

## AVIATION TRANSPORTATION

### EXISTING AIR TRANSPORTATION SYSTEM

Aviation provides an important contribution to the State's transportation system. The two airports located in the Central Vermont Region are mapped in **Figure 34**: the Edward F. Knapp State Airport and the Warren-Sugarbush Airport. Burlington International Airport is the closest commercial service airport. Burlington is served by a number of airlines including; US Airways, United, Delta, Porter, Allegiant, and jetBlue with non-stop service to Atlanta GA; Cleveland OH; Detroit MI; Orlando FL; Toronto City ; Pittsburgh PA; Chicago IL; Philadelphia PA; Washington D.C; New York City NY; and Newark NJ. Other commercial service airport options available to residents of Central Vermont include the Southern Vermont Regional airport in Rutland, the Plattsburg International Airport in New York, and the Lebanon Airport and Manchester-Boston Regional Airport in New Hampshire. Greyhound service is available to the Manchester-Boston Regional Airport and Burlington International Airport from Montpelier.

The State's public-use airports provide economic benefits to the Central Vermont Region. However, airports' contributions to their communities are not limited to their roles as economic engines. Each also contributes to the health, safety, security, recreation, and general quality-of-life in the communities they serve in ways that cannot be stated in dollar terms. These qualitative benefits are:

- ❑ *Public access to the National Airspace System* – **(Knapp, Warren-Sugarbush)**
- ❑ *Freight/Cargo Activity* – businesses of all sizes throughout Vermont rely on airports in order to ship and receive products and materials to and from all over the world. **(Knapp)**
- ❑ *Emergency Medical Aviation* – airports serve as a base of operations for the transport of critical care patients to emergency rooms, as well as those suffering from chronic disease flying to treatments in metropolitan centers (“Angel flights” for cancer patients, for example) . **(Knapp)**
- ❑ *Search and Rescue* – airports are used as a base of operations for lost individuals or downed aircraft. **(Knapp)**
- ❑ *Corporate or Business Aircraft Activity* – business executives rely on airports throughout the State to reduce overall transit time. **(Knapp,)**
- ❑ *Recreational flying, soaring, or parachuting* – airports provide facilities to support aircraft ownership by individuals and organizations with a love of flying and parachuting. **(Knapp, Warren-Sugarbush)**
- ❑ *Flight Training* – airports provide facilities for flight instruction programs for individuals who seek to learn to fly. **(Knapp, Warren-Sugarbush)**
- ❑ *Career Training and Education* – airports provide facilities for training programs in aircraft maintenance, avionics, and allied disciplines. The State of Vermont sponsors annual Aviation Career Education (ACE) camps at various airports in the State. **(Knapp, Police and Other Law**



*Enforcement Use* – State and Federal law enforcement officials use local airports as a base of operations for surveillance. **(Knapp)**

- ❑ *Staging Area for Community Events* – as airports often encompass large tracts of open space, this open space is sometimes used to host large community events that are too big for other common-use land in a city or town. **(Knapp, Warren-Sugarbush)**
- ❑ *Aerial Photography or Surveying* – airports serve as a base of operations for businesses and state agencies regularly engaged in aerial photography or surveying. **(Knapp)**
- ❑ *Aerial Inspections* – pilots use airports as ground coordination points for power line inspections and other aerial inspections. **(Knapp)**
- ❑ *Environmental Patrol* – airports serve as a base of operations for State and publicly supported environmental agencies wishing to achieve close-in inspection of natural terrain; examples include environmental monitoring vegetation for the effects of acid rain and wildlife counts for research projects. **(Knapp)**
- ❑ *Promotional Activities* – airports offer open houses, air shows, and other educational activities designed to highlight the importance of aviation in life. **(Knapp, Warren-Sugarbush)**
- ❑ *Shipping of Perishable Goods* – certain businesses in Vermont import and/or export perishable goods that need specific cargo facilities. **(Knapp)**
- ❑ *Military* – access to airports are available to the military if needed, but primary military use is for enlistment promotion. **(Knapp)**

The majority of the Central Vermont Region can be serviced within the 60-minute drive time by Burlington International Airport, with a significant portion of the region serviced by Lebanon Municipal Airport in New Hampshire as well. There is a very small area in the Northeast corner of the region that requires a drive of greater than 60 minutes.



**Figure 34**  
**Vermont's Public Use Airports**



## **Edward F. Knapp State Airport**

### 1. Airport Background and Location

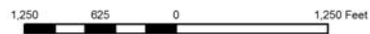
Edward F. Knapp State Airport is located in the Town of Berlin, Vermont in the central portion of the State. The airport is located centrally between Montpelier and Barre, within five miles of both cities. The airport's proximity to both the State capital, Montpelier, and the population center of the Montpelier-Barre area accounts for a large portion of its usage.

Access to Edward F. Knapp State Airport is via Airport Rd., which is easily accessible off of Route 62 (see Figure 35), and connects to Interstate I-89 (2.5 miles away). The market area for the Edward F. Knapp State Airport is the Central Vermont Region. An important portion of the usage of the airport is related to State government activities. Representatives from companies wishing to



do business in Vermont often fly into the airport to meet with State government officials in Montpelier which saves time and money for businesses. Additionally, the Knapp State Airport is used frequently by the insurance industry and other business officials who travel in and out of the airport for business purposes.

**Figure 35: Edward F. Knapp Airport Vicinity Map**



## 2. Facilities and Activity

The E.F. Knapp Airport has two runways. Runway 17-35 is the primary runway, lies in the north/south direction, and is 5,000 feet in length and 100 feet in width. The runway is equipped for night operations with Medium Intensity Runway Lights (MIRLS). A medium intensity approach lighting system with runway alignment lighting (MALSR) and a precision approach path indicator (PAPI) are available for Runway 17. There is a set of Runway End Identifier Lights (REILS) available on Runway 35. Runway 17 has a precision instrument approach with minimums of 3/4 mile visibility and 400 ft. ceiling. Runway 35 has two separate navigational aid approaches with minimums ranging from 1.00-1.25 miles visibility and 800-1,500 ft. ceiling. Runway 17-35 is designed for aircraft with gross weights up to 68,000 lbs, and is in excellent condition.

Runway 5-23 lies in the northeast/southwest direction, is 3000 feet in length and 75 feet in width, and is also in excellent condition. This runway is equipped with MIRLS.. Runway 5-23 is not used during the winter except for ski plane operations.

Multiple taxiways access tie-down aprons, hangars, and provide partial parallel runway taxiing. There is a terminal apron for transient aircraft, a jet apron, and three tie-down aprons with a total of 37 spaces. The Fuel Farm provides Avgas and jet fuel. Knapp Airport has ten on-site hangars capable of storing 36 aircraft and a Terminal Building. The Terminal Building has a briefing room with a computer with access to weather and other aviation sites adjacent to a pilot lounge, and restrooms. Roughly 76 vehicle parking spaces are provided at the airport terminal. Transient traffic at the airport is served by various rental car agencies, located less than one mile from the airport. Taxi service is also available at the airport through a call to the taxi company. The airport does not have an air traffic control tower. A full-service Fixed Base Operator (FBO) is also on site that provides air taxi, flight instruction, fueling, and aircraft maintenance services.

The airport has a sizeable aircraft population, totaling 52 fixed-wing aircraft, nearly all of which are single-engine pistons. There are several categories of operations (an operation is a take-off or landing) at E.F. Knapp Airport: general aviation (local and itinerant); military; and air taxi (this is defined as providing public transportation of persons and property on-demand). Commuter service was discontinued in 1990 (these operations were on a fixed schedule for transporting passengers, cargo or mail for revenue). Knapp Airport serves primarily small turbo-prop, single and twin engine aircraft, and occasional business jet traffic. Approximately 24,125 operations were counted in 2012. Included in this number are 14,500 local operations; 8,000 itinerant general aviation operations; 625 airtaxi operations; and 1,000 military operations. Total operations are forecast to increase to 34,600 in 2025. Based aircraft is forecasted to increase annually, with a 2025 estimate of 67 aircraft.

Knapp State Airport had a history of scheduled passenger service through the late 1980's. At present, however, none is available. If commercial service were to be reinstated, there would need to be accommodations with TSA and the provision of secure areas to screen passengers & baggage, and an additional secure apron to maintain, load, and unload the plane.

The airport receives regular cargo flights from Wiggins Airways, which provides feeder services for UPS and FedEx. UPS flies freight in 5 times a week from Manchester N.H. In 2013, air cargo totaled 95 tons.

Recent improvements to the airport include:





2010 Constructed full-length parallel taxiway for the RW17/35; reconfigured and reconstructed RW 5/23; and, constructed a jet ramp.

2012 Completed total airport perimeter security fencing

Knapp is now considered a National Service Airport **Figure 36**. To be granted this title, an airport should provide commercial cargo and passenger service (not required to be scheduled passenger service) both within and outside of the state (including international connections). Additionally, a National Service Airport should have the ability to serve larger general aviation aircraft, and potentially even serve substantial business and military aviation activity. Fueling facilities, AvGas, and aircraft maintenance should also be available, as well as pilot and passenger facilities. Runway requirements stipulate that the minimum length should be 5,500 ft long and 100 ft wide.

**Figure 36 Vermont Airport Functional Roles**



### 3. Airport Related Economic Uses

Review of the E.F. Knapp airport indicates that the airport serves the needs of local businesses in several ways. Some local businesses base aircraft at the airport to facilitate travel to customers and suppliers. Many other local businesses and the State of Vermont regularly have customers and suppliers fly in to meet with them. Members of the local insurance industry are also frequent airport users, and often come from companies with large numbers of employees and equally large financial holdings, such as Walmart. UPS is another important business user of this airport. UPS operates a distribution center on land that abuts the airport. The ability to quickly and efficiently shuttle cargo from the airport to the distribution center was an important factor in the decision to locate and maintain the UPS distribution center in Berlin.

Perhaps one of the most important impacts that the airport has had on the region is the instrumental role it played in accessing technical support for startup companies such as Bombardier and Vermont Castings. These startups have either left the region or have grown to such a size that they no longer need to regularly operate an aircraft at the airport. However, the proximity to Knapp was instrumental in the initial phases of the businesses, and for smaller area companies in Montpelier and Randolph the airport continues to have a large impact on business.

### 4. Other Airport Benefits

Edward F. Knapp adds in several ways to the market area's standard of life. Local pilots offer orientation flights to local school children and charity rides to children from the local community. Community events are also held at the airport including fly-ins and business expositions. The Vermont Agency of Forest and Parks uses the airport to conduct aerial surveys, and the Vermont State Police use the airport to conduct drug enforcement operations.

Knapp is the closest airport to skiing at major destinations like Sugarbush (Warren-Sugarbush Airport is closed in the winter). The airport is also a convenient point of access for those wishing to enjoy warm-weather outdoor activities in the area.

### ***Warren-Sugarbush Airport***

#### 1. Airport Background and Location

Warren-Sugarbush is located in the town of Warren. The airport is a privately-owned public access airport. Access is limited to small aircraft.

#### 2. Facilities and Activity

The airport has sailplane rides, instruction, and rental, as well as airplane instruction, aerobatics, tie-downs, and avgas sales. The airport consists of a single runway, 2,575 feet in length, which is in good condition. There is a briefing room, restaurant, lounge, restrooms, and public hangar space. Taxi and car rental arrangements are available. The site has approximately 15 on-site parking spaces. Seventy aircraft are based at the airport (50 gliders and 20 airplanes). Based aircraft is forecasted to increase annually, with a 2025 estimate of 82 aircraft. Estimated annual operations for the year 2005 totaled 22,500 (mostly glider flights which consist of four operations per flight). Total operations are expected to increase annually, reaching 26,400 by 2025. The Warren-Sugarbush Airport is open only during the



spring, summer, and fall. There are no night operations. During the winter, the airport is used as a cross-country ski center.

### 3. Airport Related Economic Uses

Soaring is the most important activity at the Warren-Sugarbush airport. On any given weekend with good gliding weather, fifty or sixty people can be found at the airport. The Sugarbush Soaring Association numbers about seventy-five members, and reports total club revenues in the neighborhood of \$200,000. A biannual soaring competition is hosted by the club at the Warren-Sugarbush airport, drawing an attendance of hundreds to the local area.

### 4. Other Airport Benefits

The airport restaurant is open for lunch daily, and breakfast and lunch on weekends throughout the summer months. The glider flight school and commercial ride business during the spring, summer and fall, along with the cross-country ski center in the winter, bring hundreds of visitors to the area throughout the year.

## **EXISTING AND FUTURE DEFICIENCIES**

### **Edward F. Knapp State Airport**

The FY 2015-2020 VTrans Airport Capital Facilities Program and VTrans staff identified the following project needs for the future.

#### **The short-term (within 5 years) projects are:**

- a. Airport Master Planning
- b. Northeast Hangar Development feasibility study to include extending a taxiway on the eastern terminus of Comstock Road.
- c. Hangar Construction
- d. Solar Hazard Beacon Replacement

Additionally, there is a statewide Airport Pavement Management & Maintenance Program that is updated biennially of all statewide airport pavements conditions to prioritize pavement maintenance Efforts.

### **Sugarbush-Warren Airport**

Sugarbush-Warren Airport, a privately owned facility, doesn't receive Federal or State funding. Maintenance of the existing facilities is an on-going need.

