

CHAPTER TWO:

INVENTORY OF EXISTING CONDITIONS

2.1 INTRODUCTION



BST Runway 33

Belfast Municipal Airport (the Airport or BST) is located approximately one mile southwest of downtown Belfast at the mouth of the Passagassawakeag River estuary on Penobscot Bay in eastern Maine. Situated 197.6 feet above mean sea level (AMSL), the Airport provides the City of Belfast with aviation facilities designed to accommodate a full range of aviation services and general aviation operators ranging from small piston engine aircraft to turboprop aircraft, as well as for some corporate business jets.

The Airport, along with the aviation-related businesses and facilities, represents a vital and significant regional transportation and economic asset. In addition to its many aviation-related benefits, the Airport supports local industries and encourages additional business development and expansion for cities and towns throughout Waldo County. This fact was demonstrated in the *2006 Economic Impacts of Airports in Maine Study* which quantified the total aviation and non-aviation related impact of the Belfast Municipal Airport at 62 jobs, with total wages of \$1.6 million and a total economic output of \$3.9 million.

The last airport planning effort for the Belfast Municipal Airport was in fact an Airport Layout Plan Update (ALPU) completed in 2008. Since that time, many changes have occurred on the Airport, as well as within the overall aviation industry on a local, regional, and national level that have potential impacts on the aviation facilities and services provided by the Airport. These changes necessitate a re-evaluation of the ALPU as a means of analyzing current and forecast operational characteristics and facilities, as well as updating the program for airport development. Changes in population and the economy within the region also require a long-range analysis and plan for the future needs of the Airport to accommodate aviation demand.

The focus of this document will be on the total aviation facility and its environs, with the overall planning goal being the development of an aviation facility “right-sized” for accommodating future demand and that is not significantly constrained by its environs. The initial step in the preparation of this 20-year Airport Master Plan Update (AMPU) is the collection or identification of information pertinent to the Belfast Municipal Airport and the surrounding area. This chapter, **Inventory of Existing Conditions**, consolidates that information and provides a foundation for subsequent planning analyses. Specifically, this chapter examines three basic elements involved with the existing and future development of the Belfast Municipal Airport:

This Airport Master Plan Update (AMPU) is intended to provide a comprehensive evaluation of BST and result in a long-term facilities and operational plan for the Airport.

- the Airport's facilities (runways, taxiways, aircraft parking aprons, hangars, maintenance facilities, ground access, etc.);
- the relationship of the Airport to the regional airport system and the National Airport System (NAS); and
- the Airport environs.

The information collected for this chapter was obtained from many sources, including those listed below.

- Airport site visits;
- Tenant and user interviews (direct feedback from 11 users, among others);
- Airport administration records;
- FAA 5010 (Airport Master Record) forms;
- BST Airport Layout Plan Update (2008);
- 2006 Maine Aviation Systems Plan Update (MASPU); and
- Other pertinent data and studies from the Federal Aviation Administration (FAA), Maine Department of Transportation Airports and Aviation Division (MaineDOT Aviation), and the City of Belfast.

As with any airport planning study, an attempt has been made to utilize existing data, or information in associated planning documents, to the maximum extent possible.

Subsequent chapters detail the Airport's forecasts of aviation activity, the ability of airport facilities to safely and efficiently meet the needs associated with the projected aviation activity, the compatibility of the Airport with surrounding land uses, and recommended future development within and around airport property.

2.1.1 Airport Setting

The Airport's relative location within the region is illustrated below in **Figure 2-1** and **Figure 2-2**. The seat of Waldo County, the City of Belfast is situated at the mouth of the Passagassawakeag River estuary on Penobscot Bay. Belfast has a population of 6,668 (in 2010), making it the 19th-largest city in Maine. Incorporated as the 8th city in Maine in 1853, Belfast has historically been a center for shipbuilding, shoe manufacturing, seafood harvesting, and poultry processing. Most recently, the city has seen a revival in its shipbuilding industry, and in financial and health services support.

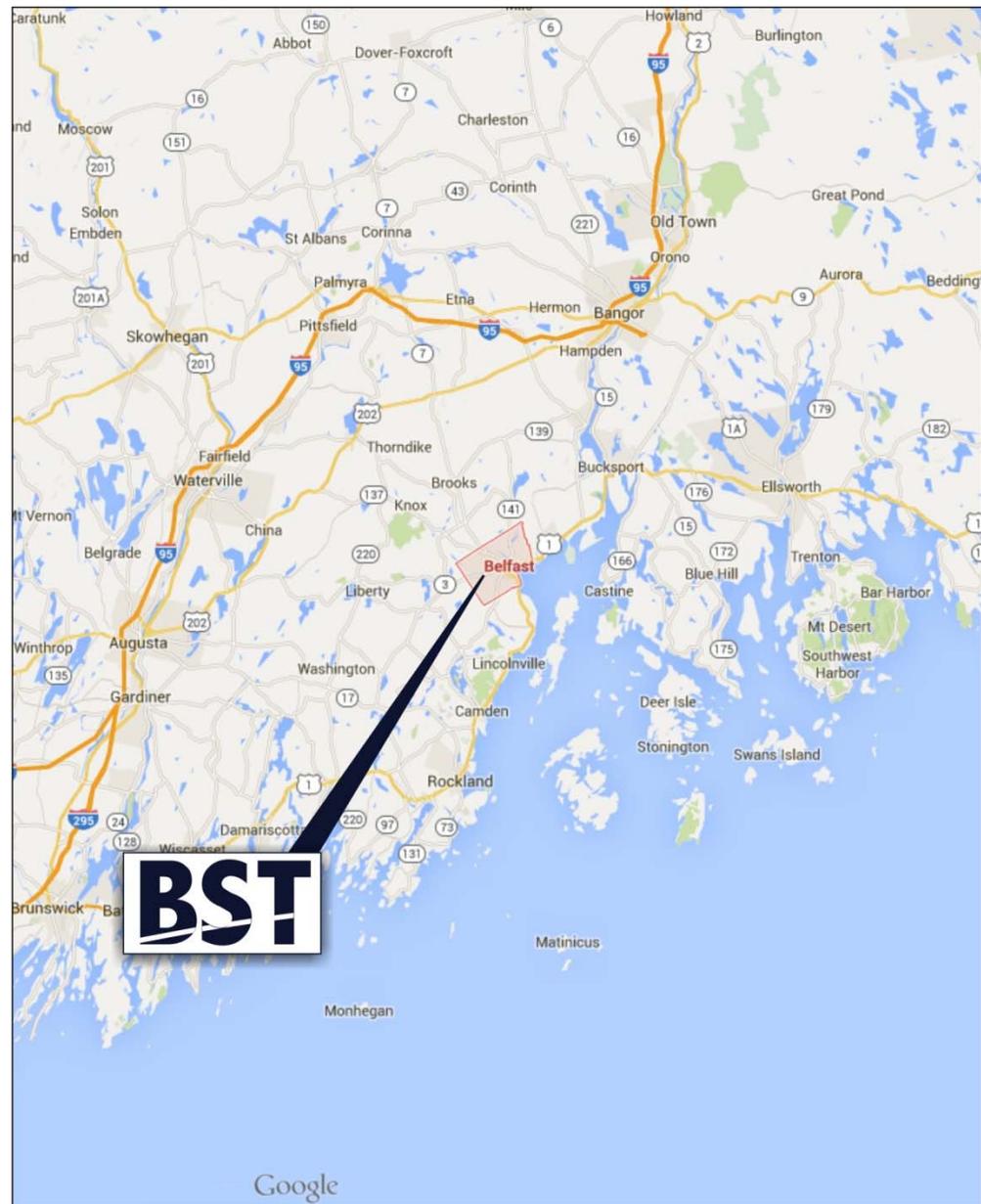
BST is located along coastal Maine, approximately 100 miles east of Portland, Maine and 36 miles south of Bangor, Maine, in Waldo County. The Airport is located off U.S. Route 1 and Congress Street, one mile southwest of the city center. Route 1 is a north-south connector between Canada (St. Stephen, New Brunswick) and points south. State Route 3 is located northwest of the Airport (intersects U.S. Route 1) providing access to Augusta and I-95.



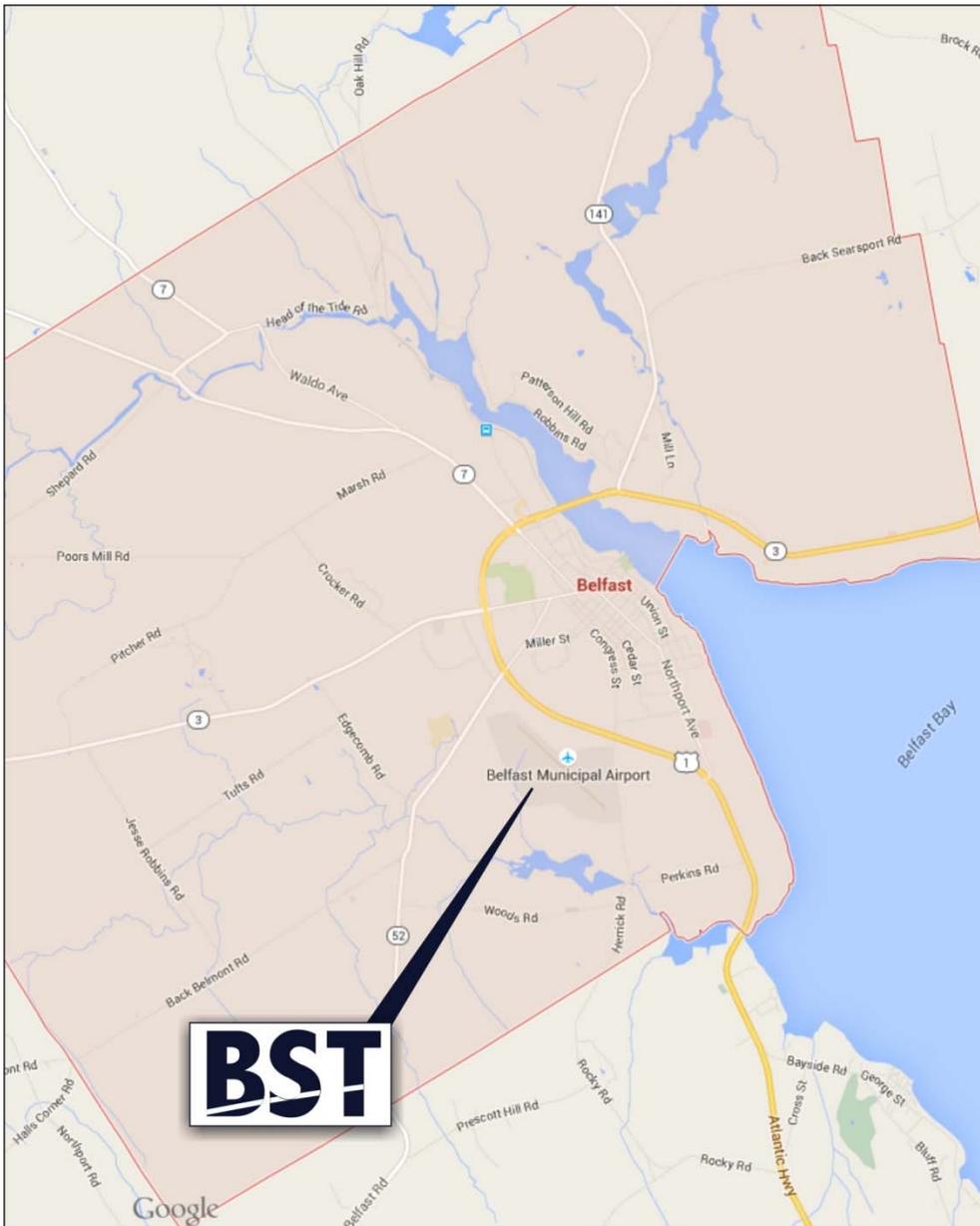
City of Belfast Seal

The Belfast Municipal Airport is a publicly owned (by the City of Belfast) public use General Aviation (GA) airport. It does not have any scheduled commercial service operations. The Airport itself encompasses 220.41 acres (and an additional 134.15 acres in avigation easements) and has a defined elevation of 197.6 feet above mean sea level (AMSL). The FAA site number for Belfast Municipal is 07837. The Airport Reference Point (ARP) is Latitude 44° 24' 33.80" N and Longitude 069° 00' 42.60" W. The mean daily maximum temperature of the hottest month (August) at the Airport is 81 degrees Fahrenheit.

Figure 2-1: BST Location Map



Source: Google Maps 2015

Figure 2-2: BST Vicinity Map

Source: Google Maps 2015

2.1.2 Airport History

The City of Belfast constructed its airport, two paved runways and a runway lighting system, for use as a potential fighter aircraft base supporting Dow Field (a.k.a. Bangor International Airport) in the 1940s with the help of the Work Projects Administration (WPA) and the Civil Aeronautics Administration (CAA). The "History of Belfast in the 20th Century" provides the following regarding the history of BST:

Federal programs continued into the next decade. Between June 1940 and April 1943 more than a half-million dollars was spent constructing Belfast's two-runway airport just west of the armory, the site of the old RCA radio complex. The Works Progress Administration (WPA) was the main contributor at \$391,239. Others who funded the project included the Civil Aeronautics Administration (\$146,294) and the state (\$2,500). The city's \$14,942 share was covered by donating the use of its equipment, including a new steam shovel. The airport was never used by the military, even though its construction was part of the government's home defense program. But the GI Bill sparked the greatest use of the field during the late 1940s and '50s as returning vets took up flying, with their training paid by Uncle Sam.

Additional data related to the historical development of the Airport can be gleaned by examining the history of FAA Airport Improvement Program (AIP) grants, as shown below in **Table 2-1**.

Table 2-1: BST AIP Grant History

Fiscal Year	AIP Number	Project	Entitlement Funding	Discretionary Funding	Total
1994	3-23-0007-01	Conduct Airport Master Plan Study	\$63,180.00		\$63,180.00
2001	3-23-0007-02	Acquire SRE	\$134,662.00		\$134,662.00
2003	3-23-0007-03	Conduct EA; Rehabilitate Runway	\$231,363.00		\$231,363.00
2004	3-23-0007-04	Acquire Land for Approaches	\$110,122.00		\$110,122.00
2004	3-23-0007-05	Rehabilitate Runway	\$438,217.00	\$2,450,898.00	\$2,889,115.00
2005	3-23-0007-06	Conduct Airport Layout Plan Update	\$28,061.00		\$28,061.00
2006	3-23-0007-07	Expand Apron	\$456,000.00		\$456,000.00
2010	3-23-0007-08	Construct Apron	\$133,032.00		\$133,032.00
2010	3-23-0007-09	Acquire Land for Development	\$68,957.00		\$68,957.00
2011	3-23-0007-10	Construct Apron	\$499,090.00	\$29,197.00	\$528,287.00
2013	3-23-0007-011	Update Airport Master Plan Study – Ph. 1	\$34,740.00		\$34,740.00
2013	3-23-0007-012	EA & Data Collection for Airspace Obstruction Analysis	\$88,650.00		\$88,650.00
2014	3-23-0007-013	Update Airport Master Plan Study – Ph. 2	\$127,350.00		\$127,350.00

Source: FAA.

2.1.3 Airport Administration

The Belfast Municipal Airport is owned and operated by the City of Belfast. Currently, the City's Economic Development Director also serves as the Airport Manager, responsible for ensuring the Airport's viability including securing operating and maintenance budgets, airport improvement grants, and fulfilling grant assurances. The Economic Development Director reports to the City Manager and to the City Council for all decisions regarding the Belfast Municipal Airport.

The Belfast Airport Advisory Committee is composed of seven people who are appointed by the City Council to three-year terms to advise to the City regarding the Airport. The Airport Manager acts as a liaison between this committee and the City Council and the City Manager.

The Airport is currently without an on-field manager or a full-time Fixed Base Operator (FBO). Ordinarily, an on-field manager or FBO would issue and cancel notices to airmen (NOTAMs), notify the City of Airport needs, and maintains minor Airport facilities (e.g., lights). In addition, an FBO may provide aircraft maintenance, aircraft rentals, flight instruction, sightseeing flights, charter flights, and aviation gas (Avgas) and motor vehicle gasoline (Mogas) to airport users. Since there is currently no full-time manager or FBO on the field, all Airport operation and maintenance responsibilities are handled by the City’s Economic Development Director.

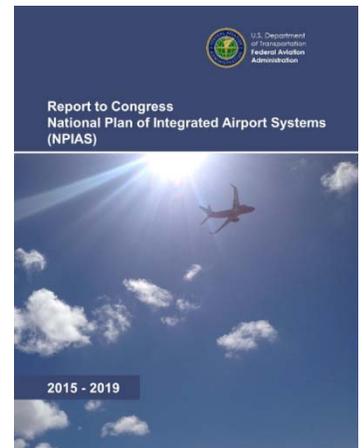


2.1.4 Airport Role

Airports can play a variety of different functional roles and contribute at varying levels in meeting the transportation and economic needs on national, regional, state and local levels. Identifying and understanding the various roles that an airport plays is essential in order for that airport to be developed with facilities and services appropriate to fulfilling its respective roles. Following are the various role classifications for Belfast Municipal Airport.

National Plan of Integrated Airport Systems (NPIAS)

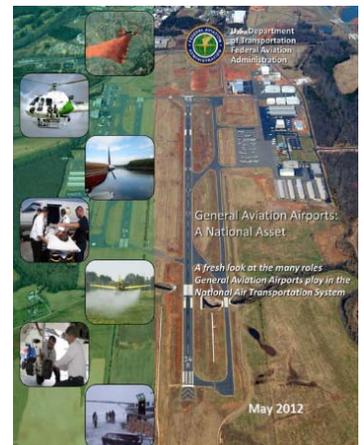
The NPIAS is an FAA-sponsored national airport system plan whose purpose is to identify the airports that are important to national air transportation. Being identified within NPIAS makes an airport eligible to receive grants under the Airport Improvement Program (AIP) for the planning and implementation of airport capital improvements and infrastructure development. Specifically, NPIAS defines an airport by its service level, which reflects the type of service that a given airport provides for its host community. This service level also defines the funding categories established by Congress to assist in the distribution of funding resources for airport development.



The 2015 NPIAS classified Belfast Municipal Airport as a **General Aviation** airport. This is defined as an airport that does not receive scheduled commercial service and accounts for enough activity (having usually at least 10 based aircraft) and are at least 20 miles from the nearest NPIAS airport.

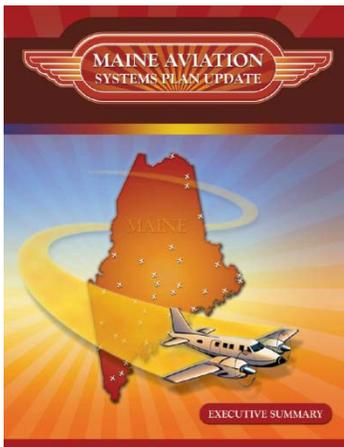
General Aviation Airports: A National Asset (ASSET)

General Aviation Airports: A National Asset documents an 18-month study of the nation’s nearly 3,000 General Aviation airports, heliports, and seaplane bases identified in the FAA’s NPIAS. This in-depth analysis highlights for the traveling public the pivotal role GA airports play in our society, economy, and the aviation system. The study also aligns the GA airports into four categories - national, regional, local, and basic - based on their existing activity levels. The new categories better capture their



diverse functions and the economic contributions GA airports make to their communities and the nation.

The FAA's ASSET study classified the Belfast Municipal Airport as a **Local** airport, defined as an airport that supplements local communities by providing access primarily to intrastate and some interstate markets. These airports are typically located near larger population centers, but not necessarily in metropolitan or micropolitan areas. Most of the flying is by piston aircraft in support of business and personal needs. In addition, these airports also typically accommodate flight training, emergency services, and charter passenger service.



Maine Aviation Systems Plan Update (MASPU)

MaineDOT Aviation Division conducted the MASPU in 2006 to provide a strategic analysis of the statewide airport system of public use airports. The MASPU produced an extensive assessment of the current system's condition, as well as a guide for meeting its current and future needs. This plan provided tools to help facilitate the continued successful development of its aviation system, to respond to future challenges and to meet changes in demand in order to promote system sustainability. This effort included identifying roles for each airport in the state.

Belfast Municipal Airport is currently classified in the MASPU as a **Level III** airport. This is defined as an airport that serves a primary role in local economies, focused on supporting a variety of general aviation activity types such as business, emergency service, recreational, and personal. These airports should be capable of accommodating all single-engine and some small twin-engine general aviation aircraft. Scheduled commercial airline operations are not accommodated at Level III airports. However, it should be noted that since that designation, BST has progressively moved more into a Level II category airport, one that should be capable of accommodating all business and personal use single-engine and twin-engine general aviation aircraft.

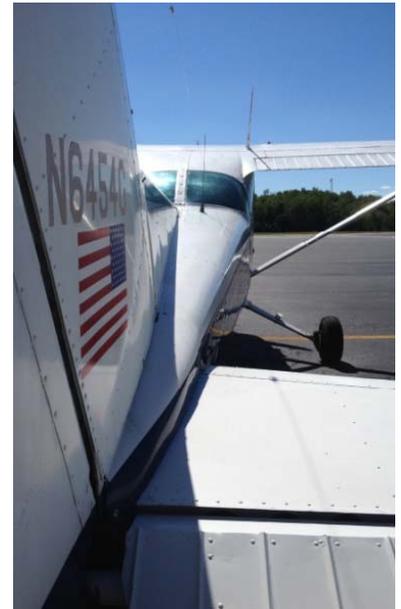
2.1.5 Primary Airport Data

Table 2-2 below provides a summary of some of the important primary data elements for the Belfast Municipal Airport. Note that the most recent (2008) Airport Layout Plan (ALP) was utilized as the source for much of the data.

Table 2-2: BST Primary Data – Existing Conditions

Airport Name	Belfast Municipal Airport
FAA Designation	BST
Associated Municipality	Belfast, ME
Airport Owner	City of Belfast, ME
Airport Sponsor	City of Belfast, ME
Airport Management	Part-time Airport Manager
Date Established	1930 (estimated)
Airport Roles	MASPU 2006: <u>Level III</u> FAA NPIAS: <u>General Aviation</u> FAA ASSET Study: <u>Local</u>
Commercial Air Service	None
Part 139 Classification	NA
ARFF Index	NA
Airport Acreage	220.41 acres (fee simple); 134.15 acres (easements)
Airport Reference Point (ARP)	Latitude: 44° 24' 33.80" N Longitude: 069° 00' 42.60" W.
Airport Elevation	197.6 Above Mean Sea Level (AMSL)
Area Mean Max. Temp.	81° F

Source: 2008 BST ALP, FAA 5010 Data; Airport Solutions Group.



2.1.6 Airport Services

Airports can provide a wide range of services to meet the varied demands of its individual market area. At BST, services are provided by both the Airport itself, and by the current Fixed Base Operator (FBO), DG Aviation, LLC. **Table 2-3** provides a general listing of a range of potential aviation-related services for an airport such as BST, and how the Airport currently provides for them.

Table 2-3: BST Airport Services – Existing Conditions

Service	Provider	Service	Provider
Commercial Air Service	None	General Aviation Terminal	BST
Commercial Terminal	None	Pilots Lounge	BST-
Rental Cars	None	Aircraft Charter	None
Aviation Fuel (100LL)	None	Aircraft Leasing / Brokerage	None
Aircraft Parking - Based (Tiedowns)	BST	Aircraft Rental	None
Aircraft Parking - Based (Hangars)	Multiple	Flight Training	FBO
Aircraft Parking - Transient (Tiedowns)	BST	Aircraft Interior Services	FBO
Aircraft Parking - Transient (Hangars)	FBO	Aircraft Detailing	FBO
Airframe Service	FBO	Aircraft Catering	None
Powerplant Service	FBO	Agricultural Spraying	None

Source: Airport Solutions Group.



2.2 AIRSIDE FACILITIES

The airside facilities at Belfast Municipal Airport include a single runway, a partial parallel taxiway, aircraft parking aprons, and several navigational aids (NAVAIDs).

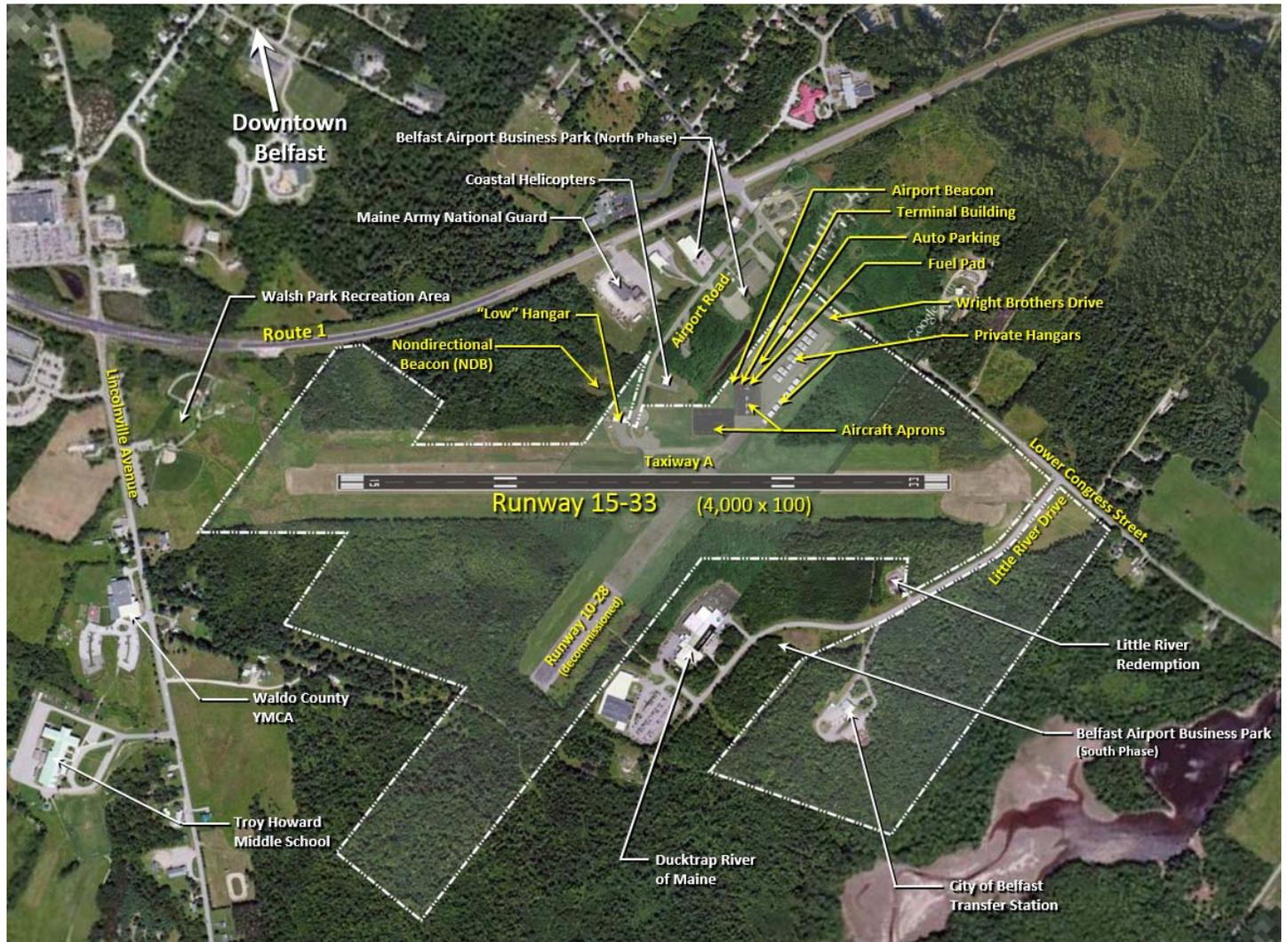
Figure 2-3 and **Figure 2-4** provide graphic presentations of the existing airport facilities.

Figure 2-3: BST Aerial Image



Source: Google Map 2015.

Figure 2-4: BST Existing Facilities



Source: Airport Solutions Group; Google Map 2015.

2.2.1 Runways

Runway 15-33

The Belfast Municipal Airport has a single paved runway (designated as Runway 15-33) and generally lies in a northwest/southeast orientation. It is 4,000 feet long by 100 feet wide, and has a true bearing of 133.42 – 313.43 degrees. The surface is bituminous concrete with a weight bearing capacity of 30,000 pounds for single-wheel aircraft. The Runway 15 approach end's elevation is 197.5 feet above Mean Sea Level (MSL) and the Runway 33 approach end's elevation is 158.5 feet MSL, resulting in a gradient of 1.00% sloping down toward the Runway 33 approach end. Note that the Runway 15 touchdown zone elevation is 197.6 feet MSL, which is defined as the official Airport elevation.



Runway 33 Approach

The runway is equipped with Medium Intensity Runway Lights (MIRL) and Runway End Identifier Lights (REILs) at both ends. (Note that these are all Pilot Controlled Lighting (PCL) on 122.8 MHz.) Both Runway 15 and Runway 33 have non-precision instrument (NPI) approach runway markings, including centerline, runway designator (numerals), threshold markings, and aiming points. The markings are in good condition and provide adequate contrast against the pavement surface. There is also a lighted windsock, segmented circle, and a rotating beacon. The Runway 15 end is served by a nonprecision area navigation (RNAV) Global Positioning System (GPS) approach, including Localizer Performance with Vertical Guidance (LPV), and a Nondirectional Beacon (NDB) approach. Runway 33 also has an RNAV GPS approach, including LPV.

The runway was last reconstructed in 2004 (and prior to that in 1981) and, per the **2014 Maine Airport Pavement Conditions Report**, the pavement has a Pavement Condition Index (PCI) of 95, which indicates that it is in excellent condition. (Note that the PCI is an index developed by the US Army Corp of Engineers that is based on a visual survey of the number and types of distresses in a pavement. The result is a numerical value between 0 and 100, with 100 representing the best possible condition and 0 representing the worst possible condition.)

A summary of the runway data has been provided below in **Table 2-4**.

Runway 10-28

Previously serving as the Airport’s crosswind, Runway 10-28 was decommissioned in 1982 due to the poor condition of the pavement, the high cost of repairing and maintaining a new pavement surface course, and the infrequent use of the runway (the previous Airport Master Plan stated that Runway 10-28 was used no more than five to six days per year). It was felt at that time that there was too little justification for keeping Runway 10-28 as an active runway.

Table 2-4: Current Runway Data

Data Element	RWY 15	RWY 33
Length (feet)		4,000
Width (feet)		100
End Location – Latitude ¹	N 44° 24' 47.3914"	N 44° 24' 20.2352"
End Location – Longitude ¹	W 069° 01' 02.5964"	W 069° 00' 22.5819"
End Elevation (AMSL)	197.6	158.5
Threshold Displacement (feet)	None	None
Surface Type	Bituminous Concrete	
Pavement Design Strength (pounds)	30,000 SW	
Effective Gradient	-1.0%	
Markings	Non-Precision	Non-Precision
Edge Lighting	MIRLS	
Approach Lighting	None	None
Visual Approach Aids	None	None
Instrument Navigational Aids	RNAV(GPS) / LPV / NDB	RNAV(GPS) / LPV

Source: Airport Solutions Group; FAA ASIS Data (10/20/2011)

¹ NAD83

2.2.2 Taxiways

In addition to the runways, the airside facilities at the Belfast Municipal Airport consists of a partial parallel taxiway for Runway 15-33 supported by two stub taxiways that provides access to the terminal area and other landside aviation facilities. All taxiways have a bituminous concrete surface course. The partial parallel taxiway (Taxiway A) is approximately 350 feet long by 35 feet wide, and is located mid-field on the north side of the runway. The current runway-to-taxiway centerline distance is 200 feet. The first stub taxiway is located approximately mid-field and was reconstructed during the 1982 runway reconstruction project. The second stub taxiway is comprised of pavement previously used for Runway 10-28. This section of the former runway was restriped to utilize the existing pavement as a taxiway stub providing access to the existing hangar area. There are taxiway edge lights only on the two stub taxiways.

The taxiways were apparently last reconstructed prior to 1983 and, per the **2014 Maine Airport Pavement Conditions Report**, the pavement has a rating of 3, indicating that taxiway pavements are generally in good condition.



Taxiway A

2.2.3 Aircraft Aprons

The Airport currently has two aircraft aprons adjacent to one another, located northeast of the runway and taxiways. The first apron was originally the east end of now-closed Runway 10-28. That apron has a bituminous concrete surface in good condition that was expanded slightly in 2005 when the terminal/administration building and fueling apron were moved to their current location, and expanded further in a dedicated construction project in 2006. Its general dimensions are 170 feet by 190 feet, equating to approximately 32,300 square feet. It has a total of six marked aircraft tie down locations.

The second apron was constructed in 2011-2012 as a result of the 2008 BST ALP Update that identified a long-term need for additional aircraft apron space. This bituminous concrete apron provides a total of 46,926 square feet of aircraft parking and associated taxilane. It also has seven marked aircraft tie down locations, three of which are for larger aircraft. It is in excellent condition.



Aircraft Aprons

2.2.4 Automated Weather Observing System (AWOS)

An Automated Weather Observing System (AWOS) is an automated weather station that provides on-site weather data collection and reporting capabilities. They are designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. Without on-airport weather reporting, many aircraft and charter/air taxi flights may not be allowed to takeoff or land in instrument (poor) weather conditions. AWOS stations disseminate weather data in several ways:



AWOS AV with Segmented Circle

- A computer-generated voice message which is broadcast via radio frequency to pilots in the vicinity of an airport. The message is updated at least once per minute.
- Optionally, a computer-generated voice message is available over a telephone dial-up modem service. The message is updated at least once per minute.

BST currently has an AWOS AV system, which reports altimeter setting, wind data, temperature, dew point, condensation altitude, visibility, and relative humidity ceiling data. It is located near the segmented circle on the field and was installed privately to support medical helicopter operations that commonly utilize BST's instrument approaches as a means to access the Waldo County General Hospital helipad during inclement weather. The AWOS collects and transmits weather data to pilots on a frequency of 122.8 MHz, and is also available by telephone at (207) 930-7071, as well as at www.digiwx-bst.com. Criteria for locating an AWOS states that the wind sensor must be above adjacent structures within a certain radius, cannot penetrate the Obstacle Free Area or Runway Safety Area, and that some of the sensors should be located within 500 feet to 1,000 feet of the primary runway (visual and non-precision instrument). The present location of the AWOS meets current FAA siting criteria.

2.3 LANDSIDE FACILITIES

Landside development at the Airport includes a terminal/administration building, aircraft hangar facilities, a concrete pad for future fuel storage facilities, and access roadways.

2.3.1 Terminal / Administration Building

The Airport Terminal/Administration Building is a one story (with a basement), wood-framed building that is 32.5 feet by 15.5 feet in size with a small wooden deck on the south side of the building. It has traditionally been occupied by an FBO that provided flight support services including fuel and flight training. It is currently unoccupied. Inside this building are an office, a restroom, and a pilot planning area.

This building is served by city water lines, overhead electrical and telephone lines, and it utilizes a septic tank located northwesterly of the building. The building is heated via propane. There is also a small add-on/shed located on the southeastern side of the building that is used for miscellaneous storage. This building was constructed approximately 55 to 65 years ago. It was relocated to its current location and renovated in 2005.



Terminal / Administration Building

2.3.2 Aircraft Hangar Facilities

Conventional Hangars

There are 22 conventional hangars located on the east end of the decommissioned Runway 10-28. These hangars are generally uniform, having metal roofs, wood or metal siding, and propane-fired heaters. Eight of these hangars measure 28 feet by 40 feet (1,120 square feet per unit for seven of these hangars; the eighth hangar in this group has a main hangar that also measures 28 feet by 40 feet, but it also has a small addition, bringing its total area to 1,144 square feet) in size, seven measure 30 feet by 40 feet (1,200 square feet per unit), and another seven measure 32 feet by 42 feet (1,344 square feet per unit). Combined, these 22 hangars have a total area of 26,792 square feet. Additionally, there are two other larger conventional hangars located just north of the standardized hangars. These hangars are sized 51.5 feet by 54 feet (2,781 square feet) and 62 feet by 60 feet (3,720 square feet) for a total of 6,501 square feet. These hangars also have some associated apron area located in front of each. Note that all 24 of these hangars are privately owned, and have ground leases with the City.



Conventional Hangars at BST

T-Hangars

There is one T-hangar at BST located at the end of Airport Road, next to the “Low” hangar. Constructed in 1950, this hangar is wood framed, steel sided with a concrete floor, and has a manually-operated sliding wooden hangar door. It has a height of 12 feet, an opening/maximum width of 40.5 feet, and a depth of 26 feet, with a total area of 682 square feet. There are no utilities in this hangar and it is owned by the City of Belfast. This hangar is currently leased to the FBO.

2.3.3 Fixed Base Operator (FBO) Facilities

Constructed in 1970, the “Low” hangar is located at the end of Airport Road near Taxiway A. It consists of two bays, each one being 16-foot high, 44-foot wide, and 37 feet deep (the building has a total area of 3,409 square feet). Each of the bays has its own motorized bi-fold door. The building is a “pole building” with treated structural verticals, steel siding, a concrete floor, and minimal insulation. There is also a lobby/entrance. The building is serviced by forced hot air (oil) heat (two 250-gallon tanks), 100-amp electricity, and municipal water. Municipal sewer is not available in the area and there is no bathroom in this building. The hangar bay located on the northwest side also has a waste oil heater (a 250-gallon tank). This hangar is currently leased to the FBO.



Low Hangar and T-Hangar at BST

2.3.4 Airfield Maintenance Storage Shed

The Airfield Maintenance Storage Shed is approximately 20 feet by 20 feet in size (400 square feet) and is located between the end of Airport Road and Taxiway A. There are no utilities serving this structure. Since all snow removal and grass cutting on BST is currently conducted by the City of Belfast Public Works Department (note that Rockport-based Aldermere Farms also currently hays the large grassy expanses parallel to Runway 15-33), the Airport does not require the shed for storage



Wright Brother Drive

purposes at the present time. It is instead being used for storage by the City of Belfast Parks and Recreation Department.

2.3.5 Fuel Storage Facilities

Though the Airport does not currently have any fueling facilities, it does possess a 28-foot by 40-foot concrete pad near the main ramp adjacent to the terminal/administration building, which could be utilized for a future fueling facility.

2.3.6 Airport Entrance Roadways and Auto Parking

Primary access to the Airport is gained via a 1,000-foot entrance drive (Wright Brothers Drive) that extends from the terminal area to Lower Congress Street, a paved two-lane road that borders the east side of the Airport. There are power and telephone cables on poles located along Lower Congress Street providing feed up along the access drive to the Airport. The entrance drive pavement is in good condition, and its size is adequate for the existing volume of traffic. The Airport's current automobile parking lot is located to the northeast of the terminal building. It was constructed in 2004 and measures 50 by 130 feet with marked parking spots for approximately 19 automobiles, including two handicapped spaces.

Access to the Airport can also be gained via Airport Road, through the north phase of the Belfast Airport Business Park. This road likewise starts at Lower Congress Street and ends at the "Low" hangar located on the Airport itself.



Security Gate near Terminal / Administration Building

2.3.7 Airport Fencing

BST has very limited security fencing around its perimeter. The purpose of the fencing is for the prevention of automobiles from readily accessing the airfield. Specifically, there is four-foot tall fencing located within the terminal area around the auto parking lot, the fuel pad and the terminal building. Additionally, there are locked pole swing gates at every automobile access point to the Airport (i.e., two in the terminal area, one at the end of Airport Road, and one on the west end of the decommissioned Runway 10-28).

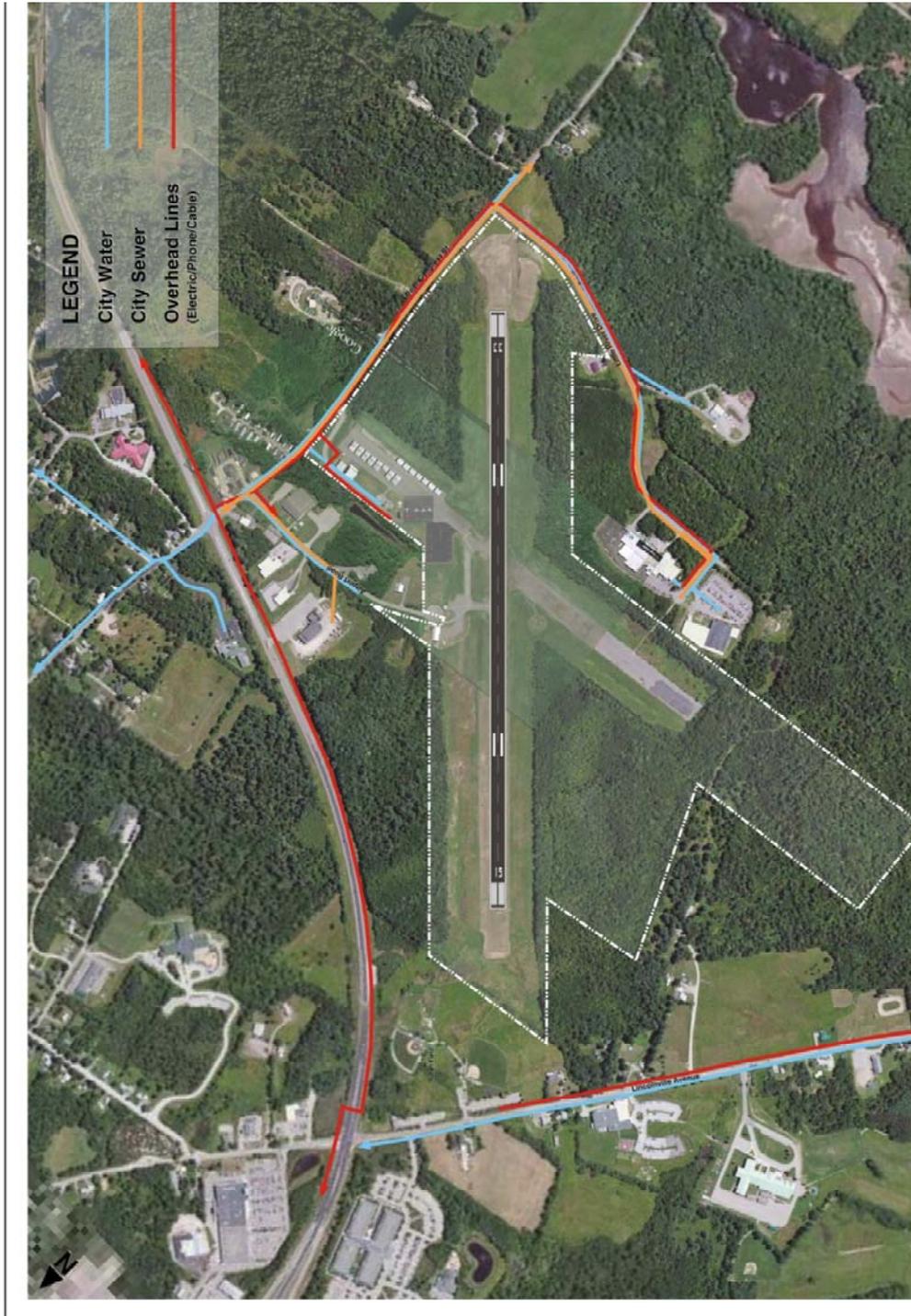
2.3.8 Utilities

Belfast Municipal Airport is served by multiple utilities. Overhead power lines bring electricity and telephone to both the Airport Road area and the Terminal Area. City water lines, via the Wright Brothers Drive and Airport Road, supply the terminal area and the "Low" hangar with water. There is no municipal sewer available on the Airport, nor is there any natural gas service available. See **Figure 2-5** for a description of the utilities on and around the Airport. Additionally, the Airfield Electrical Vault is located close to the fuel pad.



Airfield Electrical Vault

Figure 2-5: BST Existing Utilities



Source: Airport Solutions Group; Google Map 2015.

Note: Utility information from a compilation of data sources and should be considered to be estimated - it has not been surveyed.
Graphic should not be considered to be comprehensive.

2.4 AIRSPACE SYSTEM / NAVIGATION AND COMMUNICATION AIDS



The Belfast Municipal Airport operates within the larger National Aviation System (NAS), which is comprised of a wide array of services, systems and requirements for airports as well as for the pilots that function within it. The following sections provide an overview of some of the Airport's key considerations with respect to navigating and operating within the NAS, including a review of the following elements as they are related to Belfast Municipal Airport:

- Air Traffic Service Areas and Aviation Communications,
- the National Airspace System,
- Navigational Aids, and
- Part 77 Airspace Surfaces.

2.4.1 Air Traffic Service Areas and Aviation Communications

Within the continental United States, there are some 22 geographic areas that are under Air Traffic Control (ATC) jurisdiction. Air traffic services within each area are provided by air traffic controllers in Air Route Traffic Control Centers (ARTCC). The ARTCCs provide air traffic service to aircraft operating on Instrument Flight Rules (IFR) flight plans within controlled airspace, and primarily during the enroute phase of flight. Those aircraft operating under Visual Flight Rules (VFR) that depend primarily on the "see and avoid" principle for separation, may also contact the ARTCC or other airport traffic control (ATC) services to request traffic advisory services. Traffic advisory service is used to alert pilots of other air traffic known in the vicinity of, or within the flight path of, the aircraft. The airspace overlying Belfast Municipal Airport is contained within the Boston ARTCC jurisdiction, which includes the airspace ranging from Maine to upstate New York and all of New England. The Belfast Municipal Airport can be found on the Montreal sectional chart.



Aircraft that are approaching or departing an airport are also subject to airspace and air traffic control that is designed to serve one primary purpose - the safe separation of one aircraft from another. At Belfast Municipal Airport, approach and departure services are provided by Bangor International Airport's Air Traffic Control Tower (ATCT), while clearance delivery is through the Bangor Automated Flight Service Station (AFSS).

The primary means of controlling aircraft employed by air traffic controllers is computerized radar systems that are supplemented with two-way radio communications. Altitude assignments, speed adjustments, and radar vectors are examples of techniques used by controllers to ensure that aircraft maintain proper separation. The specified lateral and vertical separation criterion for aircraft used by controllers is as follows:

- Lateral Aircraft Separation: three miles (radar environment)
- Lateral Aircraft Separation: five miles (non-radar environment)
- Vertical Aircraft Separation: 1,000 feet (below 29,000 feet) and 2,000 feet (29,000 feet and above)

Aviation communication facilities associated with the Airport include the Common Traffic Advisory Frequency (CTAF) and Aeronautical Advisory Station (UNICOM) on frequency 122.8 MHz. Automated Weather Observing System (AWOS) weather data for Belfast Municipal Airport is available via telephone at (207) 930-7071 and on frequency 122.8 MHz. Approach and departure control is accessed on the Bangor Approach/Departure frequency of 118.925 MHz. Clearance delivery is provided by Bangor AFSS on 121.975 MHz.

2.4.2 Airspace

To ensure a safe and efficient airspace environment for all aspects of aviation, the FAA has established an airspace structure through the Federal Aviation Regulations (FAR) that regulates and establishes procedures for aircraft that use the National Airspace System. This airspace structure essentially provides for two basic categories of airspace: controlled (classified as Class A, B, C, D, and E) and uncontrolled (classified as Class G). (Figure 2-6 below generally illustrates each airspace type.)

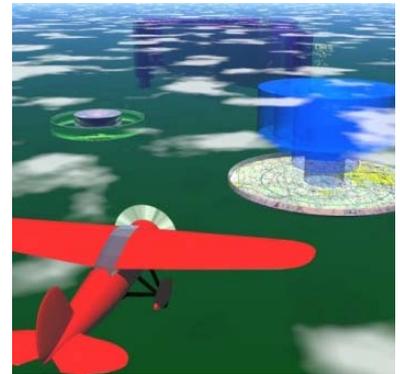
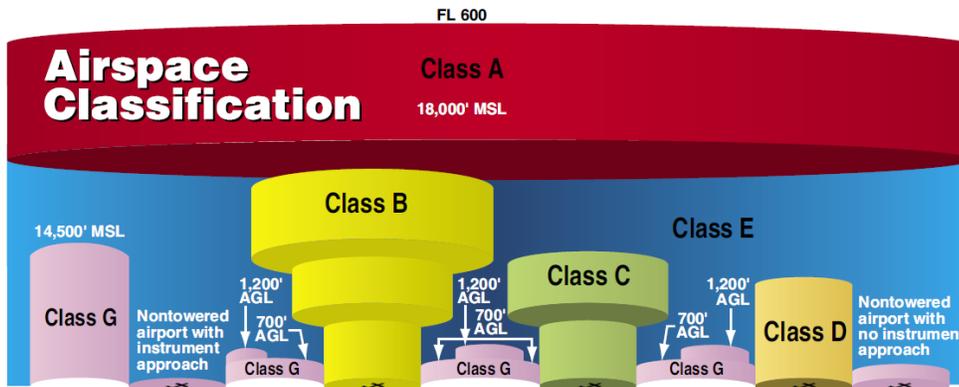


Figure 2-6: Airspace Classifications Illustration



Source: FAA Pilot's Handbook of Aeronautical Knowledge

Further, FAR Part 71 and FAR Part 73 establish these classifications of airspace with the following characteristics:

- Class A airspace is generally the airspace from 18,000 feet mean sea level (MSL) up to Flight Level 600 (approximately 60,000 feet MSL). Unless otherwise authorized, all operation in Class A airspace is conducted under instrument flight rules (IFR).
- Class B airspace is generally the airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. An ATC clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace.
- Class C airspace is generally the airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by a radar approach

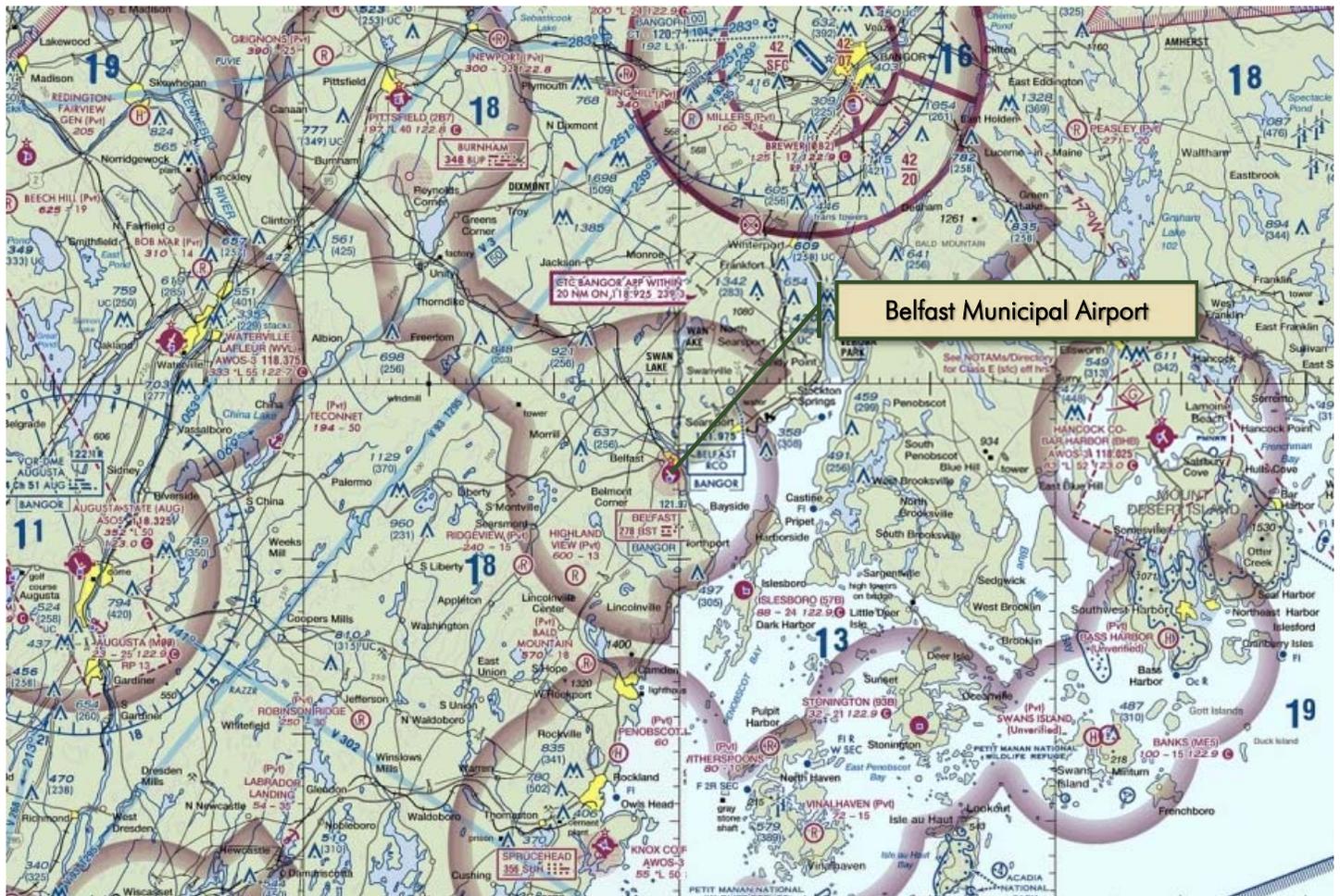
control, and have a certain number of IFR operations or passenger enplanements. Each aircraft must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace.

- Class D airspace is generally the airspace from the surface to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower. Unless otherwise authorized, each aircraft must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace.
- If the airspace is not Class A, B, C, or D, and is controlled airspace, then it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. Only aircraft operating under IFR are required to be in contact with air traffic control when operating within Class E airspace.
- Class G or uncontrolled airspace is the portion of the airspace that has not been designated with any of the above classifications. It extends from the surface to the base of the overlying Class E airspace. Although ATC has no authority or responsibility to control air traffic, pilots must still abide by visual flight rules (VFR) minimums in Class G airspace.

Belfast Municipal Airport lies in **Class G** airspace, but only up to 700 feet above ground level (AGL) where the airspace transitions to **Class E**, which itself extends up to but not including 18,000 feet MSL (**Class A** airspace). **Figure 2-7** and **Figure 2-8** show a portion of the sectional aeronautical chart published by the FAA's National Aeronautical Charting Office for the immediate regional airspace around Belfast Municipal Airport. The magenta line indicates the limits of the Class E airspace. Note that unless otherwise indicated, the airspace outside of the Class E airspace is classified as Class G or uncontrolled.

It should also be noted that federally-operated air traffic control facilities assume control for instrument approaches to those airports without Air Traffic Control Towers (ATCT). The Boston Air Route Traffic Control Center (Boston Center) located in Nashua, New Hampshire is responsible for controlling instrument flight rule (IFR) aircraft operation throughout New England and parts of eastern New York and northern Pennsylvania. Pilots flying under VFR are expected to contact the airport via the UNICOM frequency to alert operators in the area of impending aircraft operations.

Figure 2-7: BST Immediate Airspace



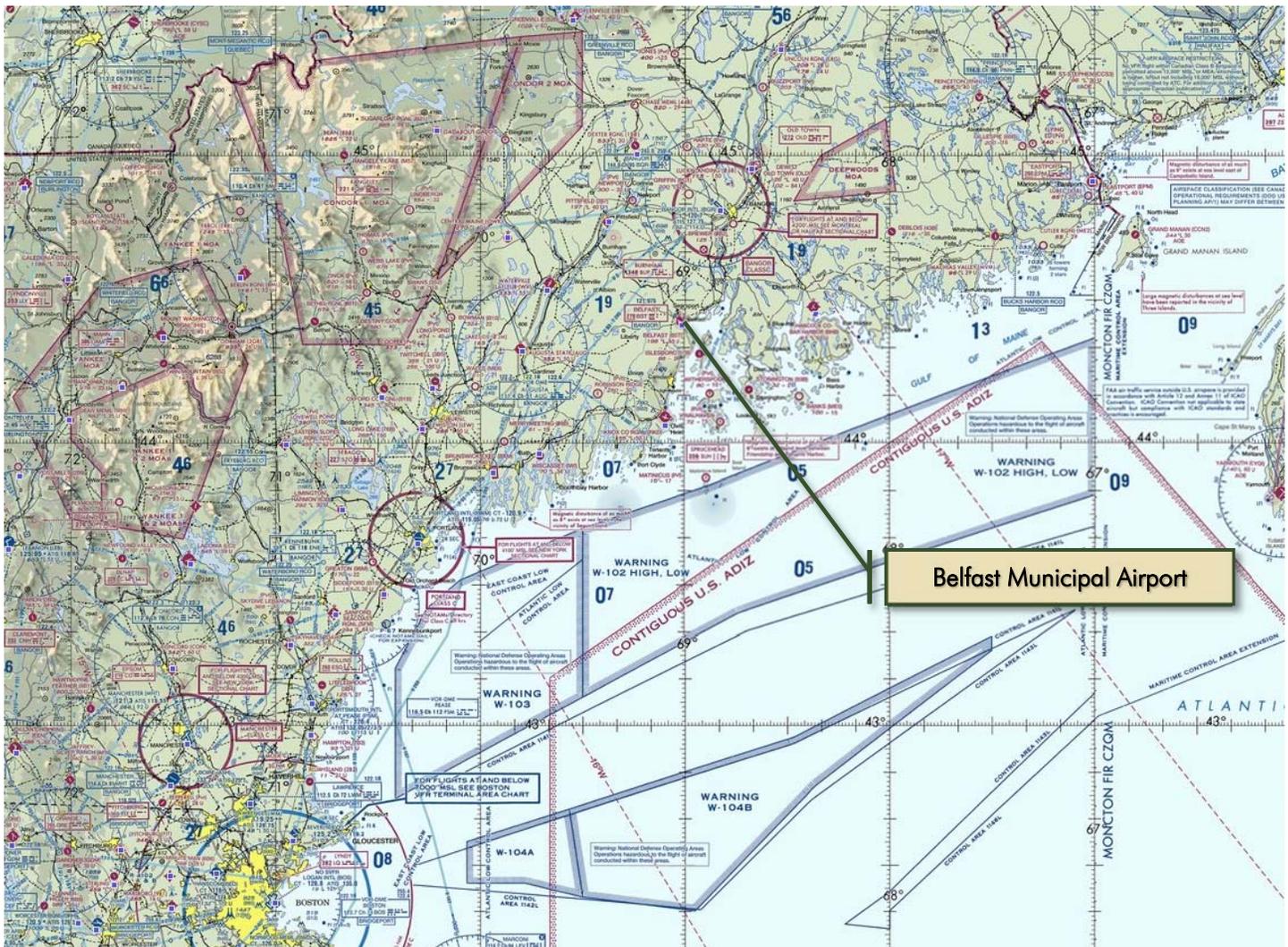
Source: Montreal Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration

Special Use Airspace

Special use airspace is the airspace in which allowable aircraft operations may be restricted or limited. There are no special use airspace designations within the immediate vicinity of Belfast Municipal Airport. However, three military operations areas (MOA) exist to the northwest and northeast of BST: the Condor 1 MOA, the Condor 2 MOA and the Deepwoods MOA. Note that the purpose of an MOA is to provide secure and clear areas for military training activities. The floor for the two Condor MOAs is 7,000 feet MSL, extending up to, but not including 18,000 feet MSL. The Deepwoods MOA has a floor of the ground surface up to a ceiling of 3,000 feet MSL.

There is one warning area (W-102) located over the Atlantic Ocean, approximately 35 nautical miles from Belfast. Warning area boundaries designate the limits of international waters, and flights through these areas may be hazardous to the aircraft and its occupants.

Figure 2-8: BST Vicinity Airspace



Source: Montreal Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration

Navigational Aids (NAVAIDS)

A variety of navigational aids are currently available to pilots around Belfast Municipal Airport, whether located at the field or at other locations in the region. Many of these navigational aids are available to enroute air traffic as well. The navigational aids (NAVAIDS) available for use by pilots in the vicinity of Belfast Municipal Airport are VOR/DME, VORTAC and NDB facilities. (Note that as of August 2015, the NDB facility has been deactivated and is scheduled to be decommissioned by the end of 2017.) NAVAIDS are listed below in **Table 2-5**.

A VOR/DME system is a Very High Frequency Omnidirectional Range Station (VOR) with Distance Measuring Equipment (DME) transmitting very high frequency signals, 360 degrees in azimuth oriented from magnetic north. This DME equipment is used to measure, in nautical miles, the slant range distance of an aircraft from the navigation aid. There is one VOR/DMEs in range of BST. A VORTAC (VHF

Omnidirectional Range / Tactical Air Navigation) is a ground-based electronic navigation aid transmitting very high frequency signals, 360 degrees in azimuth oriented from magnetic north, with equipment used to measure, in nautical miles, the slant range distance of an aircraft from the navigation aid. A VORTAC provides VOR azimuth, Tactical Air Navigation System (TACAN) azimuth, and TACAN distance measuring equipment (DME) at one site. There is one VORTAC in range of BST. A non-directional beacon (NDB) is an L/MF radio beacon transmitting non-directional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his bearing to or from the radio beacon and track to or from the station. There are four NDBs in range of BST.

Table 2-5: NAVAIDS in Close Proximity to BST

Type	ID	Name	Frequency	Radial	Range
VORTAC	BGR	BANGOR	114.80	212°	26.6 nm
VOR/DME	AUG	AUGUSTA	112.7	099°	34.1 nm
NDB	BST	BELFAST	278	at field	-
NDB	SUH	SPRUCEHEAD	356	029°	21.9 nm
NDB	BUP	BURNHAM	348	157°	22.8 nm
NDB	OLD	OLD TOWN	272	223°	39.2 nm

Source: AirNav.com

There is also a network of low-altitude published federal airways (i.e., Victor airways), in the vicinity of Belfast Municipal Airport, which traverse the area and span between the regional ground-based VOR/DME and VORTAC equipment. VORs emit VHF radio signals in a 360 degree radial pattern and allow aircraft to follow a particular magnetic heading (radial) between successive VORs. Victor airways include the airspace within parallel lines located four nautical miles on either side of the airway and extend 1,200 feet above the terrain up to, but not including, 18,000 feet MSL. When an aircraft is flying on a federal airway below 18,000 feet average mean sea level MSL, the aircraft may be operating within Class B, C, or E airspace. Near Belfast Municipal Airport, there are three low altitude Victor airways (V93, V302, and V3) that utilize the nearby BANGOR VORTAC located north of the Airport and/or the AUGUSTA VOR/DME located west.

There are three published instrument approaches at the Belfast Municipal Airport – two for Runway 15 and one for Runway 33. **Table 2-6** summarizes the approach and visibility minima of these published approaches. **Figure 2-9** and **Figure 2-11** present the current approach plates for these published instrument approaches.

Table 2-6: Lowest Published Instrument Approach Minima at BST

Instrument Approach	Lowest Straight-In Minimums		Lowest Circling Minimums	
	Ceiling (msl)	Visibility	Ceiling (msl)	Visibility
RNAV(GPS)/LPV RWY 15	487'	1 mile	720'	1 mile
RNAV(GPS)/LPV RWY 33	440'	7/8 mile	700'	1 mile
NDB RWY 15	980'	1 mile	980'	1 mile

Source: U.S. Terminal Procedures.

Figure 2-9: BST Instrument Approach Plate – RNAV (GPS) RWY 15

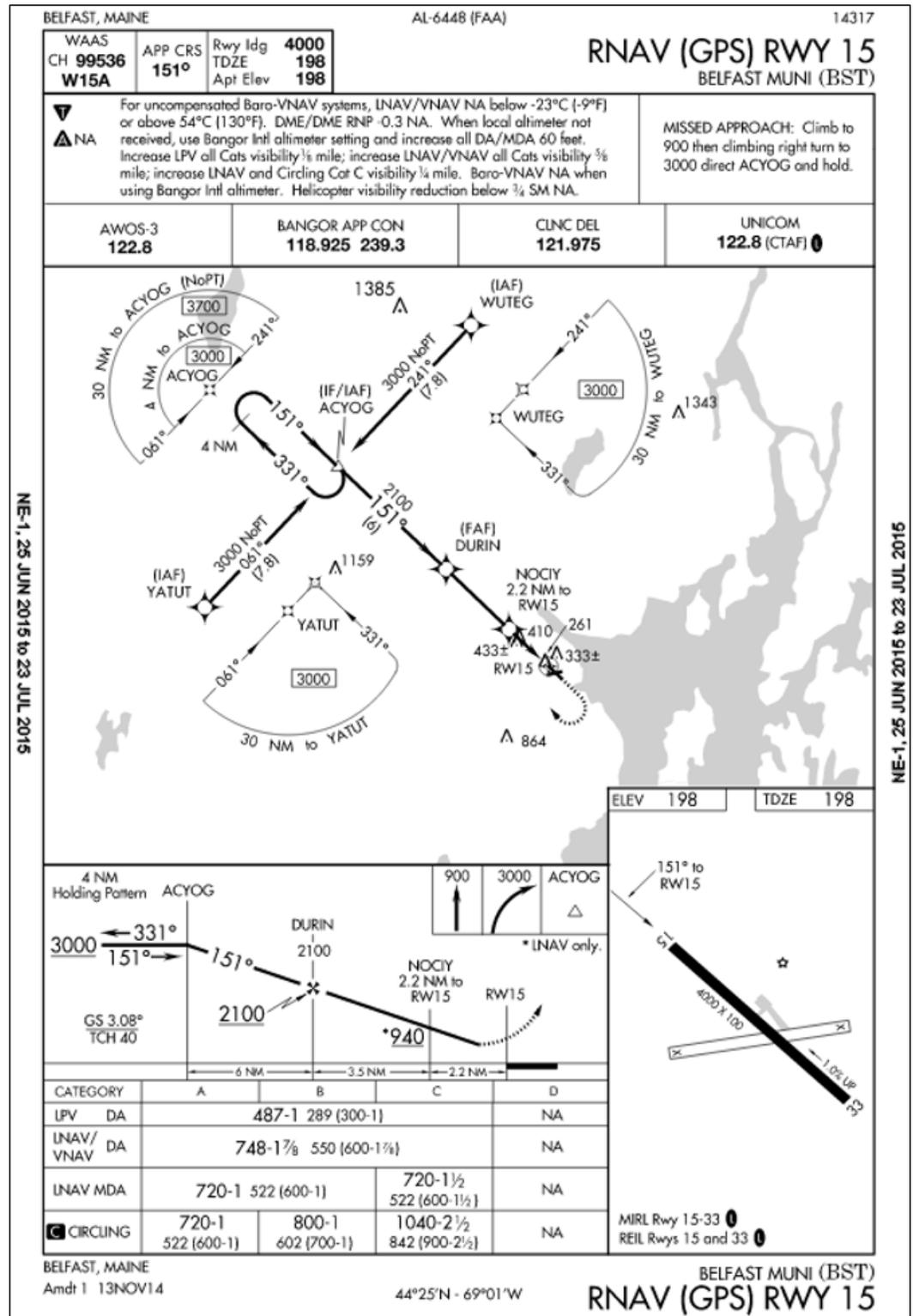


Figure 2-10: BST Instrument Approach Plate – RNAV (GPS) RWY 33

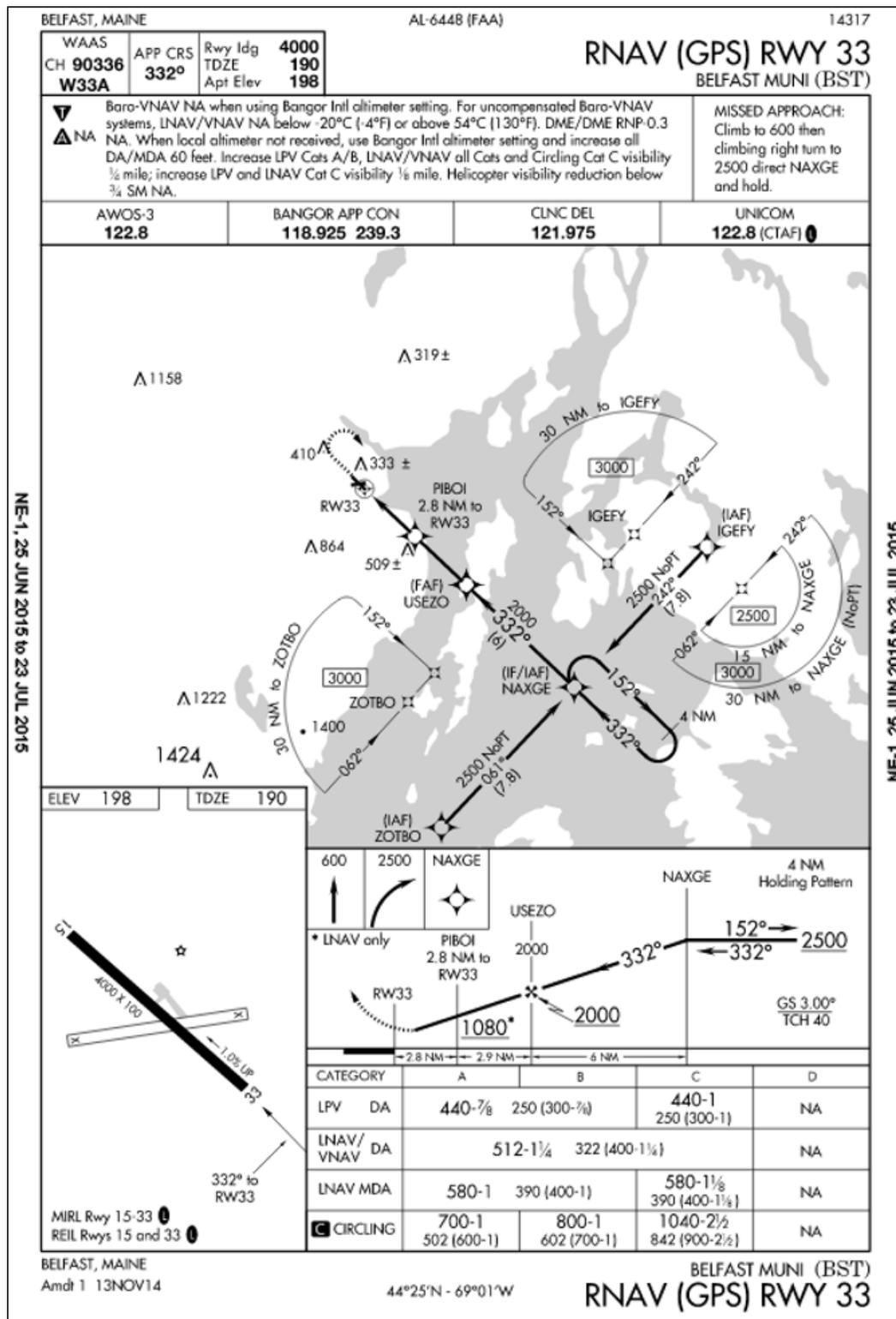
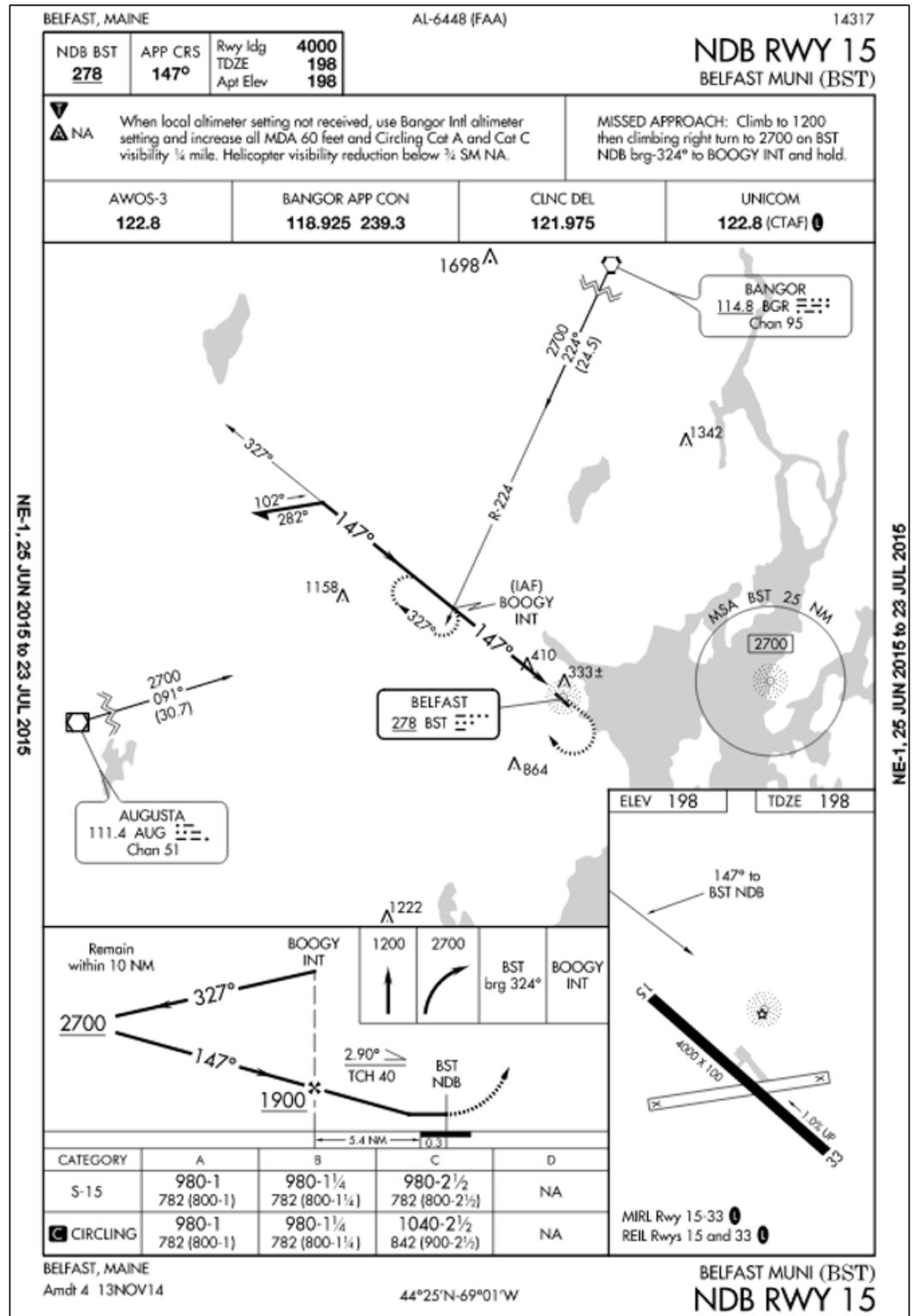


Figure 2-11: BST Instrument Approach Plate – NDB RWY 15

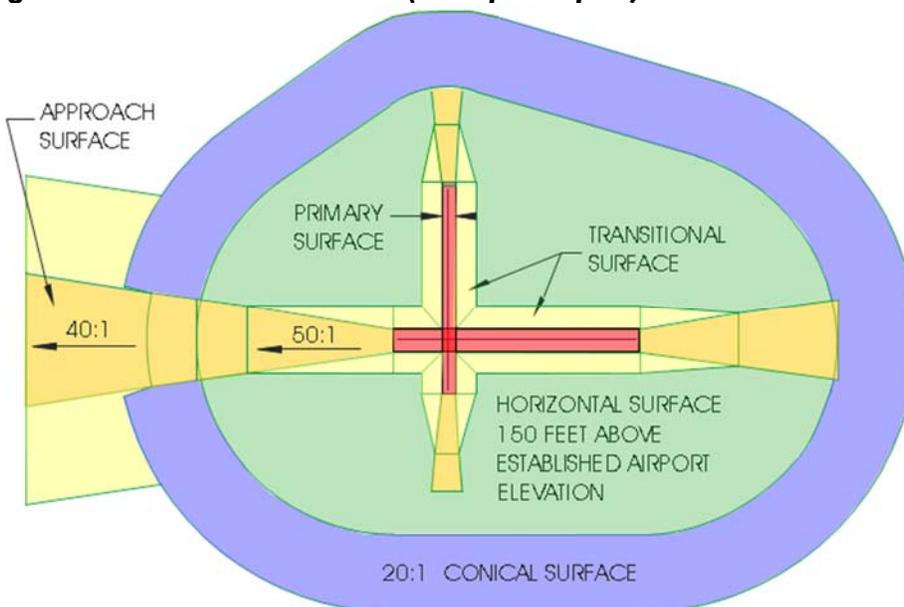


Part 77 Airspace Surfaces

Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, is a tool used to protect the airspace over/around a given airport, and each of its runway approaches, from potential obstructions to air navigation. (It is important to note that as a federal regulation, all airports included in the NAS are subject to the requirements of Part 77.) To determine whether an object is an obstruction to air navigation, Part 77 establishes several imaginary airspace surfaces in relation to an airport and to each runway end. The dimensions and slopes of these surfaces depend on the configuration and approach categories of each airport's runway system. The size of the imaginary surfaces depends largely upon the type of approach to the runway in question. The principal imaginary surfaces are generally described below and are illustrated in **Figure 2-12**.

- Primary Surface: Longitudinally centered on the runway at the same elevation as the nearest point on the runway centerline.
- Horizontal Surface: Located 150 feet above the established airport elevation, the perimeter of which is established by swinging arcs of specified radii from the center of each the primary surface end, connected via tangent lines.
- Conical Surface: Extends outward and upward from the periphery of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.
- Approach Surface: Longitudinally centered on the extended centerline, and extending outward and upward from each runway end at a designated slope (e.g. 20:1, 34:1, 40:1, and 50:1) based on the runway approach.
- Transitional Surface: Extends outward and upward at a right angle to the runway centerline at a slope of 7:1 up to the horizontal surface.

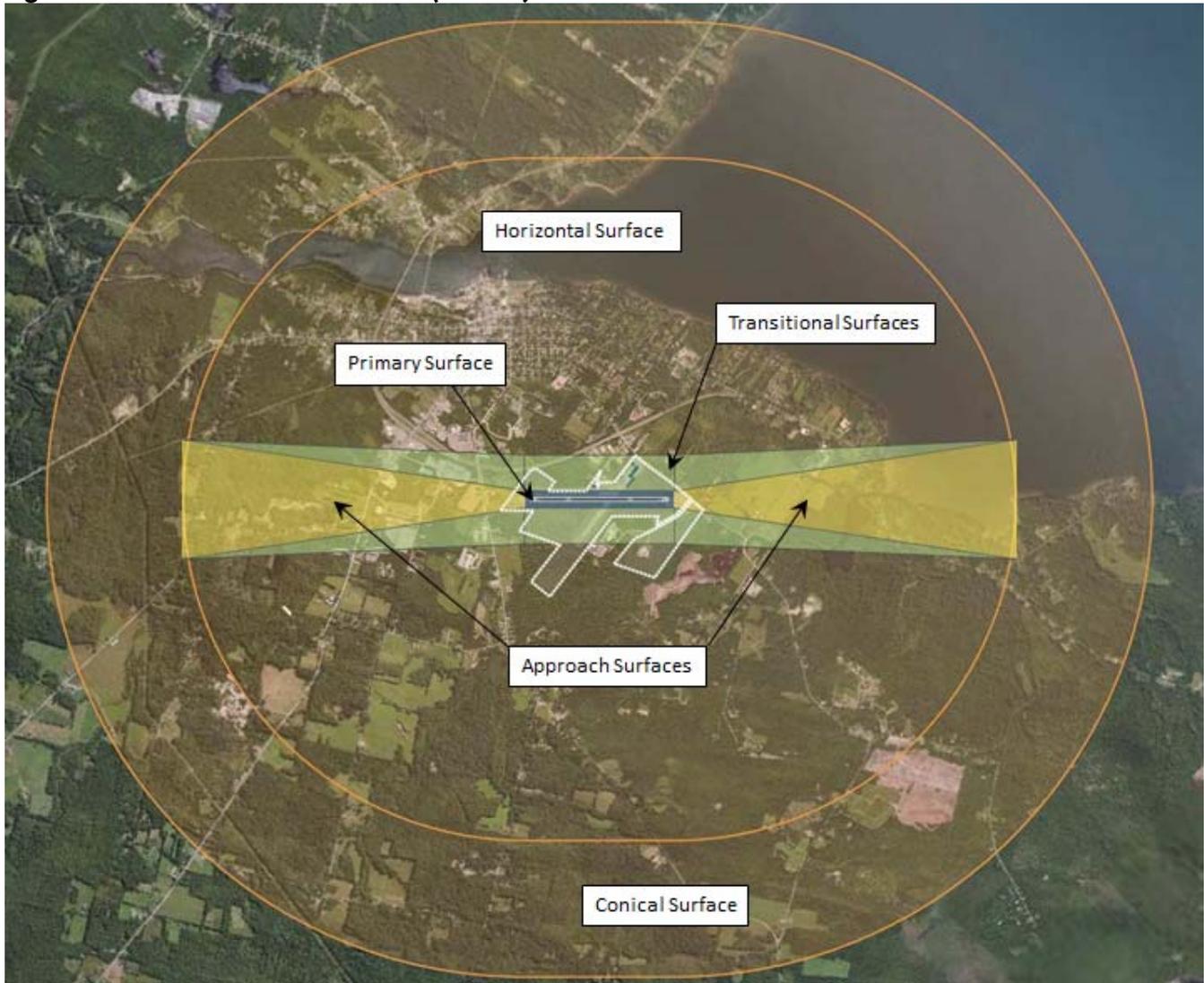
Figure 2-12: Part 77 Plan View (example airport)



Source: FAA

Based on the current operational types and approaches presented in the previous sections, the current Part 77 airspace surfaces for Belfast Municipal Airport are reflected in **Figure 2-13** below. Note that greater details related to Part 77 are presented in the Airport Layout Plan (ALP) located in **Chapter Six: Airport Plans**.

Figure 2-13: BST Part 77 Plan View (current)



Source: Airport Solutions Group, Google Maps 2015.

2.5 AIRPORTS WITHIN THE REGION

An airport service area evaluation has been prepared, which identifies selected surrounding public-use airports in relative close proximity to Belfast Municipal Airport (see **Figure 2-14**). The evaluation also includes an assessment of these airports existing roles, airside facilities/services, and operational data (see **Table 2-6**). The information presented in the table below would indicate that those airports located closer to Belfast Municipal Airport, and providing similar facilities and services, will tend to exert a greater influence on the demands at the Airport. There are six primary publicly-owned/public-use airports within 35 nautical miles of Belfast Municipal Airport.

Figure 2-14: BST Regional Airspace



Source: Montreal Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration

Table 2-6: Area Airports Comparison

	Belfast Municipal	Knox County Regional	Bangor	Pittsfield	Waterville Lafleur	Augusta State	Hancock County – Bar Harbor
Identifier	BST	RKD	BGR	2B7	WVL	AUG	BHB
City	Belfast, ME	Rockland, ME	Bangor, ME	Pittsfield, ME	Waterville, ME	Augusta, ME	Bar Harbor, ME
Ownership	City of Belfast	Knox County	City of Bangor	Town of Pittsfield	City of Waterville	State of Maine	Hancock County
Airport Use	Public	Public	Public	Public	Public	Public	Public
Location Relative to BST	--	24 mi 21 nm SSW	29 mi 25 nm NNE	31 mi 27 nm NNW	33 mi 29 nm WNW	39 mi 34 nm WSW	32 mi 28 nm E
NPIAS	GA	Primary	Primary	GA	GA	Primary	Primary
ASSET Role	Local	NA	NA	Local	Local	NA	NA
Elevation	197.6 msl	55.4 msl	192.1 msl	197.1msl	333.0 msl	352.0 msl	9.0 msl
Runways	<u>RW 15/33</u> Paved 4,000' x 100'	<u>RW 03/21</u> Paved 4,000' x 100' <u>RW 13/31</u> Paved 5,007' x 100'	<u>RW 15/33</u> Paved 11,440' x 200'	<u>RW 18/36</u> Paved 4,003' x 100'	<u>RW 5/23</u> Paved 5,500' x 100' <u>RW 14/32</u> Paved 2,301' x 60'	<u>RW 17/35</u> Paved 5,001' x 100' <u>RW 8/26</u> Paved 2,703' x 75'	<u>RW 17/35</u> Paved 3,253' x 75' <u>RW 4/22</u> Paved 5,200' x 100'
Instrument Approach	RNAV(GPS), LPV, NDB	ILS, LOC, RNAV(GPS), LPV NDB	ILS, LOC, RNAV(GPS), LPV, HI-VOR	RNAV(GPS), NDB	ILS, LOC/DME, RNAV(GPS), LPV	ILS, RNAV(GPS), LPV, VOR/DME	ILS, RNAV(GPS), LPV, LOC
NAVAIDS	Rotating Beacon, MIRL, REILs, AWOS	Rotating Beacon, HIRL, MIRL, PAPI, MALSR	Rotating Beacon, HIRL, PAPI, ASOS, ALSF2, MALSR, CL, TDZ	Rotating Beacon, MIRL, PAPI, REILs	Rotating Beacon, MIRL, VASI, MALSF	Rotating Beacon, HIRL, MIRL, PAPI, MALSR, REILs, ASOS	Rotating Beacon, HIRL, VASI, REILs, MALSF, AWOS
ATCT	None	None	Yes	None	None	Yes	None
Based Aircraft	SE: 12 ME: 0 Jet: 0 Helo: 2 UL: 1 GL: 0 Total: 15	SE: 77 ME: 2 Jet: 2 Helo: 0 UL: 0 GL: 0 Total: 81	SE: 32 ME: 4 Mil: 28 Helo: 3 UL: 0 GL: 0 Total: 67	SE: 33 ME: 6 Jet: 0 Helo: 0 UL: 0 GL: 4 Total: 43	SE: 17 ME: 2 Jet: 0 Helo: 0 UL: 0 GL: 0 Total: 19	SE: 28 ME: 4 Jet: 0 Helo: 3 UL: 0 MIL: 0 Total: 35	SE: 18 ME: 1 Jet: 0 Helo: 0 UL: 0 GL: 2 Total 21
Aircraft Storage	Tie downs, Hangars	Tie downs, Hangars	Tie downs, Hangars	Tie downs, Hangars	Tie downs, Hangars	Tie downs, Hangars	Tie downs, Hangars
Total Annual Operations	10,000	35,770	42,750	14,235	16,060	33,945	34,310
Avg. Ops. per Day	27	98	117	39	44	93	94
Airport Services	Minor Airframe, Minor Powerplant	100LL, Jet-A, Deice	100LL, Jet-A, Major Airframe, Major Powerplant, Deice, Customs	100LL, Jet-A, Major Airframe, Major Powerplant, Deice	100LL, Major Airframe, Major Powerplant, Deice	100LL, Jet-A, Major Airframe, Major Powerplant, Deice	100LL, Jet-A, Major Airframe, Major Powerplant, Deice
Acreage	220	538	2,079	325	375	406	468

Source: Website airnav.com, FAA Form 5010-1, Airport Master Record (effective date for all is 06/01/2015)

Notes: SE=Single Engine; ME=Multi-Engine; Jet=Business Jet; Helo=Helicopter; UL=Ultralight; MIL=Military; MSL=Mean Sea Level; MIRL=Medium Intensity Runway Lighting; ILS=Instrument Landing System; GPS=Global Positioning System; PAPI=Precision Approach Path Indicator; VASI=Visual Approach Slope Indicator; PLASI=Pulse Light Approach Slope Indicator; REIL=Runway End Identifier Lights; AWOS=Automated Weather Observing System; ASOS=Automated Surface Observing System; MALSR=Medium-intensity Approach Lighting System with Runway Alignment Indicator Lights; 100LL = aviation gasoline (Avgas); Jet-A = jet fuel.

2.6 AIRPORT ENVIRONS



The purpose of the following sections is to place Belfast Municipal Airport within its community and regional setting. This includes demographic and economic considerations and a brief discussion of other factors such as land use and environmental considerations.

2.6.1 Community Overview

As detailed on the City of Belfast’s website, Belfast was settled by Scottish-Irish families from Londonderry, New Hampshire, in the spring of 1770. Legend has it that the name Belfast, after the Northern Ireland city, was chosen by a coin toss. Fear of British attack led these original proprietors to abandon the settlement during the American Revolution, but they returned in the 1780s to build a vibrant, prosperous outpost that would become the market center for the outlying area.

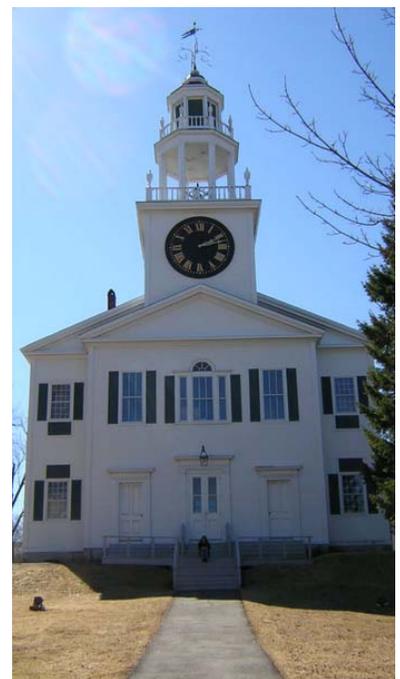
Abundant timber, a gently sloping waterfront, and proximity to varied agriculture gave rise to shipbuilding and maritime commerce. Hundreds of wooden sailing ships were built by local shipyards, and during the 19th century, as much as 30% of the male population was employed in the maritime trades. In 1868, construction began on the Belfast and Moosehead Lake Railroad, which connected Belfast to the Maine Central Railroad at Burnham Junction. Belfast merchants sold a variety of goods, and steamship operators provided regular transportation from Belfast to other coastal Maine communities, as well as overnight trips to Boston. Prosperous shipbuilders and merchants constructed the architecturally significant houses that dominate the residential neighborhoods today.

Two disastrous fires in 1865 and 1873 consumed much of the downtown area, but merchants rebuilt with brick, creating a pleasing and long-lasting commercial district. Four historic districts (the Belfast Historic District, the Belfast Commercial Historic District, the Church Street Historic District, and the Primrose Hill Historic District) are listed on the National Register of Historic Places.

The City’s prosperity, built on shipbuilding and commerce in such unglamorous cargoes as hay, ice, apples, and fertilizer, began to fade as the 20th century unfolded. A four-story shoe factory dominated the industrial area, and Belfast became a manufacturing town. By the 1950s, poultry, sardine, and potato



Downtown Belfast



The First Church in Belfast



Downtown Belfast

Airfield Electrical Vault

companies had set up processing plants along the waterfront. Belfast came to call itself the “Broiler Capital of the World”, and each July, thousands would come to Belfast to celebrate Maine Broiler Day (later renamed “Broiler Festival”).

In 1962, Route 1 was rerouted around the City and across a new bridge. The rerouting was seen by some as the death knell for the once-vibrant shire town. In hindsight, the bypass preserved the City’s center, and in the 1980s a rebirth began. The arts flourished, and the stately houses and commercial buildings were restored. Today, Belfast is that rare combination of quiet small town with an active social and cultural life that is attractive to residents and visitors alike.

According to the United States Census Bureau, the city has a total area of 38.37 square miles – of which, 34.04 square miles is land, and 4.33 square miles is water. Situated on Penobscot Bay, Belfast is drained by the Passagassawakeag River. Towns surrounding Belfast include Searsport to the northeast, Swanville to the north, Waldo to the northwest, Morrill to the west, Belmont to the southwest, and Northport to the south. All are located within Waldo County.

2.6.2 Belfast Demographics

Per the 2010 US Census, the City of Belfast had a population of 6,668 people, making it the 19th largest city in Maine. The population density of Belfast is 195.9 persons per square mile. The male/female split of the City’s population is approximately 46/54. The racial makeup of the City’s population is 96.7 percent white, 0.5 percent African-American, 1.6 percent of another race, and 1.2 percent describing themselves as having Hispanic or Latino origins.

2.6.3 Belfast Economy



Front Street Shipyard

Historically, the City of Belfast’s economy was dominated by a series of heavy industries like shipbuilding, shipping, timber, shoe and clothing manufacturing and poultry processing. The influence of each of these has grown and waned, with the last prominent decline occurring in the 1980s with the loss of the poultry processing industry. In the mid-1990s, a new complementary element was added to the economy of Belfast, with the arrival of credit card company MBNA, who built a significant campus in Belfast. Even after the sale of the company in 2006, MBNA’s former campus is still an important part of the Belfast economy, serving as the home to companies athenahealth, Bank of America, and OnProcess Technology; these companies are among the largest in Belfast, providing significant employment in the healthcare business services, credit card sales and support, and supply chain management sectors, respectively. Additionally, shipbuilding has become more prominent in Belfast with the arrival of Front Street Shipyard, a company that provides custom boat building and refitting services, as well as marina facilities. Recent growth has been very visible in the downtown area which has experienced a revitalization and significant growth in small businesses, largely based on the arts and tourism.

According to the 2010-2014 American Community Survey 5-Year Estimates, Belfast's 2014 per capita income was estimated to be \$23,197, which was lower than both that of Maine (\$27,332) and the United States (\$28,555). Likewise, Belfast's 2014 median household income was estimated to be \$34,205, also lower than both that of Maine (\$48,804) and the United States (\$53,482).

In 2006, the Maine Department of Transportation, Office of Passenger Transportation's *The Economic Impact of Airports in Maine* study attempted to calculate the economic benefits that were generated by Belfast Municipal Airport. The study used an FAA-approved methodology that relied on extensive survey efforts; these surveys yielded measurements of direct economic benefits related to on-airport tenants and indirect economic benefits stemming from visitors. Secondary economic benefits were then calculated using Maine-specific multipliers. The direct, indirect, and secondary economic benefits were then added together to yield the Airport's total economic impact, expressed as total annual output (\$3.9 million), total full-time employment (62 persons), and total annual payroll (\$1.6 million). (The information used in this study was from 2006, and this study has not been conducted again since then.) This study established that not only do the airports themselves generate economic benefits, but many other non-aviation-related employers that contribute to building the State's economy rely on the Maine airport system to support their daily business activities.

In 2006, BST generated an estimated \$3.9 million in total economic output for the local area, as well as 62 jobs (both on and off the airport)

2.6.4 Existing Land Use and Zoning in the Airport Environs

Land Use and Zoning

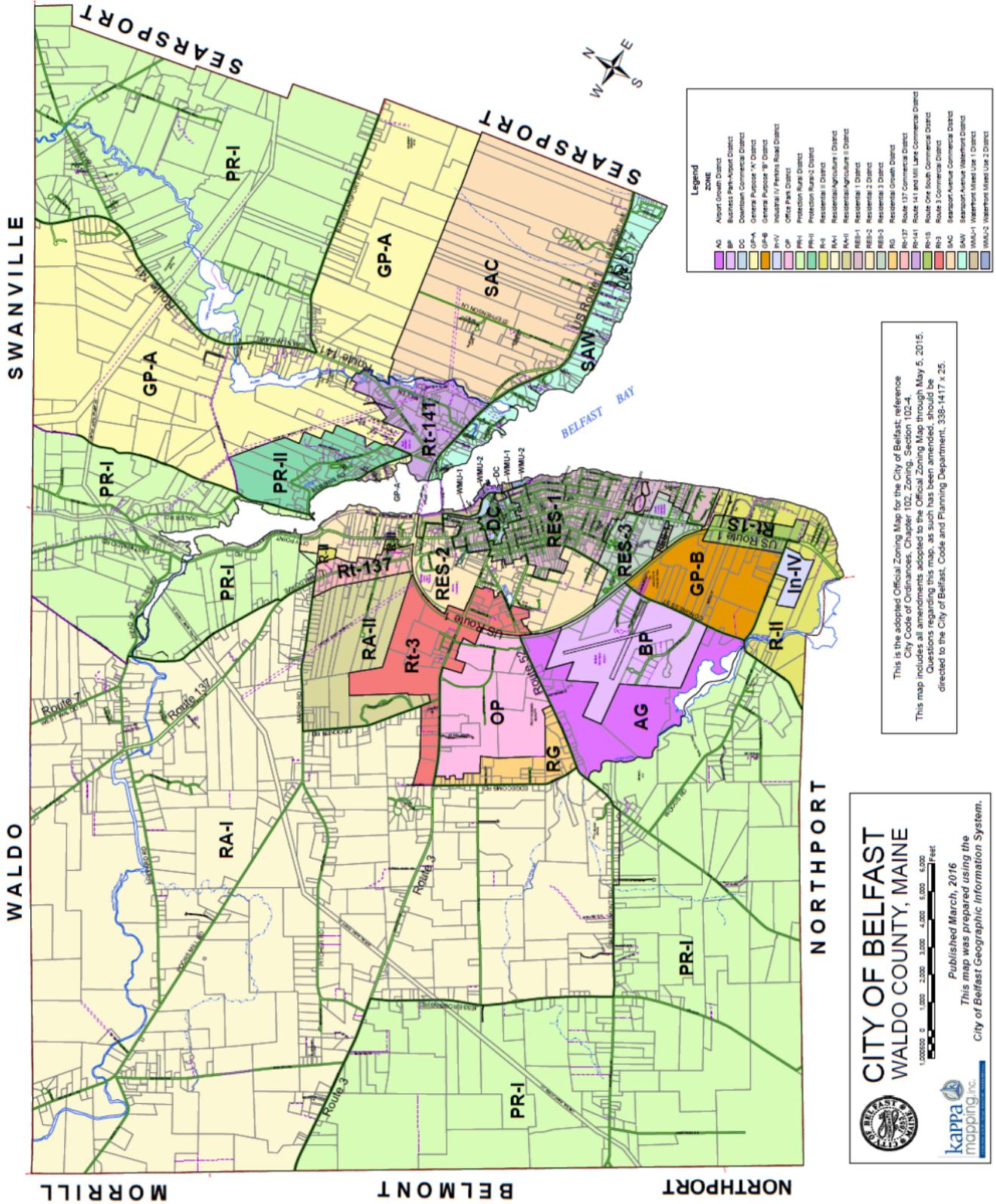
Of critical interest to any airport is the degree to which it is compatible with surrounding land uses. Airport compatible land uses can be defined as "those uses that can co-exist with an airport without constraining the safe and efficient operation of the airport or exposing people living or working nearby to unacceptable levels of noise or hazards." This definition is intentionally broad since there are many variables that must be factored in when considering whether a given land use is compatible within an airport operational environment.

Zoning regulations or ordinances are the method by which a municipal government manages the physical development of land and the kinds of uses that may be developed for each individual property. Zoning typically segregates land uses into three main categories: residential; commercial; and industrial. Thus, if a section of a city is zoned residential to allow for housing, then typically no commercial uses (e.g., auto body shops) are allowed to be developed in that same area. Typical zoning regulations also address things such as the size of a structure, the size of a lot, setbacks, parking, signage, and density.

Figure 2-15 reflects the current City zoning on and around Belfast Municipal Airport. The Airport itself is located within a dedicated Business Park - Airport District (BP) that is defined in the *City of Belfast – Code of Ordinances, Chapter 102: Zoning*. For the *Business Park - Airport District*, the following uses are currently permitted:

- (1) *Manufacturing or other industrial activities.*
- (2) *Retail sales as an accessory use to a manufacturing or industrial use, provided that the accessory use occupies no more than 50 percent of the total floor area, and at least a portion of the products sold at the site are manufactured at the site.*
- (3) Essential services.
- (4) Aviation and uses accessory to aviation.
- (5) Professional offices, excluding offices used to provide health care or legal services.
- (6) Office complexes, excluding offices used to provide health care or legal services.
- (7) Warehouse facilities, including warehouse facilities that primarily make sales to persons in the building trades.
- (8) Service businesses.
- (9) Auto repair and auto body repair, excluding fuel sales. Auto sales are permitted as an accessory use to auto repair or auto body repair, provided that a maximum of three automobiles are available for sale.
- (10) Boat building and repair, with limited amounts of boat storage allowed as an accessory use.
- (11) Municipal uses deemed necessary by the city council, but prior to taking action thereon, the council shall hold a public hearing for which a minimum of ten days notice shall be provided.
- (12) Quasi-public uses deemed necessary by the city council, but prior to taking action thereon, the council shall hold a public hearing for which a minimum of ten days notice shall be provided.
- (13) A manufacturing or industrial use may operate the following three categories of a restaurant, indoor seating, outdoor seating and take-out, as an accessory use, provided that the restaurant use satisfies all of the following criteria: the restaurant menu primarily includes and features products the manufacturer or industrial user produces on the site; the restaurant has a maximum of 24 seats; the total area devoted to restaurant seating and food preparation for the restaurant, in conjunction with any area that may be devoted to an accessory retail use, shall not exceed 33 percent of the total floor area of the structure in which the restaurant is located, or the functional equivalent of 33 percent of the total floor area if the restaurant involves outside seating; and the restaurant does not serve meals/food to customers after 10:00 p.m.
- (14) A warehouse facility may operate the following three categories of a restaurant, indoor seating, outdoor seating and take-out, as an accessory use, provided that a minimum of 90 percent of the products stored and distributed at the warehouse facilities are malt, spirituous or vinous products, and provided the restaurant use satisfies all of the following criteria: the restaurant menu includes and features malt, spirituous or vinous products that the warehouse facility stores on the

Figure 2-15: BST Vicinity – Existing Zoning



Source: City of Belfast.

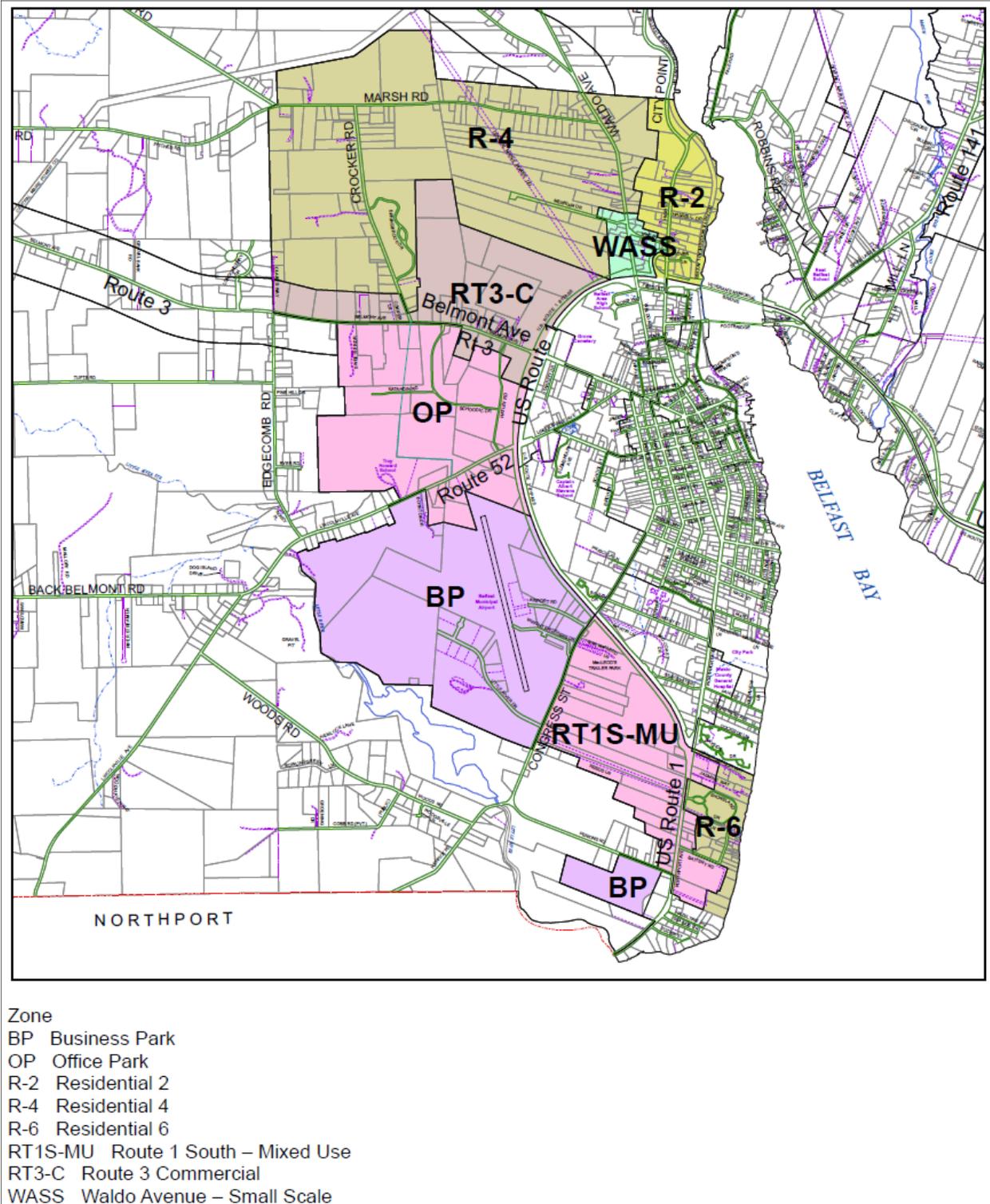
- (15) site; the restaurant has a maximum of 24 seats; the total area devoted to restaurant seating and food preparation for the restaurant, shall not exceed 33 percent of the total floor area of the structure in which the restaurant is located, or the functional equivalent of 33 percent of the total floor area if the restaurant involves outside seating; and the restaurant does not serve meals/food to customers after 10:00 p.m.
- (16) Stealth telecommunications facilities.

The Business Park-Airport Zoning District identifies land use regulations that apply to the City-owned Airport and the properties located within the City-managed Belfast Airport Business Park. In 1997, the City adopted the Airport Growth Zoning District to try and better manage uses on privately-owned lands located near the Airport, particularly the area along the southeasterly side of Lincolnville Avenue and adjacent to the Little River between Lincolnville Avenue and Congress Street, which is the southerly border of the Belfast Airport Business Park. A key provision in the Airport Growth Zoning District was to prohibit the construction of any new residential housing. This was a major change as the predominant use in this area was single-family residential housing located on one acre or larger-sized lots. In general, other uses allowed in the Airport Growth Zoning District are similar to those allowed in the adjacent Business Park-Airport Zoning District. The City notes that there has been little to no development in the area encompassed by the Airport Growth Zoning District since the adoption of these standards.

In 2009, the City adopted a new Future Land Use Plan as part of its Comprehensive Plan that identified how the City would like to amend existing zoning ordinances. Unlike a zoning ordinance, which is the law, the Future Land Use Plan is a document that identifies recommended City policy. The City has been very slow in implementing recommendations in the Future Land Use Plan, but the current goal is to implement recommendations for the area near the Airport by late 2017 or the middle of 2018. The process to revise existing zoning ordinances will require initial public hearings before the Planning Board, and ultimately, the City Council will need to conduct a public hearing at the time the zoning ordinance amendments are presented for adoption. **Figure 2-16** indicates how the boundaries of the current zoning districts would be affected if recommendations in the Future Land Use Plan were implemented.

If the recommended policies in the Future Land Use Plan are adopted as amendments to the City Code of Ordinances, Chapter 102: Zoning, there will be very little effect on current regulations for either the Airport itself, or properties in the Belfast Airport Business Park. That said, significant changes could occur that would affect private properties located near the Airport that are affected by Airport operations, particularly noise and safety. The Future Land Use Plan recommends that the City adopt an overlay district to help manage uses that would conflict with Airport uses. This means that uses that could occur in a zoning district or area outside the boundaries of the Airport that are affected by Airport operations would need to consider how Airport activities may impact the proposed use. For example, even though the adjacent Office Park Zoning District would allow single-family and multi-family residences, if said property falls within the boundary of the proposed

Figure 2-16: BST Vicinity – Proposed Zoning



Source: City of Belfast.

Airport Overlay District, such housing could be prohibited. Further, the City may seek to adopt standards that affect the maximum height of vegetation (trees) on properties within the Airport's approaches.

The specific language in the Future Land Use Plan regarding the establishment of an Airport Overlay District reads as follows:

"It is important to better manage potential land use conflicts regarding current and future use of the airport by establishing an Airport Protection Overlay zone. The intent is to establish an overlay district that accurately reflects areas in which conflicts could occur, and regulations that effectively address these conflicts. The City Airport Committee should be consulted in establishing the boundaries and regulations that would apply to the overlay district. This proposed overlay district would replace the current Airport Growth zone area."

The Future Land Use Plan also offers other recommendations which could affect the Airport, such as a recommendation that the City acquire additional land to support operation of both the Airport and the Belfast Airport Business Park, and that the City establish a 250-foot deep protective corridor along the Little River.

2.6.5 Local Comprehensive Planning

A local comprehensive plan is a strategic long-range document that addresses land use and zoning as it relates to growth and development of a municipality. With respect to an airport that lies within a community, it is critical that local comprehensive planning efforts acknowledge and address the issue of land use compatibility near an airport.

The Belfast City Council adopted the Future Land Use Plan component of its Comprehensive Plan in October 2009, and adopted the remainder of the Plan in December 2012. This plan replaces the former Comprehensive Plan, which was adopted in March 1995 and amended in 1997.

2.6.6 Environmental Setting and Considerations



BST is located in an area of relatively level low-elevation terrain within the coastal region of tidally-influenced Belfast Bay. The Airport's official elevation is 197.6 feet above mean sea level (AMSL), with elevations within airport boundaries ranging

from approximately 180 to 200 feet above MSL. Elevated areas exceeding 500 feet within the vicinity of the Airport included several hills in close proximity to Priest Hill and located to the south of BST (elevations ranging from 500 to 750 feet above MSL), Patterson Hill to the southwest (elevation 745 feet above MSL), and Park Hill to the west (elevation 498 feet above MSL); each is over one mile from BST. Elevations generally increase to the north, northwest, west and southwest of the Airport and decrease to the northeast, east, and south toward coastal land areas and Belfast Bay.

Within its property boundary, BST is comprised of several buildings and paved areas in addition to vegetated areas. The area immediately surrounding the runway is routinely mowed and consists of open areas dominated by herbaceous vegetation. Runway ends are dominated by large sapling tree/shrub wetland complexes and the immediate perimeter of the property is primarily forested and dominated by mature hardwoods and conifers. Beyond BST are a mix of open and forested habitats, agricultural areas, residences and commercial properties.

Environmental concerns and possible hazards are important considerations for any public use airport, including BST. Accordingly, this Plan addressed the environmental impact categories and guidelines identified in FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*. As such, baseline conditions are discussed for the following categories:

- 1) Air Quality
- 2) Coastal Resources
- 3) Compatible Land Use
- 4) Construction Impacts
- 5) Department of Transportation Act: Sec. 4(f)
- 6) Farmlands
- 7) Fish, Wildlife, and Plants
- 8) Floodplains
- 9) Hazardous Materials, Pollution Prevention, and Solid Waste
- 10) Historical, Architectural, Archeological, and Cultural Resources
- 11) Light Emissions and Visual Impacts
- 12) Natural Resources and Energy Supply
- 13) Noise
- 14) Secondary (Induced) Impacts
- 15) Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks
- 16) Water Quality
- 17) Wetlands
- 18) Wild and Scenic Rivers

Air Quality

Laws governing Air Quality at BST include the following:

- Clean Air Act, as amended (42 U.S.C. 7401-7671, P.L. 91-604, P.L. 95-95, P.L. 101-549).
- EPA air regulations (40 CFR Parts 50 and 51).
- Maine Statutes Title 38, Chapter 4: Protection and Improvement of Air.

The 1970 Clean Air Act was enacted by the U.S. Congress to protect the health and welfare of the public from the adverse effects of air pollution. As required by the Clean Air Act, U.S. Environmental Protection Agency (USEPA) promulgated National Ambient Air Quality Standards (NAAQS) for the following pollutants (USEPA 2011): nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM) (PM₁₀ and PM_{2.5}), carbon monoxide (CO), ozone (O₃), and lead (Pb). The NAAQS were developed to protect the human health against adverse health effects with a margin of safety and are presented **Table 2-7**. Maine Department of Environmental Protection (MEDEP) implements air quality programs under the Clean Air Act and its Ambient Air Quality Standards are identical to the NAAQS.

The Clean Air Act allows for one exceedance of the CO and SO₂ short-term NAAQS per year. The highest second-high accounts for the one exceedance. Annual NAAQS are never to be exceeded. The 24-hour PM₁₀ standard is not to be exceeded more than once per year on average over three years. To attain the 24-hour PM-2.5 standard, the three-year average of the 98th percentile of 24-hour concentrations must not exceed 35 µg/m³. For annual PM-2.5 averages, the average of the highest yearly observations was used as the background concentration. A new 1-hr NO₂ standard was recently promulgated. To attain this standard, the 3-year average of the 98th percentile of the maximum daily 1-hour concentrations must not exceed 188 µg/m³.

NAAQS specify concentration levels for various averaging times and include both “primary” and “secondary” standards. Primary standards are intended to protect human health, whereas secondary standards are intended to protect public welfare from any known or anticipated adverse effects associated with the presence of air pollutants, such as damage to vegetation. The NAAQS also reflect various durations of exposure. The short-term periods (24 hours or less) refer to exposure levels not to be exceeded more than once a year. Long-term periods refer to limits that cannot be exceeded for exposure averaged over three months or longer.

Federal Attainment Designations

Section 107 of the 1977 Clean Air Act Amendment requires that the USEPA publish a list of all geographic areas in compliance with the NAAQS, plus those not attaining the NAAQS. Areas not in NAAQS compliance are deemed non-attainment areas. Areas that have insufficient data to make a determination are deemed unclassified, and are treated as being attainment areas until proven otherwise. An area’s designation is based on the data collected by the state monitoring network on a pollutant-by-pollutant basis.

Table 2-7: National and State Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Period	National Ambient Air Quality Standards and Maine Ambient Air Quality Standards (micrograms per cubic meter)	
		Primary	Secondary
NO ₂	Annual ¹	100	Same
	1-hour ⁷	188	None
SO ₂	Annual ¹	80	None
	24-hour ²	365	None
	3-hour ²	None	1,300
PM10 ⁶	1-hour ⁷	196	None
	Annual	50	Same
	24-hour ³	150	Same
PM2.5	Annual ⁴	12	15
	24-hour ⁵	35	Same
CO	8-hour ²	10,000	Same
	1-hour ²	40,000	Same
Ozone	8-hour ⁸	147	Same
Pb	3-month ¹	1.5	Same

Source: 40 CFR 50 and 310 CMR 6.00; USEPA 2011.

¹ Not to be exceeded

² Not to be exceeded more than once per year.

³ Not to be exceeded more than an average of one day per year over three years.

⁴ Not to be exceeded by the arithmetic average of the annual arithmetic averages from 3 successive years.

⁵ Not to be exceeded based on the 98th percentile of data collection.

⁶ Due to a lack of evidence linking health problems to long-term exposure to coarse particle pollution, EPA revoked the annual PM10 standard in 2006 (effective December 17, 2006). However, the annual standard remains codified in 310 CMR 6.00

⁷ Not to be exceeded. Based on the 3-yr average of the 98th (NO₂) or 99th (SO₂) percentile of the daily maximum 1-hour concentrations.

⁸ Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years

The USEPA AirData database provides Air Quality Index (AQI) summaries of Federal attainment data for EPA core based statistical areas (CBSA) nationwide. To estimate pollutant levels representative of BST, the most recent air quality monitor data reported by MEDEP in their Annual Air Quality Reports and validated by the USEPA was obtained for the years 2010 to 2014 (MEDEP 2015a, USEPA 2015a) for the CBSAs located closest to the Airport; Bangor, located approximately 41 miles from the Airport, and Augusta/Waterville approximately 35 miles from the Airport (see **Table 2-8**). The AQI is a good indicator of overall air quality in a region, because it takes into account all of the criteria air pollutants measured within a geographic area and presents air pollution attainment data related to national standards for all six criteria pollutants for air quality (nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM) (PM10 and PM2.5), carbon monoxide (CO), ozone (O₃), and lead (Pb)). The values shown are based on the highest ones reported during the year by all monitoring sites within a given CBSA.

Based on an evaluation of 2010-2015 data from regions to the north and south of the Airport, air quality in the vicinity of the Airport (and throughout Maine) is very good, with all concentrations found to be well below their respective NAAQS and in attainment with current FAA air quality standards (MEDEP 2015a, USEPA 2015a).

State Implementation Plan

States with nonattainment areas must develop plans outlining realistic methods to meet the NAAQS in a timely manner. However, Maine is currently in attainment with all air quality standards.

Table 2-8: USEPA AirData Air Quality Index Summary 2010-2014 Bangor and Augusta_Waterville. Maine Core Based Statistical Areas.

		2010	2011	2012	2013	2014
# of Days of Data Collection	Bangor	365	365	365	363	365
	Augusta/Waterville	239	215	311	363	288
Good (AQI 0 to 50)	Bangor	328	319	337	326	340
	Augusta/Waterville	228	205	299	353	279
Moderate (AQI 51 to 100)	Bangor	37	46	28	36	25
	Augusta/Waterville	10	10	12	10	9
Unhealthy for Sensitive Groups (AQI 101 to 150)	Bangor	0	0	0	1	0
	Augusta/Waterville	1	0	0	0	0
Unhealthy (AQI 151 to 200)	Bangor	0	0	0	0	0
	Augusta/Waterville	0	0	0	0	0
Very Unhealthy (AQI > 200)	Bangor	0	0	0	0	0
	Augusta/Waterville	0	0	0	0	0
Number of days each pollutant measured was the main pollutant	Bangor	O3 (96) PM2.5 (169)	O3 (152) PM2.5 (213)	O3 (207) PM2.5 (156) PM 10 (2)	O3 (212) PM2.5 (151)	O3 (201) PM2.5 (164)
	Augusta/Waterville	O3 (207) PM2.5 (31) PM 10 (1)	O3 (174) PM2.5 (39) PM 10 (2)	NO2 (80) O3 (192) SO2 (8) PM2.5 (31)	NO2 (114) O3 (215) SO2 (6) PM2.5 (28)	NO2 (54) O3 (195) PM2.5 (38) PM10 (1)

Sources: MEDEP 2015a; USEPA 2015a.

Coastal Resources

Coastal resources in Maine are protected under the following federal and state statutes and regulations:

- Coastal Barrier Resources Act of 1982 as amended by the Coastal Barrier Improvement Act of 1990 (16 U.S.C. 3501-3510, PL 97-348).
- Coastal Zone Management Act as amended (16 U.S.C. 1451-1464, PL 92-583; 15 CFR part 930, subparts C and D, 15 CFR part 923).
- Maine Revised Statutes, Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-A: Natural Resource Protection Act (NRPA) (1987, C. 809, §2 (NEW); 2007, C. 290, §14) and Chapter 310, Wetland Protection Rules, under the NRPA.
- Maine Revised Statutes, Title 38: Waters and Navigation, Chapter 19: Coastal Management Policies.
- U.S. Department of Interior Coastal Barrier Act Advisory Guidelines (57 FR 52730, November 5, 1992).

However, the Airport is located over three miles from the nearest designated Coastal Zone, which includes lands located within 250 feet of coastal waters, coastal wetlands, and any areas affected by tidal action (MEDEP 2015b). Therefore, these do not apply to BST.

Compatible Land Use

The FAA reviews Compatible Land Use under the Aviation Safety and Noise Abatement Act of 1979, as amended (49 U.S.C. 47501-47507) and 14 CFR Part 150, and assumes that an airport's compatibility with surrounding land uses is generally associated with an airport's noise impacts. Airport compatible land uses can be broadly defined as "uses that can co-exist with an airport without constraining the safe and efficient operation of the airport or exposing people living or working nearby to unacceptable levels of noise or hazards."

Zoning regulations or ordinances are the method by which municipal governments manage the physical development of land and the type of uses allowed. The City of Belfast adopted a Future Land Use Plan as part of its Comprehensive Plan in October 2009. The City is preparing to undertake the process of amending its current zoning ordinances (reference City Code of Ordinances, Chapter 102: Zoning) to consider and implement recommendations in the Future Land Use Plan. The current City goal is to complete work for the area near the Airport by the end of 2017 or the middle of 2018.

The Airport, and the surrounding Business Park which is either owned or managed by the City, is currently located in the Business Park-Airport (BP) Zoning District. The BP Zoning District allows uses which you would typically find in a business park and uses which are compatible with the Airport. For example, job creating uses such as manufacturing, offices, and service businesses are allowed, but uses such as housing, churches, schools, and even most retail uses are prohibited. If recommendations in the 2009 Future Land Use Plan are adopted, there would be minimal changes to the Business Park-Airport Zoning District.

The City, however, also recognizes that some impacts associated with the Airport, particularly noise and public safety associated with Airport operations, transcend the land on which the Airport is located. As such, the Future Land Use Plan recommends the establishment of an Airport Overlay District to help regulate uses and activities on private properties surrounding the Airport that may be affected by Airport operations. The City views the proposed overlay district as a more precise way to consider the impact of Airport operations compared to its current regulations, adopted in 1997, that led to the establishment of the Airport Growth (AG) Zoning District, a district which prohibits residential, retail, office and similar uses. While the current AG District does limit activities on some properties affected by Airport operations, some properties that are currently within the Airport's approaches or which are affected by noise are outside the bounds of the AG District and allow incompatible uses (particularly housing). In addition, some properties that are in the current AG District are only minimally-impacted by Airport operations

and likely would fall outside the boundaries of the proposed Airport Overlay District.

The City's current zoning map (last amended in October 2014) was presented previously in **Figure 2-15**. As noted above, the boundaries of the Business Park-Airport Zoning District shown on this map are anticipated to remain nearly identical to those shown once new zoning is adopted. The City anticipates that the Airport Growth District shown on this map will be eliminated, and that the boundaries of other adjacent zoning districts may be amended. The City envisions the proposed Airport Overlay District, which could overlay the boundaries of any number of the above zones, being the primary tool that the City will use to manage impacts associated with Airport operations. While noise is the primary concern, the City also will explore establishing appropriate standards to address issues such as the height of structures, the height of vegetation (trees) in the Airport's approaches, and the location of potentially hazardous operations.

The City notes that it does not currently have a noise abatement program, but requests that pilots arriving and departing from the Airport do so in a manner that minimizes disruption to local residences and businesses. At present, the only specific requirement that applies is 14 CFR, section 36.103, which outlines aircraft noise limits.

Section 4(f)

The Department of Transportation Act of 1966, section 4(f), recodified at 49 U.S.C. 303(c), requires the consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development for projects that receive funding from or require approval by an agency of the U.S. Department of Transportation. Section 4(f) provides that the "Secretary shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife or waterfowl refuge of national, state or local significance; or land of a historical site of national, state or local significance as determined by officials having jurisdiction thereof unless there is not feasible and prudent alternative to the use of such land, and such program or project includes all possible planning to minimize harm from the land use."

No publicly-owned, or Land and Water Conservation-Funded, conservation areas, wildlife or waterfowl refuges, national or state forests or historic sites, scenic byways, wilderness areas, Wild and Scenic Rivers, "Land for Maine's Future" sites, or designated nationwide rivers occur in or within one mile of the Airport (MEDACF 2013; MEDEP 2015c; MEOGIS 2015; NWSRS 2015; USDI/NPS 2013, 2014; USDOT 2014; USFS 2013). The City-owned Walsh Field Recreation Area and the Belfast Dog Park lie immediately to the north of the Airport on the approach end to Runway 15.

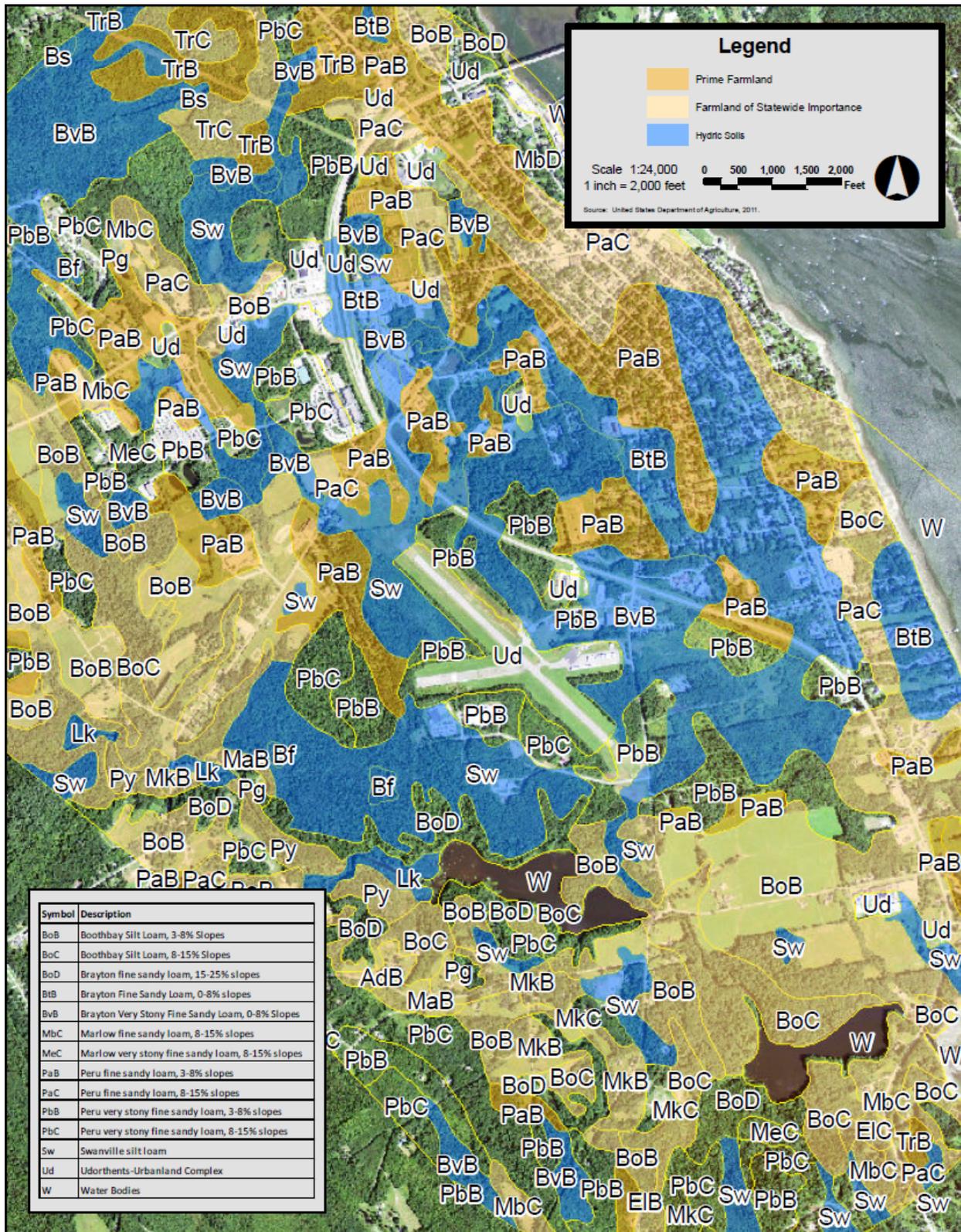
Farmlands

The Farmland Protection Policy Act (7 U.S.C. 4201-4209) (PL 97-98 amended by section 1255 of the Food Security Act of 1985, PL 99-198) addresses the conversion of farmland to non-agricultural uses. The act requires coordination with the local office of the U.S. Department of Agriculture (USDA) / National Resources Conservation Service (NRCS) if a proposed project includes irreversible conversion of prime farmland to nonagricultural uses. Farmland subject to this requirement does not have to be currently used for cropland - it may be forested or pasture, but not urban or built-up land. In the State of Maine, *Maine Revised Statutes, Title 7, Chapter 6: Maine Agricultural Protection Act*, and other state and municipal laws and ordinances are intended to avoid or minimize the conversion of farmland to non-agricultural uses (MEDACF 2010).

The NRCS identifies and maps soils that have ideal combinations of physical and chemical attributes for a variety of farming uses; these are identified as Prime Farmland, Farmland of Unique Importance, and Farmland of Statewide Importance. Prime Farmland are those areas with ideal farming conditions; Farmland of Unique Importance are those soil types that high-value crops require; and Farmland of Statewide Importance are those soils that do not meet the previous grouping criteria, but are important at the state or local level.

Based on the most recent soil survey data from the NRCS (USDA 2011) farmlands occur throughout the area surrounding the Airport (see **Figure 2-17**). Much of the area located the north and northwest of the Airport is situated on Peru Fine Sandy Loam soils with 3-8% slopes (PaB), which are considered Prime Farmland, or comprised of Peru Fine Sandy Loam with 8-15% slopes (PaC) and designated as Farmland of Statewide Importance. Land uses in these areas primarily include active agriculture, timber harvesting, recreation, along with commercial and residential development. Areas to the southeast include active agricultural lands and some forested areas, which are primarily seated on Boothbay Silt Loam soils with 3-15% slopes (BoB, BoC), which are both considered Farmland of Statewide Importance, and several smaller areas of PaB.

Figure 2-17: City of Belfast Area Soils



Source: United States Department of Agriculture, 2011.

Fish, Wildlife, and Plants

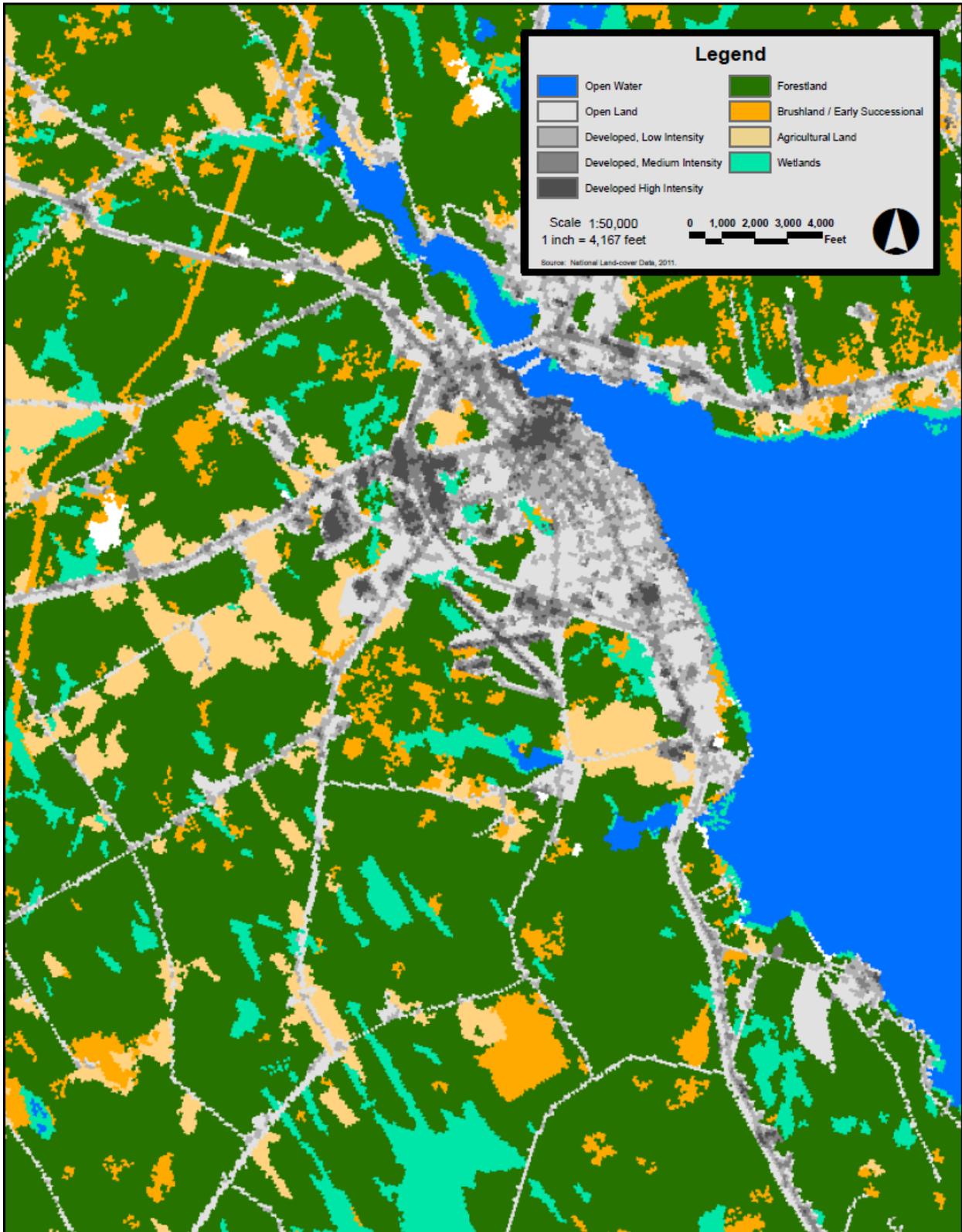
Fish, wildlife, and plants at BST are protected under the following federal and state statute and regulations:

- Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-668d).
- DOT Policy on Invasive Species, April 22, 1999.
- Endangered Species Act of 1973 (16 U.S.C. 1531-1544, PL 93-205; 50 CFR parts 17 and 22, 50 CFR part 402, 50 CFR parts 450-453, 50 CFR 600.920).
- Executive Order 13112, Invasive Species (64 FR 6183, February 8, 1999).
- Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (66 FR 3853, January 17, 2001).
- Fish and Wildlife Coordination Act of 1958 (16 U.S.C. 661-666c, PL 85-624).
- Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901-2912, PL 93-366; 50 CFR part 83).
- Maine Endangered Species Act of 1975 (Maine Revised Statutes Title 12, Chapter 925, Subchapter 3, §12803: Designation of Endangered Species).
- Maine Revised Statutes, Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-A: Natural Resource Protection Act (NRPA) (1987, C. 809, §2 (NEW); 2007, C. 480, §§ 480-A to 480-FF, 06-096), Chapters 310 Wetland Protection Rules and 335 Significant Wildlife Habitat Rules.
- Migratory Bird Treaty Act of 1981 (16 U.S.C. 703-712).
- Sikes Act of 1960, as amended (16 USC 670a-670o, 74 Stat. 1052).

Wildlife habitat is generally considered to be the sum of food, water, cover, and their spatial distribution that a given species needs to survive and reproduce in a particular area. A variety of flora (plants), fauna (animals), and the habitats they utilize occur in the vicinity of the Airport, including various age classes and types of forests, shrublands, agriculture, open grassy areas, ephemeral or intermittent streams, and a diversity of wetland communities. These areas provide food, cover, and nest sites for a wide diversity of birds and mammals. In general, the areas within one mile of the Airport to its north, northeast, east, and southeast are highly developed although several large patches of forest exist (approximately 25% of the area is comprised of forest or other undeveloped habitat). The areas within one mile of the Airport to its south, southwest, west, and northwest are sparsely developed and primarily covered by large contiguous tracts of forest habitat (approximately 90% of the area is comprised of forest or other undeveloped habitat) (see **Figure 2-18**).

Much of the BST facility and the adjacent agricultural areas, residences, businesses, and roadway edges are dominated by open grassy areas; however, these areas are maintained (i.e., mowed or plowed) on a regular basis. Birds and other wildlife

Figure 2-18: City of Belfast Land Cover Conditions



Source: National Land-cover Data, 2011.

may use these areas for foraging and temporary cover, but these habitats would not generally be expected to provide suitable breeding habitat for most species due to the frequency of disturbances. Forest, and to a lesser extent shrub, habitats comprise much of the remaining area surrounding the Airport, and include both upland and wetland types. These forests would be expected to support a wide diversity of flora and fauna typically associated with Maine's shrub, deciduous and mixed conifer-deciduous early successional/young forest to mature forest communities. Most of the bird species likely to utilize habitats of the Airport are migratory species and are protected under the Migratory Bird Treaty Act.

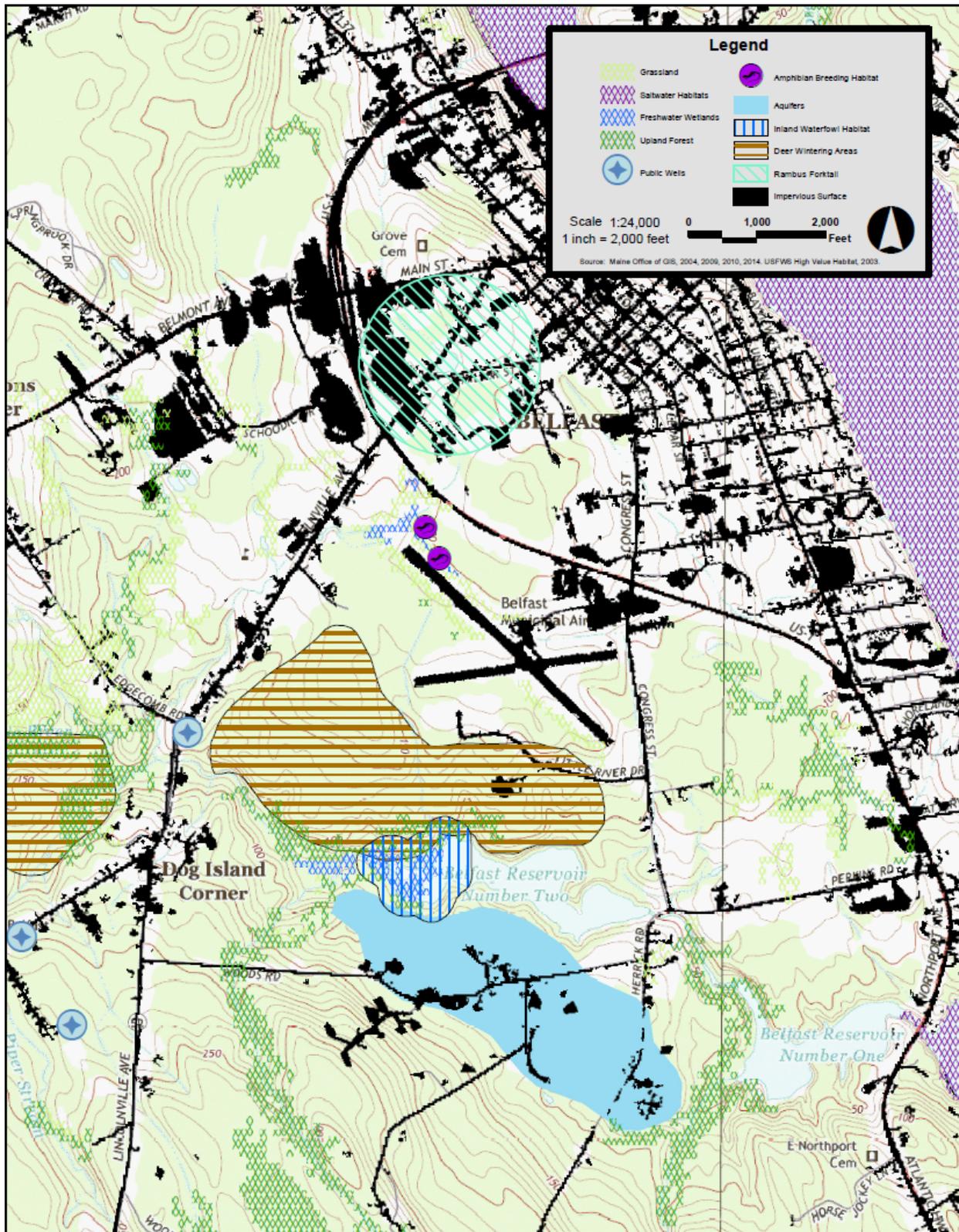
Federally-listed Species and Habitats

Based on a query of the United States Fish and Wildlife Service's (USFWS) Information Planning, and Conservation System (IPaC) (USFWS 2015a), BST is located within the known range of the northern long-eared bat (*Myotis septentrionalis*) (NLEB), which was listed as a federally-threatened species (with an interim 4(d) rule) by the United States Fish and Wildlife Service (USFWS) May 4, 2015 (USFWS 2015b). The NLEB utilizes a wide variety of forested/wooded habitats and in particular utilize snags and trees with a diameter at breast height (DBH) of 3 inches or greater, and that exhibit exfoliating bark, crevices, cavities, or cracks (USFWS 2015b; 2015c). The federally-protected expanded Gulf of Maine distinct population segment (DPS) of Atlantic salmon (*Salmo salar*) is also identified as a federally-endangered species in the region (USFWS 2015a), but habitat for this species occurs within streams and rivers to the southeast and therefore well outside of the area of the Airport. Any proposed work within forested habitats on or adjacent to the Airport would require coordination with the USFWS regarding the NLEB. Note that it has been determined by USFWS that there are no known/identified NLEB hibernacula anywhere near BST.

State-Listed Species and Habitats

Based on a review of the Maine Natural Areas Program (MNAP), beginning with Habitat database and maps (MNAP 2013) and online data (MNAP 2015), MEDEP's online digital data for bird habitats and vernal pools protected under Maine's Natural Resource Protection Act (NRPA) (MEDEP 2015c), as well as correspondences with MNAP (MNAP 2014) and the Maine Department of Inland Fisheries and Wildlife (MDIFW) (MDIFW 2014) for recent projects proposed on BST, no state-designated significant wildlife habitats or species of concern are known to occur on the Airport, but several occur within one mile of the property (see **Figure 2-19**). Habitats within ½ mile of the Airport include one Deer Wintering Area (ID 020671), an Inland Waterfowl and Wading Bird Habitat (ID 200654), and a state species of special concern, Rambur's forktail (*Ischnura ramburii*). Other significant habitats or species beyond ½ mile include an additional Deer Wintering Area (ID 020670), located approximately one mile west of the Airport; a state species of special concern, the American chestnut (*Castanea dentata*), observed just over ½-mile east of the Airport; and, a state species of special concern, northern bog bedstraw (*Galium labradoricum*), within four miles of the Airport area. The shores of the Passagassawakeag River and Belfast Bay, located approximately ¾-mile from BST, are also classified as a Tidal Waterfowl and Wading Bird Habitat.

Figure 2-19: BST Area USFWS High Value Habitat



Sources: Maine Office of GIS, 2004, 2009, 2010, 2014; USFWS High Value Habitat, 2003.

Additionally, several bat species which may utilize forested areas in and around BST are currently proposed for listing in Maine.

Vernal pools are temporary bodies of fresh water that provide important habitat for many vertebrate and invertebrate species. MEDEP provides protection for areas that meet specific criteria for definition as a significant vernal pool (SVP) as Significant Wildlife Habitat (SWH) under chapter 335 of NRPA. The MEDEP defines an SVP as a naturally occurring, temporary, or semi-permanent pool that provides habitat for a specific abundance of vernal pool amphibian indicator species, fairy shrimp, or certain state-listed rare, threatened, or endangered species. The United States Army Corp of Engineers (USACE) also regulates vernal pools through Section 404 of the Clean Water Act and Maine's General Permit (GP). However, the USACE definition of vernal pools varies from that of the MEDEP in that it does not rely upon the existence of specific indicator species to assume federal jurisdiction. Additionally, non-natural (or manmade) vernal pool habitats are not excluded from the USACE definition of a jurisdictional feature, as the MEDEP rules do.

Surveys for vernal pools were performed on portions of BST as part of recent airport project planning activities (NewEarth 2015) and two locations of amphibian breeding activity within potential vernal pools were identified. One amphibian breeding area pool was identified approximately 350 feet from the northeast corner of Runway 15 (Figure 2-19). This shrub-dominated wetland/pool is approximately 75 feet long and 40 feet wide, 2.5 feet deep, and possessing organic material substrate. Based on the 2015 survey the pool had a sufficient number of egg masses to meet the NRPA criteria for designation as an SVP. However, based on site characteristics and a review of historic aerial imagery the pool appears to be a man-made borrow-pit. If MDIFW concurs with this finding the pool would not be regulated as SWH under NRPA, which only regulates naturally-formed pools. Nonetheless, since the USACE does not differentiate between natural and man-made pools they may regulate the pool and the area within 750 feet of the pool as a Vernal Pool Management Area. Impacts within this area must be minimized to the maximum extent practicable.

Additionally, egg masses of vernal pool-dependent amphibian species were also noted in several low-lying areas within a scrub-shrub/emergent wetland on the BST site (Figure 2-19). This wetland occurs along the northeast edge of Runway 15 and is likely the result of Airport construction activities. Regardless of the origin, the number of egg masses within the wetland did not meet the criteria for protection as a significant vernal pool under NRPA (NewEarth 2015). The wetlands would still be protected under NRPA as freshwater wetland habitat, but since the USACE's definition of a vernal pool differs from that found in the NRPA, the USACE could impose additional protections on the area. Additional surveys should be performed for any work proposed in areas of BST that have not been surveyed for vernal pool habitat and the USACE and MEDEP should be consulted regarding any potential impacts within known potential vernal pool sites.

Floodplains

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program. This program is designed to provide flood insurance for existing properties and to discourage additional development within 100-year floodplains. Construction in floodplains is regulated to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values provided by floodplains. Executive Order 11988, *Floodplain Management, May 24, 1977 (42 FR 26951)*, and Order DOT 5650.2, *Floodplain Management and Protection*, address development in floodplains.

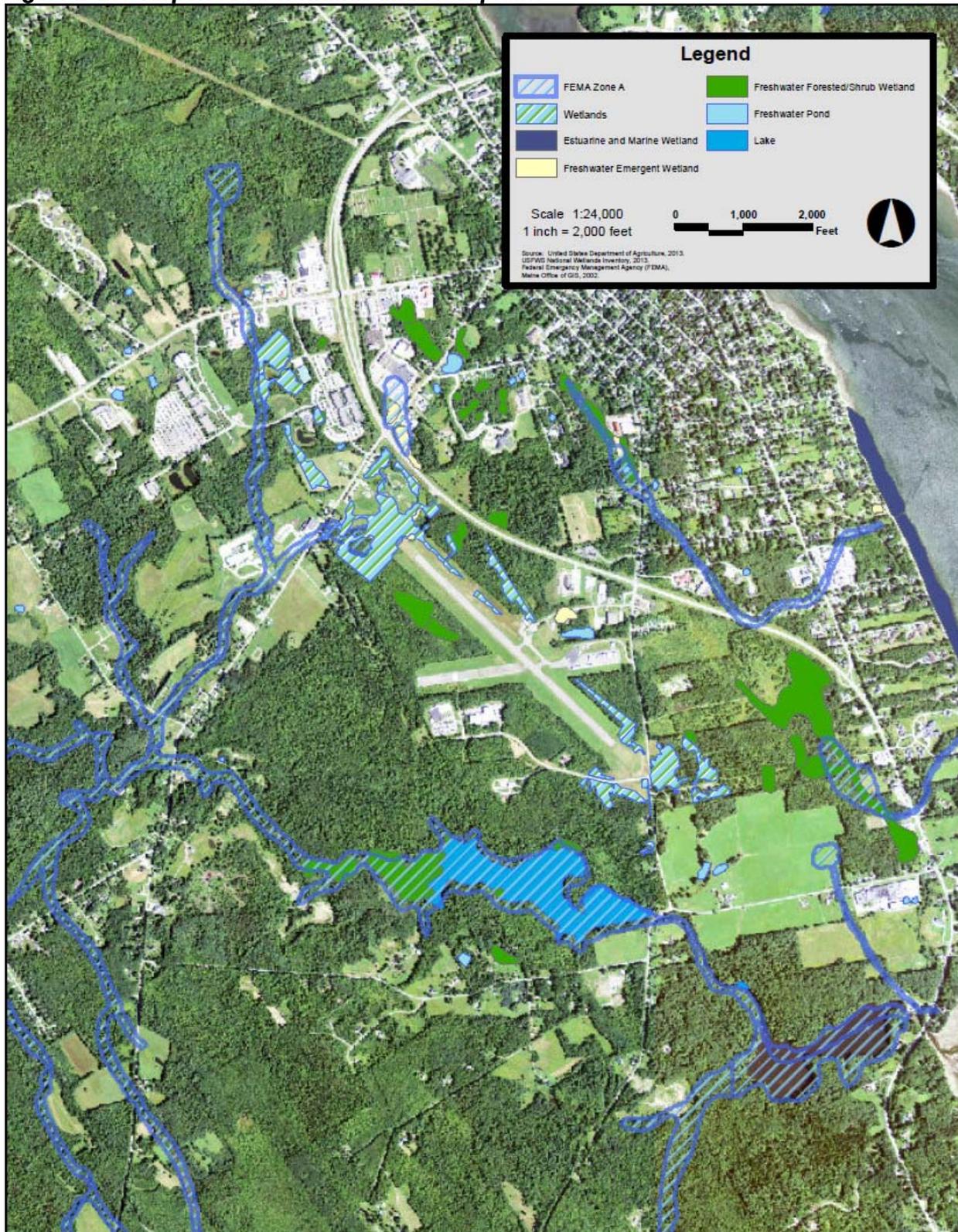
According to FEMA, Flood Insurance Rate Map (FIRM) Numbers 23027C0445E and 23027C0442E, a Zone A floodplain (City of Belfast 2015, FEMA 2014) lies within a ½-mile of the Airport (see **Figure 2-20**). The Zone A areas are associated with a large wetland complex along the northern end of the Airport runway as well as the Little River/Belfast Reservoir #2, located to the southwest of the Airport. Areas within Zone A are considered Special Flood Hazard Areas subject to inundation by a 1% chance flood (otherwise known as a 100-year flood).

Hazardous Materials, Pollution Prevention, and Solid Waste

Hazardous Materials, Pollution Prevention, and Solid Waste at the Airport are regulated under the following federal and state statutes and regulations:

- Council on Environmental Quality (CEQ) Memorandum on Pollution Prevention and the National Environmental Policy Act, January 12, 1993 (58 FR 6478).
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992, (42 U.S.C. 9601-9675; 40 CFR parts 300, 311, 355, and 370).
- Executive Order 12088, Federal Compliance with Pollution Control Standards, October 13, 1978 (43 FR 47707), amended by Executive Order 12580, January 23, 1987 (52 FR 2923) January 29, 1987.
- Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements (58 FR 41981, August 3, 1993).
- Executive Order 12580, Superfund Implementation, amended by Executive Order 13016 and 12777.
- Maine Revised Statutes, Chapter 13-B: Uncontrolled Hazardous Substances Sites §1361 - §1371.
- Pollution Prevention Act of 1990 [42 U.S.C. 1310-1319].

Figure 2-20: Airport Area Wetlands and Floodplains



Sources: United States Department of Agriculture, 2013; USFWS National Wetlands Inventory, 2013; Federal Emergency Management Agency (FEMA); Maine Office of GIS, 2002.

- Resource Conservation and Recovery Act of 1976 (PL 94-580), as amended by the Solid Waste Disposal Act of 1980 (PL 96-482), the Hazardous and Solid Waste Amendments of 1984 (PL 98-616), and the Federal Facility Compliance Act of 1992 (PL 103-386), (42 U.S.C. 6901-6992(k); 40 CFR parts 240-280).
- Toxic Substances Control Act of 1976, as amended [15 U.S.C. 2601-2692, PL 94-469; 40 CFR parts 761 and 763).

Hazardous wastes can pose a substantial threat to public health or the environment and known sites containing toxic and hazardous waste are closely regulated and tracked by USEPA and MEDEP. The USEPA Superfund Program was established in 1980 to locate, investigate, and clean up hazardous waste sites throughout the United States. In Maine, the state equivalent to the USEPA program is the Uncontrolled Hazardous Substance Sites Program (Uncontrolled Sites Program). The USEPA Superfund online database provides information on hazardous waste sites, potentially hazardous waste sites, and remedial activities across the nation. A search of this database does not identify any Superfund sites within one mile of BST (USEPA 2015b). Maine's program identifies 13 locations with potentially hazardous materials within one mile of the Airport (MDEP 2015c, d) (see **Figure 2-21**). Of these, two potential Brownfield sites lie on the Airport, and include Belfast MEANG Lot 3a (Site # REM02343) which is in the investigation stage, and Belfast Airport Lot 3 (Site # REM02342), also in the investigation stage. The remaining sites are located off Airport property, with two of those in the investigation phase, four in the remediation phase, and seven closed and undergoing post-closure obligations.

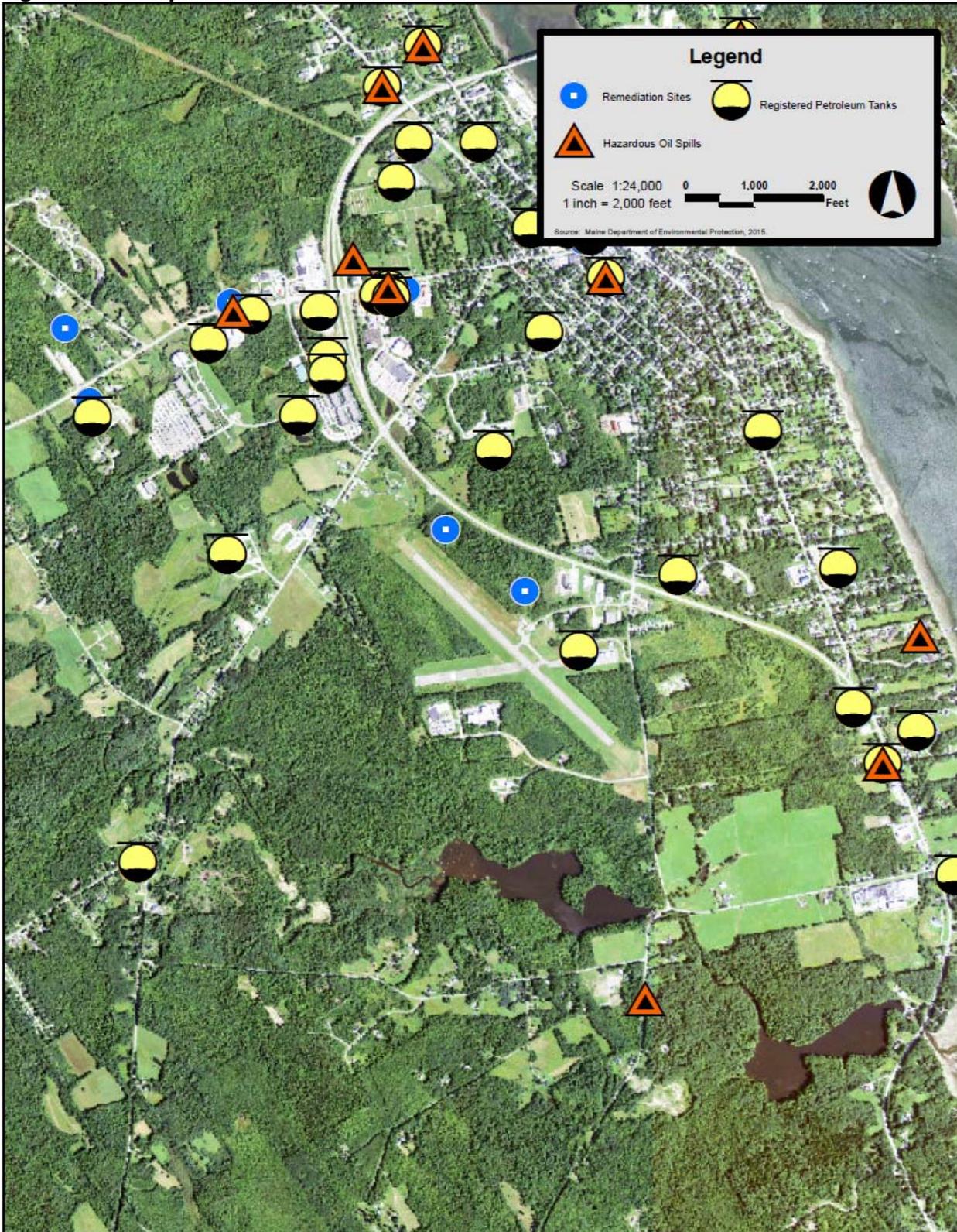
Within the BST property, hazardous materials used for the operation and the maintenance of aircraft, runways, and taxiways include fuels, degreasers, and aviation lubricants and oils. The Airport has a current Spill Prevention Control and Countermeasures (SPCC) Plan that establishes procedures for handling these substances. The Airport had a single 5,000-gallon aboveground fuel storage tank (Maine DEP Facility Registration #21048) that has since been removed.

Historical, Architectural, Archaeological, and Cultural Resources

Laws Governing National Historic Preservation Programs, National Natural Landmarks, and National Historic Landmarks include the following:

- National Historic Preservation Act of 1996, as amended, including Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921, May 13, 1971) [16 U.S.C. 470, 470 note] [PL 102-575 (1992)]; 36 CFR parts 60 (National Register of Historic Places (NRHP)), 65, 65.1 (National Historic Landmarks), 68 (standards), 73 (World Heritage Program), 78 (Waiver of Federal agency section 110 responsibilities), 79 (curation) and 800 (consultation), as revised (65 FR 77697; December 12, 2000, effective January 1, 2001).

Figure 2-21: Airport Area Hazardous Sites



Sources: Maine Department of Environmental Protection, 2015.

Laws Governing the Federal Archeology Program include the following:

- Antiquities Act of 1906 (16 U.S.C. 431, 432, 433, PL 59-209 (1906); 43 CFR part 3, 25 CFR part 261).
- Archaeological and Historic Preservation Act of 1974, as amended (16 U.S.C. 469-469c, PL 89-665);
- Archaeological Resources Protection Act of 1979, as amended (16 U.S.C. 470aa-470mm, PL 96-95; 43 CFR parts 3 and 7).
- Federal Archeological Preservation Strategy (36 CFR part 79, 25 CFR part 262).
- Guidelines for Archaeology and Historic Preservation: Standards and Guidelines (48 FR 44716, September 29, 1983 and 36 CFR part 68).
- Native American Graves Protection and Repatriation Act of 1990, (25 U.S.C. 3001, PL 101-601 (1990); 43 CFR part 10, 25 CFR 262.8).

Other Major Federal Historic and Cultural Resource Preservation Laws and Executive Orders:

- American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996, PL 95-341 (1978); 43 CFR 7.7 and 7.32, 25 CFR 262.7).
- Department of Transportation Act [49 U.S.C. 303].
- Executive Order 13006, Locating Federal Facilities on Historic Properties in Our Nation's Central Cities (61 Fe 26071, May 24, 1996).
- Executive Order 13007, Indian Sacred Sites (61 FR 26771, May 29, 1996).
- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (65 FR 67249, November 9, 2000).
- Executive Order 11593, Protection and Enhancement of the Cultural Environment (36 FR 8921, May 13, 1971; 16 U.S.C. 470 note).
- Presidential Memorandum of April 29, 1994, Government-to-government Relations with Native American Tribal Governments.
- Public Building Cooperative Use Act of 1976 [40 U.S.C. 601(a), 601(a)(1), 606, 611(c), 612(a)(4)] [PL 94-541]; 41 CFR parts 101-117, 101-17.002(l), (m), (n) (rural areas), 101.17.002(i)(2)(urban areas) and 101-19.

Section 106 of the National Historic Preservation Act (36 CFR 800 [Section 106]) requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (Council) reasonable opportunity to comment on such undertakings. Projects subject to Section 106 must consult with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer(s), and Council to determine if a proposed project has the potential to affect historic properties listed on or eligible for listing on the National Register of Historic Places (NRHP) and what, if any, alternatives exist to avoid, minimize, or mitigate the adverse effect(s) to National Register-listed and National Register-eligible properties.

State Register Review (950 CMR 71.00) requires state agencies take into account the effects of their undertakings on historic properties listed on the State Register of Historic Places. Projects subject to State Register Review must consult with the Maine Historic Preservation Commission (MHPC) and consulting parties (including Native American tribes and local historical commissions) to determine if the Project has the potential to affect historic properties listed on the State Register, and what, if any, alternatives exist to avoid, minimize or mitigate the adverse effect(s) to State Register-listed properties. State Register Review may be undertaken concurrently with the Section 106 Review process.

Based on review of data available through the National Park Service (NPS) National Register Information System (NRIS) to locate properties listed on the NRHP (USDI/NPS 2014), available digital databases (MEOGIS 2015), and correspondence with the MHPC regarding recent proposed BST project activities (MHPC 2014), no documented NRHP sites were identified within the Airport property. Several sites were identified in the immediate vicinity of BST and include: the Belfast Commercial Historic District; the Belfast Historic District; Belfast National Bank; the First Church of Belfast; Hayford Block; Masonic Temple; the Primrose Hill Historic District; the Church Street Historic District; and the James P. White House. Maine's Cultural Architectural Resource Management Archive (CARMA) contains information on historic, aboveground, non-archaeological, properties in the state. A search of this database indicates that prior historic structure surveys in the area have identified historic features, generally in the vicinity of Herrick Road, but none of these features have been listed as eligible for the NRHP (MHPC 2015). Based on consultation with the MHPC, there are no sites believed to be eligible for listing that are located on or adjacent to the Airport; however, no architectural surveys of the Airport have been conducted (MHPC 2014). MHPC coordination would be required for any potential future projects at the Airport pursuant to the Section 106 regulations.

Noise

Laws governing Noise include the following:

- Aviation Safety and Noise Abatement Act of 1979, as amended (49 U.S.C. 47501-47507).
- Aviation Operating Noise Limits (CFR, Title 14, Chapter I, Subchapter F, Part 91, Subpart I).
- Noise Control and Compatibility Planning for Airports Advisory Circular (14 CFR part 150, 150/5020).
- The Federal Aviation Act of 1958 (49 U.S.C. 40101 et seq., as amended by PL 103-305, Aug. 23, 1994).
- The Control and Abatement of Aircraft Noise and Sonic Boom Act of 1968, (49 USC, Subtitle VII, Part A, Subpart iii, Chapter 447, § 44715).
- The Airport and Airway Improvement Act (49 U.S.C. 47101 et seq., as amended by PL 103-305, Aug. 23, 1994).
- Airport Noise and Capacity Act of 1990 (49 U.S.C. 2101 et seq.).

- The Noise Control Act of 1972 (49 U.S.C. 44715).

Existing noise conditions in the vicinity of BST are typical of areas containing the surrounding land uses. Aircraft operating from the Airport must meet requirements of 14 CFR, section 36.103, which outlines aircraft noise limits. The Airport does not have a noise abatement plan, but requests that pilots arriving and departing from the facility do so in a manner that minimizes excessive noise and disruption to the local community.

Water Quality

Belfast Municipal Airport is located within the Little River watershed (12-digit Hydrologic Unit Code HUC12-010500021902) (United States Geological Survey (USGS) 2015). Based on EPA data reported by the MEDEP in accordance with Sections 305(b) and 303(d) of the Clean Water Act, there are no impaired waters located in the vicinity of the Airport (MEDEP 2014). The closest reported impaired waterbody is Warren Brook, a tributary to the Passagassawakeag River located over two miles from BST.

Per the USGS and Maine DEP, the closest significant aquifer is located approximately ½ mile to the southwest of BST (Neil and Locke 2014). Aquifer Protection Districts are intended to protect, preserve and maintain the existing quality and quantity of groundwater. Per the City of Belfast Municipal Code Sections 102-274 and 102-275, there are no designated Aquifer-Watershed Districts or aquifer zones within BST (MuniCode 2014). The Airport is served by a municipal water line and a septic system.

A Stormwater Pollution Prevention Plan (SWPPP) developed in accordance with the National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP) [as amended under the authority of 40 CFR 122/ 55 FR 48063] controls maintenance activities and operations on the site that have the potential to impact stormwater.

BST conducts snow removal operations for measurable snowfall events. Snow removed from runways, taxiways and aprons is stored in upland areas in close proximity to the Airport. No chemicals or salt are used on the runways, taxiways and aprons. No aircraft deicing operations occur at the Airport.

Wetlands and Other Habitats

Laws governing Wetlands include the following:

- Clean Water Act, section 404 [33 U.S.C. 1344] [PL 92-500, as amended by PL 95-217 and PL 100-4]; 33 CFR parts 320-330.
- Rivers and Harbors Act of 1899, section 10; Order DOT 5660.1A, Preservation of the Nation's Wetlands.

- Executive Order 11990, Protection of Wetlands (May 24, 1977) (42 FR 26961).
- Maine Revised Statutes, Title 38: Waters and Navigation, Chapter 3: Protection and Improvement of Waters, Subchapter 1: Environmental Protection Board, Article 5-A: Natural Resource Protection Act (NRPA) (1987, C. 809, §2 (NEW); 2007, C. 290, §14) and Chapter 310, Wetland Protection Rules, under the NRPA.

Wetlands

Wetland delineations performed for several proposed projects at BST (NewEarth 2014, 2015) have collectively identified wetland resources within the BST property, including forested wetlands, scrub-shrub wetlands, and emergent marsh. The USFWS National Wetland Inventory provides a cursory estimate of wetland habitats in the US and lists an additional 64 wetland complexes within one mile of the airport (see **Figure 2-23**).

Many of the wetland complexes on the Airport, abut streams and would therefore qualify as freshwater wetlands of special significance under NRPA, since they are located within 25 feet of a river, stream or brook. Also, portions of several wetlands fall within Flood Protection Zone A along unnamed tributaries to the Little River, and would therefore qualify as wetlands of special significance under NRPA.

Waterbodies

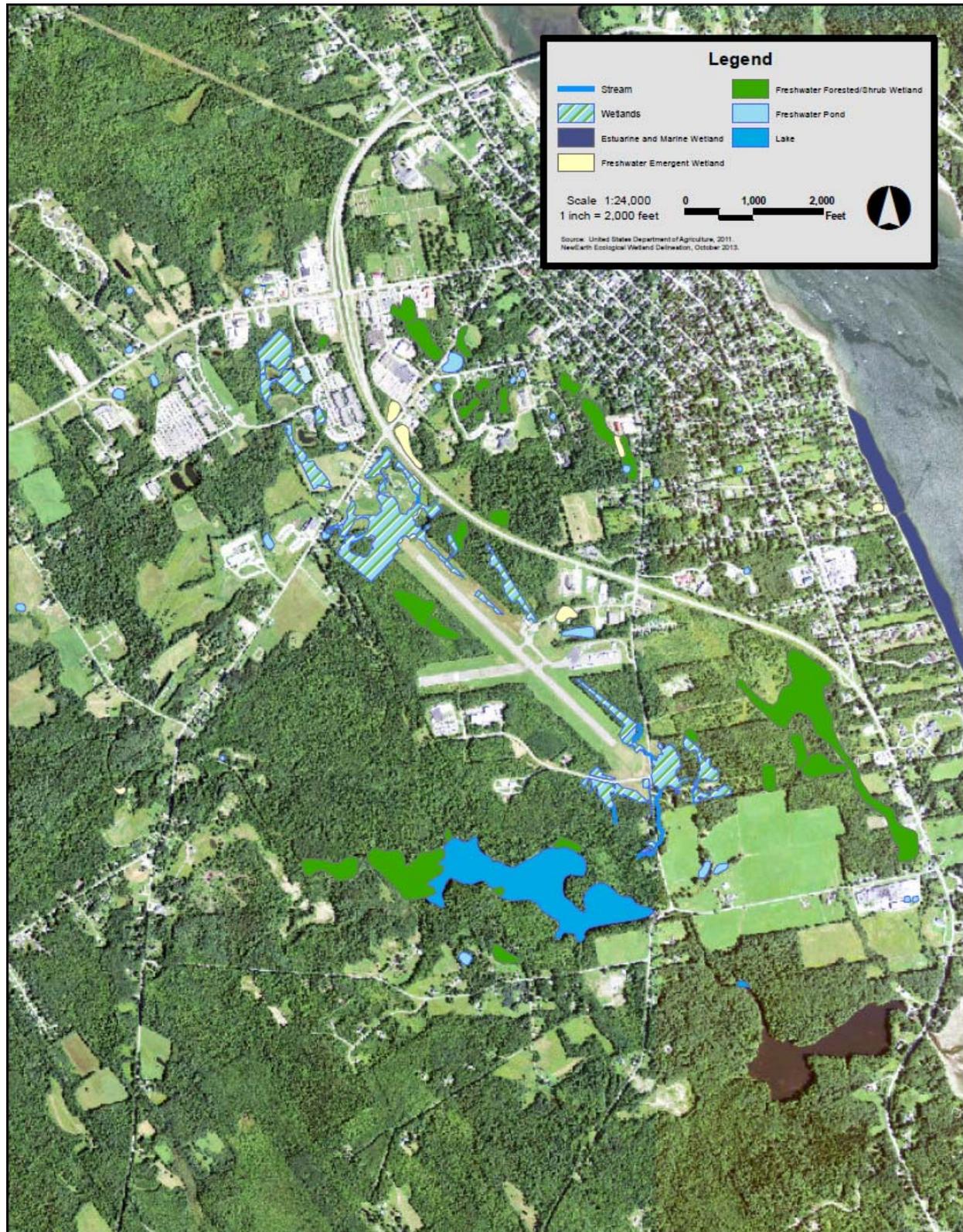
Four perennial/intermittent streams, three ephemeral drainages, and several man-made stormwater drainage ditches (primarily along runway edges) have also been documented during recent surveys (NewEarth 2014, 2015) for other projects on the BST property (**Figure 2-23**). Perennial and intermittent resources are protected under NRPA and Section 404 of the Clean Water Act, while ephemeral drainages and ditches generally are not. A potentially man-made pool is located to the northeast of the Airport runway, and provides seasonal breeding habitat for several amphibian species (see earlier discussion on vernal pools). Nearby, the Little River and the associated Belfast Reservoirs are located within ¼ mile of the Airport, and the Passawassakeag River and its mouth into Belfast Bay are within one mile.

Wild and Scenic Rivers

Laws governing Wild and Scenic Rivers include the following:

- Wild and Scenic Rivers Act of 1968 [16 U.S.C. 1271-1287] [PL 90-542 as amended by PL 96-487]; 36 CFR part 297, subpart A (USDA Forest Service), Department of the Interior and Department of Agriculture, Wild and Scenic River Guidelines for Eligibility, Classification and Management of River Areas (47 FR 39454, September 7, 1982), CEQ Memorandum on Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory, August 11, 1980 (45 FR 59190, September 8, 1980).

Figure 2-23: Airport Area Wetlands and Water Resources



Sources: United States Department of Agriculture, 2011; NewEarth Ecological Wetland Delineation, October 2013.

Based on a review of the National Wild and Scenic Rivers System (NWSRS 2015), there are no known Wild and Scenic Rivers in the vicinity of the Airport. The nearest, and only Wild and Scenic River in Maine is the Allagash Wilderness Waterway, located approximately 125 miles north of the Airport.

Socioeconomic Impacts, Environmental Justice and Children's Environmental Health and Safety Risks

Laws governing Socioeconomic Impacts, Environmental Justice and Children's Environmental Health and Safety Risks include the following:

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 7629, February 16, 1994); Order DOT 5610.2, Environmental Justice in Minority and Low-Income Populations, April 15, 1997, CEQ Environmental Justice: Guidance Under the National Environmental Policy Act, December 10, 1997, Final Guidance For Consideration of Environmental Justice in Clean Air Act 309 Reviews, July 1999.
- Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (62 CFR 19883, April 23, 1997).; 40 CFR 1508.27.
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 [42 U.S.C. 4601] [PL 91-528 amended by the Surface Transportation and Uniform Relocation Act Amendments of 1987, PL 100-117]; FAA Advisory Circular 150/5100-17, 49 CFR part 24, FAA Order 5100.37A, Land Acquisition and Relocation Assistance for Airport Projects.
- Environmental Justice Policy of the Executive Office of Environmental Affairs, October 9, 2002.

According to the USEPA's Environmental Justice Screening and Mapping Tool, when compared to the rest of the United States Belfast falls below the 50th percentile for minority population, and falls within the 60-70th percentile for both non-English speaking population and low-income population. According to the Demographic Index (a combination of the percentage of low-income population and the percentage of minority population - the two demographic factors that are explicitly named in Executive Order 12898 on Environmental Justice), the Belfast region falls below the 50th percentile (USEPA 2015c).

Three public schools are located within approximately one mile of the Airport and include the Troy Howard Middle School located on Lincolnville Avenue, Belfast Area High School located on Waldo Avenue, and the Captain Albert Stevens Elementary School located on Elementary Avenue. Private schools located within one mile of BST include the River School located on High Street, the Cornerspring Montessori School on Hatley Road, and the special education Schools at Sweetser on School Street. Numerous pre-school child care facilities are also located within one mile of BST.

One hospital, Waldo County General Hospital, is located on Northport Avenue, approximately one mile to the east of BST.

Compliance Permits

Documented federal and state environmental permits and approvals received by BST to date, include the following:

Federal

- On April 5, 2011, the U.S. Army Corps of Engineers issued a Category I permit under Maine's General Permit for 683 sq. ft. of freshwater wetland fill. The permit is # NAE-2004-486-M1.

State

- On May 24, 2006 - In MEDEP Order #L-21771-TH-A-N/L-21771-NI-B-N, MEDEP approved the reconstruction and relocation of Runway 15-33; the construction of a new Airport access road; the removal of vegetative obstructions to navigable airspace; and the relocation of terminal facilities. Subsequent to original issuance, the Department approved several modifications to the existing permit, including construction of additional hangar space and reconstruction and expansion of pavement and apron space, which cumulatively resulted in 3,993 square feet of freshwater wetland fill and 304,920 square feet (7.0 acres) of freshwater wetland alteration.
- On August 12, 2014 - In MEDEP Order #L-21771-18-F-M/L-21771-TH-G-N (Site Location of Development Act Minor Revision Application and Natural Resources Protection Act Tier 3 Application), MEDEP approved the removal or topping of airspace obstructions from a 17.36-acre area within the Runway 15-33 approach and transitional surfaces at the Airport. Collectively, the project would result in 6.32 acres of alteration to freshwater wetlands; all of which are wetlands of special significance under Maine's NRPA.

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