

CHAPTER 7 - ENVIRONMENTAL OVERVIEW

7.1 INTRODUCTION

This chapter presents a discussion of the environmental issues affecting the State's system of airports. This discussion does not identify specific environmental issues at each airport, as the data for such a comprehensive analysis was not included in the scope of this project. Rather, this section identifies environmental issues facing airports system-wide, and also describes the existing environmental process, summarizing when an environmental analysis is required and what needs to be studied in that analysis. Finally, recommendations are presented to address airport environmental compliance issues and procedures.

7.2 ENVIRONMENTAL REVIEW PROCESS

Airports, whether public or privately owned, are subject to local, state, and federal environmental regulations. The enabling federal legislation dates back to the 1969 National Environmental Policy Act (NEPA - Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), Sept. 13, 1982). Since that time, all levels of government have assumed some level of responsibility for balancing economic development with protecting the environment.

It is important to note that the jurisdiction of government agencies regarding environmental review and permitting is not dependent on funding sources. As a result, all 25 airports in the State System, including privately owned, private use facilities that receive no federal funds, are subject to the same federal environmental regulations as Manchester Airport, which has received more federal grants than any other airport in the state. In addition, all 25 airports in the State System are also subject to local and state environmental regulations, even if they receive no state or local funding.

Before discussing the environmental issues affecting airports, it is prudent to summarize the environmental review process associated with airport development. By understanding that process first, addressing environmental issues can be better understood. There are two environmental procedures that are discussed in this section: the Federal review process, and the State and local procedures that must be followed.

Federal Environmental Process

In response to and under the umbrella of NEPA, each federal agency has adopted its own environmental review, coordination, and permitting procedures. The FAA is part of the U.S. Department of Transportation, and as a result, has developed environmental procedures consistent with DOT's overall policy and mandate. Two FAA orders outline the requirements for environmental reviews for airport projects: Order 1050.1D, *Policies and Procedures for Considering Environmental Impacts*, and Order 5050.4A, *Airport Environmental Handbook*. The first order describes the policies associated with preparing environmental documentation, while the second order describes the specific actions that need to be assessed as part of environmental reviews.

The focus of these two orders is on federally funded or federally approved actions (referred to as a 'federal action'), even if it is a project (or series of projects) being undertaken by an airport. Although airport projects that do not involve FAA grants or approvals are not subject to these orders, those projects are still subject to federal environmental laws and regulations regarding protection of wetlands, air quality, rare and endangered species, etc. The two orders focus on FAA's role and procedures in reviewing and assessing potential environmental impacts, as well as the need for agency and public coordination. The orders do not, however, prescribe any requirements or standards that must be followed by other federal, state, or local agencies.



The FAA orders specify which actions undertaken by airport sponsors require environmental study, and to what level of detail the analysis should be done. There are three types of environmental ‘actions’; Categorical Exclusions (CE), Environmental Assessments (EA), and Environmental Impact Statements (EIS).

Projects that qualify as CE require no environmental review based on the premise that there will be no environmental impacts. Projects that typically qualify as CE include:

- (1) Runway, taxiway, apron, or loading ramp construction or repair work including extension, strengthening, reconstruction, resurfacing, marking, grooving, fillets and jet blast facilities, and new heliports on existing airports, except where such action will create environmental impacts off airport property.
- (2) Installation or upgrading of airfield lighting systems, including runway end identification lights, visual approach aids, beacons and electrical distribution systems.
- (3) Installation of miscellaneous items including segmented circles, wind or landing direction indicators or measuring devices, or fencing.
- (4) Construction or expansion of passenger handling facilities.
- (5) Construction, relocation or repair of entrance and service roadway.
- (6) Grading or removal of obstructions on airport property and erosion control actions with no off airport impacts.
- (7) Landscaping generally, and landscaping or construction of physical barriers to diminish impact of airport blast and noise.
- (8) Projects to carry out noise compatibility programs.
- (9) Land acquisition and relocation associated with any of the above items.
- (10) Federal release of airport land.
- (11) Removal of a displaced threshold.

As noted in the FAA Order, the following items are also categorically excluded:

- (1) Acquisition of an existing privately owned airport, as long as acquisition only involves change of ownership.
- (2) Acquisition of: security equipment required by rule or regulation for the safety or security of personnel and property on the airport (14 CFR Part 107), safety equipment required by rule or regulation for certification of an airport (14 CFR Part 139) or snow removal equipment.
- (3) Issuance of airport planning grants.
- (4) Airport Improvement Program actions which are tentative and conditional and clearly taken as a preliminary action to establish a sponsor's eligibility under the Program.
- (5) Retirement of the principal of bond or other indebtedness for terminal development.
- (6) Issuance of airport policy and planning documents including the National Plan of Integrated Airport Systems (NPIAS), Airport Improvement Program (AIP) priority system, advisory circulars on planning, design, and development programs which are not intended for direct implementation or which are issued by FAA as administrative and technical guidance to the public.



(7) Issuance of certificates and related actions under the Airport Certification Program (14 CFR Part 139).

(8) Issuance of grants for preparation of noise exposure maps and noise compatibility programs per sections 103(a) and 104(a) of the Aviation Safety and Noise Abatement Act of 1979 and 14 CFR Part 150 determinations on noise exposure maps and approval of noise compatibility programs.

(9) Airspace determinations

An Environmental Assessment (EA) requires data collection and environmental analysis, agency coordination, as well as a clear statement of project need and justification. EAs are reviewed and approved by FAA, and typically result in one of three determinations:

- a) that the proposed actions will not generate environmental impacts, and therefore a Finding of No Significant Impact (FONSI) can be issued;
- b) that the proposed actions will result in significant impacts, and therefore an Environmental Impact Statement (EIS) is required;
- c) there will be environmental impacts, however, they can be addressed with mitigation techniques and permitting, and an EIS is not required.

As noted in FAA's Order: "Federal financial participation in, or airport layout plan approval of, the following categories of actions shall be subject to the analysis of an environmental assessment (EA) and subsequent decision as to whether to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI)."

- (1) Airport location.
- (2) New runway.
- (3) Major runway extension.
- (4) Runway strengthening which would result in a 1.5 Ldn or greater increase in noise over any noise sensitive area located within the 65 Ldn contour.
- (5) Construction or relocation of entrance or service road connections to public roads which adversely affect the capacity of such public roads.
- (6) Land acquisition associated with any of the above items plus land acquisition which results in relocation of residential units when there is evidence of insufficient comparable replacement dwellings, major disruption of business activities, or acquisition which involves land covered under section 4(f) of the DOT Act (recodified 49 USC Subtitle I, section 303, January 12, 1983).
- (7) Establishment or relocation of an instrument landing system, or an approach lighting system.
- (8) An airport development action that involves any of the following:
 - (a) Use of section 4(f) land.
 - (b) Effect on property included in or eligible for inclusion in the National Register of Historic Places or other property of state or local historical, architectural, archeological, or cultural significance.
 - (c) Land acquisition for conversion of farmland, scoring over 160 on Form AD-1006, protected under the Farmland Protection Policy Act (FPPA) to nonagricultural use through Federal financial assistance or through conveyance of government land.
 - (d) Wetlands, coastal zones, or floodplains.
 - (e) Endangered or threatened species.
 - (f) FAA requests for conveyance of government land for airport purposes under section 516 of the 1982 Airport Act.

When an EIS is determined to be required, it must be sponsored, funded, and managed by the FAA. FAA will include the airport sponsor in the study, but unlike an EA or other projects, an EIS is a federal action.

In cases where a project triggers either an EA or an EIS, the analysis must address twenty separate environmental categories, as shown below:

- Noise
- Compatible Land Use
- Social Impacts
- Induced Socioeconomic Impacts
- Air Quality
- Water Quality
- Section 4(f)
- Historic, Architectural, Archeological, and Cultural Resources
- Biotic Communities
- Endangered and Threatened Species of Flora and Fauna
- Wetlands
- Floodplains
- Coastal Zone Management Program
- Coastal Barriers
- Wild and Scenic Rivers
- Farmland
- Energy Supply and Natural Resources
- Light Emissions
- Solid Waste Impact
- Construction Impacts

Potential impacts in any one or more of those categories may require additional coordination with and permitting by other federal agencies, such as the U.S. Army Corps of Engineers, U.S. EPA, U.S. Fish & Wildlife Service, etc., as well as by state and local agencies where appropriate. The permitting process is separate from the preparation of the EA and EIS, although permits may be obtained while the EA or EIS is on-going. It should also be noted that even when FAA approves an EA or an EIS, that approval does not commit any other agency to issue an approval or a permit for airport projects. However, the coordination process completed during the preparation of the EA or EIS will typically determine whether other agencies will issue permits, which will be considered by FAA when they are reviewing the EA or EIS.

It should be noted that, as part of the airport master planning process, environmental overviews are often developed, the purpose of which is to identify where environmental problems could occur, and to recommend further in-depth environmental study if needed, such as an EA or EIS. If further analysis is required, it usually culminates in an EA that covers projects listed in a five-year airport capital improvement program (ACIP). Master plans sometimes also include EAs covering the first five years of capital projects. These EAs are sometimes similar to overviews, where projects requiring in-depth studies are noted and projects that do not have significant environmental effects are given a FONSI. An EA will be recommended for projects that may affect environmental resources.

There is another environmental study that is funded by FAA. If an airport determines that there are significant land use compatibility and noise impacts as a result of an airport's operation, then a Federal Aviation Regulation (FAR) Part 150 Noise Control and Compatibility Planning study may be prepared. FAR Part 150 Studies consist of two basic elements – a noise exposure map (NEM) and a noise compatibility plan, both of which are reviewed and approved by FAA. FAA requires the preparation of a FAR Part 150 Study by airports in order to be eligible for federal funding for property acquisition and/or soundproofing in order to address non-compatible land use issues.

This study goes a step beyond the requirements of the noise assessment in the EA or EIS by making specific recommendations to address noise impacts to the surrounding community. Typically, those recommendations include soundproofing homes impacted by specific aircraft noise levels, identifying noise abatement procedures such as runway use configuration, specific arrival and departure tracks, etc., as well as property acquisition. Public involvement is also a major component of the Part 150 study process, and public input must be taken into account when developing and implementing recommendations.



It is apparent when considering the amount of information that must be collected and analyzed, and the level of coordination that is required to undertake an environmental analysis, that this process is both time consuming and expensive. It requires airports, therefore, to budget for and schedule the time to complete these studies, which increases the time it takes to implement capital improvement programs.

The analysis also requires extensive knowledge of environmental regulations and permitting procedures, which require expert analysis above and beyond the level that most airport managers can accomplish internally. As a result, an airport that is not eligible for federal assistance (14 of the 25 airports in the NH State Airport System are not eligible) typically does not have the resources to undertake the necessary environmental analysis, coordination, and permitting process.

There are eleven airports in the NH State Airport System that are included in the NPIAS and that currently receive Federal funding. All of those airports have completed airport master plans and several of those airports have also completed EAs, EISs, and Part 150 studies, as shown in Table 7-1.

Table 7-1 – Airport Environmental Studies

Airport	Master Plan	EA	EIS	Part 150 Study
Berlin	X			
Concord	X			
Claremont	X			
Dillant-Hopkins	X			
Laconia	X	X		
Lebanon	X		X	X
Manchester	X		X	X
Boire Field	X			X
Pease International Tradeport	X		X	X
Skyhaven	X	X ^{1/}		
Mt. Washington Regional	X	X		

1/ EA to be completed in 2003 (est.)
 Source: NHDOT – Division of Aeronautics Library

State Environmental Process

The NH Department of Environmental Services (DES) oversees the state’s environmental review and enforcement process. As noted by DES:

“The protection and wise management of the State of New Hampshire's environment are the important goals of the NH Department of Environmental Services (DES). The department's responsibilities range from ensuring high levels of water quality for water supplies, ecological balance, and recreational benefits, to regulating the emissions of air pollutants, to fostering the proper management of municipal and industrial waste, to managing water resources for future generations.

Formed in January 1987 by state statute RSA 21-O, DES was legislatively created through the consolidation and reorganization of four previously separate agencies: the Air Resources Agency, the Office of Waste Management, the Water Supply and Pollution Control Commission, and the Water Resources Board. Each of these groups is now represented within the department's three divisions: Air Resources, Waste Management, and Water. Also, DES has units within the Office of the Commissioner whose roles are to coordinate such activities as agency-wide planning, enforcement, permitting, public information, laboratory services, geologic services, information resources, and financial and personnel management. “



All of the airports in the state are subject to DES regulations. The state's environmental regulations incorporate key elements of NEPA, and the state process is similar to the federal environmental process described above, particularly since there are three classes of environmental actions: those that represent categorical exclusions, and those that require either an EA or an EIS level of study. NH DES has the authority to promulgate regulations and enforce environmental standards, including issuing permits, similar to federal agencies.

Examples of permits that are issued by DES include State Wetlands Permit issued by the Wetland Division of NHDES. There are also other state regulations that must be taken into account. Examples of these regulations may include Coastal Zone Management Consistency, NH Rivers Management and Protection Program, or the NH Lakes Management and Protection Program.

The NHDES has developed a package that includes all of the necessary forms and provides a guide to determine the level of analysis that would be necessary for a given project. These forms must be filled out for projects that are federally funded, as well state and locally funded. The airport sponsor is responsible for completing the forms and any analyses required to complete the forms.

7.3 ENVIRONMENTAL ISSUES AFFECTING AIRPORTS

Addressing environmental issues has become an integral part of airport development throughout the nation. Environmental issues have become so complex that they have stopped projects from being developed. Over the past twenty years, the Federal Aviation Administration (FAA) has become more focused on environmental issues and has required airports to complete rigorous environmental studies to ensure environmental compliance.

Two environmental issues are predominant in terms of implementing ACIPs: wetlands and aircraft noise. Other environmental issues that have affected airports in New Hampshire include rare and endangered animal species and habitat (such as the Karner Blue Butterfly at Concord Airport and the Bald Eagle in the vicinity of Manchester Airport), as well as endangered and threatened species of flora and fauna, etc. Wetlands are classified as an important natural resource that needs to be preserved, however, in the 1930s and 1940s wetlands were considered to be good locations for airports since they were not considered to be suitable for other land uses. Thus, many airports are actually located in the middle of what are now considered to be valuable natural resources, and a high level of importance has been given to addressing wetland impacts associated with ongoing activity at an airport and impacts associated with airport development.

The second environmental factor is associated with aircraft noise. Aircraft noise has a significant effect on the surrounding community of an airport. Aircraft on the ground, aircraft arriving or departing an airport, or aircraft flying within the airport's flight pattern, generates aircraft noise. The level of noise generated by an airport is dependent upon the number of operations occurring at the airport, coupled with the types of aircraft that operate at the airport.

Associated with noise is land use surrounding airports. The FAA has defined land uses that are compatible and incompatible with airport activity. Commercial and industrial land uses are typically compatible with airports as they are not noise sensitive. Uses that are incompatible with airports include residential development, hospitals, schools, outdoor recreational facilities, or nursing homes, which are very sensitive to noise.

Land use, however, is controlled by the surrounding communities through zoning and building permits, as well as by market forces, and airports have relatively little, if any, direct control over development patterns. Some municipalities have adopted zoning ordinances that protect airport approaches (imaginary surfaces), limited types of development within the vicinity of airports to minimize non-compatible development, as well



as prevent land uses that could impact aircraft operations such as the generation of smoke, light, or electronic signals.

One factor that complicates the ability to control land use adjacent to airports is the fact that airports and their approaches (imaginary surfaces) and aircraft traffic patterns overlies numerous different communities, all of which must adopt zoning ordinances and building permit review procedures to promote compatible development adjacent to airports. Communities are under pressure, however, to increase their tax base to enhance their revenue stream, and adopting standards to maintain compatible land uses with airports often limits their development and tax revenue potential.

In response to many legal challenges dating back to the 1950s, state and federal courts have consistently held that airport sponsors are responsible for the noise generated by aircraft arriving and departing from their facility, and if noise impacts reach certain levels, adjacent property owners can recover damages from airport sponsors. As a result, airports have undertaken strategies such as acquiring easements (so-called 'avigation' <aviation & navigation> easements), that allow for aircraft over flights and the right to make noise. Easements are also acquired to remove penetrations to imaginary surfaces. Easements, however, are often expensive and time consuming to acquire, and unless a municipality is willing to exercise its right of eminent domain, which they are often reluctant to do, airports frequently cannot acquire easements from all of the property owners in the vicinity of an airport, because some owners will not voluntarily sell easements.

7.4 AVAILABLE ENVIRONMENTAL INFORMATION FOR AIRPORTS

During the inventory phase of this System Plan, it was found that, while there is adequate environmental information for airports that receive federal funding (the eleven NPIAS airports), little environmental data exists for airports that do not receive federal funding. For example, to document the presence, extent and quality of wetlands on an airport often requires field work and mapping by a registered environmental professional, and non-federal airports often do not have the resources to hire such professionals. The same is true regarding developing noise contours and land use compatibility studies. Furthermore, in discussions with those airports that do not receive federal funding, managers were either not aware of potential environmental issues on their airport, or had limited knowledge of environmental regulations and laws that pertain to their facility.

Assessing Available Environmental Data

To understand the general environmental issues facing airports in the State, the available environmental documents were reviewed. As noted previously, the eleven airports receiving federal funds are almost the only ones that have prepared EAs or an EIS. Although the information obtained from the review of these documents may be specific to one airport, it does provide a perspective on some of the common issues facing NH airports, in general. Table 7-1 presented in Section 7.2 details the available information for those airports receiving Federal funds. As shown in this table, all of the airports have completed a master plan. Typically, airport master plans address environmental issues as part of an environmental overview section, where information regarding environmental issues is presented and recommendations made for follow-on studies, if necessary.

Going beyond the environmental overviews, six airports have completed extensive environmental studies since 1985. Those studies addressed single projects, as well as all projects listed in various five-year capital improvement programs. Federal Environmental Assessments (EAs) were completed for Laconia, and Mt. Washington Regional Airports. Airports that completed even more detailed environmental studies - comprehensive Environmental Impact Statements (EISs) - include Lebanon, Manchester, and Pease International Tradeport. The EA for Skyhaven is expected to be completed in late 2003.

Several of the federally funded airports have addressed impacts associated with aircraft noise in their adjacent



communities. Federal Aviation Regulation (FAR) Part 150 noise studies have been completed by Lebanon, Manchester, Pease International Tradeport, and Boire Field. Pease has also prepared one of the first FAR Part 161 studies in the country dealing with access restrictions for Stage 3 aircraft.

A number of the most recent airport master plans were reviewed to identify environmental issues that are common to NH airports as show in Table 7-2.

Table 7-2 – Environmental Impacts of Proposed Development at Federally Funded Airports	
Airport	Environmental Impact
Berlin Airport	Wetlands east of the airport that could affect tree clearing project. Also wetlands could be affected by new approach light system.
Claremont Airport	No effects of proposed projects, but manage runoff effects on nearby stream.
Concord Airport	Presence of the Karner Blue Butterfly, a federally endangered species. Concord reached agreement with U.S. Fish & Wildlife Service & NH DES to set aside property for Blue Lupine (habitat) to allow development of new NH Army Guard Aviation Support Facility.
Dillant-Hopkins Airport	Future projects must address on-airport wetlands and floodplain areas.
Laconia Airport	Potential wetlands impacts from runway safety areas and runway extension .
Lebanon Airport	No significant environmental issues .
Manchester Airport	EIS covering the Multi-Year Development Program implementation.
Boire Field	Potential wetland impacts associated with tree clearing off Runway 14.
Skyhaven Airport	Wetlands impacts associated with future airport improvement projects.
Pease International Tradeport	EIS for base reuse addressed wetlands, aircraft noise, and hazardous materials.
Mt. Washington Regional	Wetlands affecting runway extension and tree clearing projects.
Source: Individual Airport Master Plans	

As noted earlier, this list represents the environmental overviews included in the most recent master plans completed for the individual airports. The EA and EIS studies listed in Table 7-2 were completed either as an outgrowth of previous master plans or the most recent master plans for the airports. This listing of environmental concerns does not represent all of the environmental issues at airports in the state, but it does provide a good indication of what the most common issues are.

Wetlands

As seen in Table 7-2, the primary environmental issue facing NH airports concerns wetlands. These wetland issues are extensive in several cases (e.g., Mt. Washington Regional, Dillant-Hopkins, Laconia, Manchester, Skyhaven Airports, Boire Field, etc.), many of which will require in-depth study to assess the problem and, if necessary, mitigate the impacts. A review of available data on the NH Department of Transportation’s Geographical Information System (GIS) provided one source of information concerning the extent of wetlands within the State. Additionally, it also provided information on rivers, coastal zone area, and floodplains that could also be used to assess the existence of potential wetland impacts. However, airports are not included in the database, therefore specific information about potential airport related impacts cannot be readily accessed from the GIS data.

Aircraft Noise

As noted in the master plans, aircraft noise was not a significant issue at many of the smaller General Aviation airports. The relatively low level of activity at many of the smaller airports was insufficient to create significant noise impacts on the neighboring community. However, during the site visits conducted as part of this study, several airport managers noted that the public was aware of the noise created by aircraft flights.



Aircraft noise at several NH airports has been an issue with neighbors. Four airports have completed detailed Part 150 noise and land use compatibility studies since 1986, including Lebanon, Manchester, Boire Field, and Pease International Tradeport. These four airports had sufficient levels of activity that generated aircraft noise affecting the adjacent communities. Each Part 150 study developed noise exposure maps based on five-year forecasts of operations, as well as land use compatibility plans, and also recommended specific actions to address problems. The recommendations included changes to arrival and departure flight tracks, runway use patterns, voluntary curfews, and in the case of Manchester Airport, residential property acquisitions and soundproofing. As noted by Manchester Airport, over 650 eligible homes located in neighborhoods surrounding the airport have received sound insulation modifications. The City of Manchester has received over \$20 million dedicated to the Manchester Airport Residential Sound Insulation Program. Improvements to homes included:

- replacing existing windows with double-pane acoustical window units
- replacing existing exterior doors with 1 3/4" solid-core doors
- wall and ceiling modifications
- extra layers of insulation in attics and crawl spaces
- central air conditioning

Land Use and Zoning

Discussions with airport managers also revealed that land use and zoning are often addressed in master plans, even though airports have limited jurisdiction over them. Although there is no comprehensive land use information available at the State level for each city and town, site visits conducted for this study provided an understanding of land use around the airports. Airports in the State are typically set in rural, residential, and mixed-use (residential, commercial, industrial) areas. The list presented in Table 7-3 identifies the primary land uses around airports in the State.

Table 7-3 – Surrounding Land Use By Airport	
Rural and Residential Land Use	Mixed Land Use
Lakes Region	Concord
Moultonboro	Laconia
Skyhaven	Newfound Valley
Twin Mountain	Boire Field
Franconia Soaring Center	Dean Memorial
Errol	Gorham
Plymouth	Mt. Washington Regional
Colebrook	Hampton Airfield
Berlin	Manchester Airport
Dillant-Hopkins	Pease International Tradeport
Silver Ranch	Hawthorne
	Lebanon
	Parlin
	Claremont

As noted above, almost half of the airports lie within rural and residential districts, while the remaining airports lie within mixed-use areas. Residential encroachment has occurred near many of these airports, as noted by several of the managers during the airport interviews. Airports that specifically expressed concern were Dillant-Hopkins and Lakes Region, which are located primarily in areas that have seen an increase in population and housing development over the last decade.



Any zoning information that was available from each of the airports was collected as part of this analysis. The information revealed that there are few airports that have airport specific zoning (Table 7-4).

Only four airports have airport-specific zoning in which the airport is a separate district within the zoning regulations. Five airports have overlay zones that are specifically used to control the height of objects around the airports. The overlay zoning is an additional restriction upon the underlying zoning. Thus, 36% of the airports within the system of airports have airport related zoning.

Table 7-4 –Airport Zoning	
Region/Airport	Zoning
Central	
Concord	Airport
Lakes	
Lakes Region	No Zoning
Laconia	Industrial / Airport Overlay Zone
Newfound Valley	Industrial
Moultonboro	Residential
Strafford	
Skyhaven	Agricultural / Airport Overlay Zone
Nashua	
Boire Field	Airport
North Country	
Twin Mountain	Residential/Business
Dean Memorial	Airport Zoning
Franconia Soaring Center	No Zoning
Errol	Residential
Gorham	Residential
Plymouth	Residential / Airport Overlay Zone
Mount Washington Regional	No Zoning
Colebrook	No Zoning
Berlin	Residential/Agricultural
Rockingham	
Hampton Airfield	Industrial/ Business/ Commercial
Pease International Tradeport	Airport – Specific to Tradeport only, no local regs.
Southern	
Manchester	Airport
Southwest	
Dillant-Hopkins	Airport
Hawthorne	Commercial
Silver Ranch	Residential
Upper Valley	
Lebanon	Light Industrial
Parlin Field	Rural / Airport Overlay Zone
Claremont	Airport Approach District
Source: Airport Interviews	

Of the remaining airports, four have no zoning because the towns in which they are located have not adopted zoning ordinances. In the case of Mt. Washington Regional Airport, however, the town has created a



development plan for the airport and surrounding area that is similar to airport specific zoning, and also defines an overlay zone restricting object heights. The remaining airports are zoned residential or commercial/industrial, many of which are located in smaller districts that are primarily residential in character, with limited commercial and industrial development.

Overlay zoning brings to bear another problem facing NH airports, obstructed approaches. The Division of Aeronautics undertakes a visual obstruction analysis when an inspector visits each airport annually. Obstructions are identified and noted by the inspector and airports are made aware of potential problems, however, no survey or photogrammetry is compiled as part of these inspections.

The responsibility for maintaining unobstructed approaches rests with the airport sponsor. In several master plans obstruction analyses were completed, and where there were extensive problems identified, the airports completed a more detailed study subsequently. Claremont Airport, for example, recently completed a study of one of their approaches. Dillant-Hopkins Airport has also completed an extensive obstruction study, and they are close to completing the removal program with the acquisition of land and easements to clear the remaining obstructions. These types of projects highlight the on-going problems in protecting an airport's airspace, but they do not necessarily address controls to limit future obstructions, be they natural or manmade.

There are four airports that have an overlay zoning that incorporates limiting obstructions. The State does have a statute that discusses the need for such overlay zoning and addresses the requirements needed for these zones. This is outlined in the New Hampshire Statue Title XXXIX Airports, Chapter 424 *Airport Zoning* (see Appendix 7-A). Given that only four airports have developed such overlay zones, other airports should become familiar with this concept and implement similar measures in adjacent towns and cities. Given the extent of urban and suburban sprawl in New Hampshire, it is increasingly important that airports have such zoning in place to try to limit development of structures such as cellular phone towers that have the potential to affect existing and future instrument approaches to airports throughout the State.

It is not uncommon for certain constituencies to oppose instituting zoning changes, including overlay zoning. For example, real estate agents and developers have claimed that changes to zoning ordinances negatively impact property values, and city councilors and managers have expressed concern about constraints on development that may impact the municipal tax base. Consequently, the economic impact of implementing airport specific or overlay zoning around airports that currently do not have such zoning is of concern. In addition, given the size of the imaginary surfaces around an airport, as well as the size of the 65 Ldn noise contour around certain airports, multiple jurisdictions are often impacted and therefore zoning changes have to be adopted by many communities, not just the municipality that owns the airport.

However, airport managers noted during the site visits conducted for this study, that their experience indicates that implementing such zoning changes has not had a negative economic impact on the surrounding communities. They noted that there are many other factors that impact property values in a given location, and that zoning changes are not the sole or even primary factor impacting property values. The acquisition of aviation (aviation-navigation) easements is intended to compensate property owners for the financial impact on their property, and other studies have documented that the value of property adjacent to an airport is not lowered by the presence of the airport.

7.5 SUMMARY AND RECOMMENDATIONS

Environmental issues facing airports are increasing in complexity, cost, and the time needed to address them. Environmental issues are relatively well documented and analyzed by airports receiving Federal funding (NPIAS Airports). A series of meetings held with airports in the Upper Valley and North Country regions focused in part on the environmental review and approval process, and several airports (including ones listed in the NPIAS) specifically asked NHDOT and the Executive Council to provide more assistance in



coordinating with state and federal permitting agencies to ensure that their projects can proceed in a timely manner.

Based on the site visits, it was also apparent that the 14 non-Federally funded airports have much fewer resources (financial, technical, or logistical) with which to address environmental issues on their airports. Given the discussions held during the site visits, it appeared that non-federally funded airports are not fully aware of environmental laws and regulations affecting their facility, or the environmental process they must follow to obtain agency approval for development projects.

A number of recommendations were made based upon the findings described above, primarily to ensure that airports are made aware of environmental laws and regulations that apply to them, and what procedures they should follow to ensure appropriate resource agency review and approvals.

Federally funded (NPIAS) airports in the State System have a defined environmental process they must complete as part of implementing their ongoing capital improvement programs (FAA Orders 5050.4A and 1050.1D, described above). However, non-Federally funded airports in the state are not subject to those Orders and do not have access to FAA grants to fund EA's or EIS's, or to hire experts in the permitting process.

It is recommended that the Division of Aeronautics develop an education program specifically targeted at non-Federally funded airports to make them aware of their environmental responsibilities, and to ensure they comply with appropriate local, state, and federal environmental procedures. NHDES has prepared a package (Appendix 7-B) that outlines which projects will and will not have environmental consequences. NH DOT should require airports to complete these forms as a condition of receiving grants from the State to ensure that they are in compliance with appropriate environmental regulations, as shown below:

- A. The Division of Aeronautics should approach NHDES and the Office of Environment to discuss their existing environmental procedures vis-à-vis airports, and to develop an airport-specific review process whereby airports would submit environmental information when they begin implementing their capital improvement programs. Related to this process, it is also recommended that the Division of Aeronautics undertake a series of mini-master plans for non-federal airports. Such mini-master plans would have a very focused scope of work to produce a current Airport Layout Plan (ALP), capital improvement plan (CIP), and environmental overview. Such mini-master plans would provide an extremely useful database for the Division of Aeronautics and the non-federal airports, which is not presently available.
- B. The Division of Aeronautics should obtain information packages from NHDES and ensure that all airports are aware of the environmental process undertaken by DES and federal environmental agencies. This can be done as part of the annual inspection program, or through trade groups such as the Granite State Airport Managers Association (GSAMA).
- C. As each airport requests a grant, either a categorical exclusion form or the environmental review form should be provided outlining the criteria for either a categorical exclusion or the need to complete additional environmental study.
- D. If there is a potential environmental impact from the proposed project(s), the Division of Aeronautics should work with the airport to coordinate with NHDES and the Office of Environment to complete the required analyses.

The Division of Aeronautics should review the existing land use and zoning for all of the airports within the System during their airport inspection process. The purpose of this review is to develop recommendations to



limit further incompatible land use and to protect each airport's airspace by limiting man-made towers and vegetation from penetrating protected airspace. The Division of Aeronautics should evaluate each airport's surrounding land use and zoning regulations, if they exist.

In cases where an airport does not have airport specific zoning or overlay zoning to protect airspace, the Division of Aeronautics should review with the airports the opportunity to develop such zoning. If airport specific zoning is unable to be developed or does not make sense, then overlay zoning should be developed to protect airspace.

Regional planning agencies can play a lead role in this process, for several reasons. They have in-house expertise on land use and zoning, they deal with regional development and transportation issues, and the multiple municipalities that are affected by airport imaginary surfaces and noise contours are often represented on a single RPA.

Information on current zoning and overlay zones was collected as part of this study and provided to the Division of Aeronautics. It was found that not all airports have zoning or overlay zoning for their airports. This type of zoning is important to have as it ensures the protection of the airports and their related airspace. Also, airports that are federally funded are required by the grant assurances to maintain such zoning. The Division of Aeronautics should develop an educational pamphlet addressing this issue and provide them to airports during the airport inspections.

The Division of Aeronautics should ensure that the 25 airports in the State System comply with current state statutes regarding land use and airspace controls, and:

- A. If the airport has airport specific zoning, ensure that the language includes elements of FAA advisory circular AC 150/5190-4A, *A Model Zoning Ordinance to Limit Height of Objects Around Airports*.
- B. If the airport has overlay zoning, ensure that it meets NH State statutes, as well as the above referenced advisory circular.

A number of airports and states across the country have adopted zoning ordinances that protect airports, and those examples can serve as models, along with FAA's advisory circulars, for municipalities that will consider amending their ordinances. Such information can also be provided to the Regional Planning Agencies so that they can work with their municipal members to adopt such changes, as well. Sample zoning ordinance language from AC 150/5190-4A is presented in Appendix 7-C.