



CHAPTER 8 - RECOMMENDED AIRPORT SYSTEM

8.1 INTRODUCTION

This chapter presents the findings and recommendations concerning the existing New Hampshire Airport System, as well as implementation strategies for the future state airport system plan. This analysis examines statewide issues, as well as regional and airport-specific issues. Throughout the preparation of this Airport System Plan, input was solicited from a wide variety of constituencies, including airport users and tenants; airport sponsors, authorities, and managers; state and federal agencies; regional planning agencies; environmental agencies; city managers and economic development directors; and corporate officers.

A variety of techniques were used to collect and analyze data, including compiling existing published sources, conducting mail-out surveys, site visits, telephone surveys, one-on-one interviews with key parties, presentations and meetings with airport authorities and regional planning agencies, meetings with city managers and economic development directors, etc.

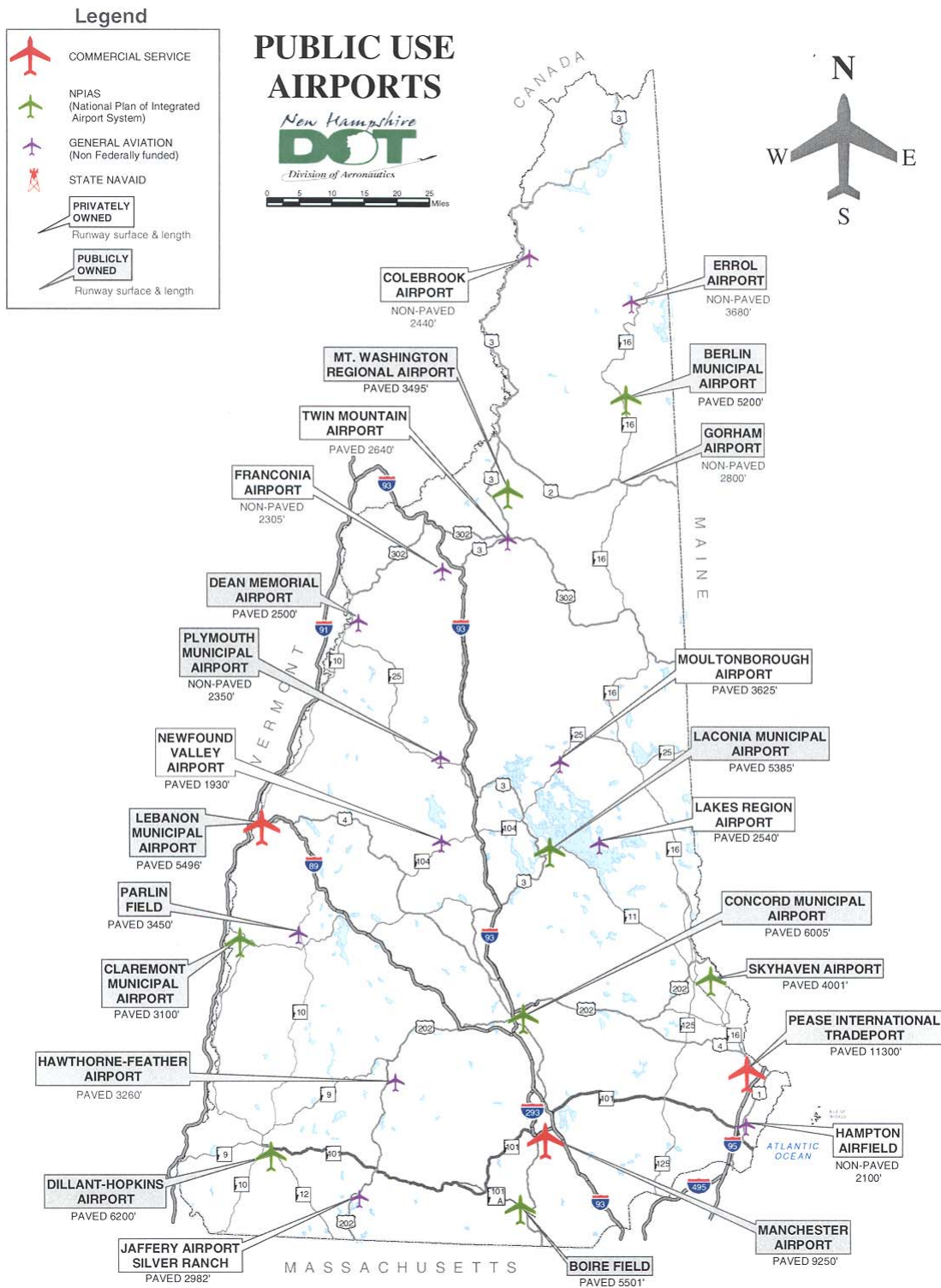
As noted previously, the state was divided into nine regions based on their socio-economic characteristics, and each region was analyzed in terms of its future economic, demographic, and aviation trends.

As of 2003, there are 25 airports in the State Airport System Plan (See Figure 8-1). To briefly summarize the System:

- Three (12%) are commercial service airports (Manchester, Pease International Tradeport, and Lebanon).
- Manchester Airport captures more than 98% of all passenger enplanements and more than 95% of all cargo enplanements in the state.
- Ten of the airports (40%) are privately owned, public use.
- Fourteen airports (56%) are listed in the FAA's National Plan of Integrated Airport Systems (NPIAS), of which 11 (44%) are eligible to receive FAA grants.
- Boire Field, Nashua, has the most based aircraft (approx. 400) - 33% of all based aircraft in the state.
- The North Country Region has the most airports of any of the study regions – nine total, including the most privately owned – public use airports (four).

Although there are more than 50 helipads and more than 10 seaplane bases in New Hampshire, most of which – although not all - are privately owned, private use, none are included in this Plan, however they are discussed in this Chapter.

Figure 8-1 – Existing System of Airports





8.2 STUDY OBJECTIVES

Three broad objectives were identified for this Airport System Plan Update, as summarized below.

1. Clearly identify the relationship between airports and economic development

Based on surveys conducted at each airport, as well as other data sources, it is estimated that approximately 3,200 people are employed by 115 separate aviation-related businesses located on airports in New Hampshire (that represents one half of one percent of total employment in the state). However, 78% of airport-related employees and 92% of airport-related businesses are located on two airports: Manchester and Pease International Tradeport. Of the 25 airports in the State Airport System Plan, the analysis in this study confirmed that Manchester Airport has the most dramatic impact on the state’s economy, and in fact, is the only airport in the System Plan that has a significant statewide economic impact:

- Gross Annual Payroll (in 1998 with 1,388 employees)..... \$31,816,000
 - Airport Expenditures (1998)..... \$504,231,000
 - Airport Expenditures (Year 2010).....\$628,971,000
 - Total Economic Impact (Year 2010).....\$1,035,554,000
- (Source: *Economic Impact Study Final Report for Manchester Airport*, Leigh Fisher & Assoc., Dec. 1999)

Boire Field also prepared an economic impact study and noted that the airport is: “a major factor in the economy of Nashua and its surrounding communities. During 1999, the airport had a total economic impact of \$21,528,940 and is projected to have a total benefit of \$131,436,334 over the next five years”.

An extensive outreach program was conducted for this study. That program included both mail-out and telephone surveys, numerous one-on-one meetings and interviews, presentations at industry association meetings, etc., to determine how companies throughout the state use airports, and also to measure their perception of the value of airports to their operation in New Hampshire. In addition to the outreach program, existing studies on the state’s economy were reviewed and documented.

A system was developed by which each airport was ranked in terms of their role in supporting tourism, business development, and/or as a public utility. A series of measures were devised to rank each airport as high, medium, or low in terms of its level of support, as shown below. One key element of the ranking process was the input provided by officials (city managers, councilors, and economic development directors) of municipalities that own and operate airports.

System Airports Classified by Level of Support			
	Low	Medium	High
Tourism Support	19	3	3
Business Support	15	4	6
Public Utility	15	6	4

The definition of low, medium or high for each category is presented below:

- Low Tourism Support = unidentified or infrequent use of the airport by tourists.
- Medium Tourism Support = occasional use of the airport by tourists.
- High Tourism Support = frequent use of the airport by tourists.
- Low Business Support = unidentified or no aviation-dependent business establishments or jobs, infrequent transient corporate aircraft operations, and no based corporate aircraft.



- Medium Business Support = Less than five aviation dependent business establishments, and/or less than thirty aviation dependent jobs, and/or 500 corporate aircraft operations annually (estimated), and/or less than five based corporate aircraft.
- High Business Support = Five or more aviation dependent businesses, thirty or more aviation dependent jobs, established and regular corporate operations, and more than five based corporate jets, along with significant corporate operations.

Public Utility is a measure of known use by military units, public institutions, and government agencies (such as the state and federal forest service, police, fire protection, emergency medical operations):

- Low Public Utility = unidentified or no use of the airport by any military, public agency, or government aircraft.
- Medium Public Utility = occasional use of the airport by military, public agency, or government aircraft.
- High Public Utility = regular or high use of the airport by military, public agency, and/or government aircraft, including the NH Air and Army National Guard units at Pease International Tradeport and Concord.

That data and analysis led to the conclusion that while some of the other 24 airports in the New Hampshire System Plan (other than Manchester Airport) support local and regional economic development, and also generate economic activity through employment and sales, they do not drive regional economic growth and investment. Company executives that were surveyed noted that factors such as the availability of skilled labor, labor costs, taxes (e.g. the business profits tax – BPT, and the business enterprise tax – BET), the cost of energy (particularly electricity), communications and ground transportation infrastructure, are much more important to their decision to locate and expand, as well as the local and regional economy, than most airports.

The majority of businesses that responded to the surveys in this study use airline service at Manchester Airport and some companies, such as Fidelity Investments, indicated that the presence of Manchester Airport was a major factor in their decision to locate a large operation in New Hampshire.

Other examples of companies that made their location decisions based on the presence of an airport include C&S Wholesale Grocers in Dillant-Hopkins Airport, Keene; White Mountain Insurance Group - Manchester Airport; Presby Environmental Plastics - Mt. Washington Regional Airport; and Energex Pellet Fuel - Lebanon Airport.

Some airports have developed joint marketing programs with adjacent businesses, examples of which include the Franconia Airport with the Franconia Inn, and Mt. Washington Regional Airport with the Mount Washington Hotel. Additionally, the race teams that use the New Hampshire International Speedway (NHIS) fly into Concord and Laconia Airports during the two NASCAR races held at NHIS each season (see Appendix 8-A). As many as 80 aircraft use the two airports during race weekends.

There are also a number of companies based in New Hampshire, or with offices in the state, that operate company airplanes, some of which include:

- Graphics Packaging at Concord Airport
- Jefferson Pilot Insurance at Concord Airport
- Kalwall Corporation at Manchester Airport
- Fisher Scientific and Tyco Corporation at Pease International Tradeport
- Pulp & Paper of America at Berlin Airport (since left the area)

Some survey respondents indicated that while they use airports other than Manchester because they are convenient transportation facilities, those airports serve a supporting versus a primary role in decisions concerning office/plant location and investment. Municipal and state economic development officials also shared the same perception of the role of airports in their community.

2. Develop a program to increase investments by local and state agencies in airports

There are two separate issues regarding financial investment in airports:

- a) The need for funding for capital improvements (such as constructing new, rehabilitating and expanding existing facilities).
- b) Subsidies provided by airport owners (sponsors) for operations and maintenance (O&M). This is an important issue because most of the 25 airports in the State Airport System Plan are not financially self-supporting in terms of their annual operating budgets.

Regarding investments for capital improvements, both the federal Airport Improvement Program (AIP) and the State of NH have limited resources and cannot meet the needs identified by the federally-funded airports in the state. Through 2007, there will be an estimated shortfall of approximately \$700,000 per year even if FAA's AIP program is re-authorized at the same funding level as FY 2002. However, if money is diverted from AIP for transportation security or other purposes, then the shortfall will be even larger.

It is important to note that 72% of all federal and state investment in capital improvements has gone to Manchester Airport to support its \$500 million expansion program. The level of FAA funding that has been provided is based on their established priority ranking system, and rapidly growing commercial service airports are given high priority by FAA. Certain phases of Manchester's program will be completed by 2005, while other projects, including additional terminal expansion, second parking garage, airport access road, an airport master plan update, etc. will be completed subsequently. As a result, Manchester Airport will continue to apply for FAA grants beyond the end of this planning period (2010).

It should be noted that even if Manchester Airport did not apply for additional FAA grants, that money would not be re-allocated by FAA to other airports in New Hampshire. It would go instead to other commercial service airports similar in size and activity to Manchester, located in other states.

In addition to capital improvements, airport sponsors (owners) are responsible for annual operating and maintenance (O&M) budgets, and when there is a shortfall they use local appropriations to make up the balance. Based on numerous interviews with municipal officials and airport managers, there is a very clear relationship between local political support for an airport and its ability to be financially self-supporting. Those facilities that rely on subsidies, particularly for annual operating and maintenance expenses, experience significantly less political support and greatly increased scrutiny from city councilors and managers.

As a result, airport managers are pro-actively adopting best-business practices (such as using industry rates and charges based on benchmarking, identifying cost-centers and revenue streams, and controlling overhead costs) in order to balance their budgets. However, many general aviation airports have limited revenue sources, particularly those airports that do not have fixed base operators (FBOs), and consequently many airports are unable to balance their annual O&M budgets.

Unfortunately, budget deficits are common among GA airports across the country, according to the results of a national survey conducted by the American Association of Airport Executives (AAAE). Nationally, GA airports generate an average of \$8.99 in revenue per aircraft operation, while their operating expense averages \$10.74 per aircraft operation, which is a gap of 19.5%.

3. Identify the key constituencies and make them aware of the value of airports to the states economy

There are a number of different constituencies that have a direct impact on airports in New Hampshire. The most obvious ones are:

- Airport users and tenants (pilots, passengers, fixed base operators, other businesses)
- Airport sponsors (owners) – city and town councils, managers, economic development officers
- NHDOT Division of Aeronautics – funding, technical support, enforcement
- Federal Aviation Administration (FAA) – funding, technical support, enforcement

In addition to those constituencies, however, there are a number of others that have very important roles to play regarding airport operation and development:

- NH General Court – funding, regulatory and policy issues.
- NH Congressional Delegation – input to federal airport legislation and funding.
- Regional Planning Agencies – land use and zoning, multi-modal transportation planning.
- Environmental agencies, including NH Department of Environmental Services (DES) – review and permitting of airport development projects.
- State and local economic development agencies, including NH Department of Resources and Economic Development (DRED) – airport marketing and technical support.
- Citizens groups – provide input on airport operations and development.
- Aircraft Users Advisory Board (AUAB).
- NH Legislative Aviation Group

In terms of implementing the recommendations presented in this chapter, all of the parties listed above must have clearly defined roles in the on-going process. There are a number of existing organizations in the state that represent aviation constituencies, including the Granite State Airport Management Association (GSAMA), the Aviation Users Advisory Board (AUAB), the Aviation Association of New Hampshire (AANH), the Aviation and Space Education Council, among others. However, those groups are aviation oriented, and no one organization includes all of the key constituencies identified in this study.

8.3 SUMMARY OF FINDINGS, RECOMMENDATIONS, AND IMPLEMENTATION

This section presents the summary of the findings that were developed as a result of the analysis of the airport system in New Hampshire. A number of specific recommendations were developed in response to the findings, as well as implementation guidelines directed towards all of the key constituencies identified above. The conclusions, recommendations, and implementation guidelines were divided into six broad categories, as summarized below:

1. System Capacity – Includes airport facilities and operations.
2. Financial/Economic – Both capital improvements and operating and maintenance budgets
3. Division of Aeronautics – Funding, operations, and policy issues such as right-of-first-refusal and data collection.
4. Intermodal – Ground transportation issues, including scheduled public transportation.
5. Environmental – Resource agency coordination, review, and permitting.
6. Security – Since September 11, 2001 new security regulations and procedures have had an enormous impact on both airport operations and costs, particularly on the three FAR Part 139 airports (Manchester, Pease International Tradeport, and Lebanon).



The format for each section presents the finding, recommendations concerning the finding, and then the implementation strategy to address the each finding.

8.3.1 SYSTEM CAPACITY

1. Airport Service Area Coverage

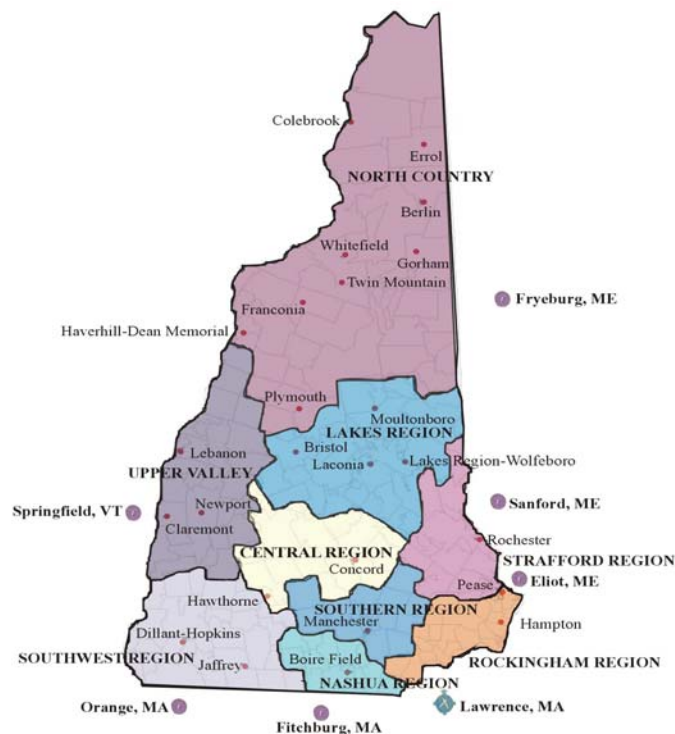
Finding: Currently, the existing twenty-five airports in the State System Plan provide more than adequate service area coverage in each of the nine regions, with the exception of the North Conway area in the North Country. An out of state airport, Eastern Slopes Regional Airport in Fryeburg, ME, provides service area coverage for the North Conway region. Because it is publicly owned and encumbered by federal and state grant assurances, it is anticipated that Fryeburg will continue to provide service area coverage beyond this planning period (2010).

Recommendation: Based upon the current system of airports, as well as the current financial and demographic conditions, no new airports are needed in the State Airport System Plan to provide additional service area coverage.

2. Adjacent Out-of-State Airports

Finding: The service areas of seven out-of-state airports (Sanford, Eliot, and Fryeburg Airports in Maine, Springfield Airport, VT, as well as Orange, Fitchburg, and Lawrence Airports in Massachusetts) extend into New Hampshire (Figure 8-2). All of those airports, with the exception of Eliot, are publicly owned and operated, and are encumbered by state and federal grants. Some of the out of state airports (Sanford, Eliot, Springfield, Orange, Fitchburg, and Lawrence) compete against New Hampshire airports (including Skyhaven, Lebanon, Claremont, Dillant-Hopkins, Silver Ranch, and Boire Field), and FBOs at those airports, for traffic and business.

Figure 8-2 – Out of State Airports



It should be noted that out-of-state airports do not have to be close to New Hampshire's border to compete against in-state fixed base operators. FBOs at airports such as Hanscom Field, MA, for example, can draw maintenance and flight training business away from NH airports. Other out-of-state airports such as Eastern Mountain Slopes Regional in Fryeburg, ME, provide coverage for the North Conway area where there is no in-state airport.

The State of Massachusetts recently changed its law (effective March 1, 2002) to exempt aircraft and parts from the state's 5% sales tax, thereby eliminating a strong incentive for aircraft owners, particularly of larger corporate aircraft, to base those airplanes in New Hampshire. The change is temporary (until 2006) unless it is extended or made permanent by the Massachusetts state legislature. It should be noted that the State of Connecticut adopted a similar change to its tax law in 1997 in response to lost business due to airplanes moving out of state. Since the change in Massachusetts tax law was adopted in early 2002, few if any corporate aircraft have left New Hampshire and returned to Massachusetts, in part because existing flight departments have already invested in hangars and other facilities in New Hampshire. However, the change in Massachusetts tax law will likely result in significantly fewer Massachusetts airplanes being located in New Hampshire in the future, which will decrease the growth of based aircraft in this state.

Recommendation: The Division of Aeronautics should monitor the neighboring airports in terms of any changes in their role, facilities, and services, as well as any changes in adjacent state laws, as well as the overall economy, and determine whether New Hampshire airports may be penalized or suffer from increased out-of-state competition. For example, if an adjacent state were to significantly lower taxes on avgas and/or Jet-A fuel (which is considered unlikely given the budget deficits faced by most states), the resulting lower fuel prices would attract a number of New Hampshire aircraft, resulting in lower fuel sales and revenues for in-state FBOs.

Implementation: The Division of Aeronautics should consider appropriate responses to changes in adjacent state laws, such as the recently passed exemption for airplanes and parts from Massachusetts state sales tax, and determine whether a response would be warranted by the Division, DOT, or the General Court. In general, any changes that bring adjacent state tax laws in line with existing New Hampshire laws and procedures, such as what Massachusetts did recently, does not warrant a response by New Hampshire. However, if an adjacent state creates a significant advantage for their airport tenants and businesses that will impact New Hampshire airports, then a response by Division of Aeronautics or the NH General Court may be warranted, similar to what was done in Massachusetts and Connecticut.

3. System Constraints

Finding: Demand for additional hangar space was identified at many airports throughout the state. In assessing each airport's ability to add new facilities, it was found that all but one airport has the space available to accommodate projected demand. Boire Field in Nashua is close to its build-out capacity in terms of based aircraft because it is physically constrained by wetlands (the Pennichuck Water Works to the north) and adjacent residential, industrial, and commercial development.

If Boire Field reaches saturation, the 'overflow' of based aircraft after 2010 could be accommodated at Jaffrey, Manchester, and/or Concord Airports. It is also possible that some based aircraft could locate at Orange, Fitchburg, and Lawrence Airports in Massachusetts, particularly since that states' law was changed in early 2002 exempting aircraft and parts from the Massachusetts state sales tax. That change in the tax law is temporary (until January 1, 2006), unless it is extended or made permanent by the state legislature.

Recommendation: Monitor Boire Field to assess future growth of based aircraft vs. available hangar and tiedown capacity. If the airport reaches capacity in terms of based aircraft within the next ten years, the Division of Aeronautics should work closely with airport sponsors at Silver Ranch, Concord, and Manchester



to ensure that they can accommodate any ‘overflow’ of based aircraft. The primary goal is to retain as many based aircraft within NH as possible.

Implementation: The Division of Aeronautics should, as part of their annual review of the System Plan, assess the demand-capacity of Boire Field and Dillant-Hopkins Airport, and identify when they will reach their limits in terms of based aircraft. The Division of Aeronautics should also work with Silver Ranch, Concord, and Manchester Airports to provide additional tiedown and hangar capacity.

4. Airport Roles

Findings: Based on current trends in the airline industry, none of the existing 22 general aviation (GA) airports in the State System Plan will receive scheduled airline service through the end of the planning period (2010). As a result, all existing GA airports will retain that role throughout the planning period, and Lebanon, Pease International Tradeport, and Manchester will remain as the three commercial service airports in NH.

Although no significant changes in airport roles are anticipated, a number of airports will enhance their facilities to better serve aviation demand.

- Manchester Airport will grow from small-hub to a medium-hub commercial service airport based on the growth in passenger enplanements (FAA defines medium hub airports as those that accommodate more than 0.25% but less than 1% of total national enplanements. In 2001, that represented between 1,652,674 to 6,610,695 passenger enplanements.) In 2002, more than 1.6 million passengers enplaned at Manchester Airport, which means that it is very close to the threshold as a medium hub airport.

With the completion of the expansion program, particularly the extension of Runway 17-35 to 9,250 feet and the installation of a Category IIIB instrument landing system (ILS), the airport will be able to accommodate non-stop transcontinental and transatlantic service. Therefore, its haul length (as defined by FAA) will increase from medium to long range (more than 1,500 miles), which will open new non-stop markets not presently served from Manchester. As a result, its potential passenger and cargo traffic will increase even further, and Manchester will maintain its dominant role as the primary commercial service airport in the state and the Northern New England region.

- Mt. Washington Regional Airport is examining a proposed runway extension to 5,000 feet, and has also expressed a desire to upgrade its non-precision localizer instrument approach to a full Instrument Landing System (ILS) or precision GPS approach to Runway 10 to accommodate more jet and turboprop corporate aircraft. Issues such as wetland impacts will have to be addressed, and may require obtaining permits. The airport will remain a general aviation facility, but would be capable of accommodating corporate traffic that is not now served if the proposed improvements are implemented.
- Skyhaven Airport is proposing a runway extension to 5,000 feet to accommodate increased corporate aircraft, but will also remain a general aviation facility. As with Mt. Washington Regional, the runway extension will accommodate more corporate jet aircraft than are currently using the facility.
- Laconia Airport is examining a runway extension, as well as constructing FAA-standard runway safety areas, to provide more operational capability (in the form of increased payload and fuel) for corporate jet aircraft that currently use the airport. It will also remain a general aviation facility, and these enhancements will benefit the current mix of aircraft using the facility. Issues such as wetland impacts will have to be addressed and may require obtaining permits. The FBOs at Laconia Airport indicated that the upgrade of the non-precision approach to a full precision instrument landing system

(ILS) several years previously resulted in an increase in corporate traffic at the airport. Similar upgrades to non-precision approaches at other airports would likely see similar results.

- Boire Field has identified a need for a parallel runway (3,200 feet long, visual daytime only) to serve training aircraft (touch and go traffic) and increase the airport's peak hour operational capacity. Boire will remain a general aviation reliever airport, and as of 2003 the only designated reliever in the state.
- Berlin Airport is examining publishing a precision instrument approach (either an ILS or GPS) to Runway 18, including the installation of a medium intensity approach light system (MALSR). Issues such as wetland impacts will have to be addressed, and may require obtaining permits.
- Dean Memorial Airport is actively working to publish a non-precision straight-in GPS instrument approach, which will increase the airport's operational utility. The Airport has contacted FAA about starting the process.

Recommendation: The Division of Aeronautics should support the proposed development described above as part of each airport's capital improvement program, including assisting the coordination process with NH-DES as part of the environmental review and permitting process.

Implementation: The Division of Aeronautics should fund the Capital Improvement Program to the extent feasible, and also amend Concord Airport's role in the NPIAS.

5. Entry Criteria for New Facilities in the State Airport System Plan

Finding: Current procedures allow any public use facility (airport, heliport, or seaplane base) – private or publicly owned - to enter the State's Airport System Plan if they meet two criteria: **a)** declare that the facility is open for public use, and **b)** a request for state funding is submitted by the facility owner.

As a result, the existing criteria for entry into the New Hampshire Airport System Plan is too broad, and too much discretion is given to airport sponsors to decide when they will enter the system, and hence become eligible for state financial assistance. There are no formal guidelines established for the Division of Aeronautics regarding entry into the state system. However, policy has been established by the Division of Aeronautics to use applicable FAA guidelines for airports requesting to enter the system.

Recommendation: The requirements for future entry into the State Airport System should be formalized. The Division of Aeronautics should be given the authority to exercise discretion in determining which facilities (airport, heliport, or seaplane base) can be admitted into the State System Plan by establishing performance-based entry criteria. The entry criteria should be similar to FAA's for inclusion in the National Plan of Integrated Airport Systems (NPIAS), for example: the facility may be required to have a minimum of ten based aircraft; be located at least 20 miles from the nearest other facility also included in the State System Plan; be in close proximity to a town, city, or location (including important resource or recreational facility) not presently served by another airport in the State System; the facility develop a plan to comply with FAA design criteria within a two year period; and the Division of Aeronautics may make a specific determination whether that particular facility is needed based on special circumstances.

Based on the analysis presented in this study, no additional facilities are needed in the State System Plan to meet projected demand and/or meet the stated goals of the NHDOT.

In addition, the Division of Aeronautics should require that any public-use facility (airport, heliport, or seaplane base) that wishes to enter the State System Plan should meet FAA design standards appropriate for

their specific type and role of facility. A “grandfather” clause should be added to either exempt existing airports in the system that do not meet appropriate design standards, or set a time period within which they must comply.

Any new facility included in the System Plan should either have, or be able to develop, within two years of inclusion in the System, an airport layout plan (ALP) and capital improvement program (CIP) describing whether they meet appropriate design standards, or if not, how the facility will be brought up to standard. Both the ALP and CIP must be developed within a given time period, and should be prepared as part of the group master plans concept described in the Financial/Economic section. If additional facilities meet those criteria and are included in the State System, then the Division of Aeronautics will require additional funding to accommodate the needs of the new facilities, as well as to enhance airports presently in the System that do not meet design standards.

Implementation: The Division of Aeronautics should institute changes to the entry criteria by, a) either amending the current administrative rules and procedures, or b) draft legislation for adoption by the Court and Governor and Council if appropriate. Such changes should be in place by 2005 at the latest.

6. NPIAS Airports

Finding: Currently there are 14 airports in New Hampshire that are included in FAA’s National Plan of Integrated Airport System (NPIAS), 11 of which have received FAA grants. Silver Ranch, Parlin Field, and Plymouth Municipal Airport have NPIAS numbers but do not qualify for federal grants for capital improvement projects. The State currently manages the apportionment, discretionary and GA entitlement funding from FAA for the eight general aviation airports in the NPIAS (Boire Field, Dillant-Hopkins, Concord, Skyhaven, Laconia, Claremont, Berlin, and Mt. Washington Regional). By contrast, the Division of Aeronautics serves essentially as a pass-through of FAA discretionary and entitlement funds for the three commercial service airports (Manchester, Pease International Tradeport, Lebanon). In addition, revenues generated by passenger facility charges (PFCs) at those airports do not pass through the Division, nor does the Division have any role in the bonds issued by the commercial service airports.

The amount of FAA grant money available for the eight general aviation airports presently in the NPIAS does not meet the existing needs as identified in the state or individual airport capital improvement programs. Because FAA grants are tied to the annual federal budget cycle, even when multi-year programs are in place (such as the current Airport Improvement Program – AIR-21), the Division of Aeronautics and individual airports have limited ability to control how much money Congress appropriates. In addition, there are several factors that point to lower appropriations from Congress in the near future, including the growing federal budget deficit and the increased funding needed for the Departments of Homeland Security and Defense. The Transportation Security Administration, which is part of the Department of Homeland Security, has received as much as \$500 million from FAA discretionary money in FY 2002 and 2003, which decreased the amount available for airport capital improvements.

More than 70% of FAA’s grant money awarded to NH airports since 1999 supported Manchester Airport’s on-going \$500 million development program. The current phase of the program should be completed by 2005, however, Manchester Airport has additional projects that it will undertake beyond that period, thereby continuing to apply for FAA grants. Adding more NH airports to the NPIAS and making them eligible for federal grants will not necessarily result in more grant funds awarded to New Hampshire, in large part because additional airports will not receive the same federal priority ranking as Manchester Airport. However, because it meets the criteria and is interested in being included in the NPIAS, Dean Memorial Airport should be considered for inclusion in the near future.

If passenger enplanements at Pease International Tradeport and or Lebanon fall below 10,000 per year, they

would no longer be designated as primary airport and they could lose their FAA entitlement money, which would mean that they would receive less federal funding (approximately \$500,000 annually).

Recommendation: At this time, only one other airport should be considered for inclusion into the NPIAS program, Dean Memorial Airport. Dean Memorial Airport is municipally owned, serves the Upper Connecticut River Valley region, and is located between two other NPIAS airports, Plymouth and Mt. Washington Regional Airport (although Plymouth does not presently qualify to receive federal funding). Dean Memorial Airport is well maintained, is financially self sufficient, has more than 10 based aircraft and can accommodate additional based airplanes. The airport also has political support from the town, and the commission is actively promoting the facility to increase its use and visibility within the community as an important and beneficial transportation facility. The commission is also actively pursuing the publication of a new straight-in non-precision GPS instrument approach.

In the future, should the ownership status for Silver Ranch (Jaffrey), Moultonboro, and/or Wolfeboro change, consideration should also be given to include these airports in the NPIAS.

However, the Division of Aeronautics should assess the option and evaluate the potential impact to current funding levels. This can be done through a coordinated effort with the airport to determine what is required over the next five years and to assess the funding availability within the Division of Aeronautics' current Capital Improvement Program. The Division of Aeronautics should discuss including the airport in the NPIAS with the FAA if it is a viable option.

Implementation: The Division of Aeronautics should discuss the future development requirements of Dean Memorial Airport and determine how it will effect current funding requirements of the State's current Capital Improvement Program. If it is a viable option, the Division of Aeronautics should then discuss the option of adding Dean Memorial Airport to the NPIAS with the FAA, as well as future levels of state apportionment funding. Discussions must also be held to determine if the Town is willing to abide by the federal grant assurances that will encumber the Town for a twenty-year period after each federal grant has been awarded and accepted. If the Town is willing and able to comply with the grant assurances, then the Division of Aeronautics could recommend adding Dean Memorial Airport to the NPIAS. In the future, should the ownership status for Silver Ranch (Jaffrey), Moultonboro, and/or Wolfeboro change, consideration should also be given to include these airports in the NPIAS.

7. North Country Airports

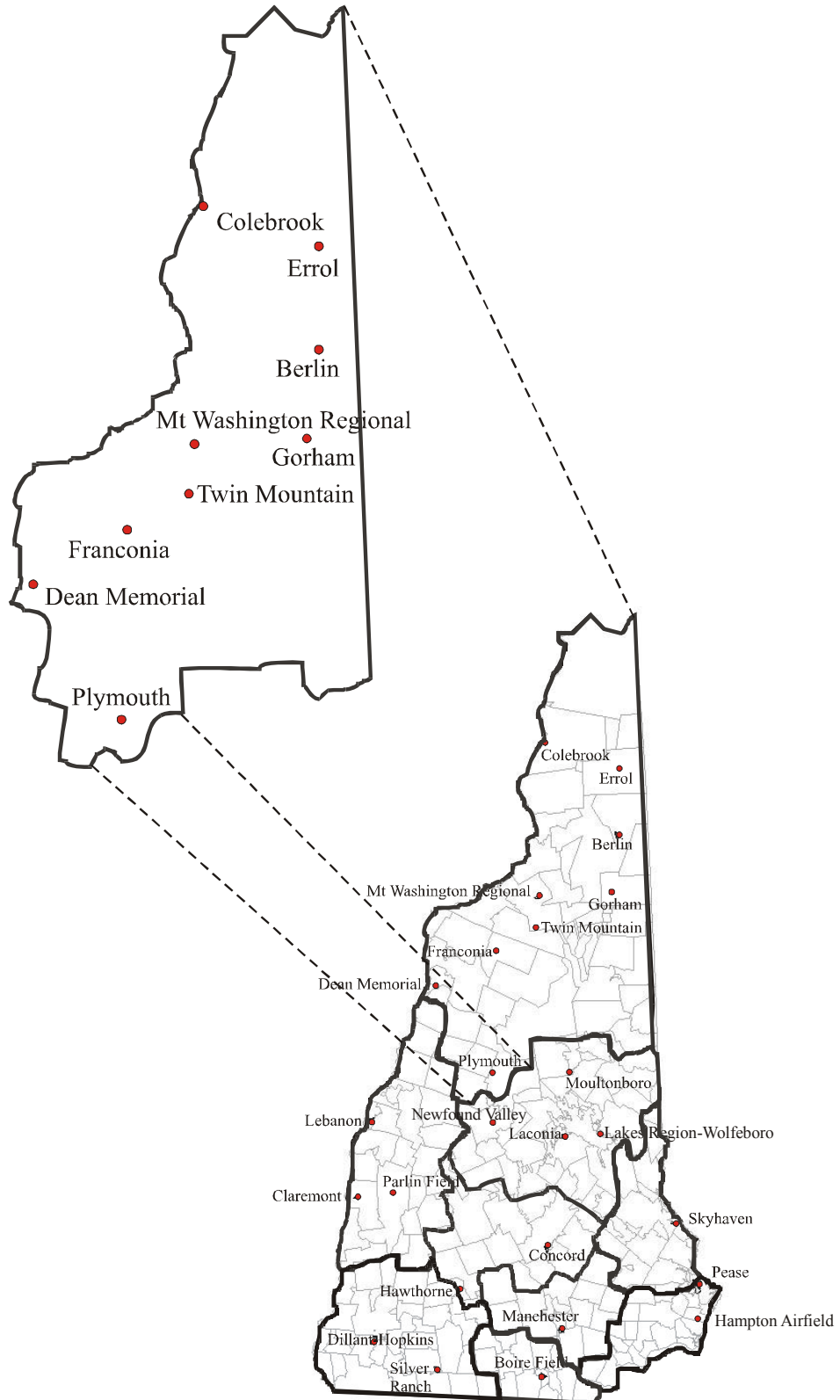
Finding: As noted above, the North Country has the most airports of any region in the state (see Figure 8-3), but also has the lowest population density as well as the lowest median household income. Four of the nine airports are privately-owned, and only two in the region (Mt. Washington Regional and Berlin Municipal Airports) are included in FAA's NPIAS and eligible for federal assistance, although Dean Memorial Airport has been recommended for entry in the NPIAS as noted in the previous section.

Airports located in the North Country Region face unique challenges in terms of attracting more traffic, particularly corporate aircraft, due to a number of factors:

- The lack of precision instrument approaches and relatively high minimums on the existing procedures.
- The presence of the Yankee One and Two Military Operating Areas (MOA) and the regular use of that airspace by military aircraft training at both low and high altitudes. Surveys conducted for this study, as well as interviews with Manchester ATC personnel, indicated that the presence of the MOAs has the ability to potentially constrain access to the North Country because some pilots are concerned about their ability to see and avoid military aircraft. The Aircraft Owners and Pilots Association (AOPA) has protested the creation of additional MOAs around the country because of

the negative impact that they have on general aviation aircraft operations.

Figure 8-3 – North Country Airports



- The lack of FAA Air Traffic Control (ATC) towers and radar coverage, and services (such as flight following) in the region.
- The lack of direct communications with FAA ATC for instrument approach and flight clearances.
- Only Berlin Airport has a runway long enough to accommodate most corporate jet operations.

Some airports, such as Mt. Washington Regional, have taken a pro-active approach to joint marketing with area businesses such as the Mount Washington Hotel, in addition to creating a regional authority, as well as adopting an aggressive business plan. The Authority is actively considering a runway extension and an improved instrument approach to attract more corporate traffic, although state or federal agencies have made no funding commitments. In addition, environmental issues – particularly wetland impacts – must be addressed. Berlin Airport would also like to improve its instrument approach minimums with a GPS precision approach and installation of an approach lighting system to Runway 18, but also must address wetland issues as well.

As noted above, the North Country has more airports than any other region, and yet also has the lowest population density and per capita income of any region in the state. Colebrook, Errol, and Gorham Airports overlap the service areas of Mt. Washington Regional, Berlin and Twin Mountain Airports, accommodate relatively low levels of activity, and are seasonal operations. If those airports remain open and operational, they will remain in the State System Plan. However, if the owners decide not to continue the operation of those facilities, they should be dropped from the System Plan.

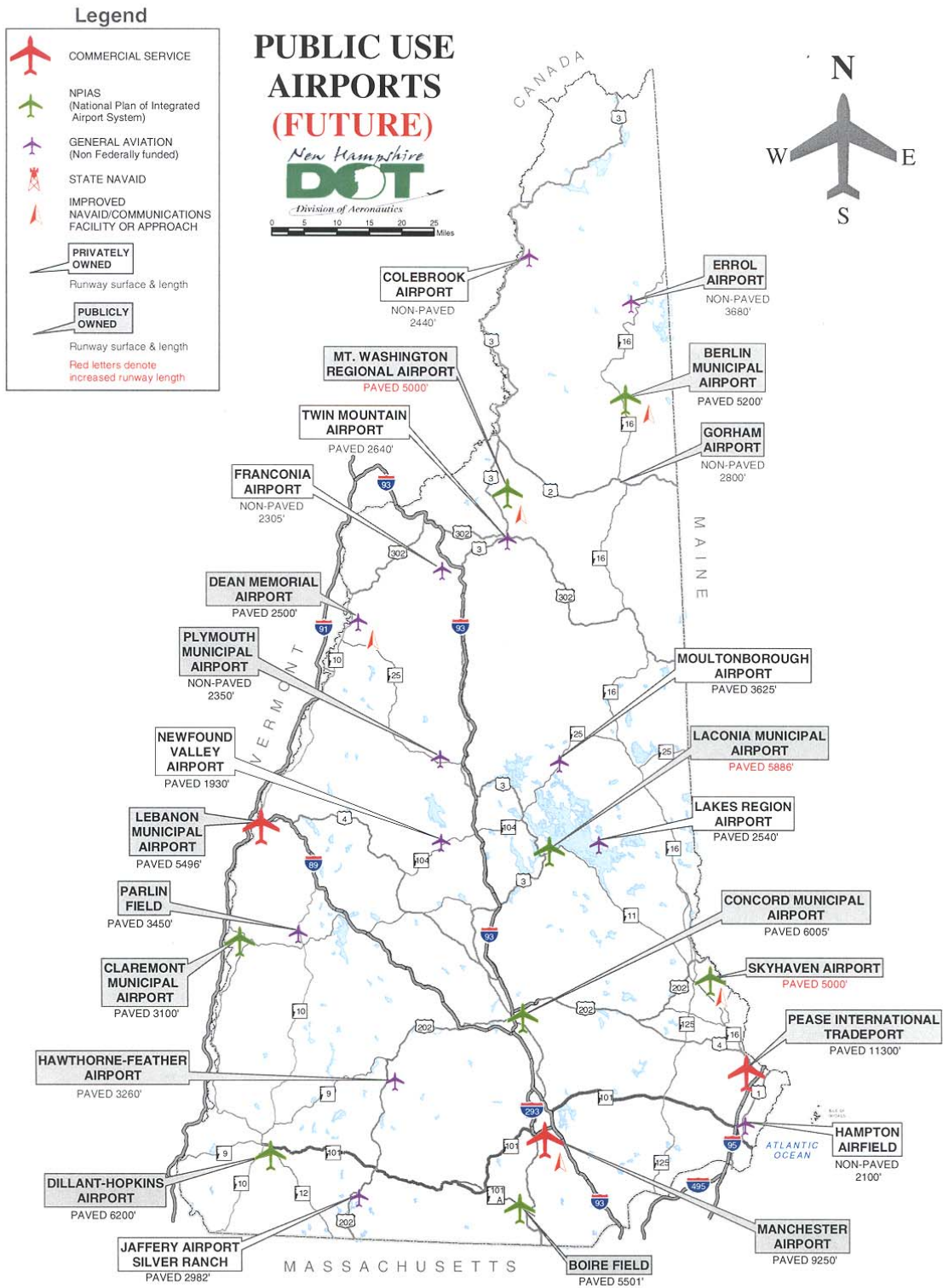
FAA has sole jurisdiction over airspace and air traffic control issues, and no changes to the Yankee One and Two MOAs are anticipated by the end of this planning period (2010). In addition, discussions with FAA ATC personnel indicated that FAA has no plans to install additional radars for improved flight following or ATC services in the region due to the high cost and relatively low traffic levels.

Recommendation: The Division of Aeronautics should:

- Actively support both Mt. Washington Regional and Berlin Airport in their efforts to improve their instrument approaches, lower their approach minimums, install medium intensity approach light systems with runway alignment indicator lights (MALSR) at each airport, and remove obstructions. Such support will take several forms: fund the state's share of the necessary environmental and planning studies; assist in the coordination and permitting process with environmental agencies; and provide funding for the associated construction projects.
- Lobby FAA for at least one precision approach facility (ILS) in the North Country. Two potential candidate airports are Mount Washington Regional Airport and Berlin Airport.
- Support Dean Memorial Airport's efforts to have FAA publish a new straight-in GPS non-precision instrument approach to that airport.
- Strongly encourage FAA to install additional remote communications outlets (RCO) in the North Country to provide direct aircraft-ATC communications. Both Berlin and Mt. Washington Regional Airports have RCOs located at their facilities that connect with Bangor Flight Service Station (FSS), but that is not as efficient as direct communications with FAA ATC.
- Maintain coordination with the military to monitor any changes to the Yankee One and Two MOAs in terms of their size, hours of operation, and/or military aircraft operating characteristics. This will be dependent upon, in part, for funded staff travel under the Division's current and future budget.

Implementation: The Division of Aeronautics should focus an effort to improve the airports within the North Country Region to better enhance accessibility to the region. Improvements to the airports and the navigational/communications facilities in the region, will be accomplished through coordination with the airports and the various divisions within the FAA. Based on the previous discussions, the recommended system of airports will include all of the current airports within the system as shown in Figure 8-4.

Figure 8-4 – Recommended System of Airports



8.3.2 FINANCIAL/ECONOMIC

1. Federal and State Funding

Finding: Comparing anticipated development needs identified in airport capital improvement programs with existing federal funding levels, it is apparent that there is insufficient money between FY 2002 and FY 2007 for the eight general aviation NPIAS airports. This is due, in part, to New Hampshire’s limited apportionment from FAA’s Airport Improvement Program for general aviation airports, which is determined by a set formula based in part on the state’s population. As a result, some projects are being deferred until funding is available.

As noted previously, the three commercial service airports (Manchester, Pease International Tradeport, and Lebanon) receive separate funding from the FAA (such as passenger entitlements), and also revenue from passenger facility charges (PFC), neither of which are available for general aviation airports. Pease International Tradeport is also included in the FAA’s military airport program (MAP). The NH Court appropriates sufficient money to provide the state’s matching share for federal grants awarded to the NPIAS airports, however, there is insufficient state funding to meet all of the airports capital improvement needs.

It is interesting to note that the other airports that are not included in the NPIAS have not prepared airport layout plans (ALP) or capital improvement programs (CIP). As a result, it is very difficult for the Division of Aeronautics to accurately identify their capital improvement needs, the amount of state or local funding required, or when such funding will be needed.

Recommendation: In terms of increasing FAA grants, the Division of Aeronautics should work closely with the state’s congressional delegation to promote adequate funding through FAA’s Airport Improvement Program (AIP), promote the passage of multi-year funding programs, and also to include New Hampshire airports as ‘named’ airports in authorizing legislation for targeted appropriations, where feasible and appropriate.

A similar effort should be made to better fund the Division of Aeronautics so that they may fund airport development at the airports that do not receive federal assistance. In order to do this, though, the Division of Aeronautics needs to have a current capital improvement program for every airport in the System, which it does not presently have. The eleven NPIAS airports have current CIPs and ALPS, but very few of the other 14 airports have that detailed information.

One way in which this can be accomplished is for the Division of Aeronautics to develop short-term “mini” master plans for the state-funded (non-NPIAS) airports. None of the state funded airports have current airport layout plans or capital improvement programs, and as a result, neither the airport owner nor the Division of Aeronautics know what overall capital improvements are required, the cost for such improvements, or the possible funding sources. The “mini” master plans would develop an airport layout plan for each airport, generate a capital improvement program, and identify key issues associated with developing the airport over a ten-year period. By completing these mini master plans, the Division of Aeronautics would have a definitive understanding of what would be involved in maintaining the airports within the current system and define the financial requirements to meet the needs of these airports.

Implementation: The Division of Aeronautics and NHDOT should keep the state’s congressional delegation informed of the funding needs of the NPIAS airports, and that they should lobby for increased AIP funding as well as the passage of multi-year programs, particularly when the current AIR-21 program expires in FY 2003.

The Division of Aeronautics should also implement a program to develop mini-master plans to develop ALPs

and identify future funding needs for the non-NPIAS airports. These mini master plans can be done separately, or several combined within a group of studies. The Division of Aeronautics will need to assess if current staff can do these mini-master plans or if outside consulting services will be required.

2. Increase State Funding for Airports

Finding: As noted previously, there is insufficient funding for the capital improvements identified by individual airports and the Division of Aeronautics. The State of New Hampshire, and the municipalities in the state, presently has few financial resources with which to increase investment in airports to cover the shortfalls in state and federal capital improvement funding. The NH Center for Public Policy Studies has documented that the state suffers from a “structural deficit”, which is defined as a situation “where, with no change in the tax laws or public services, tax revenues do not increase as fast as expenditures.” The state is currently projecting a budget deficit approaching \$250 million in the next Biennium, and significant cuts in agency budgets are anticipated. At present, the state charges tax on aviation fuel (2 cents/gal. on Jet A and 4cents/gal. on Avgas), but the revenue generated goes into the State’s General Fund and is not earmarked for airport or aviation related expenses.

Municipalities have even fewer revenue sources than the state. As a result, in order to increase investment in airport infrastructure by the state and municipalities, new revenue sources will be required such as aviation user fees/taxes that could include additional fuel taxes, aircraft registration fees, aviation services taxes (landing and parking fees, land and building lease rates, etc.)

However, aircraft owners, operators, and passengers are price-sensitive, and a significant increase in user fees/taxes would decrease aviation activity in the state (and therefore revenues) and divert traffic to out-of-state airports. Such was the case when Massachusetts state sales tax provided a strong incentive for aircraft owners to base their airplanes in New Hampshire, which has no sales tax, particularly by owners of larger, more expensive airplanes. As a result, Massachusetts recently changed its tax law to exempt airplanes and parts from its sales tax specifically to eliminate the incentive to move out-of-state, and also to attract airplanes presently based in New Hampshire to return to Massachusetts.

Recommendation: The State should direct the revenue from aviation fuel tax from its General Fund to airport-specific expenses. Such a move would increase funding for airports without involving a tax increase. While instituting user fees and creating a statewide aviation trust fund would provide additional revenue for airports in New Hampshire, there are two significant problems: first, most airport users and tenants are price sensitive, and increased fees will decrease aviation traffic and business at airports in the state, thereby negating the benefits of any new user fees. A primary motivation for the State of Massachusetts in eliminating aircraft and parts from the state sales tax, for example, was specifically to eliminate the cost differential with New Hampshire and increase traffic at Massachusetts airports. Secondly, changes in New Hampshire’s tax law will require legislation to be adopted by the General Court and Governor and Council, which have historically opposed any new broad-based taxes.

Implementation:

3. Innovative Funding Sources

Finding: A good example of innovative funding sources is this State System Plan Update. The Division of Aeronautics utilized funding from the federal intermodal transportation program under the Transportation Efficiency Act (TEA-21) to undertake this System Plan Update. Typically, funding for the FAA provides these types of studies.

Because the state and municipalities have relatively few revenue sources, other ‘non-traditional’ funding



sources have been identified:

- Explore additional grants from the U.S. Department Transportation through the Transportation Efficiency Act (TEA-21) intermodal program for airport studies and programs.
- The U.S. Department of Commerce funds a number of programs that airports may utilize when FAA grants are not available, such as Community Development Block Grants for capital improvements, Community Economic Development Strategy Grants, and Grants for Public Works and Economic Development Facilities, which are all handled through the Department's Economic Development Administration (EDA). In addition, the Small Business Administration (SBA) funds start-up business planning and capital investments with low interest loans that could be used by FBOs locating on an airport.
- Other state agencies, such as the Department of Resources and Economic Development (DRED), may provide both financial and technical assistance with airport marketing programs, as well as market the state's airports in their existing materials.
- A General Aviation Airport Support should be established in which all of the airports within the designated airport system share information and resources to enhance operating and administrative activities. Currently, this is done at meetings held by the Granite State Airport Managers Association (GSAMA). However, due to limited travel budgets, not all airport managers can attend. Thus a program, in concert with GSAMA, should be developed that can reach all airport managers, through the State's website, or through quarterly meetings to be held in different regions within the state. The GSAMA meetings provide a basis for the types of information that is typically shared and should be used as a guide to determine what types of information is shared. Managers who are unable to make many of the GSAMA meetings should be contacted to also determine their needs and to obtain their input.
- Increased private investment in airports from FBOs and other companies that wish to establish or expand businesses or flight departments on the airport. All of the hangars and FBO buildings at Boire Field, for example, are constructed by private companies that pay ground leases to the Nashua Airport Authority. In addition, the leases have reversion clauses so that the ownership of those hangars and buildings revert to the Airport Authority twenty years after the lease is executed.

Recommendation: The Division of Aeronautics and the AUAB should work with airport sponsors to explore the funding sources noted above, assist with completing and filing grant applications where appropriate, provide coordination with other state agencies (such as DRED), as well as with appropriate federal agencies.

Implementation: The Division of Aeronautics should coordinate with other state agencies to collect specific data about grants that NH airports may qualify for and be eligible to receive, and disseminate that information to airports around the state. The Division of Aeronautics can also assist with the completion and submission of federal and state grant application forms, where appropriate, and coordinate with other state agencies, such as DRED, to provide marketing support to airports.

4. Airport Sponsorship and Funding Options

Finding: All of the airports within the state are owned and operated by municipalities, private owners or the State of New Hampshire. As a result, the burdens of operating, maintaining, and funding capital improvements are the sole responsibility of these airport sponsors. With regard to the municipally-owned facilities, there were a limited number of airports that were financially self-sufficient. Thus, many of the airports operated at a deficit, which required various levels of funding affecting the overall town budgets.

Many airports throughout the nation have addressed the financial and operational impacts of their airports through the development of an airport authority or an airport commission to operate the airport. These authorities or commissions are either state or municipally chartered or are recognized as an extension of local government. These authorities or commissions, typically made up of a host community and surrounding towns that use, or benefit from the airport, provides a multi-town funding and operating mechanism that spreads the burden of the airport over the member towns rather than the host town. This “sharing of resources” such as financial support or in-kind support such as snow plowing, etc. is one way in which towns can operate an airport economically while benefiting from having an additional transportation gateway to their communities.

One such example of an airport run by an authority in New Hampshire is Mt. Washington Regional Airport Commission. The airport is located in the Town of Whitefield and provides air transportation access to this part of the North Country region. Because many of the towns in this region have a limited population base and limited financial means, the Town of Whitefield reached out to the other surrounding towns to help support and operate the airport. As a result, many of the surrounding towns indicated their willingness to develop an airport authority based upon the benefits of providing an additional transportation link to their communities. The Commission operates through an inter-municipal agreement to budget, collect, and disperse operating funds to maintain and operate the airport. Over the years, there have been as many as 12 towns participating in the authority, however that number has fluctuated over the years. In 2003, the authority was made up of nine towns: Whitefield, Lancaster, Jefferson, Franconia, Lincoln, Bethlehem, Littleton, Dalton and Twin Mountain. Funding the airport budget is based upon a specified rate per person for each of the participating towns. The current rate is 75 cents per person in each of the town’s budget has a budget line item for the airport. This rate is a recommended rate and most towns are able to support the airport.

The Mt. Washington Regional Airport Commission is one example in which to maintain, develop and fund an airport. There are other examples around the country that use various methods to fund and share the burden of the airport. In cases where a municipality is unable to fully fund the operation of an airport, an airport authority is a unique opportunity to do so.

Recommendation: The Division of Aeronautics regularly monitors airports through annual inspections, grant requests and offers, and various projects such as master plans and engineering projects. The Division should monitor the airports and if it is found that municipalities are struggling financially or operationally, then the Division should discuss with the municipality the options to look beyond the town to those communities that are using, or would benefit from the airport, to develop an airport authority or airport commission.

Implementation: If the Division of Aeronautics finds, or is approached by, a municipality that is having difficulty in operating or funding their airport, then it is suggested that options be discussed with the municipality about an airport authority or airport commission. If the development of an airport authority or commission is an option, the Division of Aeronautics should work with the municipality providing information and guidance. Information can be obtained from various state department of transportation agencies who may have regulations and guidelines on airport authorities. Additional sources also may include various state airport management associations who may provide contacts to other airport authorities in the various states.

The Division of Aeronautics should also work with the Granite State Airport Managers Association (GSAMA) and develop forums to gauge the ability of the various airports within the state if airport authorities or commission could be an option to operate airports within the state. Additionally, the Mt. Washington Regional Airport Commission should also be contacted to provide their experience with the advantages and disadvantages of the authority. GSAMA provides a good forum for such a discussion.

5. Business Use of Airports

Finding: A statewide survey of businesses was conducted with the assistance of various Chambers of Commerce and the Business and Industry Association (BIA). The majority of survey respondents indicated that they use Manchester Airport for their air travel needs, however, many respondents were also unaware of the presence of general aviation airports relatively close to their facility. The survey results also indicated that most corporate location and expansion decisions were not based on the presence of airports, with the exceptions noted below.

However, the following companies indicated in the survey that they made their location decision based on the proximity of an airport, and/or indicated that a GA airport was very important to their line of business:

- C & S Wholesale Grocers, Inc. – Brattleboro, Vermont/Keene, NH
- Fidelity – Merrimack, NH
- New Hampshire International Speedway – Loudon, NH¹
- The Franconia Inn – Franconia, NH
- Energex - West Lebanon, NH

Recommendation: The surveys highlighted a significant problem of how airports are viewed by business and the general public. Most businesses recognize Manchester as the key airport within the state. That focus on Manchester Airport was reflected in a report prepared by the University of New Hampshire Whittemore School of Business regarding opportunities for the City of Concord to attract more high-tech and incubator industries. The report highlighted Concord’s proximity to Manchester Airport, including the fact that the city was far enough away to not be affected by aircraft noise, however, did not mention that there is an airport in Concord large enough to accommodate corporate jets.

The value and possible use of general aviation airports by most business travelers in the state are not well known or understood. The advent of fractional ownership of business aircraft has greatly increased corporate aircraft utilization nationally, stimulated in part by increased security and inconvenience levels at commercial service airports. However, even with such growth only a fraction of all business travelers have access to corporate aircraft – the large majority still use airline service. Thus, in order to obtain increased utilization of, and support for GA airports, a comprehensive education process will be needed to make the business community, as well as local communities and governments aware of the benefits of each airport.

Implementation: The Division of Aeronautics has defined, as part of the system plan update, materials that can be used to educate the public and elected officials. The Division of Aeronautics may also work with state agencies like the Department of Resources and Economic Development (DRED), as well as local economic development directors and chambers of commerce, to make business leaders aware of their local airport, and that it is an economic resource.

6. Airport Financial Performance and Local Political Support for Airports

Finding: Surveys of city and town managers and economic development directors consistently indicated that local political support for an airport is dependent on the financial performance of each airport. Airports that require annual subsidies to balance their budgets receive less political support than airports that break-even or are financially self-sufficient. As a result, financially under-performing airports do not receive as much money for maintenance, capital improvements, or marketing, and come under much more scrutiny by city and town councils and budget committees.

¹ The NASCAR race teams

It should be noted that some municipalities that own airports have developed portions of the airport property for non-aviation purposes, typically commercial and industrial development. That development is generally compatible with airport operations and provides a significant source of revenue for the municipality in the form of taxes, leases, or sometimes revenue from the sale of property. According to FAA grant assurances, however, all of the revenue generated on airport property – including from commercial and industrial land uses - must be used for airport-related purposes, and cannot be used for other non-airport purposes such as for police or fire departments, for example. Some municipalities, however, have not adhered strictly to that requirement, and as a result, some airports have not received the credit for revenue generation that they should have.

In terms of airport operating and maintenance (O&M) budgets, of the 25 airports in the State System Plan:

- Manchester Airport generates the largest operating revenue stream, due primarily to growing passenger and cargo service.
- Boire Field, Laconia Airport, and Haverhill-Dean Memorial operate at or above break-even levels, even though they generate much smaller revenue levels than Manchester Airport.
- Lebanon, Dillant-Hopkins, Concord, and Skyhaven Airports have been, or are close to break-even.
- The remaining 17 airports are not as close to being financially self-supporting.

Airports that do not have fixed base operators (who provide aviation services such as fueling, aircraft maintenance, flight training, etc.) generate very little revenue. As a result, it is very difficult to break-even financially, although Dean Memorial Airport in Haverhill has achieved that goal. Nine airports in the state do not have FBOs, although some airports do sell fuel: Newfound Valley, Errol, Gorham, Moultonboro, Parlin Field (sells fuel), Hawthorne-Feather (sells fuel), Colebrook, Dean Memorial (sells fuel), Lakes Region (sells fuel) and Twin Mountain (sells fuel). Claremont has a part-time FBO and also sells fuel.

Improved financial performance at most airports is based on attracting well-managed fixed base operators that offer a variety of goods and services, and that effectively market their business (and by extension, the airport itself). Airport sponsors can assist FBOs in marketing campaigns, and by adequately maintaining their physical facility. Additionally, if services such as fuel and/or aircraft maintenance are provided at airports that do not currently have fuel or services, then their ability to break even or become financially self sufficient could be significantly improved.

Recommendation: In order to gain political support, airports will need to run more like a business and less like a public utility. As noted, there are 17 airports that must be subsidized in order to cover their annual operating expenses. There are a number of actions that can be taken to enhance the financial performance of airports. The Division of Aeronautics should work with airports to identify best business practices at airports around the state, particularly those airports that are financially self sufficient, and disseminate those ideas and practices to all of the airport managers in the state.

Airports with operating deficits typically have few, if any services available, nor do they have FBOs to market the airport. FBOs provide the most effective means of increasing both traffic and revenue at airports, based in part on the services they offer and their marketing programs. However, the airports themselves must market their facilities and services to attract businesses as well. Airports should also market companies in the local area since it was very apparent from the business and industry survey that general aviation airports are relatively unknown to the business community.

The Division of Aeronautics, in association with the Department of Resources and Economic Development (DRED), could help develop marketing programs for airports within the State Airport System to attract more users. Such marketing programs could include websites of the airports with links on DRED's website, available land to develop non-aviation related land uses, and available services at airports, etc.

The burden of developing marketing plans, however, cannot rest solely upon the Division of Aeronautics or DRED. Airport managers must rethink how they operate their facilities and should develop business plans with a number of strategic goals:

1. Use “best-practices” from private industry (where appropriate) in terms of day-to-day management: adopt business plans, create balanced budgets, use industry benchmarks when setting rates and charges and negotiating leases.
2. Set break-even targets at a minimum, or become financially self sufficient, as the airport budget’s primary goal, with the following milestones:
 - Maximize efficiency and cost effectiveness of airport management
 - Control costs, particularly overhead expenses (e.g. salaries, utilities, etc.)
 - Use benchmarking: compare the airport with industry rates & charges (AAAE surveys)
 - Develop property designated as surplus for aviation purposes to maximize revenue
 - Ensure that non-aviation development/revenue is credited to airport
 - Maximize revenue-generating sources, both aviation and non-aviation

Other keys to achieving financial self-sufficiency include cost-controls and maximizing revenues, and an essential element of revenue generation is having a good fixed base operator. Because some airports do not have an FBO, or have recognized a need for additional services even if they have an FBO, the Division should consider developing an incentive program to attract FBOs to airports. Such a program could include allowing FBOs access to the state’s revolving loan fund, as well as providing state assistance for capital improvements for FBO buildings, hangars, and ramps. Such assistance would lower the overhead cost for a start-up business, and provide an opportunity to attract FBOs that might otherwise not move to that airport.

The Division of Aeronautics should also examine the possibility of placing self-service fuel (100 LL avgas) tanks at airports that currently do not have an FBO or fuel as a way to generate revenue. Such airports could include Newfound Valley, Colebrook, Plymouth, Errol, and Colebrook. These fuel tanks cost between \$50,000 - \$100,000 each to install, and it may not be financially feasible for these airports to invest this amount of money into such a project. Another option would be to purchase a mobile fueler (tank truck), such as Twin Mountain has done, to provide 100LL fuel. This option is less expensive and may be a viable option for airports with little financial resources. The revolving loan program from the Division of Aeronautics may be the primary source of funding for such a program, and should be discussed with airport sponsors as a way to afford self-service fuel tanks or a tank truck.

Implementation: The Division of Aeronautics, in conjunctions with other state agencies, should develop programs for airports to increase utilization of their current facilities through dissemination of information about their airports through existing marketing channels and programs. This could be done through a cooperative effort between the Division of Aeronautics and DRED to develop marketing packages and providing information about the airports on various state websites.

In order to collect meaningful data about how the airports are performing financially, the Division of Aeronautics should develop standardized forms in order for the airports to submit comprehensive data on an annual basis. The Division could require that the forms be completed and submitted annually as a condition of receiving state financial assistance. Commercial service airports (Manchester, Lebanon, and Pease International Tradeport) presently provide such information to FAA on Form 5100-125, *Operating and Financial Summary*, and Form 5100-126, *Financial Government Payment Report*, and similar forms could be developed and used by the Division.

The financial data would provide the Division of Aeronautics with an accurate indication of how the airports are performing in terms of their operating budgets, expenses, and revenues. The data would also provide a

useful tool for benchmarking the financial performance of the airports in the State System, and help identify which airports have recurring financial problems, and also how some airports achieve better performance. The American Association of Airport Executives (AAAE) collects similar financial data every two years with a comprehensive national survey of member airports, and such information can be used as a benchmarking tool on a national level.

In addition, the Division of Aeronautics should consider making state funding programs such as the revolving loan program and/or the 50/50 program available for new businesses (FBOs) on airports that need to increase revenues to achieve consistent break-even results or become financially self sufficient.

8.3.3 DIVISION OF AERONAUTICS

1. Preservation of Public Airports

Finding: The Division of Aeronautics has the right of first refusal to acquire an airport if the owner of the airport sells the facility. Under current law (RSA Title XXXIX, Chapter 422, Section 422:19), an airport owner that puts their property up for sale must offer it to the State of New Hampshire “in the first instance”. The state has the right to match “any verifiable bona fide offer made for such airports, within the funds available to the director for this purpose”. There are 10 privately-owned airports in the State System Plan. If the State were to acquire any additional airports, the Division of Aeronautics would need to create two additional internal positions (airport operations personnel) to oversee the airports, as well as create operating and maintenance budgets for each airport (approximately \$30,000 per year, per airport, which does not include capital improvements). In addition, issues such as obstruction removal, runway and taxiway grades, airfield lighting, and runway safety areas would have to be addressed, and could require a substantial financial investment to bring airports up to current FAA standards.

According to New Hampshire Statutes Revised, Title XXXIX, Aeronautics, Chapter 422, New Hampshire Aeronautics Act, Section 422:19, *Purchase or Transfer of Airports*: “Airports purchased under this section shall be held and maintained as airports in the statewide airport system and shall be offered for sale or transfer to a local municipality, county, or airport authority. If the state is unable to sell or transfer an airport to a local municipality, county, or airport authority within 10 years, the airport shall be offered for sale to private enterprise.”

The NH General Court has noted that the State should not be an airport owner or operator, with the exception of Pease International Tradeport. However, since the 1980s, municipalities in New Hampshire have been very reluctant to assume ownership of airports, and if the state were to acquire any airports under the right of first refusal, it is possible that they will be unable to transfer ownership to another public entity.

The General Court passed legislation requiring the state to transfer ownership and operation of Skyhaven Airport to another public entity by July 2003, if such an entity is willing to take the airport. The City of Rochester is considering taking the airport from the State, but has expressed concern about the financial burden of owning and operating the airport. In the past, other towns have considered taking ownership of privately owned airports, such as Hillsboro and the Hawthorne-Feather Airport, as well as Wolfeboro and the Lakes Region Airport, and both declined the option to take ownership of the airport. If the City of Rochester does not accept Skyhaven Airport from the state, then the state will remain as the airport sponsor for the foreseeable future.

In general, the DOT needs flexibility when considering whether to acquire public-use airports if they are to be discontinued or abandoned by their owner.

Recommendation: Before exercising the right-of-first-refusal to acquire public use airports that would be

abandoned or discontinued, the Division of Aeronautics should consider a number of factors such as the proximity of other airports, levels of activity/based aircraft, economic benefits, services and/or FBOs, financial performance, and the need for financial investment to bring the airport up to standard. It is recommended that Legislation be enacted to preserve the existing public use airports within the state. That under this legislation, it would adopt a clear and straightforward procedures similar to that used for railroads in RSA 228:60-b, so that alternate modes of transportation are treated in a similar fashion under the law.

Implementation: The Division of Aeronautics should support legislation to preserve the existing public use airports within the system. Should any airport owner exercising a right to discontinue or abandon the public use of an airport, and the airport meets the criteria established by the legislation, the Division should exercise its right of first refusal for that airport.

2. Airport Database

Finding: During the data collection phase of the System Plan, it was found that there is a lack of accurate data regarding the total number of aircraft operations, the number or type of corporate aircraft operations, and the number and types of based aircraft, particularly at airports without control towers. Currently, only four airports out of 25 in the State System have control towers (Manchester, Pease International Tradeport, Boire Field, and Lebanon), and it is not anticipated that any additional airports will receive control towers in the future. Additionally, there is very little historical operational data for any of the non-towered airports.

Recommendation: The Division of Aeronautics should develop a program to collect data from all of the airports regarding aircraft operations and based aircraft. Presently, the Division of Aeronautics collects much of the data that is available during their annual inspection of each airport based on discussions with airport managers. At airports that do not have control towers, the Division of Aeronautics should implement a data collection system that involves several elements:

- Use acoustical counters, or similar devices, to take sample counts of aircraft operations during different periods of the year. The results from the counters should then be compared with data and input from airport managers and FBOs.
- Conduct surveys every two years with the assistance of FBOs and organizations such as Aviation Association of New Hampshire (AANH) to identify where transient pilots are flying in from, what missions they conduct, and how much they spend in the local economy.

Implementation: The Division of Aeronautics should develop a program with the airports to count traffic on a seasonal basis. This can be done with aircraft acoustical counters that can be acquired (two or more are recommended) and set up at non-towered airports for periods ranging from one week to one month during the peak period of the year. For most airports in New Hampshire, that is during the summer and fall. The acoustical counter would also record operations at night when airports are typically unattended. The data results can then be annualized and compared with input from airport managers and FBOs to determine the number of aircraft operations and type of aircraft, which will provide a much higher level of confidence in aircraft operations data than is presently available.

3. Continuation of the Statewide Steering Committee

Finding: A number of key constituencies, both in and outside of the aviation industry, have been identified that have a direct impact on the State Airport System Plan. Due to the complexity of the recommendations presented, and the need to fully involve representatives of that broad constituency, the implementation program must not only maintain the coordination process that was developed as part of the Statewide Steering Committee, but also expand and extend it beyond the end of this study.



While there are a number of organizations that presently represent aviation interests in the state, including the Aviation Users Advisory Board (AUAB), the Granite State Airport Management Association (GSAMA), the Aviation Association of New Hampshire (AANH), and various representatives of local airport or regional flying clubs/groups, these groups are focused on specific aviation issues pertinent to their constituents and mission. In addition, they do not include representatives from outside of the aviation industry. Although the Steering Committee for this study was made up of a diverse group of agencies, including representatives from the organizations noted above, the follow-on Committee should be expanded to include representatives from the existing Steering Committee as well as from other key constituencies not presently included.

Recommendation: A Standing Steering Committee should be created to oversee the implementation of the System Plan recommendations. A number of the recommendations made as part of the system plan will:

- Require multi-agency coordination
- Take a period of time to implement and,
- Are interrelated and will have an impact on other recommendations.

As a result, it is recommended that a Standing Steering Committee be formed by the Division of Aeronautics to meet on a semi-annual basis (every six months) to review the status of the implementation process. The Division should act as chair of the committee. The membership of the Standing Committee should include all of members of the existing Steering Committee (including representatives from GSAMA and AUAB), as well as the addition of representatives from:

- | | |
|---|---------------------------------|
| ▪ FAA (both Airports and Air Traffic Divisions) | ▪ Fixed Base Operators |
| ▪ NH DES | ▪ Citizen Organizations |
| ▪ NH DRED | ▪ Regional Planning Agencies |
| ▪ NH Municipal Association | ▪ NH Legislature Aviation Group |

Implementation: The Division of Aeronautics should identify the additional representatives to be included on the Standing Committee, and they along with existing members of the Statewide Steering Committee should be invited to serve on the Standing Committee. The Director of the Division of Aeronautics should serve as chair of the committee, and the committee will be charged to oversee the implementation of the recommendations presented in the System Plan.

8.3.4 INTERMODAL TRANSPORTATION

Airports are, by their very function, intermodal transportation facilities. The large majority of all pilots, passengers, and airport employees access the 25 airports in New Hampshire by private automobile. Only three airports in the state have scheduled bus service, and none have rail service. Based on discussions with airport managers and pilots and passengers, there is a need to improve ground transportation services to a number of airports in the state.

1. Airport Access

Finding: Only three airports (Manchester, Pease International Tradeport, and Skyhaven) are served by scheduled bus lines, although Skyhaven Airport generates little ridership on the bus line. Surveys of inter-city bus lines and local transit companies, as well as GA airport managers, indicated that there is not sufficient demand at the 22 remaining airports to attract and maintain public transportation such as scheduled bus service. Bus companies that were interviewed were not interested in possible subsidies to serve airports, with some companies stating that maintaining their schedule (and by-passing the airport) was more important than potential subsidies.



At present, there is no rail service to airports in the state. Commuter rail service provided by the Massachusetts Bay Transportation Authority (MBTA) from Boston will be extended from Lowell MA to Nashua, and eventually be extended up to the City of Manchester. Based on discussions with the regional planning agencies, there are no plans at this time to tie airports into the proposed stations at either Nashua or Manchester.

Manchester, Pease International Tradeport, Concord, Lebanon, and Laconia Airports have rental car agencies located on the airport in the terminal building, as well as local taxi service. By contrast, eleven airports have no public ground transportation services such as rental cars, taxis, limos, buses, rail, available for transient pilots and passengers. In addition, some airport managers indicated that although rental car and taxi service is available from companies located off-airport, the level and quality of service provided is poor, which limits the ability of transient pilots and passengers to travel off-airport and visit the local region.

Recommendation: Based on input from the bus companies and airport managers, extending scheduled bus service to airports that presently do not have any will be expensive and inefficient due to the low level of demand for such service. As a result, the state should not consider subsidies or other incentives to attract scheduled bus service to airports that presently do not have such service.

However, the Division of Aeronautics, along with municipalities (airport sponsors), should provide cars that are designated surplus and available for auction as courtesy vehicles at those airports that either do not have access to rental cars or taxis, or that have poor service. A number of FBOs across the state provide courtesy vehicles for their customers, however, not all airports have FBOs and not all FBOs provide such service. Issues such as insurance and liability, vehicle maintenance and security, fuel and maintenance costs, etc., will need to be addressed.

Another recommendation is to examine the potential to subsidize shuttle service to Manchester Airport when the new park-and-ride facility is built near Exit 4 on Interstate 93. Inter-city bus lines indicated that they could provide a stop at Exit 4 that could be used by potential passengers traveling from other parts of the state to connect to Manchester Airport. This would enhance accessibility to Manchester Airport and reduce a portion of trips now provided by personal vehicles.

And finally, it is suggested that the Division of Aeronautics review the option of providing shuttle service to Manchester Airport at the proposed rail stops at Merrimack and Manchester for the extension of MBTA rail service.

Implementation: The Division of Aeronautics should investigate the ability of the DOT to provide surplus automobiles to the various airports around the state for use as courtesy cars. The Division of Aeronautics should also work with the airports to improve existing intermodal services such as local taxi and rental cars to ensure that these agencies respond in a timely manner to provide their services at the airports. The Division of Aeronautics should also work with other Divisions within DOT, as well as regional planning agencies, to enhance access to Manchester Airport via a park-and-ride facility at Exit 4 of Interstate 93 and from proposed stations for the extension of MBTA rail service to Nashua and Manchester.

8.3.5 ENVIRONMENTAL ISSUES

Finding: Almost every airport in the state faces environmental constraints, particularly due to wetlands. Airports such as Boire Field, Concord, Dillant-Hopkins, Laconia, Manchester, Mt. Washington Regional, Skyhaven, Parlin Field, and Berlin Airport have recently dealt with environmental agency coordination and permitting issues. Permitting and agency coordination was identified by many airport managers as significant factors in terms of implementing their capital improvement programs, in part because they resulted in higher costs and longer implementation periods. In addition, it is anticipated that state and federal environmental laws will increase in the future, and that compliance for airports will become more expensive and time-consuming.

Recommendation: The Division of Aeronautics should provide detailed guidelines and assistance to non-federally funded airports in terms of appropriate environmental review, coordination, and permitting procedures. The Division of Aeronautics should fund such projects and where appropriate, help the sponsors understand how to select consultants to complete the work.

Implementation: The Division of Aeronautics should work with the Department of Environmental Services and develop a package similar to the agencies package that contains discussions about the environmental process, contacts, other agencies and the appropriate forms that can be given to airports throughout the state. The Division of Aeronautics should also develop a program to monitor and provide assistance to the airports to ensure that they comply with the appropriate environmental regulations pertaining to their proposed projects. Additionally, the Division of Aeronautics should also require environmental coordination as a mandatory element of receiving funding from the State.

8.3.6 AIRPORT SECURITY

Finding: Post September 11, 2001 has seen drastic changes in the security procedures in effect at airports around the country. The creation of the Transportation Security Administration (TSA), as well as the new Homeland Security Department, has seen the responsibility for airport security shifted from FAA and the airlines to the TSA. To date, most of the new security procedures and requirements have been applied to FAR Part 139 certificated airports (Manchester, Pease International Tradeport, and Lebanon), which has significantly increased their operating costs, only some of which has been reimbursed by the federal government. The three airports have met the deadlines imposed by TSA, and mandated by Congress, for new security procedures.

General aviation airports have not been subject to similar security regulations as Part 139 airports yet, although some states have adopted various security measures at GA airports. Organizations such as the National Association of State Aviation Officials (NASAO) have studied the issue of GA airport security. Measures adopted by some states include full perimeter fencing and electronic gate card access; video monitors; flood lighting on ramps, fuel farms, terminal area, and hangars; as well as pilot identification cards. New security procedures increase capital improvement costs, as well as the cost to operate and maintain GA airports. Security procedures also potentially decrease airport utilization (and therefore revenues and income for FBOs and sponsors) due to increased inconvenience, and make it more difficult for GA airports to break-even financially.

In addition, the Aircraft Owners and Pilots Association (AOPA) has adopted a GA airport security program called “Airport Watch”. As noted on AOPA’s web site:

“The Transportation Security Administration (TSA) has partnered with the Aircraft Owners and Pilots Association (AOPA) to develop a nationwide aviation watch system. Key to the program will be a toll-free hotline and a centralized system for reporting and acting on



information supplied by general aviation pilots.

AOPA's Airport Watch will enlist the support of some 550,000 general aviation pilots to watch for and report suspicious activities that might have security implications. The hotline was formally launched in December 2002.”

The TSA has rule-making authority, and can adopt new rules and procedures without going through the public notification, review, and comment process that applies to other federal agencies. As a result, it is difficult to predict, or even anticipate, when new security rules and procedures may be adopted for general aviation airports, what they will cost to implement, how they will affect airport design criteria or facility requirements, and what the net impact will be on airport utilization and income. Additional rule changes could also apply to the three Part 139 airports in the state as well, and further increase their operating costs.

FAA continues to implement temporary flight restrictions (TFRs) based on certain events (major public sports activities for example), threats to public safety (such as to nuclear power plants), movement of key officials such as the President, etc. General aviation aircraft, for example, are not allowed access to Washington National Airport. TFRs have been implemented in very short periods of time, and have resulted in the closure of airports, as well as certain parts of the national airspace system, which adversely impacts aviation activity. It is difficult to predict when particular TFRs will be implemented, how extensive any particular restriction will be, how long it will be in effect, or how much of an impact it will have on aviation activity.

The U.S. Congress recently passed legislation to create the new Department of Homeland Security, and considered implementing permanent airspace restrictions around certain large public events, including NASCAR races. Such restrictions could have potentially prevented aircraft from using either Laconia or Concord Airports, for example, during race weekend, which would have had significant financial impacts on the fixed base operators (FBOs) at those airports. The continued implementation of TFRs will decrease GA activity, both because of the restriction itself, as well as pilots’ concerns about the consequences of inadvertently violating restricted airspace.

Recommendation: The Division of Aeronautics should continue to work closely with trade organizations such as NASAO, AAAE, AOPA, and EAA, etc., as well as with FAA and the TSA, to monitor possible changes in security rules and procedures that may apply to GA airports, and also monitor what impact those changes may have on the airports’ operating costs and revenue potential. The Division should promote adoption of reasonable rules and procedures that will not adversely impact the users or the tenants of the airports.

Implementation: The Division of Aeronautics should maintain a working knowledge of the various changes in security standards set by FAA, TSA, and other agencies. This will require staff to coordinate closely with the various agencies to comment on proposed security rules and procedures that might be implemented within the State.

8.4 HELIPORTS AND SEAPLANE BASES

Although there are a number of heliports and seaplane bases in New Hampshire, none of those facilities are included in the State Airport System Plan. There are 53 heliports and six seaplane bases listed by Helicopter Association International (HAI) throughout the state, although discussions with helicopter operators indicate that there may be as many as 120 heliports/ helipads throughout the state. The helipads are almost all privately owned and operated, and many are located in the Connecticut River Valley area of the state.

There are six hospital helipads (Concord, Dartmouth-Hitchcock Medical Center, Exeter, Franklin Regional, Wentworth-Douglass, and North Conway Memorial). In order to be certified as a Level I Trauma Facility by the state, hospitals are required to have a helipad.



Many heliports are owned and operated by corporations and businesses for company use, and one heliport (Wharf, located in Portsmouth) is publicly owned by the NH Port Authority, but is private use. Companies such as Tyco, Norden Systems, Digital Equipment (now part of Hewlett Packard), PSNH, as well as individuals such as Dean Kamen, have constructed heliports in NH. Local zoning ordinances in the state vary widely in terms of allowing or prohibiting the development and operation of heliports. Some communities allow heliports in industrial and commercial districts, while others do not allow heliports anywhere in the community. Some zoning ordinances do not specifically address heliports as either a permitted or an exempted use, and planning boards often interpret that as not allowing heliports anywhere in the community.

Helicopters also use the airports in the state, particularly the support facilities and services (such as fuel, hangars, maintenance, etc.), and many helicopters are based at airports, including those operated by the NH Army Guard and the NH State Police at Concord Airport.

Helicopters provide a wide variety of services in New Hampshire from executive transportation (including shuttling race teams between Concord Airport and NHIS during the races), to emergency medical evacuation, airborne law enforcement, search and rescue, construction, heavy lift, aerial photography, power line patrol, air cargo, etc. For example, the Dartmouth-Hitchcock Air Response Team (DHART), initiated in 1994, operates an EC-135 turbine helicopter (shown at left) for rapid emergency response to the more remote regions of northern New England. As noted by DAHRT: "The helicopter, which cruises at 150 mph, and its crew have transported over 1,300 patients to date."

All of the seaplane bases are privately-owned, although the waterway is public. There is one public-use seaplane base, Alton Bay, which is listed in the Airport/Facility Directory published by FAA. During the winter, the waterway becomes an ice runway. All of the heliports and seaplane bases are visual, none have an instrument approach, and none have control towers or fixed base operators.

Although none of the facilities discussed above are listed in the State System Plan, some could be included if the facility owner declared them public-use (as noted, the Alton Bay Seaplane base is presently public use), and if the owner requested state assistance. It is possible, therefore, that Division of Aeronautics could receive a number of requests from heliport and seaplane base owners for inclusion in the State System Plan. However, it is proposed that the entry criteria for the State System Plan be changed, and that any facility wishing to be listed in the State System Plan at a minimum meet the appropriate design criteria specified by FAA for that type and category of facility.