

CHAPTER 3 – ENVIRONMENTAL BASELINE STUDY

3.01 Background

This chapter discusses 22 specific categories of potential environmental impact to determine what effects would result from development at the Airport. Before any major development would occur (as specified in Federal Aviation Administration Order 5050.4A, *Airport Environmental Handbook*), a federal-level environmental assessment may need to be undertaken to fully assess any possible project-related environmental impacts. **This environmental study is not a federal-level environmental assessment**, but rather a review of the areas of potential environmental impacts. For additional information, see Appendix C for Environmental Correspondence.

3.02 Noise

A range of aircraft, from small single-engine propeller driven airplanes to large business jets, fly in and out of the Erie International Airport. Aircraft generated noise is generally the most serious environmental impact at airports of all types. These impacts are strongly affected by the volume and type of traffic at the facility.

The impact of existing and future noise levels is described through the use of the Day-Night Average Sound Level (DNL) methodology, an official system for quantifying cumulative aircraft noise. DNL is an energy summation methodology that depicts the total aircraft generated sound over a 24-hour period. For the Noise Exposure Map for Erie International Airport, approved by the FAA on June 24, 1992, the Integrated Noise Model (INM), Version 3.8, was used to calculate nested contours (lines of equal cumulative noise exposure) based on a typical day's traffic. These also reflect the statistical average of the conditions which exist throughout the entire year. Determinations of exposure levels are typically displayed as contours with values ranging from DNL 55 dB, to DNL 75 dB in five unit increments.

The DNL methodology also considers the following factors in developing noise exposure contours:

- Aircraft and engine type (i.e., the source noise characteristics)
- Mix of differing aircraft types
- Flight tracks and operational profiles
- Volume of daily operations by runway
- Runway elevation and runway length

The DNL system is useful primarily as a means of gauging the degree of compatibility of various land uses impacted by the differing levels of noise, and comparing the noise impacts between several different airports or variations in traffic levels. If this system is effectively used to control development in the airport vicinity, it can prevent noise sensitive development in areas which have unacceptable noise exposure. This does not necessarily mean that there will never be a noise complaint. Individuals react differently to specific events, as well as to elevated average levels of noise exposure. Thus, unusually noisy aircraft

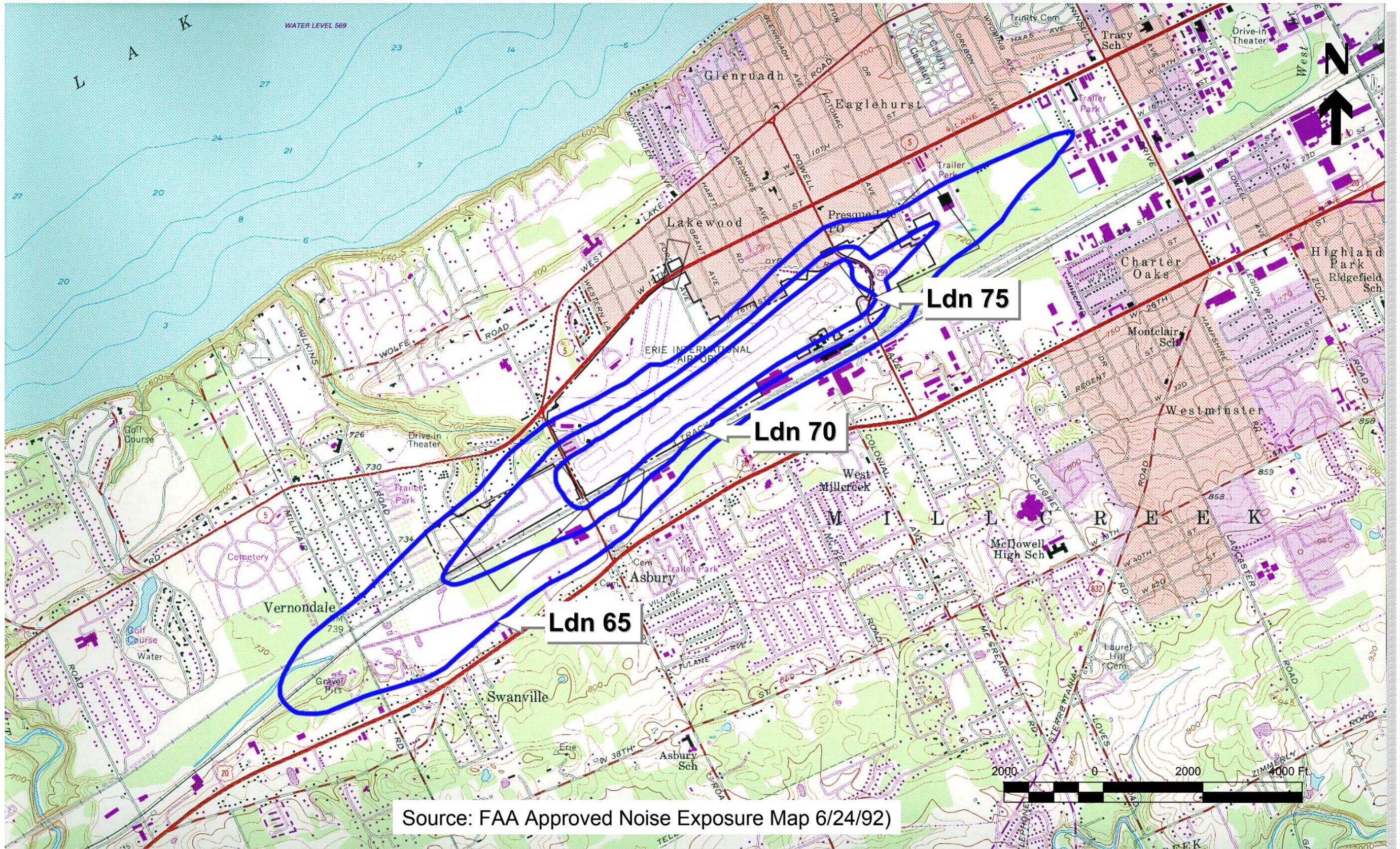
operating normally or relatively quiet aircraft flying unusually close to neighborhoods can trigger occasional or isolated complaints when no widespread noise problem may exist.

NOISE EXPOSURE CONTOURS

As shown, the area within DNL 65dB, which is the generally accepted level for determining the onset of significant impacts, encloses approximately 1.39 square miles and extends off of airport property to the southeast and northwest in areas that are largely industrial. The noise exposure summary identified the population within the DNL 65 dB as totaling 551 in some residential areas along the north side of the Airport. (See the next section for a discussion of noise-related compatible land uses).

The next phase of the Master Plan (alternatives analysis) will model and evaluate future noise impacts that may result with different development scenarios.

At Erie International Airport, a total of 68,210 aircraft operations took place in 1988, the base year for the FAR Part 150 Noise Study. The resulting noise exposure contours for the existing case are shown in Figure 3-1.



Source: FAA Approved Noise Exposure Map 6/24/92)

3.03 Compatible Land Use

The compatibility of existing and planned land uses near an airport is usually associated with the extent of noise impacts related to the airport. Land use compatibility standards have been developed through surveys of residents living near airports worldwide. The normal standards, which are associated with the Day-Night Average Sound Level Methodology, are shown in Table 3-1. These standards are incorporated from Federal Aviation Regulations (FAR) Part 150 and are intended as guidelines for development recommendations in noise exposure areas. All land uses are considered compatible below the DNL 65 dB level.

It is recognized here that there may be some impact occurring below the DNL 65 dB level. The reasons for this may be varied. In some instances, individuals or community activities may be extremely noise sensitive (e.g., housing for the elderly, community facilities, schools, and libraries). In addition, these noise determinations are based on averages that may or may not reflect the actuality of the daily situations. For example, peak traffic levels may be considerably higher than the average. During the summer months of the year, local residents using outdoor living areas or who normally keep their windows open for ventilation may experience some annoyance. Thus, the standards are not meant to supersede local judgements concerning what is or is not acceptable in a given community, but rather to define levels which are normal and reasonable.

**TABLE 3-1
LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS**

Land Use	Yearly day-night average sound level (Ldn) in decibels					Over 85
	Below 65	65-70	70-75	75-80	80-85	
RESIDENTIAL						
Residential, Other Than Mobile Homes And Transient Lodgings	Y	N (1)	N (1)	N	N	N
Mobile Home Parks	Y	N	N	N	N	N
Transient Lodgings	Y	N (1)	N (1)	N (1)	N	N
PUBLIC USE						
Schools	Y	N (1)	N (1)	N	N	N
Hospitals and Nursing Homes	Y	25	30	N	N	N
Churches, Auditoriums and Concert Halls	Y	25	30	N	N	N
Government Services	Y	Y	25	30	N	N
Transportation	Y	Y	Y (2)	Y (3)	Y (4)	Y (4)
Parking	Y	Y	Y (2)	Y (3)	Y (4)	N
COMMERCIAL USE						
Offices, Business and Professional Wholesale and Retail-Building Materials, Hardware and Farm Equipment	Y	Y	25	30	N	N
Retail Trade-General	Y	Y	25	30	N	N
Utilities	Y	Y	Y (2)	Y (3)	Y (4)	N
Communications	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing-General	Y	Y	Y (2)	Y (3)	Y (4)	N
Photographic and Optical	Y	Y	25	30	N	N
Agriculture (except Livestock) and Forestry	Y	Y (6)	Y (7)	Y (8)	Y (8)	Y (8)
Livestock Farming and Breeding	Y	Y (6)	Y (7)	N	N	N
Mining and Fishing, Resource Production and Extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor Sports Arenas and Spectator Sports	Y	Y (5)	Y (5)	N	N	N
Outdoor Music Shells, Amphitheaters	Y	N	N	N	N	N
Nature Exhibits and Zoos	Y	Y	N	N	N	N
Amusement Parks, Resorts and Camps	Y	Y	Y	N	N	N
Golf Courses, Riding Stables and Water Recreation	Y	Y	25	30	N	N

**TABLE 3-1 CONT.
LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS**

*The designation contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving compatible land uses.

Key:

Y (yes) Land use related structures compatible without restrictions

N (No) Land use and related structures are not compatible and should be prohibited

NLR Noise Level Reduction (outdoor to indoor) to be achieved though incorporation of noise attenuation into design and construction of structure.

NOTES:

- (1) Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide ad NLR of 20 dB. Thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.
- (2) Measures to achieve NLR of 25 must be incorporated in the design and construction of portions of these buildings where the public is received; office areas, noise sensitive areas ore where the normal noise level is low.
- (3) Measures to achieve NLR of 30 must be incorporated in the design and construction of portions of these buildings where the public is received; office areas, noise sensitive areas ore where the normal noise level is low.
- (4) Measures to achieve NLR of 35 must be incorporated in the design and construction of portions of these buildings where the public is received; office areas, noise sensitive areas ore where the normal noise level is low.
- (5) Land use compatible provided special sound reinforcement systems are installed.
- (6) Residential buildings require an NLR of 25.
- (7) Residential buildings require an NLR of 30.
- (8) Residential buildings not permitted.

Source: FAR 150 Airport Noise Compatibility Planning, Appendix A, U.S. Department of Transportation, Federal Aviation Administration (December 1995).

A review of the 1999 Fairview Township (located west of the Millcreek Township limits at Asbury Road) Zoning Ordinance shows a provision of height restrictions “where such structures would encroach into the Airport Approach Height Limitation Zones.” Fairview Township’s 1998 Comprehensive Plan does consider the recommendations from the 1990 FAR Noise Compatibility Program’s land use management plan, and those areas within the future 65 DNL noise contour were zoned accordingly.

A review of the Millcreek Township Zoning Ordinance (enacted 1974, and amended through 1999) indicates that there are height and area restrictions for buildings and structures to conform to “Federal Regulations relative to objects affecting navigable air space and to the Airport Zoning Ordinance of Millcreek Township.”

Millcreek Township presently is in the process of updating their Comprehensive Plan. The Town Planner indicated that the comprehensive master plan in progress continues to encourage commercial and industrial uses around the Airport which are compatible land uses such as those existing around the Airport presently. The comprehensive plan in progress does not specifically consider the Airport or the recommendations from the Land Use Management Plan in the approved FAR Part 150 Noise Compatibility Program (1992).

Erie County, PA is in the process of developing their *draft* comprehensive master plan for the county. Millcreek Township is coordinating with Erie County on the update of their comprehensive master plan. Development of appropriate compatible land use controls or proper zoning near the airport should be encouraged. The county's comprehensive master planning effort should consider this opportunity for the Airport to ensure and encourage surrounding compatible land use development.

3.04 Social Impacts

Social impacts that need to be considered are those associated with business or residential relocation, or other community disruption which may be caused by the operation of a facility or by development. Table 3-1, showing FAR 150 Airport Noise Compatibility Planning standards for land use compatibility, provides a preliminary basis for the determination of social impacts.

Industry, commercial businesses (predominantly strip development) and vacant land border the airport property to the east, south and west. Residential communities within the airport environs are located predominantly along the northern limits of the Airport. Residential areas can be described as a combination of single family residential and multiple dwellings, including substantial areas of mobile home parks in the northeastern quadrant and beyond the Runway 6 end of the airport environs.

A proposed runway extension, if needed to satisfy aviation demand, may involve the relocation of Powell Avenue, and therefore may likely alter surface transportation patterns. The road, according to the 1990 *Erie International Airport Master Plan*, has been relocated once before for a 500-foot runway extension. Powell Avenue is a principal two-lane arterial. The road and Powell Avenue Bridge serve north and southbound traffic in the Town of Millcreek between S.R. 0020 and S.R. 005 (major east-west roadways). Adjacent connecting roadways are Asbury Road (off the west end of the airport) and Peninsula Drive (approximately 6,500 feet east of Powell Avenue).

3.05 Induced Socioeconomic Impacts

Induced socioeconomic impacts refer to the stimulation of residential housing construction or the institution of business or other activities which may result from the increases in use fostered by airport development.

Regional growth that is directly attributable to the proposed development of Erie International Airport is anticipated to be a positive benefit overall. Proposed development will enable Erie International Airport to become more competitive in the movement of goods within the global freight market. For instance, it is expected that the acquisition, development and marketing of the former Fenestra and Penn Brass facilities will position the Erie International Airport to attract specialized cargo operations. Furthermore, the potential runway extension and terminal improvements will ultimately boost passenger service and

airfreight flying in, and out of the region.

Potential for induced impacts resulting from airport improvements is limited in the area north of the Airport where the land area contains “older development” and is near being completely built out. The potential for induced socioeconomic impacts is more likely to the south of the Airport where there is greater potential to expand into undeveloped land areas.

A study prepared by Urban Engineers of Erie, Inc. in 1996, entitled *Transportation Needs Analysis: Erie International Airport and Surrounding Highway Network*, identified potential impacts to surrounding communities based on a preliminary analysis of the proposed Runway 6-24 extension. Alternatives considered in this report were expansions upon the closure or relocation and replacement of Powell Avenue. The Airport’s surrounding roadway network is currently in need of capacity enhancements to improve the existing level of service (LOS) at intersections on West 12th Street and Asbury Road, according to recommendations provided in the *Transportation Needs Analysis* study. Additionally, the report stated, “Any change in the roadway network that either eliminates a roadway or increases traffic demand on other roadways can impact response times to emergency calls.” Potential impacts from the preliminary study range from increases in emergency response times by adding demand to the surrounding roadway network to impacts on the Millcreek School District busing schedules and equipment maintenance resulting from either a closure or relocated Powell Avenue.

Information provided by an informal survey (October 2000) of community public service providers indicates that the Millcreek Paramedic Service ambulances, Millcreek Township Police and fire stations within the vicinity of the Airport do use Powell Avenue as a major north-south connecting route. Therefore, these services could be impacted by a potential runway extension. Potential impacts to bus transit are anticipated to be minor. Erie Metropolitan Transit Authority does not use Powell Avenue for bus routing, nor is Powell Avenue slated for future bus routes.

3.06 Air Quality

Presently, Erie County is considered to be in an attainment area for all National Ambient Air Quality Standards (NAAQS) until January 16, 2001. After that time, the county will be marginal non-attainment for ozone. Because of the NAAQS ozone non-attainment status, it will be necessary to make a general conformity determination for airport development projects.

In accordance with FAA Order 5050.4A, *Airport Environmental Handbook*, no air quality analysis should be performed or is needed if the forecasted aircraft activity at the airport is less than 180,000 operations annually. The largest preliminary forecast for Erie International Airport for the twenty-year planning period is unlikely to be more than double the 1998 operations total of 63,256. (This number of annual operations is 35% of the measurement point). Therefore no further analysis is needed as no air quality impacts are expected. Though no air quality analysis is required, it is recommended that any subsequent Environmental Assessment consider an air quality analysis.

Temporary impacts that may result in fugitive dust from movement of heavy construction equipment and exposure and disturbance of surface soils during the construction process will require measures to minimize impacts. Measures include the restriction of the amount of exposure surface at any one time and wetting exposed surfaces to stabilize dust particles. The provisions of FAA Advisory Circular 150/5370 -10A, *Standards for Specifying Construction of Airports* should be incorporated into construction specifications to minimize air quality impacts.

3.07 Water Quality

Erie International Airport receives water from the City of Erie Water Authority. The city's potable water source is Lake Erie, processed through the municipal water authority's system. The Town of Millcreek is also supplied by a municipal system (Millcreek Water Authority) and based on preliminary research, there are no known ground water wells on the airport property.

The Airport is located within the Lake Erie Watershed. Smaller or "sub" watersheds that drain through Millcreek Township include Walnut Creek, Mill Creek, and Cascade Creek. The nearest of the three is Walnut Creek, which is approximately 9,000 feet south of the Airport. Cascade Creek is east of Runway 24 approximately 12,000 feet. Mill Creek is approximately 5 miles to the east of the Airport. A small tributary, Wilkins Run is located just 1,000 feet west of the Airport and drains into Lake Erie.

Any proposed construction on the airport property will have minimal impact on water quality. To ensure this, soil erosion and siltation controls would be used to minimize adverse water quality effects during construction as specified in FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports*. Requirements regarding construction impacts on water quality pertain to stormwater discharges. The federal Clean Water Act, established in 1977, which is an amendment to the 1972 Federal Water Pollution Control Act (33 U.S.C. s/s 1251 et seq.) provides the authority to establish water quality standards. The act also provides the authority to regulate discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges (Section 402) and for dredged or fill material (Section 404).

A separate federal issue associated with the permit application process is the need for a Water Quality Certification under Section 401 of the Federal Water Pollution Control Act. (Note: If PennDEP approves an application and issues a Water Obstruction and Encroachment Permit (Chapter 105), the review for the 401 certification will have been completed and the 401 certification will be included with the permit). See Wetlands discussion (Section 3.11) for Chapter 105 permit requirements associated with construction impacts on wetlands.

On Nov. 16, 1990, the U.S. Environmental Protection Agency developed permitting regulations for stormwater discharges as required by the federal Clean Water Act (33 USC §

1251 *et seq.*). Effective Oct. 1, 1992, all construction activities proposing to disturb five or more acres of land must be authorized by a National Pollutant Discharge Elimination System (NPDES) Permit.

In Pennsylvania, the NPDES permit program is delegated to and administered by the Pennsylvania Department of Environmental Protection (DEP). Dischargers must also consider pollution prevention measures for the storage and use of chemicals, fuels and other potential pollutants at construction sites. If these materials or wastes are to be used or stored at a site, a Preparedness, Prevention and Contingency (PPC) plan is required. The PPC plan must include an emergency response program, inventory of materials and wastes, inspection and housekeeping program, spill and leak prevention/response, and site security.

The Airport presently holds an approved NPDES General Permit for their deicing facility, which is renewable, every 3 years. The Airport will need to reapply for renewing the permit in December of 2000. Additionally, the Airport has an approved Stormwater Drainage Plan to control impacts to water quality. The Airport also holds a NPDES General Permit for regular stormwater discharge off the site through a series of outfalls to the municipal stormwater system. A permit, applied for in the spring of 2000, is renewable every five years.

To reduce the amount of pollutants in the storm water runoff, the Airport installed a system which collects and retains all deicing solvents. The storm water drainage system at the Airport controls runoff from the deicing system. The storm water runoff procedure is diverted to a deicing solvent collection system where it flows to a pump chamber and is then pumped to an approximately 121,000 gallon holding tank. From the holding tank, the solvents are then pumped at a rate of no greater than 20 gallons per minute to the Millcreek Sanitary Sewer System and ultimately to the City of Erie Waste Water Treatment Facility.

An agreement between the City of Erie and the Millcreek Township provides for a threshold of “ultimate flow capacity” concerning the many access connection points that the Township has with the City of Erie Wastewater Treatment Facility. Therefore, if the Township exceeds this threshold, it is subject to fines and penalties under the agreement. Future development at the Airport and any resulting increase in sewer loads are not anticipated to adversely impact the Erie municipal system capacity since the development of the Airport has been planned for in municipal service plans. Additionally, future airport development is not anticipated to require modifications to the current NPDES permits.

3.08 Department Of Transportation Act Section 4(f) Lands

Section 4(f) of the DOT Act places restrictions on the use of any significant publicly-owned recreational land, public park, recreation area, wildlife and waterfowl refuge or historic site of national, state, or local significance.

There is one publicly-owned park located southeast of Runway end 6 bounded by the Norfolk Southern/ CSX Railroads to the north, the Millcreek Township limits to the east, and US Route 20 to the south. (See Figure 3-2). Though recreation may be considered as a compatible land use, use within the meaning of Section 4 (f) includes not only the physical taking, but also adverse indirect impacts under constructive use (23 CFR § 771.135). Constructive use is defined by the courts as that which substantially impairs the use of the facility. Substantial impairment occurs only when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished.

Using 14 CFR 150 (Part 150) as guidance, if the proposed action will cause noise sensitive areas to experience an increase of DNL 1.5 dB or more at or above DNL 65 dB noise exposure, the TOS is exceeded. A determination of impairment may require a Section 4 (f) evaluation for the recreational facility in any subsequent Environmental Assessment for proposed airport development.

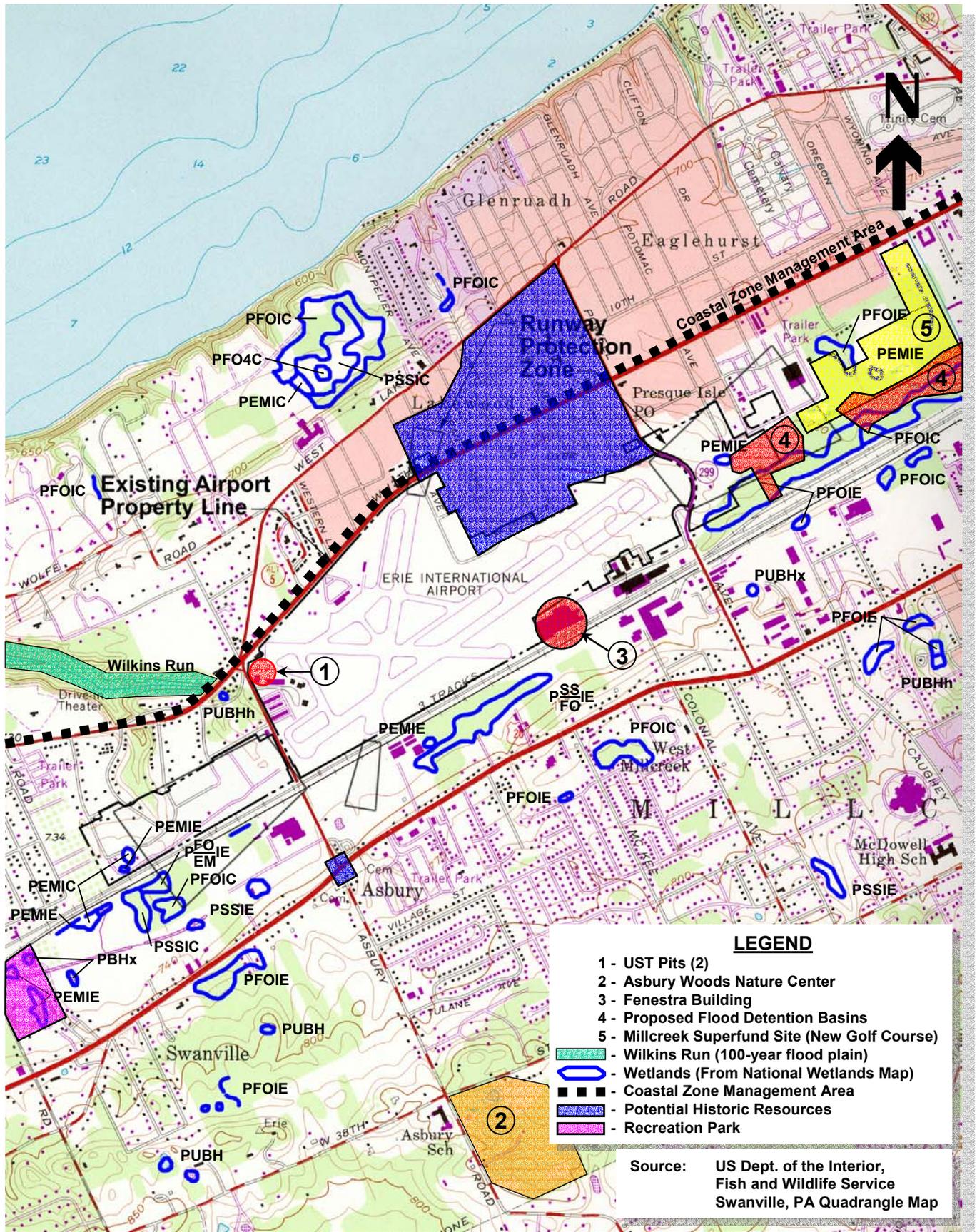
3.09 Historic And Cultural Resources

There are two basic laws that apply to this category of impact. The first law is the National Historic Preservation Act (NHPA) of 1966, (as amended June 1999). Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation (an independent government agency) a reasonable opportunity to comment.

Through the requirements of the NHPA, any work at the Airport that involves Federal funding, licensing, or permitting must consider the effects of a project on a historic property. The responsible Federal agency must determine whether an undertaking could affect historic properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. If so, it must identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO) to consult with during the process.

The second law is the Archeological and Historic Preservation Act of 1974, which provides for the survey, recovery, and preservation of significant archeological and historical data.

Preliminary consultation with the Pennsylvania Historical and Museum Commission indicates that an “area of potential effect” must be developed in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended in 1980, and the regulations (36 CFR 800) of the Advisory Council on Historic Preservation. Therefore, specific cultural or historic resources on the airport property should be assessed in a Phase I Evaluation of those resources (both architectural and archaeological) on the Airport. As project planning stages progress, further coordination will be required with the Bureau of Historic Preservation for potential impact on cultural resources that may be located within any additional land required for future airport growth.



Scale: 1" = 2000'

ERIE INTERNATIONAL AIRPORT
TOM RIDGE FIELD



ENGINEERS
DESIGN BUILD
TECHNICAL RESOURCES
OPERATIONS

Erie International Airport Environmental Inventory Map Figure 3-2

3.10 Biotic Communities/ Endangered And Threatened Species Of Flora And Fauna

Consultation under the Fish and Wildlife Coordination Act (48 Stat. 410, 16 U.S.C. 661 et seq.) and pursuant to the Endangered Species Act, (87 Stat. 884, as amended; 16 USC 1531, et seq.) requires consideration of biotic communities and endangered and threatened species for all proposals. Section 7 of the Endangered Species Act requires each Federal agency to insure that any action the agency carries out "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat" of critical species.

According to the United States Department of the Interior (USDOI) U.S. Fish and Wildlife Service, "except for an occasional transient species, no federally listed or proposed threatened or endangered flora and fauna under Service jurisdiction are known to occur within the project impact area." Therefore, no biological assessment or further Section 7 consultation under the Act is required with the Fish and Wildlife Service.

Consultation with the Pennsylvania Department of Conservation and Natural Resources (DCNR) indicated that review using the Pennsylvania Natural Diversity Inventory (PNDI) information system concluded, "no occurrences of species of special concern are located within the project area." Therefore, no impact on endangered, threatened, or rare species is anticipated at this location. Additional coordination was conducted with the PA Fish and Boat Commission and the PA Game Commission (See Appendix C – Environmental Correspondence).

3.11 Wetlands

Wetlands are defined in Executive Order 11990, *Protection of Wetlands*, as "those areas that are inundated by surface or ground water with a frequency sufficient to support...a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas..."

Federally designated wetlands are mapped on airport property and in the area surrounding the airport (see Environmental Inventory Map - Figure 3-2). According to the National Wetland Inventory (NWI) map, there are no known wetland areas located on the airfield proper, but small wetland areas are mapped on Airport parcels southwest and northeast of the airfield.

Since soil maps indicate the presence of hydric soils, a determination will be needed for the presence or absence of wetlands potentially impacted by proposed development. It is recommended that a wetland survey and delineation conforming to the procedures outlined in the Army Corps of Engineers Wetland Delineation Manual (1987) be prepared to evaluate the airport property and areas of potential acquisition to conduct in any subsequent environmental assessment. The resulting report should also indicate those wetlands

hydrologically connected to the coastal zone that may be impacted by proposed airport development.

As part of the remediation plan for the Millcreek Superfund Site (see Section 3.19, Hazardous Materials and Solid Waste Impacts), wetlands are being created off Runway 24. A portion of the Principal Responsible Parties (PRPS) for the Millcreek Superfund Site are presently undertaking the remediation plan, and will turn the land over to the Millcreek Township when the project is complete. Seven acres of wetlands are being created as a result of the project. Related to this project is the construction of flow detention basins near these wetlands (east and west of the proposed Flow Detention Basin (FDB) area, south of the existing airport property limits and southwest of West 17th Street. The FDB area is currently pending approval from the Penn DEP. The Millcreek Township will use Community Development Block Grants (CDBG) for the construction of the FDBs.

Supporting state efforts, the federal Clean Water Act, established in 1977, which is an amendment to the 1972 Federal Water Pollution Control Act (33 U.S.C. s/s 1251 et seq.) provides for the protection of wetlands under the Army Corps of Engineers Section 404 permitting program.

According to FAA Order 5050.4A, *Airport Environmental Handbook*, “a proposal is considered to affect wetlands if it would involve development in a wetlands area; involve dredging, filling, draining, channelizing, diking, impounding, or otherwise directly impact a wetlands area; involve disturbing the water table of an area in which a wetland lies; or indirectly affect a wetland by impacting regions upstream or downstream or inducing secondary development.”

Executive Order 11990, *Protection of Wetlands* provides that Federal agencies avoid possible adverse impacts associated with the destruction or modification of wetlands. It further states that Federal agencies avoid direct or indirect support of new construction of wetlands wherever there is a practicable alternative and to include all practicable measures to minimize harm to wetlands. If a proposal would affect a wetland and there is no practicable alternative, the following requirements apply:

- Airport runoff may be considered to be a discharge subject to Federal or state National Pollutant Discharge Elimination system permit pursuant to the Clean Water Act when the surrounding environment is a wetland (see Section 3.07, Water Quality).
- If a project affects a water resource, coordination is required under the Fish and Wildlife Coordination Act with the Fish and Wildlife Service and the state agency having jurisdiction over the wildlife source. FAA Order 5050.4A, *Airport Environmental Handbook* states, “If a proposal would cause only a minor permanent alteration of existing habitat, it may be assumed that there would be no significant impact on biotic communities. *Minor alteration* generally refers to the removal of a few acres of habitat, which represent a small percentage of the area’s inventory, or which support a limited variety or number of common wildlife species.” (See Section 3.10, Biotic Communities/ Endangered and Threatened Species of Flora and Fauna).

- Additionally, a wetland which is in or adjacent to a coastal area may be subject to a state coastal zone management program (see Section 3.13, Coastal Zone Management).

For any construction due to airport development, the necessary wetland permits will be acquired before any development will occur that would impact wetland areas. Furthermore, any proposed construction would be guided by requirements under the authority of the Commonwealth of Pennsylvania’s Dam Safety and Encroachments Act. Regulations that provide permitting criteria and wetland mitigation and replacement requirements are found in the Pennsylvania Code Title 25, Chapter 105. A Chapter 105 Water Obstruction and Encroachment permit is needed for any structure or activity which changes, expands or diminishes the course, current or cross section of a watercourse, floodway or body of water.

Proposed mitigation includes, but is not limited to:

- Modification of the design, construction, or operation of the facility, including collection of pavement surface runoff to prevent direct discharge into sensitive areas,
- Waste treatment,
- Development of compatible land uses, and
- Special construction controls (see Section 3.20, Construction Impacts).

As part of this Master Plan, a drainage study has been prepared by C&S Engineers, Inc., that evaluates the drainage requirements for proposed development at the Airport. These projects include the runway extension, the additions of structures and/or parking aprons in the Fenestra area, and the expansion of the main terminal facilities. The study also analyzes the frequent flooding of the Asbury Road underpass at the southwest corner of the Airport to determine the airport facilities’ contribution, if any.

3.12 Flood Plains

Flood plains are defined in Executive Order 11988, *Flood Plain Management*, as "the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year."

The Threshold of Significance (TOS) is exceeded when there is an encroachment on a base flood plain (100-year flood). An encroachment involves:

- A considerable probability of loss of life,
- Likely future damage associated with encroachment that could be substantial in cost or extent, including interruption of service or loss of vital transportation facilities, or
- A notable adverse impact on natural and beneficial flood plain values.

According to the Federal Emergency Management Administration (FEMA) Flood Plain and Flood Hazard Mapping, Erie International Airport is not located within a 100-year flood plain, or within an identifiable flood hazard area. Therefore, there are no impacts to be assessed for this environmental category.

3.13 Coastal Zone Management

The National Oceanic and Atmospheric Administration (NOAA) Regulations (15 C.F.R. Part 930) contain detailed procedures for determining whether an action is consistent with approved coastal zone management programs.

The TOS is exceeded if the proposed project is in a Coastal Zone Management Program or if any of the TOS are exceeded in the following areas:

- Coastal Barriers
- Water Quality
- Biotic Communities
- Construction Impacts

The Lake Erie Pennsylvania Coastal Zone consists of a 63-mile stretch along the Lake Erie shoreline. The Lake Erie Coastal Zone extends from 900 feet to over three miles inland from the shoreline. According to the *Commonwealth Pennsylvania Coastal Zone Management Program Guidance Document (1999)*, this area includes “erosion hazard areas, wetlands, and floodplains in which the state can manage activities with direct and significant impacts on coastal waters.”

The Erie International Airport is not located within the state’s coastal zone management area (see Figure 3-2, Environmental Inventory Map). However, consultation with the Pennsylvania Department of Environmental Protection’s Division of Watershed Support indicated the project will be reviewed for consistency with the policies of the Pennsylvania Coastal Zone Management Program (CZMP). The project will be reviewed for federal consistency requirements under the Federal Coastal Zone Management Act of 1972, as amended, and specifically under 15 CFR Part 930 Subpart F – Consistency for Federal Assistance to State and Local Governments.

The Pennsylvania CZMP Program consists of ten policy areas to guide decision making in the Commonwealth of Pennsylvania. These areas are:

1. Coastal Hazards
2. Dredging and Spoil Disposal
3. Fisheries Management
4. Wetlands
5. Public Access for Recreation
6. Historic Sites and Structures
7. Port Activities
8. Energy Facility Siting
9. Intergovernmental Coordination
10. Public Information

The regulatory aspects of the program are centered on the following state authorities:

1. The Dam and Encroachment Act (controls obstructions and encroachments in wetlands and in the beds of Lake Erie and the Delaware River);
2. Floodplain Management Act;
3. Bluff Recession and Setback Act
4. Clean Streams Act, as amended; and
5. Air Pollution Control Act, as amended.

According to the *Commonwealth Pennsylvania Coastal Zone Management Program Guidance Document (1999)*, “Development is permissible and encouraged in the coastal zone as long as it meets certain performance standards in wetlands and floodplains in the coastal zone, and erosion hazard areas along Lake Erie, and air and water quality regulations throughout the coastal zone.” Therefore, development impacts to wetlands hydrologically connected to the coastal zone, and also erosion impacts that increase stormwater flows upon the Lake Erie Bluff Recession Hazard Area in the Millcreek Township will be reviewed under the above policy consistency requirements.

No significant impact is anticipated under this category.

3.14 Coastal Barriers

The Coastal Barriers Resources Act of 1982 prohibits most federal financial assistance for development within the Coastal Barrier Resource System, which consists of undeveloped coastal barriers along the Atlantic and Gulf coasts.

The State of Pennsylvania contains no Coastal Barrier Areas. Since there are no coastal barriers located on or adjacent to the airport, there would be no impact.

3.15 Wild And Scenic Rivers

The Wild and Scenic Rivers Act describes those river areas eligible to be included in a system that offers protection to rivers which "are free flowing and possess... outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values."

There are no federally designated wild and scenic rivers within the Nationwide Rivers Inventory-Final List of Rivers prepared by the Department of Interior that are located within or near airport property. No significant impact is anticipated under this category.

3.16 Prime And Unique Farmland

If a proposed project involves the acquisition of farmland that will be converted to nonagricultural use, it must be determined whether any of that land is protected by the

Farmland Protection Policy Act (FPPA). The FPPA provides guidelines for identifying the effects of Federal programs on the conversion of farmland to non-agricultural uses.

There are no known protected agricultural uses in the near vicinity of the airport and any proposed development would not include conversion of farmland to non-agricultural uses. Consultation with the USDA Natural Resource Conservation Service further states that “while soil maps show that some of the area would otherwise be considered Prime Farmland or Additional Farmland of Statewide Importance, because most have already been converted to non-agricultural use (such as the area underlying the airport itself) they are no longer considered to be Important Farmlands.”

No significant impact is anticipated under this category.

3.17 Energy Supply And Natural Resources

Potential impacts to energy requirements usually fall into two categories: those which relate to changed demands for stationary facilities (e.g., airfield lighting) and those which involve the movement of air and ground vehicles.

No development of the airport is expected to significantly change aircraft or ground vehicle use which would increase fuel consumption, or change the use of any natural resources in short supply.

No significant impact is anticipated under this category.

3.18 Light Emissions

In order to assess the potential light emissions impacts, the extent to which any additional airport lighting will create an annoyance among people near the installation must be addressed.

Any proposed navigational aids for Erie International Airport will be designed so that they do not shine directly into homes near the airport. Therefore, no impacts are anticipated.

3.19 Hazardous Materials And Solid Waste Impacts

Airport actions that relate only to airfield development (e.g., runways, taxiways, and related items) will not normally result in an increase in the production of solid wastes after project completion. However, any terminal area development may involve circumstances that require consideration of solid waste impacts.

Should a new terminal or expansion of the terminal or other terminal area buildings (e.g., hangars) be planned and designed, measurements of solid waste production and disposal alternatives would have to be assessed at that time. In any case, construction debris would be disposed of at a site approved by Erie International Airport.

Two sites of environmental significance are located on airport property concerning hazardous material. A review of Pennsylvania Department of Environmental Protection files regarding Underground Storage Tanks (UST) indicated that two USTs, which had been removed in October 1997, were found to have contaminated the soils near the sites (one jet and one gasoline). Because the soil contamination was extensive, it was decided to leave them in place and assess the level of contamination. The sites are in the process of remediation, and are continually being monitored. These sites are located in the far northwestern corner of the Airport property near Asbury Road (See Figure 3-2, Environmental Inventory Map).

There are two remaining sites of environmental significance regarding hazardous materials and solid waste impacts adjacent and contiguous to the existing airport property. The sites are included in this discussion as they are related to the potential future development of the Airport (See Figure 3-2, Environmental Inventory Map).

One building site, the former Fenestra Building (68,000 sf) located south of the airport property limits (at 4040 W. 20th St.) will be donated to Erie International Airport as part of a court-ordered settlement. In addition, as part of the settlement that found the Fenestra Corporation in violation of the state Solid Waste Management Act, Fenestra Corporation was ordered to clean up the site. The site, which contained Trichlorethylene (TCE), was found to have contaminated ground water because of improper solid waste disposal. The company recently installed a ground water pumping system (composed of four wells) which pumps out the water puts it through a treatment unit and then discharges the treated water to the municipal sewage plant. The recent installation is intended to decontaminate the ground water to acceptable standards. This building site is being considered for future development of air cargo.

The remaining site of environmental significance is the Millcreek Dumpsite (84.5 acres), which is located approximately 2400 feet east of Runway 24 (See Figure 3-2). This is a federal Super Fund site (EPA ID: PAD980231690), which is currently on the National Priority List (NPL). The site was once a freshwater wetland. In the past, it had been filled with foundry sand and industrial and municipal waste. The site was also operated as an unpermitted active landfill at one time. The site's main significance stems from the bulk disposal of halogenated volatile solvents in soils that resulted in ground water contamination. Additional extensive soil, sediment, and surface water contamination was discovered during remedial investigations.

Remediation of the site as stated in the Record of Decision (05/07/1986) includes:

- Soil excavation and consolidation under a Resource Conservation and Recovery Act (RCRA) cap to meet proposed soil criteria (criteria to be reevaluated during design).
- Site grading- soil cover over remaining low level contaminated soils not exceeding criteria.
- Construction of surface water management basins and ditches.

- Revegetation of soil cover and cap.
- Installation of additional monitoring wells.
- Construction of flood retention basin on property owned by Millcreek Township.
- Pumping and treating of contaminated groundwater.
- Design of the remedy, which will require additional sampling and well installation.
- Operation and maintenance will be implemented by the state of Pennsylvania on the RCRA cap, flood retention basins, surface.

The Mill Creek Superfund site is presently completing remediation. It is under construction for development of a nine-hole public golf course owned by Millcreek Township, Erie County. A groundwater treatment plant was constructed in 1992 and monitoring wells will continue to function to monitor the groundwater. A soil cap is being installed for the golf course development.

The Millcreek site (55.96 acres) falls within the Runway Protection Zone (RPZ). FAA Runway Safety Area (RSA) surface gradient standards for the first 200 feet beyond the runway ends restrict the longitudinal grade to between zero and 3 percent sloping downward from the runway ends. The maximum allowable negative grade is 5 percent for the remaining distance. Should any proposed RSA construction involve earthwork and drainage improvements, there will be potential to disturb the Millcreek site. Further studies are recommended for any proposed development to ensure that measures to avoid disturbance of the site are considered.

3.20 Construction Impacts

Limited short-term effects resulting from construction operations may occur due to proposed development. Specific effects could include noise of construction equipment on the site, noise and dust from the delivery of materials, air pollution, and water pollution from erosion.

For any future development at the Airport, any impact would be controlled and limited by requiring the contractor to comply with all contract provisions for environmental protection. These short-term construction impacts will not persist beyond the construction period, and no significant long-term construction impacts are expected as a result of development at the airport. All construction activities would take place in accordance with FAA Advisory Circular 150/5370 -10A, *Standards for Specifying Construction of Airports*.

Pennsylvania’s Environmental Quality Board approved statewide regulations for erosion and sediment control, 25 Pa. Code, Chapter 102 in September of 1972. These regulations were authorized by the Pennsylvania Clean Streams Law, 35 P.S. §§691.1 *et seq.*, which prohibits the discharge of any pollutant to waters of the Commonwealth. The Pennsylvania Department of Environmental Protection (DEP) has the authority to enforce the requirements contained in the Clean Streams Law. The regulations require that anyone conducting earth disturbance activities use various best management practices (BMPs) to reduce and minimize the amount of sediment leaving the site or the project.

3.21 Environmental Justice

Executive Order 12898 (February 11, 1994) was issued to address Environmental Justice in Minority Populations and Low-Income Populations. The intent of this Order is to ensure that each federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment in a manner that does not exclude persons or populations from participation, does not deny benefits, and does not subject to discrimination because of race, color, or national origin. Ensuring greater public participation and access to information by minority and low-income populations is part of the environmental justice strategy.

No discrimination based on minority status or low income will result with implementation of any proposed project and opportunities will be offered for receiving public comments. Recent population characteristics and those from the U.S. Bureau of the Census 1990 decennial census data indicates a very minute percentage of sensitive environmental justice populations are located near or in the vicinity of potential effects from proposed airport development. Therefore, any proposed action as a result of the Master Plan is not likely to have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

3.22 Protection Of Children From Environmental Health Risks And Safety Risks

Executive Order 13045 requires federal agencies to ensure that their policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks and safety risks. Federal agencies must identify and assess potential environmental health risks to children. Potential environmental health risks are defined to mean risks to health that are attributable to products or substances that the child is likely to come in contact with or ingest, such as air, food, water, soil, and products.

As a result, Executive Order 13045, dated April 21, 1997, states that each Federal Agency:

- (a) Shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and
- (b) Shall ensure that its policies, programs, activities and standards address disproportionate risks to children that result from environmental health or safety risks (i.e., risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest, such as the air, food, water, soil, etc.). (*Federal Register*, April 1997)

No concerns have been raised to date concerning potential environmental health risks to children in the area of the Erie International Airport. The Airport is primarily surrounded by industrial and commercial business south, west and east of the airfield. Therefore, disproportionate risks or impact by the airport on schools, playgrounds, and any other areas

where children may frequent are not likely. Please refer to air, noise and water quality sections for additional information.

3.23 Cumulative Impacts

In order to determine the environmental impact, it is necessary to consider the overall cumulative impact of the proposed action and the consequences of subsequent related actions. CEQ sec. 1508.7 defines cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (*Policies and Procedures for Considering Environmental Impacts*, 12/95, Order 1050.1D). FAA Order 5050.4A, *Airport Environmental Handbook* states “In the context of the CEQ Regulations, the total proposal includes the proposed action and all other actions reasonably related to it in time and probability.”

FAA Order 5050.4A, *Airport Environmental Handbook* states that the 1982 Airport Act requires that Airport Improvement Program applications for projects involving airport location, runway location, or a major runway extension shall not be approved, “ unless the governor of the state in which the project is located certifies that there is "reasonable assurance" that the project will be located, designed, constructed, and operated in compliance with applicable air and water quality standards.”

The airport property is currently within the Erie County metropolitan area, and is within the jurisdiction of the Erie Metropolitan Transportation Study (EATS), the designated Metropolitan Planning Organization (MPO) for the Erie, PA (pop. 177,668) metropolitan area. The proposed Powell Avenue relocation and runway extension are included in the MPO’s Transportation Improvement Program (TIP), and the *Statewide Transportation Improvement Program* (STIP). The STIP, in turn, represents the first component of the State’s 1999 *Twelve Year Transportation Program*. Therefore, the proposed relocation of Powell Avenue and runway extension are identified for federal and state capital program funding.

The existing or baseline (no build) impacts on the environment plus the incremental direct effect of any proposed development, plus the indirect/secondary impacts should be quantified and assessed to explore the environment’s ability to sustain such impact. As previously cited under the discussion of induced socioeconomic impacts, regional growth that is directly attributable to proposed development of Erie International Airport is anticipated to be a positive benefit overall.

However, as planning progresses, the planned development of the former Fenestra and Penn Brass facilities may be reasonably related to the proposed Powell Avenue relocation and runway extension. Cumulative effects may need to be addressed more substantially within the appropriate National Environmental Policy Act (NEPA) document assessing these facilities induced growth impacts combined with the proposed relocation of Powell Avenue

and the runway extension. As previously noted, an Environmental Assessment is being conducted on the potential combined significant effects of the proposed Powell Avenue relocation and the runway extension.

A principal indicator in assessing the potential for cumulative effects is the forecasted population for the Lake Erie Watershed. The population of Erie County increased 3% from 1990-2000 according to the Pennsylvania State Data Center. It is forecasted to grow 6.1 % from 1990-2020 (compared to state growth of 3% from 1990-2000 and 5.8% forecasted from 1990-2020). This is a moderately low rate of growth and corresponds to the state rate of growth overall through the planning period. Therefore, the population growth rate of the Lake Erie Watershed region may not be a specific driving variable of stress on the environment, or associated with habitat loss, for example.

Other stress factors on environmental resources from past and present actions that can reasonably be identified relate to standards already cited with regard to water quality and wetlands. Therefore determining the threshold beyond which cumulative effects significantly degrades a resource or ecosystem should take into account any other proposed development. Should threshold values, as specified in FAA Order 5050.4A, *Airport Environmental Handbook*, paragraph 47e regarding airport related development be exceeded, then cumulative effects should be addressed more substantially within the appropriate NEPA document.

3.24 Summary

This chapter has provided a brief inventory of existing environmental conditions at Erie International Airport. The inventory indicates that development at the Airport has the potential to impact the following environmental categories directly or indirectly:

- Noise
- Compatible Land Use
- Induced Socioeconomic Impacts
- Water Quality
- Department of Transportation Act, Section 4 (f)
- Wetlands
- Hazardous Material and Solid Waste Impacts
- Construction Impacts
- Cumulative Impacts

The potential environmental effects by the proposed facility improvements are identified and gauged against the baseline conditions. When and if a threshold of significance as defined in the FAA Order 5050.4A, *Airport Environmental Handbook* has been exceeded, further analysis may be required in subsequent NEPA documents.

In the evaluation of development alternatives, an assessment will be made as to the potential impact on these categories. The evaluation of alternatives is based on a number of factors. Environmental considerations are weighted as completely and fairly as non-environmental considerations. The objective in developing the Airport Layout Plan is to enhance

environmental quality or minimize environmental impacts while fulfilling the FAA's principal mission to provide for the safety of aircraft operations.

Compliance under NEPA requires potential impacts to be mitigated regardless of level of significance. Additionally, should threshold values, as specified in FAA Order 5050.4A, *Airport Environmental Handbook*, paragraph 47e regarding airport related development be exceeded, then cumulative effects should be addressed more substantially within the appropriate NEPA document.