



## 3.7 Support Facilities and Equipment

Locations of support facilities and equipment storage locations are documented in **Figure 3.7.1**.

### Airfield Maintenance

The Airport's main maintenance facility is located in the Northeast Area of the Airport. As indicated by the Airport Certification Manual (ACM) for LVIA that was revised in March 2016, a large quantity of the Airport's airfield maintenance equipment is past its expected useful life. A complete inventory of airfield maintenance equipment, their condition, storage location, and projected replacement year is indicated in **Table 3.7.1**.



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**Legend**

- Airport Property Line
- Support Facilities
- Support Facilities Equipment Storage

0 125 250 500 750 Feet  
1 inch = 500 feet  
When printed at 11" x 17"



Lehigh Valley International Airport  
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**Support Facilities &  
Equipment Storage**

Figure 3.7.1

SOURCES: Building Polygons from LVIA ALP Base 2015 Update CAD files from LNAA; Aerial Imagery from Quantum Spatial taken 09/12/16 CREATED BY: C&S Engineers, Inc.





**Table 3.7.1: Airfield Maintenance Equipment Inventory**

Type	Year	Make	Model	Condition	Airfield Maintenance Department	Projected Replacement Year
Tractors	1971	Ford	5000	Poor	Braden	1991
	2011	John Deere #30	6330 with 24' three gang flail mowers	Good	Airfield	2031
	1973	Ford	4500 25' Boom Mower	Good	Airfield	1993
	1997	John Deere	3102J	Fair	Airfield	2017
	2005	New Holland	21' Three Gang Fail Mower	Good	Queen City	2025
	2017	John Deere #39	6120M w/CX20 mowing Deck	Good	Airfield	2037
	2017	Kubota	N/A	Good	Airfield	2027
Riding Mowers	2005	Toro	Outfront 72" Rotary Mower	Fair	Terminal	2015
	2006	Toro #37	4100D Outfront Rotary Mower- 10'6" cut	Fair	Airfield	2021
	2009	Toro	4100D Outfront Rotary Motor- 10'6" cut	Poor	Terminal	2019
	1995	John Deere	1145 Front Deck	Fair	Terminal	2005
	1992	Kubota #76	Tractor drag behind 6' mower w/ bucket	Fair	Terminal	2022
	2017	Toro 5000	Turf 60" EZ Vac Blower	Good	Terminal	2027
Misc. Equipment	1973	Engersoll Rand	Tow behind air compressor	Poor	Airfield	2018
	1994	Leroy	Q185DJE tow behind air compressor	Good	Airfield	2025
	1992	Craftco	EZ200D Tar Kettle crack filler	Poor	Airfield	2012
	2014	Graco	Line Lazer Paint Machine	Good	Airfield	2027
	2014	Ventrac	Mower-summer Broom-winter	Good	Airfield/Terminal	2030
	2008	John Deere #32	Model 310SJ Backhoe/Loader	Good	Airfield	2030
	1970	Mack	Flatbed Truck	Fair	Airfield	2020
	201	GMC	Flatbed Truck	Good	Airfield-Painter	2030

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Type	Year	Make	Model	Condition	Airfield Maintenance Department	Projected Replacement Year
Lighted X's	1997	Batts	Titan, Diesel, Generator capacity 5,000 watts	Fair	Queen City	2019
	1997	Batts	Titan, Diesel, Generator capacity 5,000 watts	Fair	Queen City	2019
	2013	Sherwin	Model S1701W Yanmar Diesel Generator	Good	Airfield	2033
	2013	Sherwin	Model S1701W Yanmar Diesel Generator	Good	Airfield	2033
	2010	Sherwin	Kipor Diesel Generator	Fair	Airfield	2025
	2010	Sherwin	Kipor Diesel Generator	Fair	Airfield	2025
Aerial Equipment	1999	JLG	600S 62' High Rock	Good	Terminal	2019
	2008	JLG	2630 26' Platform Lift	Good	Terminal	2028
Fork Lifts	1990	Caterpillar	Model 60 GC-30 5,000lbs.	Fair	Airfield	2025
	1955	Clark	6,000 lb.	Poor	Terminal	2018
	2017	Toyota	N/A	Good	FBO	2027
Bus	1996	International	78 passenger	Fair	Aviation Services	2025
Light Carts (1) (2)	2013	Allmand	Night-Lite Pro II 50/60 HZ generator	Good	Airfield	2033
	2013	Allmand	Night-Lite Pro II 50/60 HZ Generator	Good	Airfield	2033
Portable Generators	N/A	Honda	2,500 watt	N/A	ARFF	N/A
	N/A	Dayton	5,000 watt	N/A	ARFF	N/A
	N/A	Honda	2,200 watt	N/A	Terminal	N/A
	N/A	Honda	3,500 watt	N/A	Terminal	N/A
	N/A	Honda Kipor	5,000 watt	N/A	Airfield	N/A
	N/A	Endress	5,000 watt	N/A	Airfield	N/A
Trucks	2015	Ford #44	F-250 4door	Good	Airfield –Lawn crew	2027
	2011	Ford #42	F-250	Good	Airfield	2027
	2015	Ford #16	S-DTY F-550-Dejana Uplift Yellow Paint	Good	Airfield	2027
	2015	Ford #22	F-250 w/ plow	Good	Terminal	2027
	2015	Ford #23	F-250 w/ plow	Good	Terminal- Plumber	2027
	2015	Ford #25	F-250 w/ lift gate	Good	Terminal	2027
	2015	Ford	F-250 Truck	Good	Queen City	2027
	2016	Ford	Ford F250 4 door	Good	Cargo	2027

Airport Master Plan Update—Existing Conditions/Inventory  
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Type	Year	Make	Model	Condition	Airfield Maintenance Department	Projected Replacement Year
	2014	Ford	Transit	Good	IT	2027
	2015	Ford #10	F150	Good	Airfield	2025
	2017	Ford #60	Transit Van 250	Good	Terminal- Electrical	2030
	2008	Ford #41	Van	Good	Terminal- Electrical	2028
	2008	Ford #46	Utility truck w/ plow	Good	Airfield – Electrical	2028
	1996	Ford #28	Van	Fair	Terminal-HVAC	2018
	2008	Ford #59	Utility truck w/plow	Good	Airfield	2028
	2000	Ford #61	Van	Fair	Terminal-Carpenter	2020
	2017	Ford	F750 w/spreader and 12ft plow	Good	Queen City	2040

Source: C&S Engineers, Inc.; ACM, *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016. Equipment list updated July 2017.



## Snow Removal Procedures and Inventory

Weather forecasting is monitored on a daily basis at the Airport using a variety of web-based sources as well as runway pavement sensors located on Runway 6-24 and 24-hour monitored closed circuit television cameras observing the airfield. An accumulation of one quarter of an inch of weather contaminants on an appreciable portion of the airfield pavement is an immediate trigger to begin snow removal operations. Whiteout conditions in which snow removal operations are deemed unsafe results in an immediate closure of aircraft operations. Runways that exceed the total allowable accumulation of winter contaminants as indicated in **Table 3.7.2**, will be closed.

**Table 3.7.2: Runway Closures due to Accumulation**

Contaminant	Contaminant Description	Depth
Wet Snow	Snow that has grains coated with liquid water, which bonds their mass together. A well compacted snowball can be made, but water will not squeeze out.	> ½ inch
Slush	Snow that has water content exceeding its freely drained condition. Water will drain when a handful is picked up.	> ½ inch
Standing Water	Freely flowing water/	> ½ inch
Dry Snow	Snow that has insufficient free water to cause cohesion between particles. Cannot be made into a snow ball.	> 2 inches

Source: C&S Engineers, Inc.; *Appendix VI- Snow and Ice Control Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016.

Three departments at the Airport have responsibilities during snow and ice removal. The Airport is physically inspected twice daily by the Airport Operations and Safety Department, which is also responsible for performing field condition assessments, field friction testing, filing Runway Condition Readings (RCR), closing airfield pavements, issuing Notices to Airmen (NOTAMs), and designating emergency access routes. The Operations Center is responsible for notifying personnel on the Snow Callout list and for relaying weather observation and tenant requests for information to management. The Airport’s Maintenance Department is tasked with the operation of snow removal equipment (SRE) to remove winter contaminants, perform de-icing, anti-icing, or sanding of airfield pavements. Maintenance Department staffing levels are adjusted based on the storm intensity and duration, with up to sixteen total pieces of SRE able to operate on the airfield simultaneously.<sup>23</sup>

SRE equipment is maintained and stored at the Maintenance Department Garage. The majority of equipment is housed at this location, with additional equipment that cannot be accommodated stored at two remote sites. **Table 3.7.3** provides a list of SRE and their storage location. As seen with the ground maintenance equipment, a significant quantity of the Airport’s SRE is still being maintained long past its projected replacement year.

<sup>23</sup> *Appendix VI- Snow and Ice Control Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016



**Table 3.7.3: Snow Removal Equipment (SRE) Inventory**

Year	Make & Model	Equipment Type	Projected Replacement Year	Condition	Quantity	Storage Location
1979	R-3000 Snow Blast #53	Snowplow mounted with 3,000 ton/hr. snow blower	1999	Fair	1	Inside GSE Garage
1979	Walters SnoDozer #52	Snowdozer with 28' snow plow and 12 cu. yd. sander	1999	Fair	1	Inside GSE Garage
2017	Case 921G #57	Front-end loader with a 4.75 cu yd bucket, 72" forks & 24' Blade	2042	Good	1	Inside GSE Garage
1990	Oshkosh P-series #s 64 & 65	8 cu. yd. Dump truck with 22' reversible snow plow and 8 cu. yd. sand spreader	2010	Fair	2	Inside GSE Garage
1992	Volvo Model 170 #75	4 cu. yd. Rubber Tire loader with 20' Ramp Blade	2006	Fair	1	Inside GSE Garage
1995	Caterpillar 966 #70	5 cu. yd. Rubber Tire loader with 30' Ramp Blade	2015	Good	1	Inside GSE Garage
1995	Oshkosh H-series #71	Multi-purpose SRE with front mounted Sweepster 18' snow sweeper or 3,000 ton/hr. snow blower	2015	Good	1	Inside GSE Garage
2001	Oshkosh P2530 #14	6 cu. yd. dump truck with 5 cu. yd. spreader and 14' high speed wing plow rollover	2021	Good	1	Inside GSE Garage
2004	Oshkosh H-series #35	Front mounted 5,000 ton/hr. snow blower	2024	Good	1	Inside GSE Garage
2010	Wausau-Everest SnoDozer #33	Snow dozer with front mounted 5,000 ton/hr. snow blower	2030	Good	1	Inside GSE Garage
1990	Oshkosh #s 66& 67	Sweepster with front mounted high speed 24' snow sweeper	2010	Poor	2	Outside GSE Garage



Year	Make & Model	Equipment Type	Projected Replacement Year	Condition	Quantity	Storage Location
2003	Oshkosh H-series #74	Multipurpose snow removal with 20' sweeper broom and two side wing snow-plower 45'	2024	Good	1	Outside GSE Garage
2011	Mack Granite #11	3,500 Gallon Deicer Tanker with 75' Spray Boom and 22' snowplow	2031	Good	1	Outside GSE Garage
1999	Batts	1,100 Gallon Deicer Trailer Back-up	2009	Fair	1	Outside GRE Garage
2015	Avalanche LDAT 400-30	30' ramp plow (blade is mounted on a 5 cu. yd. front end loader which is rented for the season)	2035	Good	1	Outside GSE Garage
2016	Avalanche LDAT 400-12	Snow Pusher	2035	Good	1	Maintenance
2015	Avalanche LDAT 400-22	Snow Pusher	2035	Good	1	Cargo
2018	M-B Companies MB3	Front Mount Broom	2038	New	1	Inside GSE Garage
2018	M-B Companies MB5	Multi-Tasking Snow Removal Equipment	2038	New	1	Inside GSE Garage

Sources: C&S Engineers, Inc.; *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016 and *Appendix VI- Snow and Ice Control Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016. Equipment list revised by LNAA July 2017/2019.





As the primary source of field condition reporting, the Operations Field Condition Assessment Vehicle is used to inform the ATCT, air carriers, air taxis, and other parties of runway closures and opening and to forward tenant requests for snow removal. The Command Vehicle is used to manage snow and ice clearing personnel and equipment operations. Together these two vehicles make up the Airport's Snow Control Center (SCC).

Airfield clearing priorities are adjusted based on precipitation type and intensity and air traffic limitations. However, priorities are given in the following order for clearing:

- Priority 1: The active runway, associated parallel taxiway, selected taxiway turnoffs, selected taxiways connecting the active runway to the terminal and cargo apron, NAVAID critical areas for the active runway, selected mutual aid access points, and designated emergency routes.
- Priority 2: The secondary runway, its associated parallel taxiway, selected taxiway turnoffs, and the air carrier aircraft parking apron.
- Priority 3: The cargo apron and GA/FBO aprons.

According to the snow clearance plan, the approximate 2,478,800 square-feet making up the Priority 1 snow clearing area should have a clearance time of approximately 30 minutes.<sup>24</sup>

General snow clearing principles at the Airport strive to maintain the best possible surface conditions for terminal aprons and GA taxiways. Runways are cleared to a minimum 100 feet width from runway centerlines and taxiways are cleared at a 40 feet width from their centerlines. Snow bank height profiles are maintained to stringent limits. Currently there is no snow fencing or trenching in use at the Airport. Designated snow stockpile areas are illustrated in **Figure 3.7.2**.

In the event that ice has bonded to pavements, the Airport Authority uses both a mechanical and chemical method of ice removal. Chemical methods include the application of potassium acetate and sodium formate according to the manufacturer's suggested application rates. Sand is also used to provide traction and anti-skid control measures. Sand is applied according to FAA minimum for Expanded Sand Gradation Standards.

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<sup>24</sup> Appendix VI- Snow and Ice Control Plan, Lehigh Valley International Airport (ABE), Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016



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SOURCES: Snow Disposal Areas digitized from ACM Appendix VI - Snow and Ice Control Plan, March 2016 revised version; Aerial Imagery from Quantum Spatial taken 09/12/16.  
CREATED BY: C&S Engineers, Inc.



# Snow Disposal Areas

Lehigh Valley International Airport  
Master Plan Update  
Figure 3.7.2





## Ground Service Equipment (GSE) Facilities

The LVIA Maintenance Department houses, maintains, and operates the ground service equipment (GSE) required for the infrastructure and land owned by the Airport Authority. The Airport's main maintenance facilities are located in the northeast area of the Airport, west of the FAA Air Traffic Control Tower, and can be accessed via Fashion Drive South, off of Race Street. This gated facility is approximately 23,400 square-feet.<sup>25</sup> The Maintenance Building has two ground vehicle fuel tanks, one 10,000 gallon unleaded fuel tank and one 20,000 gallon diesel fuel tank. The building also houses 17,650 gallons of potassium acetate, which is used for pavement deicing, in two 1,550 gallon, one 2,600 gallon, and 12,000 gallon tanks.<sup>26</sup>

Ground service maintenance equipment is housed within the Airport's main maintenance facility, the GSE ramp, FBO Hangar 7, and Hangar 9. A complete GSE inventory, with equipment condition, housing location, and projected replacement year, is indicated in **Table 3.7.4**.

**LNAA Maintenance Building**



Source: C&S Engineers, Inc.

<sup>25</sup> *Lehigh Valley International Airport Master Plan Update*, 2004, LNAA, DMJM Aviation, AECOM, GRA, Inc., DMJM Harris, McTish Kunkel & Associates

<sup>26</sup> Source: *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016



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**Table 3.7.4: Ground Service Maintenance Equipment Inventory**

Year	Make	Model	Equipment	Condition	GSE Maintenance Department	Projected Replacement Year
1987	Ford	F-800	Deicer	Fair	GSE	2007
1988	Ford	F-800	Deicer	Fair	GSE	2008
1986	Ford	F-600	Deicer	Fair	GSE	2005
1985	Horbart FCz	800	GPU	Fair	GSE	2005
1985	Horbart Jet Ex	40	GPU	Fair	GSE	2005
1985	Horbart Jet Ex	40	GPU	Fair	GSE	2005
1988	Isuzu	160	Lavatory Truck	Fair	GSE	2008
1992	Hobart	160	Lavatory Truck	Fair	GSE	2012
1985	Stinar	2500	Air Stairs	Fair	GSE	2005
1990	Trilectron	PSC	Air Stairs	Fair	GSE	2010
1996	Tug	660	Belt	Fair	GSE	2016
1980	Cochran	660	Belt	Fair	GSE	2000
1978	Cochran	660	Belt	Fair	GSE	1998
1994	Tug	660	Belt	Fair	GSE	2014
1980	Cochran	660	Belt	Fair	GSE	2000
1985	Harlan	40	Tug	Fair	GSE-QC	2005
1975	Clark	50	Tug	Fair	GSE-QC	1995
1970	Hough	225	Tug	Fair	GSE Ramp	1990
1999	Tiger	50	Tug	Fair	GSE Ramp	2010
1975	Clark	50	Tug	Fair	GSE Ramp	1995
1975	Clark	50	Tug	Fair	GSE Ramp	1995
1999	Tiger	50	Tug	Fair	GSE Ramp	2019
1992	United Tractor	160	Tug	Fair	GSE Ramp	2012
1985	Harlan	160	Tug	Fair	GSE Ramp	2005
1975	Clark	50	Tug	Fair	FBO Hangar 7	1995
1970	Hough	180	Tug	Fair	FBO Hangar 7	1990
1975	Tug	160	Tug	Fair	FBO Hangar 7	1995
1970	Clark	2500	Tug	Fair	FBO Hangar 7	1990
1992	United Tractor	160	Tug	Fair	FBO Hangar 7	2012

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Year	Make	Model	Equipment	Condition	GSE Maintenance Department	Projected Replacement Year
1986	United Tractor	160	Tug	Fair	FBO Hangar 9	2008
2016	Tronair	Electric	Tug	Good	FBO	2026
2016	Tronair	Electric	Tug	Good	FBO	2026
2014	Jeep	Cherokee	Jeep	Good	FBO	2024

Source: C&S Engineers, Inc.; *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016. Updated by LNAA July 2017.

## Fueling Facilities and Operations

The LNAA Fuel Farm at the Airport is accessible landside from Hayden Circle and airside from the Taxiway “A” Safety Area. Sufficient land area adjacent to the existing facility towards Postal Road has been reserved for expansion should there be a need for future capacity.

Currently, the Airport’s FBO provides full service fueling of 100LL Avgas and Jet A fuel. Full service fueling ensures that pilots in need of fuel will generally not have to reposition their aircrafts for fueling as fuel trucks driven by FBO employees will drive fuel to the aircraft, dispense fuel from the fuel truck, and then collect payment from the pilot. World Fuel Services is the current fuel supplier for the Airport, with fueling hours from Sunday to Saturday from 4am to 10pm.<sup>27</sup>

In 2016, 684,210 gallons of fuel were sold for GA activities at the Airport, generating \$1,415,554 in gross fuel sales. This is a decrease from the \$1,832,379 generated from gross fuel sales from the sale of 836,007 gallons in 2015.<sup>28</sup>

The fuel farm is sufficiently fenced and posted with “Flammable” and “No-Smoking” signs and equipped with boldly marked emergency cutoff valves located outside the areas of probable spill and near the routes that would be used to escape a fuel spill. The fuel farm contains three 50,000 gallon Jet A fuel tanks and one 12,000 gallon 100LL fuel tank.<sup>29</sup> All fuel tanks contain a non-splashing bottom inlet and are equipped with rain-proof and bug-proof vents at least twelve feet above grade. All piping is clearly identified by fuel type and grade by color and marking codes are sufficiently protected from damage by surface vehicles. Loading docks at the fuel farm are color coded and marked in accordance to fuel type and equipped with one accessible fire extinguisher, a non-bypassable, automatic fuel flow cutoff

**LNAA Fuel Farm**



**Lehigh Valley Aviation Services Fueling Vehicle**



Source: C&S Engineers, Inc. 12/13/16

<sup>27</sup> “Lehigh Valley Aviation Services,” Airnav. Accessed on 11/11/2016 at <https://www.airnav.com/airport/KABE/LNAA>

<sup>28</sup> “Agenda, Financial Statements, Traffic Reports & Minutes for the Board of Governors Meeting on January 31, 2017,” Lehigh Northampton Airport Authority

<sup>29</sup> *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016





feature, and bond wire and appropriate conductor clamps for bonding tankers to the fueling system.<sup>30</sup>

Mobile fuel trucks are used to transport fuel from the fuel farm to aircraft. An inventory of FBO mobile fuel trucks and their condition is located in **Table 3.7.5**. All mobile fuelers are equipped with emergency fuel cutoffs and fire extinguishers located on each side of the fueler, in addition to a brake interlock system that prevents the fuelers from being moved during fuel delivery. All mobile fuel tanks are equipped with closed and gasketed dome covers to prevent fuel spillage during vehicle movement and the influx of water, a sump drain to capture overflow, a tank bottom outflow cutoff valve to block fuel spillage in the event of a valve failure or rupture, and sufficiently marked hoses, nozzles, and connectors.<sup>31</sup>

**Table 3.7.5: FBO Fuel Truck Inventory**

Year	Make	Model	Condition	Projected Replacement Year
1994	Ford	5,000 gallon Jet A Refueler	Fair	2014
1994	Ford	3,000 gallon Jet A Refueler	Fair	2014
2000	Int'l IHC 4900	5,000 gallon Jet A Refueler	Fair	2020
2004	Int'l IHC	5,000 gallon Jet A Refueler	Good	2024
2004	Ford	F-350 750 gallon Avgas Refueler	Good	2019

Source: C&S Engineers, Inc.; *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016

All fueling agents are in compliance with the standards and procedures for fuel storage, handling and dispensing contained in the most recent edition of the National Fire Protection Association, *Standard for Aircraft Fuel Servicing*, in addition to the procedures for refueling and quality control contained in the most recent version of the National Air Transportation Association publication, *Refueling and Quality Control Procedures for Airport Service and Support Operations*. In addition, all fueling agents who fuel aircraft, accept fuel shipments, or otherwise handle fuel receive annual on-the-job safety training and report to at least one fueling supervisor with annual FAA approved fire safety training.<sup>32</sup>

<sup>30</sup> “Appendix I- Standards for Fuel Storage, Handling, and Dispensing”, *Airport Certification Manual for Lehigh Valley Airport Authority*, Lehigh-Northampton Airport Authority, March 2016 update

<sup>31</sup> “Appendix I- Standards for Fuel Storage, Handling, and Dispensing”, *Airport Certification Manual for Lehigh Valley Airport Authority*, Lehigh-Northampton Airport Authority, March 2016 update

<sup>32</sup> “Appendix I- Standards for Fuel Storage, Handling, and Dispensing”, *Airport Certification Manual for Lehigh Valley Airport Authority*, Lehigh-Northampton Airport Authority, March 2016 update



## Aircraft Rescue and Firefighting (ARFF)

The LNAA ARFF Department provides fire and rescue services for aircraft and structures, serves as first responders for medical and hazmat emergencies, and conducts/oversees aviation related fire suppression and rescue operations at the Airport. As an ARFF Index C Airport, the Airport must have a minimum of two firefighters on duty at all times, which includes at least one ARFF Lieutenant or acting Lieutenant, and all ARFF personnel must comply with 14 CFR Part 139.315-319 guidelines. Currently, the Fire Department is directed by the Director of Operations and Safety. Staffing includes one ARFF Chief, three ARFF Lieutenants, three ARFF full-time members, and three ARFF part-time members. Scheduling is divided into three platoons that operate on a schedule of 24 hours on duty and 48 hours off duty, with typically one ARFF Lieutenant or acting Lieutenant and one firefighter working each shift.<sup>33</sup>

The Airport currently has one 13,000 square-foot ARFF facility which was commissioned in October 2003 to house ARFF personnel, vehicles, and support equipment. The facility is located on the north-side of the Airport, northeast of the intersection of Taxiway C and Taxiway E. This location was chosen to yield the quickest response time to each runway end (less than five minutes to anywhere within the Airport security fence) in addition to strategically supporting the construction of a future parallel Runway 6-24. This two story facility is complete with a second story Watch Mezzanine, four vehicle bays, four dormitories, two offices, a power generator, emergency lighting, men’s and women’s locker rooms, a foam room with storage tank, and an exterior standpipe pump system for refilling tanks with foam.<sup>34</sup> An inventory of vehicles and equipment housed at this location is available in **Table 3.7.6** on the following page.

<sup>33</sup> *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016

<sup>34</sup> “Fire Department,” *Stay Connected*, ABE website. Accessed 11/14/16. Accessible at <http://www.flylv.com/stay-connected/fire-department/>



**Table 3.7.6: ARFF Vehicle and Equipment Inventory**

Number	Year	Make	Model	Condition	Projected Replacement Year*
1	2017	Oshkosh	Striker 3000 gallon water 420 gallon foam 50' Boom (HRET) High Reach Extendable Turret	Good	2027
2	2000	E-One	3,000 gallon water 450 gallon foam	Fair	2020
3	1997	Oshkosh	3,000 gallon water 450 gallon foam 52' sozzel boom	Fair	2013
4	2011	KME on Int'l Chassis	Rapid Response 500 gallon water 60 gallon foam	Good	2022
5	1994	Ford	F350 4x4 Utility Truck	Fair	2001
7	1993	Int'l	Support Vehicle Air Bags- jacks-blocking	Fair	2013
8	2017	Ford	F350 Utility Truck	Good	2027

Source: C&S Engineers, Inc.; *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016. Updated by LNAA July 2017.

During an emergency dispatch, Taxiway E north of Runway 6-24 is used as the emergency access route for ARFF vehicles to access the airfield. Three first run vehicles are typically deployed during an emergency, Fire Rescue Trucks 2, 3, and 4, supplying a total of 6,500 gallons of water, 880 gallons of Aqueous Film Forming Foam (AFFF), and 950 gallons of dry chemical. Support and standby vehicles during an emergency dispatch includes Fire Rescue Trucks 1 and 5, carrying a total of 1,500 gallons of water, 200 gallons of AFFF, airbags, cribbing back boards, fans, and extra supplies. All internal operations, road, and pump tests are performed on a weekly basis to ensure efficiency.





### ARFF Facility



Source: C&S Engineers, Inc. 12/13/16

Additional responding agencies may be called in during an emergency. Secondary responding agencies include: the Allentown Fire Department (Station 13), the Allen Township Fire Company (Station 45), the Bethlehem Fire Department (Engine 9), the Catasauqua Fire Rescue (Station 2), the East Allen Township Fire Company (Station 46), the Han-Le-Co Fire Company (Station 33), the Lehigh Township Fire Company (Station 47), the Northampton Township Fire

Company (Station 42), the North Catasauqua Fire Department (Station 18), and the Whitehall Fire Department (Station 35). Tabletop training exercises are conducted yearly with these additional rescue and firefighting agencies and full scale exercises are conducted at least every 36 months.

In addition to ARFF facilities, there are 53 fire hydrants located on or adjacent to airport property that can be used to supply water, all with flowage rates between 1,280 to 1,405 gallons per minutes in the event of an emergency. In addition, all airport facilities are equipped with water sprinkler systems. Additional foam fire suppression systems are installed in Hangar 9, Hangar 10, and the LNAA Fuel Farm.<sup>35</sup>

### Airport Police Department

The LNAA Police Department provides federally mandated Airport security and law enforcement services and provides direct communication with ICO and other key LNAA management personnel. Specific roles of the LNAA Police Department include managing law enforcement operations, such as traffic control, evacuation assistance (providing instruction for and controlling access to evacuated or sheltered areas), scene assess control, crowd control, and scene security. The Airport Police Department also provides perimeter security of the Aircraft Operations Area (AOA) fence line, Security Identification Display Area (SIDA), and AOA, as required by the FAA and TSA.

As an Authority, the LNAA Police Department is a police force separate from other local agencies. Currently the Airport has six full-time and nine part-time police officers, including the Chief of Police. All Airport Police Officers are trained and certified in the Commonwealth of Pennsylvania under Act 120 and under 14 CFR Part 139 & 49 CFR Part 1542 policies. In addition, all officers must complete annual recurrent Airfield Drivers' Training, S.I.D.A. Training, Wildlife Hazard Management Training, and Law Enforcement

<sup>35</sup> Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE), Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016

Training. The Airport Police Department is located on the first floor of the Main Terminal Building.<sup>36</sup> Recent additions to Police Department equipment includes one Ford Interceptor and one Holland police vehicle.

## FAA Air Traffic Control Tower (ATCT) and facilities

### FAA ATCT



Source: C&S Engineers, Inc. 12/13/16

The Airport's Federal Aviation Administration (FAA) ATCT is located in the northern area of the Airport. It is accessible landside from Fashion Drive South off of East Race Street and airside via Taxiway C. The ATCT is responsible for controlling all aircraft operations and ground vehicles operating with the Airport's active movement area and local airspace. The ATCT is FAA owned and was commissioned on December 10, 1995, before being dedicated on May 13, 1996. The facility is 155 feet tall overall, with a 525 square-foot cab, and a 12,000 square foot base. The ATCT operates 24 hours a day, seven days a week.

There are seven control tower operator positions for local and ground control in the tower and twelve operator positions in the Terminal Radar Approach Control (TRACON) in the building base. In addition to the TRACON, the base

building also contains office space for the Air Traffic administrative workforce and Airway Facilities maintenance workforce. The ATCT is staffed by thirty Air Traffic Control Specialists, four Operational Supervisors, four Administrative Staff Officers, one Contract Training Specialist, and ten Airway Facilities Specialists.<sup>37</sup>

<sup>36</sup> *Appendix II- Airport Emergency Plan, Lehigh Valley International Airport (ABE)*, Lehigh-Northampton Airport Authority, submitted February 2013 and revised March 2016

<sup>37</sup> "Facility Orientation Guide," Allentown Tower, published by the FAA. Accessible at: <http://www.air-traffic-control.org/pdf-files/allentown.pdf>