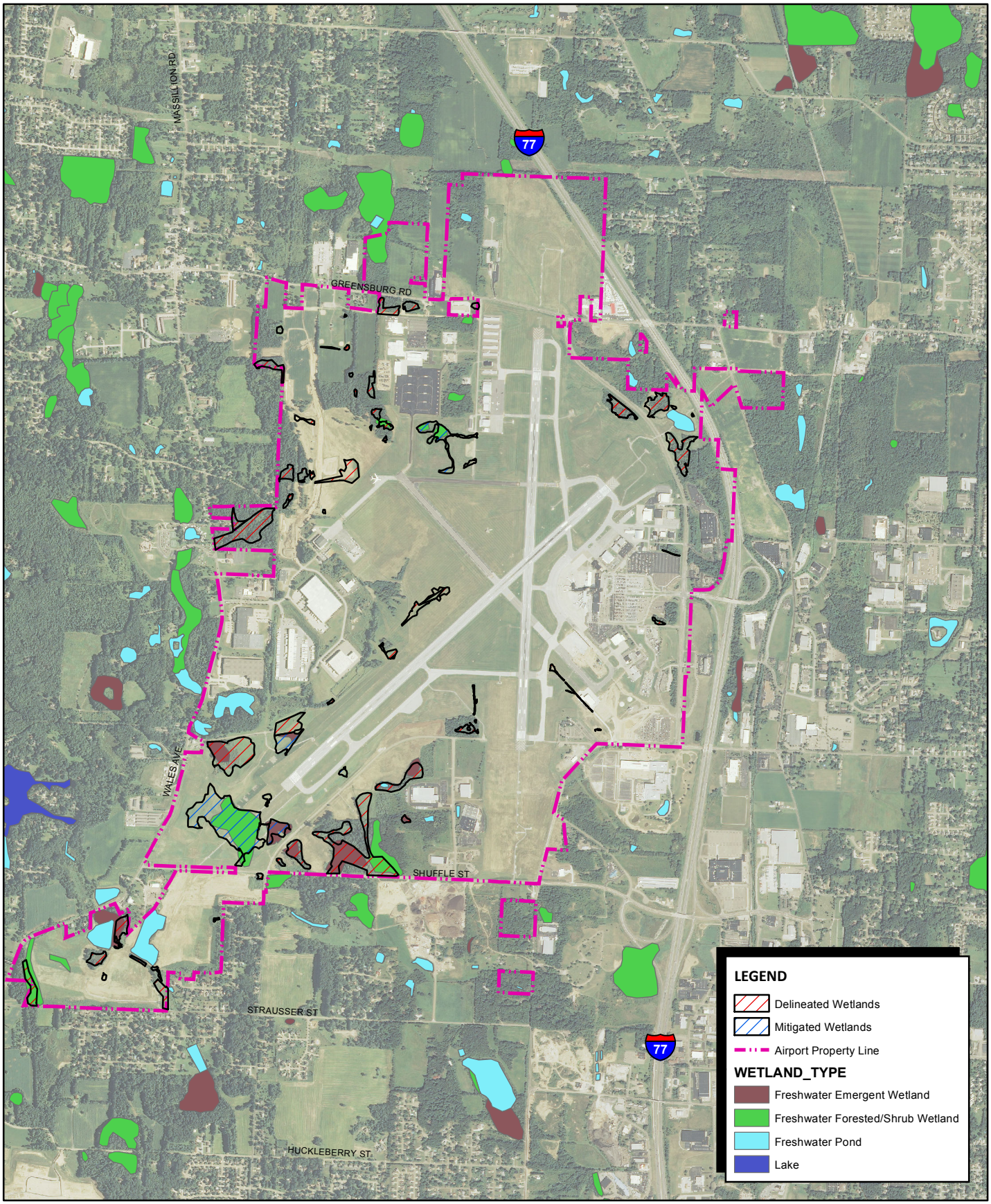

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Figure 7-4
Wetlands Map

7.1.21 Wild and Scenic Rivers

Wild and scenic rivers have remarkable scenic, recreational, geologic, fish, wildlife, historic or cultural value. Federal land management agencies in the Departments of the Interior and Agriculture manage the Wild and Scenic Rivers Act (Act), which preserves rivers' free-flowing conditions, protects rivers' surrounding areas and strives to balance river development with permanent protection of the country's most outstanding, free-flowing rivers. The National Rivers Inventory (NRI) lists more than 3,400 free-flowing river segments, with at least one feature mentioned above. Listing on the NRI means the federal government is protecting these rivers and streams while agencies are considering the river for designation to the Wild and Scenic Rivers System (WSRS).

Potential Impacts

The WSRS and NRI recognize segments of the Tuscarawas River in Stark County and the Cuyahoga River in Summit County as meeting at least one of the criteria above. While located in the same counties in which the Airport is located, neither of these rivers are within close proximity to Airport property and therefore, would not be affected by potential improvements.

7.1.22 Cumulative Impacts

Cumulative impacts are those that the proposed action would have on a particular resource, when added to impacts on that resource due to past, present and foreseeable actions within a defined time and geographical area. A statutory framework for consideration of cumulative effects in federal decisions is found in NEPA and implemented through CEQ regulations in 40 CFR Sections 1508.7 and 1508.25(a)(2) and (3).

Potential Impacts

While the effects of individual actions may seem inconsequential, they can pose significant threats to a community's resources when combined with others. In order to determine the effect that a project may have on the overall environment, each proposed action would need to be assessed for its interconnection with other actions in the vicinity within a reasonable timeframe. Any data associated with past, current and other future projects in the development areas would need to be collected, analyzed and compared to planned development. This issue would need to be addressed in more detail during any future NEPA process to be completed for each improvement.

7.2 STORMWATER MANAGEMENT PLANNING

Stormwater management is an evolving practice, dependent on physical site characteristics such as: topographic relief, amount of perviousness and types of soils, as well as external factors, such as government regulations and costs of materials. It is also an important practice to ensure that post-development stormwater runoff quantities are not greater than pre-development quantities and that the quality of stormwater runoff meets or exceeds established standards for release back to the environment.

The Stormwater Management Plan presented here is a result of the current conditions and regulations, but with the necessary flexibility to adapt to changing internal and external factors so it can best serve CAK in the long term. It is presented in the following sections:

- Stormwater Regulations
- Existing Stormwater Controls at CAK
- Future Stormwater Controls at CAK for Quantity and Quality

7.2.1 Stormwater Regulations

Stormwater is regulated through the National Pollution Discharge Elimination System (NPDES) permit program, created in Section 402 of the 1972 Clean Water Act (CWA). The U.S. EPA administers the NPDES. Its initial goal was to prohibit discharges of pollutants from any point source into the nation's waters, except as allowed under an NPDES permit. In 1977, Congress amended the CWA to enhance the NPDES program. The amendment shifted the focus from controlling conventional pollutants to controlling toxic discharges. In 1987, Congress passed the Water Quality Act, which called for increased monitoring and assessing of water bodies to make sure water quality standards were met in the nation's waters.

The NPDES permit program is designed to prevent stormwater runoff from washing harmful pollutants into local surface waters such as streams, rivers, lakes or coastal waters. It regulates stormwater discharges from three potential sources: separate municipal storm sewer systems (MS4s), construction activities and industrial activities. The EPA has classified the use of glycol-based aircraft deicing materials as a regulated “industrial process”. Operators of stormwater sources, considered “point sources”, are required to receive an NPDES permit before they can discharge. A point source is a natural or human-made conveyance of water through pipes, culverts, ditches, catch basins or any other type of channel. It is the most prevalent source of stormwater. All other sources of stormwater are considered non-point sources, a catch-all term for stormwater without well-defined discharge points, such as sheet runoff over an open field. Currently, the NPDES only regulates point sources and the primary method to control them is through the use of Best Management Practices (BMPs).

Most states are authorized to implement the NPDES Stormwater Program and administer their own stormwater permitting programs. The Ohio EPA administers the program in Ohio and issues stormwater permits. The 1987 amendments to the CWA required the U.S. EPA to address stormwater runoff in two phases. Phase I of the NPDES Stormwater Program (40 C.F.R. 122.26)

began in 1990. It applied to: large and medium MS4s serving populations of 100,000 or more, and 11 industrial categories, including construction sites disturbing five acres of land or more. Phase II began in 2003, amending 40 C.F.R. 122.26 and creating 40 C.F.R. 122.30 through 122.37. Phase II also specified new requirements for some MS4s serving populations fewer than 100,000 people, ended an exemption for publicly-owned industrial facilities and revised the industrial program to include construction sites disturbing equal to or greater than one but less than five acres of land.

CAK requires permit coverage for stormwater discharges from its industrial and construction activities. There are two stormwater permit application options for industrial and construction activities in Ohio. The first is to submit an individual NPDES permit application. The second is to file a Notice of Intent (NOI) form requesting coverage under a general permit. The general permit process is usually easier and faster than the individual permit process.

CAK's industrial activities (e.g. aircraft deicing) are monitored under individual NPDES permit number 3IN00157*BD, which expires on October 31, 2018. Individual permits are to be renewed every five years. In compliance with the industrial permit requirements, CAK has a published *Stormwater Pollution Prevention Plan[4] for Industrial Activities*, which includes the contact information of the Pollution Prevention Team, a description of potential pollutant sources, measures and controls, and BMP descriptions.

Some of CAK's construction activities are monitored under the *General Permit for Storm Water Discharges from Small and Large Construction Activities*. The current General Construction Permit is No. OHC000004, expiring on April 20, 2018. The Ohio EPA has been renewing the permit every five years. The General Construction Permit covers facilities with similar operations and types of discharge throughout the state of Ohio. It affords coverage to new and existing dischargers that meet the eligibility criteria given in the general permit. General permits cover discharges that will have a minimal effect on the environment. The Ohio EPA has, however, required that several airport construction projects, such as the Airport Rescue and Fire Fighting (ARFF) building and parking lot expansions performed between 2010 and 2014, obtain an individual construction permit.

The Stormwater Management Plan prepared for this Master Plan Update only addresses discharges from construction activities. Construction sites impact Ohio's waters by adding pollutants – including sediment – to rainwater runoff and making long-term land-use changes that alter the hydrology and pollutant loading of local streams. To limit the negative impacts of construction projects on Ohio's waters, Ohio EPA administers the permitting program to require practices that keep pollutants out of streams during and post-construction.

Pending future coordination with Ohio EPA for each specific construction project, if the project is eligible, there are several advantages to obtaining coverage under a general NPDES permit

[4] Storm Water Pollution Prevention Plan for Akron-Canton Regional Airport, prepared by Gresham Smith & Partners, January 2008

instead of an individual NPDES permit: the simplified one-page application form for the permit doesn't require the inclusion of effluent data; there is reduced Ohio EPA processing time and quicker review time; there is permit consistency with other similar facilities; and there are permit requirements available prior to applying.

Permit coverage under the Ohio General Construction Permit requires the following sequential steps:

1. Develop a Storm Water Pollution Prevention Plan (SWPPP) for the construction site, describing controls used during the construction period and proposed post-construction Best Management Practices (BMPs). Stormwater quality and quantity must be managed.
2. Submit a Notice of Intent (NOI) to the Ohio EPA, requesting coverage under the general permit.
3. Wait to receive the Ohio EPA approval letter confirming coverage under the general permit before starting construction.
4. Ensure that contractors, subcontractors and staff understand their roles in carrying out the SWPPP.
5. Implement the SWPPP.
6. Proceed with construction, including regular maintenance and inspection of sediment and erosion controls and storm water management facilities.
7. Upon construction completion, submit a Notice of Termination (NOT) to the Ohio EPA so the project can be closed.

As new projects develop at the Airport, corresponding SWPPPs would need to meet the requirements of the General Construction Permit in place at the time of the NOI submission. Every time the Ohio EPA has re-issued the General Permit, revisions have included modifications to the SWPPP requirements, including the addition or deletion of certain BMPs. Post-construction BMPs that may have been acceptable for earlier construction projects could have different requirements under the new permit, and new post-construction BMPs are constantly being developed and assessed for implementation.

7.2.2 Existing Stormwater Controls at CAK

A comprehensive stormwater study[5] was completed in 1997 for the CAK property, which covers 1,800 acres of land in the City of Green in Summit county; and in Jackson Township in Stark County. The study analyzed how the development of Airport facilities had changed volume and distribution of stormwater runoff. The topography is gently rolling, with elevations in the Airport property ranging from 1,120 to 1,240 feet above mean sea level (AMSL). Most of the soils are classified as loams and silty loams, which are moderately drained[6]. There are also delineated wetlands within the property.

[5] Akron-County Regional Airport Stormwater Drainage Study, prepared by Environmental Design Group, April 1997

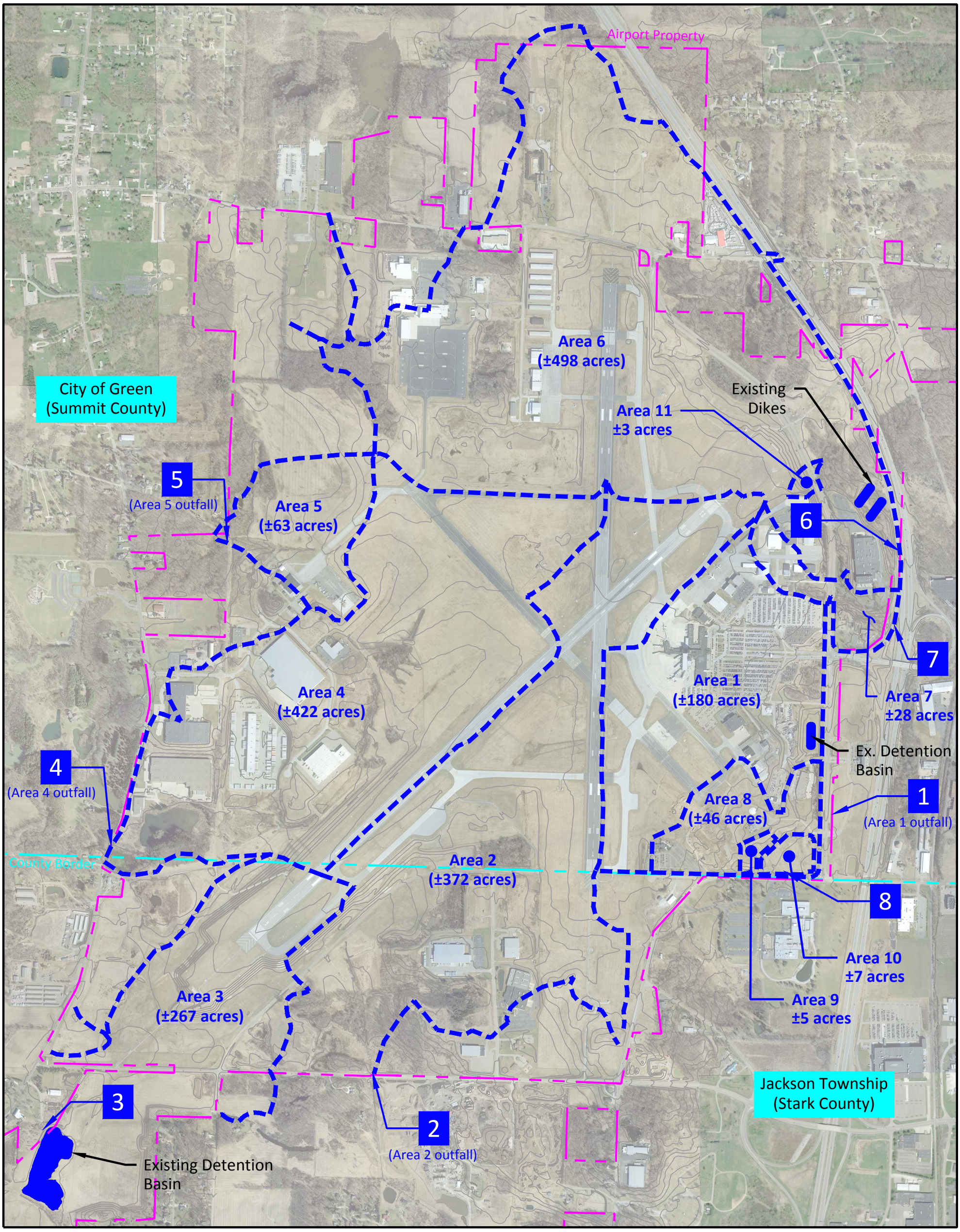
[6] Akron-Canton Airport Custom Soil Resource Report for Stark County, Ohio, and Summit County, Ohio, created using the Web Soil Survey (WSS) tool operated by the USDA Natural Resources Conservation Service, June 3, 2014

The drainage areas within the Airport property are shown in **Figure 7-5**, with their corresponding outfalls. There are eight principal stormwater outfalls from the Airport property: Outfalls 3, 4 and 5 discharge toward the west of the property and are tributary to Willowdale Lake in Stark County; Outfalls 1, 6, 7 and 8 discharge toward the east and are tributary to Schumacher Ditch in Summit County; and Outfall 2 discharges toward the south and is tributary to Zimber Ditch in Stark County.

Several stormwater improvements have been built at the Airport since the 1997 study. The projects constructed prior to the implementation of NPDES Phase II addressed stormwater quantity. Those built more recently address stormwater quality and quantity. The following stormwater controls are currently in use at the Airport:

- A detention basin constructed in 1998 to control stormwater quantity at Outfall 1.
- Two earthen dikes constructed in 1998 to control stormwater quantity at Outfall 6.
- An existing detention basin, constructed by previous property owners, was utilized for the extension and safety upgrade of Runway 5/23 (completed in 2010) and controls water quantity at Outfall 3.
- A system of underground storage pipes and sand filters constructed in 2011 for the parking lot expansion adjacent and to the south of the long-term parking lot, controlling stormwater quantity and quality.
- Stormwater quantity and quality controls to support the new aircraft rescue and firefighting and operations facility (ARFF) constructed in 2013.

These controls have been performing as designed, and there are no known chronic flooding problems on Airport property. Adjacent to the Airport, flooding has occurred along Schumacher Ditch and Zimber Ditch, but the discharges from the Airport outfalls are controlled to pre-development levels.



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MASTER PLAN UPDATE

GRAPHIC SCALE (FEET)
0 600 1200

Figure 7-5
Existing Drainage Areas

7.2.3 Future Stormwater Controls at CAK for Quantity and Quality

The Airport Master Plan identified future development in several areas on Airport property. As these areas are planned and developed, each will need to comply with the NPDES permit requirements, intended to foster the construction of new systems to detain and clean stormwater before reaching an outfall. The CAK Stormwater Management Plan needs to address stormwater quantity and quality.

Stormwater quantity has been well-controlled on Airport property since 1997, when CAK implemented the recommendations of its Drainage Study to ensure post-development runoff volumes remain equal to or below the volumes calculated prior to development. Calculations and practices for stormwater quantity are well-established and understood. On the other hand, the control of stormwater quality is still an evolving field, receiving recent impetus because of the Ohio General Construction Permit requirements. However, many of the practices intended for water quality, also referred to as post-construction BMPs, are impractical for airfields where ponding water can attract wildlife and create hazards for aviation.

The methods approved for stormwater quality by the Ohio EPA are described in its *Rainwater Manual*[7], and consist of management practices and structural practices. The management practices include reduction of impervious areas, low impact development (LID), conservation development and stream and wetland setback areas. Each method should be evaluated for the proposed development projects. They encourage maintaining natural hydrologic functions by absorbing and infiltrating precipitation where it falls. Instead of conveying and treating stormwater solely in large end-of-pipe facilities located at the lower end of drainage areas, stormwater is treated through small-scale landscape practices and design approaches that preserve natural drainage features and patterns.

Structural practices described in the *Rainwater Manual* consist of water quality ponds, infiltration trenches, sand and organic filters, grass filters, bioretention areas and permeable pavement. These practices are difficult to use safely on or near an airfield. Water quality ponds and bioretention areas require ponding water – which attracts wildlife. Infiltration trenches require native soils with high infiltration rates to work properly – these are not generally found on Airport property. Grass filters are not considered a stand-alone BMP, but can be used as part of a treatment train to reduce sediment in stormwater runoff — most of the airfield infields can be considered grass filters. Permeable pavement is only a viable option at locations with light traffic, since it is not as strong as conventional pavement. As a result, sand filters have been the structural practice most commonly used at the Airport for stormwater quality.

[7] Rainwater and Land Development: Ohio's Standard for Stormwater Management, Land Development and Urban Stream Protection, prepared by the Ohio Department of Natural Resources, Division of Soil and Water Conservation, Third Edition 2006, updated 2012

Each of the proposed developments on Airport property will require controls for stormwater quantity and quality and will be classified as redevelopment, new construction or a combination of the two under the Ohio EPA General Construction Permit.

Redevelopment projects are defined as those sites previously developed where post-construction BMPs for water quality were not installed, but they may already have stormwater quantity controls in place.

In all cases, stormwater management at each proposed development should follow these principles:

- Respect the Watersheds: As sites are developed, avoid transferring storm flow runoff from one drainage area to the other. Even when storm flows are detained or retained, impacts further downstream are difficult to predict. In addition, since the various Airport outfalls are monitored through the Ohio EPA Industrial Permit, the quantity and quality of stormwater at each outfall needs to continue to stay within the permit limits.

- Control Stormwater Quantity: All projects must ensure that post-development stormwater outflows remain at the same levels or below those of pre-development outflows. Some of the existing detention ponds on Airport property were designed with excess capacity for future development and should be considered first.

- Control Stormwater Quality: The post-construction BMPs for each project must be designed to meet the current permit requirements. Sand filters have been used on prior projects at CAK because they don't rely on open-air ponding that could attract wildlife. However, the selection of post-construction BMPs is evolving and other options may be available in the future. Factors to consider for a post-construction BMP on Airport property include the potential for attracting wildlife, accessibility for maintenance and the presence of pre-treatment features such as grass filters in the airfield.

- Consider Maintenance Requirements: All stormwater control features require maintenance and their location should be selected so that maintenance activities have minimal impact on Airport operations. In addition, the needs for specialized maintenance equipment and personnel training should be considered, since the stormwater control features are to be maintained in perpetuity.

- Coordinate with the Industrial Permit: Most stormwater quantity and quality controls will improve the quality of water monitored at the Airport outfalls under the Industrial Permit Program. As these controls are implemented and as the data from the industrial permit monitors show improvement, it may be possible to eliminate some of the outfall monitors, resulting in cost savings for the Authority. It is possible to envision a time when CAK could seek coverage under the General Industrial Permit, instead of the more elaborate Individual Industrial Permit.

- Consider Future Projects: When sizing and locating stormwater controls, include some flexibility in the design to allow for future projects and document the assumptions and calculations for future use. The Authority should collect drainage calculations and maintenance and operation manuals that are required by the permit for all stormwater controls installed by tenants on Airport property.

The preferred development strategy for the Airport shows several proposed improvements and developments. A preliminary analysis was performed to arrive at order of magnitude sizes for post-construction BMPs, assuming that sand filters would be used. The sand filters work in combination with 60-foot underground pipes for sedimentation. The results are described below and summarized in **Figure 7-6**. The calculations are included in **Appendix F**. Please note that as each area is developed, the designers for that area will select the most appropriate controls. The features presented here allow initial preparation of construction cost estimates and assessment of impacts.

1. Terminal Expansion, Parking Garage and Surface Parking and Roadway Improvements:
   The detention basin at Outfall 1 was designed with the capacity for the full terminal build-out. No additional stormwater quantity controls will be needed for the proposed parking garage, terminal expansion and parking and roadway improvements. Post-construction BMPs for stormwater quality will be required.

2. Aviation Related Development, West Side, Including the West Side Parallel Taxiway:
   The development is in two drainage areas with existing stormwater quantity controls. The detention pond at Outfall 3 was designed with excess capacity and could be used for the portion in Drainage Area 4, if the existing storm sewer is extended to the basin. The dikes at Outfall 6 would serve the portion in Drainage Area 6. Both portions would require installation of post-construction BMPs.

3. Airfield Improvements and Remote Parking Lot: The following proposed improvements would use existing storm water quantity controls already in place, but would require new post-construction BMPs:
   a. Remote parking lot and reconfigured Taxiways B and D
   b. New taxiway at Runway 1 end
   c. New high-speed exit taxiways
   d. New taxiway between Taxiway E and Runway 23
   e. New taxiway from Runway 19 end to GA hangars

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Stormwater Quality Controls

(Preliminary Assessment to Evaluate Order-of-Magnitude Impact; final controls to be selected and designed during project development)

1 1 Row 60" Pipe, 273 LF
2 Sand Filters, 10' x 20' each

2a 18 Rows - 60" Pipe, 1224 LF each
5 Sand Filters, 80' x 30' each

2b 12 Rows - 60" Pipe, 822 LF each
4 Rows - 60" Pipe, 534 LF each
3 Sand Filters, 75' x 30' each

3 14 Rows - 60" Pipe, 792 LF each
3 Sand Filters, 85' x 25' each

4 3 Rows - 60" Pipe, 860 LF each
2 Sand Filters, 50' x 15' each

5 3 Rows - 60" Pipe, 570 LF each
5 Sand Filters, 10' x 20' each

6 3 Rows - 60" Pipe, 548 LF each
5 Sand Filters, 10' x 20' each

7 2 Rows - 60" Pipe, 430 LF each
3 Sand Filters, 10' x 20' each

Figure 7-6
Post Construction BMPs

7.3 SUSTAINABLE MANAGEMENT PLAN

The Akron-Canton Regional Airport Authority is committed to promoting and implementing environmentally- and socially-responsible business practices throughout the Akron-Canton Airport by balancing social, environmental and economic needs for the well-being of the community and its employees.

In early 2014, the Authority began the preparation of a Sustainable Management Plan to incorporate the principles of sustainability into the everyday operation and long-term planning of the Airport. This is being done to ensure the Airport's operational viability and service to the traveling public well into the future. From an airport management perspective, the Authority's sustainability program will focus on actions that support the following goals:

- Promoting social progress
- Enhancing the customer experience
- Protecting and conserving natural resources
- Reducing the Airport's carbon footprint
- Increasing efficiency and reducing operational and maintenance costs
- Promoting local and regional economic growth

7.3.1 Current Sustainable Activities at CAK

Early in the process of developing the Sustainable Management Plan, a working group of Airport stakeholders, staff and tenants identified several sustainable (or green) actions that were currently being performed at the Airport. Several of those items are listed below:

- Centralized de-icing pads and glycol recovery
- Anaerobic fluidized bed reactor by-product – methane – is used to heat treatment plan and will potentially heat proposed sand storage building (*CAK is the second aviation facility in the world to install and use this technology)*.
- Building management systems
- Recycling programs in office areas and food service areas
- Low-flow, automatic toilets and sink fixtures in restrooms
- Fritted glass in portions of new terminal allows natural daylight while reducing heat transmission
- Terrazzo flooring, instead of carpet, is a long-lasting material that reduces cleaning and maintenance costs
- High-efficiency boilers and HVAC equipment being installed with renovation and upgrade projects
- Non-smoking facility with smoking prohibited near entrances
- Public transportation – bus lines run to the Airport as part of the Stark Area Regional Transit Authority and Akron METRO Regional Transit Authority
- High efficiency, LED lighting fixtures being installed in new construction and in renovated areas when appropriate — in the terminal and on the airfield
- Part 150 Noise Compatibility Program – voluntary program to manage aircraft noise and compatible land use within the surrounding community
- Cell phone lot to improve customer convenience and reduce automobile emissions
- Airport Stormwater Pollution Prevention Plan (SWPPP) – current stormwater discharge from the Airport is less than the calculated pre-development quantities.

- Airport Spill Prevention, Containment and Countermeasures (SPCC) Plan – to manage hazardous materials spills

7.3.2 Future Sustainability Actions

When complete, the Sustainable Management Plan will identify specific objectives, actions and performance targets across several sustainability-related topics or focus areas. The focus areas and associated objectives are listed in **Table 7-13**. The plan will also include mechanisms for monitoring performance, reporting on achievements and updating and continually improving the program.

Table 7-13 – Sustainability Focus Areas and Objectives

Focus Area	Objectives
Administration	• Integrate sustainable practices into the policies, business processes, written agreements, day-to-day operations and long-term planning of the Airport. • Provide opportunities and incentives to improve the health and well-being of the employees. • Develop the CAK workforce through proper recruitment, training, retention and diversity.
Energy Management	• Maximize energy efficiency and minimize energy consumption in buildings and Airport property. • Evaluate and implement alternative energy procurement programs and renewable source generation.
Water Resource Management	• Maximize water conservation and minimize water use in buildings and Airport property. • Protect water quality through effective stormwater management and pollution prevention initiatives.
Air Quality	• Minimize greenhouse gas emissions associated with Airport activities. • Develop and operate Airport facilities in accordance with federal NEPA provisions for criteria air pollutants.
Green Construction	• Integrate sustainable approaches and practices into the design and construction and of facilities at the Airport.
Solid Waste & Recycling	• Minimize generation of solid waste including universal, hazardous and construction wastes. • Reuse and recycle collected waste to the maximum extent possible. • Ensure that hazardous materials are properly stored and handled and do not pose a threat to the environment or human health.
Community Connection	• Promote compatible on- and off-Airport land uses that support continued Airport operations and minimize impact to the surrounding communities. • Strengthen partnerships with local government and community organizations. • Engage the public through dedicated outreach, education and involvement in the long-term planning for the Airport. • Foster intermodal transportation options to and from the Airport.
Economic Vitality	• Develop and maintain robust product and service offerings (air service, concessions, general aviation) and customer friendly facilities. • Promote on- and off-Airport business development, revenue generation and job growth and retention. • Strengthen partnerships with the business community and universities that promote business diversity. • Make prudent financial decisions and employ full life-cycle cost evaluations.

Source: Akron-Canton Airport Sustainable Management Plan, Working Paper #1, May 2014

7.3.3 Sustainability and the Master Plan Recommendations

Environmental, community and financial factors have been taken into consideration throughout the master planning process. This is in direct support of the principles of sustainability. As described in **Chapter 2**, environmental resources and considerations were identified during the early Airport inventory process. Local, state and national socioeconomic conditions were factored into the projections of aviation activity described in **Chapter 3**. The facility requirements identified in **Chapter 4** were in direct response to anticipated user demands and are intended to maintain the highest level of safety, operational efficiency and customer convenience. The land use planning discussed in **Chapter 5** addressed on- and off-Airport land use compatibility, with consideration of synergies between the various types of aircraft operators, between Airport activities and the surrounding communities, and between the Airport and the regional planning and zoning initiatives. The development concepts in **Chapter 6** were evaluated on their ability to maximize return on investment, operational efficiency, long-term flexibility and potential environmental impacts. The environmental analysis and stormwater management planning described in this chapter indicate that the resultant development strategy can be implemented within the regulatory framework and most likely without adverse impact to the natural or man-made environments. The financial feasibility of the recommended improvements, as evaluated in **Chapter 8**, reflect the Authority's customer-centric, financially prudent management philosophy, which directly supports economic vitality and quality of life in the region. Additionally, the Authority has engaged the community and stakeholders throughout the master planning process through its highly active outreach, social media and relationship building programs.

As the Authority moves forward with its ongoing improvement of Airport facilities and services, the Sustainable Management Plan will be a guide for implementing sustainable measures. The Plan will establish mechanisms for incorporating environmentally-friendly technologies, practices and procedures into daily activities and long-term facility planning.