

5.0 ENVIRONMENTAL OVERVIEW

This section presents an overview of the environment surrounding the Waterbury-Oxford Airport (OXC) and highlights potential impacts associated with the recommended plan. The information herein was considered during the development of the alternatives, as well as the recommendations. Note that a more detailed environmental study, such as an Environmental Assessment (EA), would be required prior to the development of the substantial recommendations contained in this Master Plan Update. The overview identifies the environmental categories of greatest concern based upon initial investigation. The overview can also be used during the scoping process for a future environmental study. Figure 4-7 (last page of Chapter 4) illustrates the development recommendations for OXC.

As indicated in the sections below, the implementation of the recommended developments would involve evaluation of several standard impact categories, with emphasis on aircraft noise, compatible land use, social impacts, water quality, wetlands, cultural resources, and secondary and cumulative impacts.

This overview was prepared following the guidelines of FAA Order 5050.4A, “*Airport Environmental Handbook*,” which requires a review of each of the following categories:

- Aircraft Noise
- Compatible Land Use
- Social Impacts
- Induced Socioeconomic Impacts
- Air Quality
- Water Quality
- USDOT Section 4(f)
- Cultural Resources
- Biotic Communities
- Threatened & Endangered Species
- Secondary and Cumulative Impacts
- Wetlands
- Floodplains
- Coastal Zone Management Program*
- Coastal Barriers*
- Wild and Scenic Rivers*
- Farmland
- Energy Supply & Natural Resources
- Light Emissions
- Solid Waste
- Construction Impacts

*Not applicable at Waterbury-Oxford Airport

The information in this chapter was obtained through field work, agency coordination, and review of existing studies for the Airport, including:

- *Federal Environmental Assessment, Connecticut Finding of No Significant Impact for Airport Master Plan Projects at Waterbury-Oxford Airport* (1995), ConnDOT.
- *Final Environmental Assessment/Final Environmental Impact Evaluation for Extension of Runway 18-36 at Waterbury-Oxford Airport* (2003), USDOT, FAA.
- Various environmental documents published by federal and state agencies (i.e., ConnDEP, USACOE, USFWS, etc.)

Following the Master Plan Update process, a comprehensive EA for the projects anticipated at the Airport will be conducted, and may focus on the first five years of the implementation plan. A federally- and state-approved EA would enable OXC to pursue the design and permitting for each project. An EA would include a public involvement process and public hearing to satisfy environmental regulations, and would also consider the cumulative impacts of past airport-related developments.

The sections below provide a summary of future required environmental analysis, potential impact categories, and anticipated permits regarding the Master Plan Update recommendations.

5.1 Aircraft Noise

Residential, educational, and institutional land uses represent the most sensitive noise receptors. As residential subdivisions are located to the north of the Airport in Middlebury (e.g., Triangle Hills, Steeple Chase, Brookside), and to the south of the Airport in Oxford (e.g., the proposed Glendale and Central Park developments), a FAA FAR Part 150 Noise Study was prepared to evaluate potential aircraft noise impacts in these surrounding communities.

When evaluating aircraft noise impacts, the FAA requires the use of the Day-Night Average Noise Level (DNL) metric, which represents the total accumulation of aircraft noise spread uniformly throughout the day. To compensate for the added annoyance created by nighttime aircraft activity, the DNL metric applies a 10-decibel multiplier (i.e., a penalty) to operations that occur between 10:00 PM and 7:00 AM. The FAA considers average noise levels greater than 65 DNL to be incompatible with residential development.

As illustrated on Figure 5-1, DNL noise contours were generated for OXC activity levels in 2003 and forecast conditions in 2008. These contours were created for the Noise Study using the FAA's Integrated Noise Model (INM). Under the 2003 conditions, 64 homes are located within the 65 DNL contour and 20 homes are located within the 70 DNL contour. Under the forecast 2008 conditions, 53 homes are located within the 65 DNL contour and 5 homes are located within the 70 DNL contour. In both years, all of the affected homes are located in the Town of Middlebury. The reduction in noise exposure from 2003 to 2008 in Middlebury is caused by the recent extension of Runway 36, which shifted takeoffs 500 feet further south, as well as by the anticipated phase out of many of the noisiest jets in use at OXC by 2008.

Since incompatible residential development exists within the vicinity of the Airport, the Noise Study evaluated potential measures to reduce or prevent future noise exposure in these areas. These measures included changes to aircraft/airport procedures (e.g., flight tracks, power settings), and changes to the affected land use (e.g., zoning, soundproofing, purchase of property, avigation easements). Additional noise analysis would also be included in a future environmental study for specific airport improvements.

FIGURE 5-1

5.2 Compatible Land Use

The Waterbury-Oxford Airport is located in both the Town of Oxford and the Town of Middlebury. The municipal boundary intersects the northern portion of the airport property adjacent to Runway 18. The majority of the Airport is in Oxford. Airport property boundaries and existing land use are also illustrated on Figure 5-1.

Surrounding Land Use

Airport property is surrounded by a mix of open, wooded, residential, commercial, and industrial land uses. The land to the south of the Airport is predominately wooded and/or open, with light industrial establishments along Christian Street and several low density residential areas south of an electrical transmission line. The Larkin State Park Trail is located just south of Runway 36. A wide mixture of industrial and residential land uses are located to the north and west of the Airport along Christian Street, Route 188, and other roadways. The land to the east is predominately wooded with scattered residential areas.

Residences are scattered along virtually every roadway in the airport vicinity (excluding I-84). The highest density of housing near the Airport is located to the north of Juliano Road and west of Christian Street (e.g., Triangle Hills.). This area includes over 50 single-family homes and is located one-quarter mile north of the runway.

To control land use immediately beyond runway ends, the FAA recommends easements or acquisition of the property within the Runway Protection Zones.

As discussed in Chapter 1, the development of a power plant has been proposed in Oxford, in a location approximately ½-mile to the east of the Airport. The power plant would be constructed within the planned Woodruff Hill Industrial Park, and operated by Calpine/Towantic Energy LLC. Although this development is not associated with the Airport or the Master Plan Update, it has been discussed throughout the process due to concerns regarding the emission of vertical plumes and their associated impact to aviation activity.

Based on these concerns, the FAA has agreed to conduct a “Safety Risk Analysis of Aircraft Overflight of Industrial Exhaust Plumes” for the development of the Calpine facility. The FAA analysis will address the appropriateness of the power plant site from an aviation safety standpoint. Based on their findings, the previous conclusions regarding the power plant may be revised, including re-examination of a 2001 Declaratory Ruling for the proposed facility. Furthermore, if the development moves forward, Calpine/Towantic Energy will have to submit an FAA Notice of Actual Construction or Alteration (FAA Form 7460-2), which would prompt the FAA to perform an standard Aeronautical Study of the proposed project addressing airspace and obstruction issues.

Zoning

Zoning in the immediate vicinity of the airport is primarily industrial. However, areas to the north are zoned residential.

The Town of Oxford Zoning Regulations, last amended in February 2004, is the official zoning regulations for the Town. Lands located adjacent to the airport property are zoned Corporate, Industrial, or Residential District A. Land uses within the Corporate District include business or corporate offices, research and development facilities, data processing facilities, and manufacturing facilities. Land uses that are permitted in the Industrial District include professional offices, banks and financial industries, professional and corporate offices, and manufacturing and assembly facilities. Residential District A permits land uses consisting of single-family dwellings, offices or shops in single family dwellings, elder care facilities, farms, governmental buildings, and similar uses.

The Town of Middlebury Zoning regulations, last amended in March 2004, is the official zoning regulations for the Town. In Middlebury, land near the airport is zoned as Light Industry (LI-200), Residential (R-40, R-80 and R-40/PRD), and Special Development (SDD). The LI-200 district consists of lots larger than 200,000 square feet that can be used for executive or business offices, light manufacturing, warehousing, public utility substations, or other similar uses. Residential District R-40 consists of residential lots with a minimum lot size of 40,000 square feet. Residential District R-80 consists of residential lots with a minimum lot size of 80,000 square feet. Residential District R-40/PRD consists of residential lots with a minimum lot size of 40,000 square feet. The R-40/PRD District is intended to enable higher development densities in clusters, in order to protect sensitive environmental areas and enable more efficient construction.

5.3 Social & Induced Socioeconomic Impacts

Social and induced socioeconomic impacts are typically defined by disruptions to surrounding communities, such as shifts in patterns of population movement and growth, changes in public service demands, loss of tax revenue, and changes in employment and economic activity stemming from airport development. These impacts may result from the closure of roads, increased traffic congestion, acquisition of business districts or neighborhoods, and/or by disproportionately affecting low income or minority populations.

The recommended airport developments do not include projects with the potential for these types of broad impacts. Past FAA studies have identified that social and induced socioeconomic impacts are not normally significant unless substantial impacts are anticipated in other categories (e.g., noise, land use, property acquisition).

As part of the recommendations of the noise study and final recommendations of the Master Plan, voluntary acquisition of homes will be an available option. An EA would address the social impacts associated with implementation of voluntary home acquisition.

Although any affected homeowners would be fairly compensated and provided with related assistance, acquisition and removal/relocation of homes can also affect the neighborhood as a whole. Thus, such community/social impacts would also be evaluated.

5.4 Air Quality

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six air pollutants (i.e., ozone, carbon monoxide, particulates, sulfur dioxide, nitrogen dioxide, and lead). States must identify geographic areas, termed “nonattainment” areas, which do not meet the NAAQS. Areas that meet the NAAQS are termed “attainment” areas.

Federal regulations specify that an air quality analysis is not required if the project is located within an attainment area, and at a general aviation airport with less than 180,000 forecast operations. If these criteria are met, it is concluded that the proposed project would not cause significant air quality impacts.

The 2003 EA conducted an air quality analysis in accordance with National Environmental Policy Act requirements as specified in the Council on Environmental Quality’s regulations, the Federal Aviation Administration’s (FAA’s) Order 5050.4A, Airports Environmental Handbook, and the FAA’s Air Quality Procedures for Civilian Airports & Air Force Bases. The EA concluded there would not be an impact to air quality as a result of the Runway 18-36 extension.

The EPA classifies all of New Haven County as a Serious nonattainment area for 1-hour ozone, and a Moderate nonattainment area for 8-hour ozone, and a nonattainment area for Particulate Matter (PM-2.5). Therefore, an air quality analysis would potentially be required as part of an Environmental Assessment (EA) for OXC. Air quality impacts are not anticipated from the projects recommended in the AMPU.

5.5 Water Quality

Airport activities that can potentially impact surface water and groundwater include aircraft fueling, fuel storage, and aircraft maintenance. The addition of pavement (i.e. impervious surface) can also impact water quality at airports.

Surface water features in the vicinity of the Airport include a network of streams, wetlands, and floodplains that flow/drain south and west as part of the Little River watershed (see Figure 4-7). Little River itself is located south of the Airport and flows in a southerly direction to the Naugatuck River. The Connecticut DEP Aquifer Protection Program has determined that there are no State Identified Aquifer Protection Areas in the project area.

The proposed developments would result in an increased amount of impervious surface. Without mitigation measures, this new impervious surfacing could result in a variety of water quality impacts. Stormwater management during construction would conform to the “Best Management Practices” for control of erosion, sedimentation, and stormwater runoff, and would be

incorporated into the construction specifications. In addition, a Stormwater Pollution Control Plan for the project would be developed as part of the application to ConnDEP for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. The plan would include a description of the erosion and sedimentation controls to be used on the site, the management of dewatering wastewaters, the measures that would be installed to ensure post construction stormwater management, the disposal of waste at the site, and the practices to be followed to minimize off-site vehicle tracking of sediments and the generation of dust. As a result of these control measures during construction, no significant impact to stormwater management due to construction activities is expected. Both during and after construction, the Airport would continue operating in accordance with its existing stormwater permit (General Permit for Industrial Activities).

The plan would identify measures to avoid or minimize impacts to surface waters and groundwater at the site both during and after construction activities. The specific measures included in the Stormwater Pollution Control Plan would be determined during the design phase, and could consist of the installation of infiltration swales, vegetated buffer strips, silt fencing around the project area, vegetated open channels, hay bales and temporary slope drains, and/or a piped stormwater collection and conveyance system.

An EA would identify the total acreage of new pavement at OXC based on the project design and the potential water quality impacts associated with the impervious surface. Subsequently, with the required permits and standard safeguards described above employed during construction, impacts to water quality are not anticipated.

5.6 USDOT Section 4(f)

The U.S. Department of Transportation (USDOT) regulations prevent transportation projects from developing or taking publicly-owned land from a public park, recreational area, wildlife or waterfowl refuge, or historic site unless there are no feasible alternatives, and planning to minimize harm and mitigation measures have been incorporated.

The Larkin State Trail, located beyond the southern boundary of the airport property, is an 11 mile multi-use recreational trail that connects the towns of Southbury, Oxford, Middlebury, and Naugatuck. The trail is located on top of a former New Haven Railroad corridor, has a 100-foot wide right-of-way, and has a conglomerate surface of gravel, ballast, and cinder. The trail is owned and maintained by the Connecticut DEP State Parks Division. Due to proximity, the Trail is directly associated with and monitored by the Southford Falls State Park in Southbury. The Connecticut DEP permits the following recreational activities; walking,



Larkin State Trail (south of OXC)

horseback riding, cross country skiing, and mountain biking. Given the level and types of public use of the trail, the trail is considered a Section 4(f) resource.



Larkin State Trail at power line crossing

Specifically, the recommended plan for OXC would include development of an approach lighting system that crosses the trail. The pole mounted lights would be located near the trail right-of-way, but positioned to avoid any direct impact (see Figure 5-2). No lighting impacts are anticipated since the trail is not open after dusk. A Section 4(f) resource evaluation would potentially be required as part of an Environmental Assessment (EA) to determine any visual impacts on the trail. The lighting system itself is not likely to directly impact the trail or affect its use.

FIGURE 5-2

5.7 Cultural Resources

According to correspondence contained in the 2003 EA, the Connecticut State Historic Commission (SHPO) determined that the recent runway extension project would have no effect on historic, architectural, or archaeological resources listed on or eligible for the National Register of Historic Places. The SHPO recommends that concerned citizens be afforded the opportunity to review and comment upon future proposed undertakings in accordance with the National Historic Preservation Act of 1966 and the Connecticut Environmental Policy Act. Thus, as part of a future EA further coordination with the SHPO and potential cultural resource investigation would be required. However, based on the location and moderate level of recommended development, no cultural impacts are anticipated from the Master Plan's implementation.

5.8 Biotic Communities

According to a 2003 consultation with the DEP Natural Diversity Data Base (from an earlier EA), wildlife habitat in the project area includes upland deciduous forest with areas of fallow field, treed swamp, and limited open wetland. The airport property area is maintained as open, mowed fields. These communities are described below:

- **Deciduous Forested** – broad leaf trees such as Hickory, Oak, Maple, and Sumac Basswood. The understory consists of Redbud, Spicebush, and Buttonbush.
- **Treed Swamp** – forest swamp species such as Ash, Red Maple, Alders, and Yellow Birch, and shrubs including spicebush, arrowwood, and sweet pepperbush.
- **Wetlands** – areas of land with hydric soil, hydrophytic vegetation (plant types adapted to living in saturated soils), and ground or surface water for a significant part of the growing season.
- **Maintained Field** – open, successional fields that are periodically mowed and maintained.

An EA would evaluate the areas of potential disturbance and impacts to biotic communities. Based on past studies, impacts to the above communities would not typically be considered significant, with the exception of the wetland communities, as discussed in section 5.10.

5.9 Threatened & Endangered Species

Correspondence with the US Fish and Wildlife Service was conducted most recently in October 2001 to request information regarding the presence of federally-listed and proposed, endangered or threatened species. The response to the inquiry indicated that no federally-listed threatened or endangered species are known to occur in the project area. However, the US Fish and Wildlife Service has acknowledged the occurrence of occasional transient bald eagles. Furthermore, the "Town of Oxford State and Federal Listed Species and Significant Natural Communities" map indicates that the Airport is not located within an endangered species/communities area.

Updated correspondence with the U.S. Fish & Wildlife Service (FWS) and Connecticut Department of Environmental Protection (CT DEP) would be obtained as part of an EA. If necessary, field surveys during nesting and other periods would be conducted to identify the presence or absence of critical species and assess the suitability of the habitat to support the species. Field surveys can identify the activities of any threatened and endangered species in the project area, which can then be used to devise mitigation measures for identified impacts.

5.10 Wetlands

The Town of Oxford regulates activities within the wetlands of its municipal boundaries, pursuant to the Inland Wetlands and Watercourses Act of the Town of Oxford. However, since the Airport is located on State property, the Connecticut Department of Environmental Protection oversees activities that impact the identified wetlands. There are wetlands located on airport property within the Town of Middlebury, but these areas are not under consideration for development.

A wetland delineation on airport property identified 18 wetland areas in the immediate vicinity of Runway 18-36. Wetlands were delineated based on federal and state definitions, and are located on the western, southern, southeastern, and eastern edges of the airport. Based on



**Little River wetlands
(southeast border of airport property)**

medium intensity soil mapping from the Soil Conservation Service (SCS) Soil Survey Maps for New Haven County, the following wetland soil series occur on the airport property: Ridgebury, Leicester, and Whitman Complex. There are also Aquents, which are disturbed wetland soils, on the airport property. The following upland (non-wetland) soil series occur on the airport property: Charlton, Charlton-Hollis Complex, Hollis-Charlton Complex, and Udorthents (made land). Figure 4-7 illustrates the location of existing wetlands. This detailed figure illustrates federally-regulated and state-regulated wetlands.

The Little River system comprises the backbone of all of the wetlands on the airport property. Little River originates in Oxford and flows in a southerly direction to the Naugatuck River, which in turn drains into the Housatonic River and ultimately into Long Island Sound near Bridgeport.

The wetlands on the western side of the airport are hydraulically connected by an unnamed intermittent stream that flows south to Little River. The wetlands on the southern and eastern sides of the airport are part of the Little River system and are hydraulically connected by the Little River and some small, unnamed tributaries that flow south into Little River. The wetland types include deciduous wooded swamp, shrub swamp, wet meadow, and open water. These

wetland types are interspersed throughout the property and, in most cases, are directly associated with or adjacent to upland wooded areas. Although these wetlands are proximate to airport runways and taxiways, they are separated from the airport elements by areas of upland vegetation or topographic variation.

The most dominant wetland type in the vicinity of the airport is deciduous wooded swamp, comprised primarily of red maples (*Acer rubrum*). Other common vegetation that can be observed in the area includes: green ash (*Fraxinus pennsylvanica*), oak species (*Quercus spp.*), spicebush (*Lindera benzoin*), multiflora rose (*Rosa multiflora*), jewelweed (*Impatiens capensis*), skunk cabbage (*Symplocarpus foetidus*), common cattail (*Typha latifolia*), common reed grass (*Phragmites australis*), and reed canary grass (*Phalaris arundinacea*). The largest concentrations of red maple swamp are on the eastern, southern, and southwestern fringes of the Airport. Beavers are very active in the area. Many of the wetlands located within as well as beyond the airport perimeter fence have pockets of standing water that have been created by beaver activity.



**Red maple swamp on airport property
(adjacent to southeastern end of Runway 36)**



Beaver dam (southern end of airport property).

The primary functions of the subject wetlands are sediment/toxicant retention, as they trap sediments and toxicants in runoff from the nearby airport before the runoff enters adjacent streams, and wildlife habitat, since the diverse wetland types, vegetation, and water regimes provide a wide variety of food sources and habitat features. The areas surrounding the airport are mostly undeveloped, and the density and cover of vegetation provide ideal corridors and habitats for a wide variety of wildlife species anticipated to include (but not be limited to:) beaver, deer, coyote, mustelids (weasel, mink), lagomorphs (rabbits), amphibians, and woodland songbirds. Some of the secondary functions associated with the wetlands include flood storage of the Little River system, which occurs in the flatter, vegetated wetlands, and fish habitat in some of the many beaver ponds and larger streams.

Most of the recommendations for OXC would involve the development of new facilities on upland areas surrounding the airfield, and new taxiways within the existing airfield area.

However, two of the projects include development in locations that contain areas of regulated wetlands. The extension of Parallel Taxiway "B" Alternative 1B would likely impact all (approximately 3.8 acres) of Wetland #1 since it would require filling the area to raise the grade to match the elevation of the existing airfield. The on-airport service road Alternative 1A would impact up to 0.1 acres of Wetlands #2 and #5.

Required mitigation would involve wetland re-creation of approximately eight acres, ideally within the same drainage system. A review of suitable uplands on airport property revealed a lack of continuous acreage for on-site wetland re-creation. As such, off-site mitigation areas within the immediate area would have to be reviewed for suitability of wetland re-creation. Appendix D consists of a Conceptual Wetland Mitigation Plan, which discusses potential on- and off-airport locations for wetland mitigation. The wetland impact and re-creation would require a U.S. ACOE Wetland Permit and ConnDEP Inland Wetlands Permit.

5.11 Floodplains

The Federal Emergency Management Agency (FEMA) publishes Flood Insurance Rate Maps (FIRMs) that depict 100-year and 500-year floodplains in many areas throughout the country. A 100-year floodplain is an area that has a 1% chance of being flooded in any given year. A 500-year floodplain is an area that has a 0.2% chance of being flooded in a given year.

Review of the FEMA Flood Insurance Rate Map indicates that 100-year and 500-year floodplains (tributaries of Little River) are located within OXC property near the Runway 36 end, as illustrated on Figure 4-7. The recommended MALSR development may require that one pole be located within the 500-year floodplain, but only minimal impervious surface would be included. As such, no significant impacts to the 500-year floodplain are anticipated with the MALSR development. No other floodplain impacts are anticipated with the recommended developments.

5.12 Coastal Zone Management Program & Coastal Barriers

The Waterbury-Oxford Airport is not located within a coastal zone and is not within the jurisdiction of the Coastal Zone Management Program.

5.13 Wild & Scenic Rivers

No state- or federally-designated wild or scenic rivers are present within the airport vicinity.

5.14 Farmland

The Natural Resource Conservation Service (NRCS), within the United States Department of Agriculture (USDA), has established guidelines under the Farmland Protection Policy Act (FPPA) for federal activities that involve directly undertaking, financing, or approving a project that would convert farmland soils. The guidelines recognize that the quality of farmland varies based on soil conditions, and places higher value on soils with high productivity potential. To

preserve these highly productive soils, the NRCS classifies soils types as prime and statewide important. The NRCS requires that soils in these categories be given proper consideration before they are converted to non-farming uses by federal programs.

The airport property is primarily composed of Urban Development soil type (UD). The north end of the airport at the Oxford-Middlebury Town line contains a soil of Statewide Importance, Paxton fine sand loam (PbC). This soil has 8 to 15 percent slopes. The area has been cleared and graded, and contains buildings or is forested. Farming is not an activity in the area, and is not expected to be used for future farming activity.

The majority of the recommended developments would not impact farmland soils. However, the construction of a service road through the northern portion of the airport property would occupy PbC for nonagricultural uses. As such, coordination with the NRCS and completion of a Farmland Conversion Impact Rating Form (Form AD-1006) may be required as part of an EA. As these locations contain no farming operations and cannot be used for agricultural purposes under any foreseeable scenario, Form AD-1006 would indicate no anticipated impacts.

5.15 Energy Supply & Natural Resources

Proposed developments, such as taxiways, hangars and lighting, and an increase in airport activity at OXC would result in additional use of energy and resources. An EA would evaluate impacts to the local energy supply. As all of the recommended projects would have low to moderate energy requirements, no significant impacts are anticipated.

5.16 Light Emissions

Chapter 4 recommended the development of a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) at Runway 36 (See Figure 5-2).

The MALSR would consist of both steady burning and flashing lights. The first seven light poles (extending 1,400 feet beyond Runway 36) would consist of the steady burning lights, which are not generally known to cause disturbance to nearby residents and property owners. The last five light poles (extending an additional 1,000 feet) of the proposed MALSR system would contain flashing lights, which are more conspicuous than the steady burning lights. These lights have the potential to disturb nearby residents.

Although the MALSR would cross the Larkin State Trail, no lighting impacts are anticipated since the trail is not open after dusk. Additionally, since no residences are located nearby Runway 36 and a dense area of trees is located within the area of the proposed MALSR system, no lighting impacts on residences are anticipated. The MALSR system is consistent with the industrial zoning of the area. In order to install and operate the MALSR system, selective tree removal would be required within 200 feet of the MALSR centerline. A gravel service road and associated right-of-way would also be needed.

The MALSR system would enable aircraft to land at OXC during low visibility conditions and improve safety by enhancing visual reference to pilots. However, the system does not change or reduce the height or angle of the flight path to the runway end. The approach path and angle to the runway would continue to be controlled by the existing visual and electronic glide slopes (i.e., Precision Approach Path Indicator and Instrument Landing System).

5.17 Solid/Hazardous Waste

The 2003 EA identified no hazardous waste disposal sites on or in the vicinity of airport property. However, fuel is stored at the airport by Keystone Aviation, ConnDOT, Double Diamond Aviation, and Executive Flight Services. Keystone Aviation maintains four 20,000 gallon double-walled above ground storage tanks on the western side of the airport north of the control tower. ConnDOT stores fuel in two 1,000-gallon double-walled above ground (self contained) tanks. Both tanks are located south of the airport manager's office. Double Diamond Aviation and Executive Flight Services each maintain one double-walled fuel tank, 15,000 and 8,000 gallons, respectively.

5.18 Construction Impacts

Construction projects can produce temporary environmental disturbances, such as noise from equipment, air quality impacts from dust, soil erosion, and sedimentation, and disruption of off-site and local traffic patterns. These impacts can be mitigated through careful planning and consideration, as well as quality construction supervision.

Noise impacts from construction equipment can be lessened through the use of properly mufflerized vehicles. Enforcing the contractor to conduct activities within the daytime work hours would prevent nighttime noise impacts.

The construction specifications for the recommended projects at OXC would incorporate the appropriate "Best Management Practices" for control of erosion, sedimentation, and storm water runoff. In addition, a Stormwater Pollution Control Plan for the projects would be developed as part of the application to ConnDEP for a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. The plan would identify measures to avoid or minimize impacts to surface waters and groundwater at the site both during and after construction activities. The specific measures included in the plan would be determined during the design phase, and could consist of the implementation of infiltration swales, vegetated buffer strips, vegetated open channels, and/or a piped stormwater collection and conveyance system. The goal of the plan would be to minimize runoff and replicate pre-construction hydrology. Temporary disturbance areas would be re-seeded and stabilized following construction. Post construction controls would be maintained on a regular basis.

The proposed developments would require the importation of construction materials from off site locations. A designated haul route would be supplied to the contractor, and the contractor would repair any damage to roadways at the end of construction.

With the standard safeguards described above, significant construction impacts are not anticipated.

5.19 Secondary & Cumulative Impacts

Secondary impacts occur when one project fosters, encourages, and/or enables another project with environmental impacts. Cumulative impacts consider past, present, and reasonably foreseeable actions, based on the fact that environmental impacts can accumulate over time. The recommended developments at OXC would not change the general character of the area. Nevertheless, an EA would be required to evaluate the secondary and cumulative impacts associated with the recommendations from this Master Plan Update and recent or planned projects in the vicinity of the Airport.

5.20 Potential Environmental Permits

If developments are pursued, the following environmental permits could potentially be required during the project design phase:

- U.S. ACOE Wetland Permit
- ConnDEP Section 401 Water Quality Certification
- ConnDEP Inland Wetlands Permit
- ConnDEP Stormwater and Dewatering Wastewaters from Construction Activities Permit