

Vermont Airport System Plan Update

Plan Update Overview & Process

COSTA PAPPIS, POLICY & PLANNING SECTION

OCTOBER 9, 2018



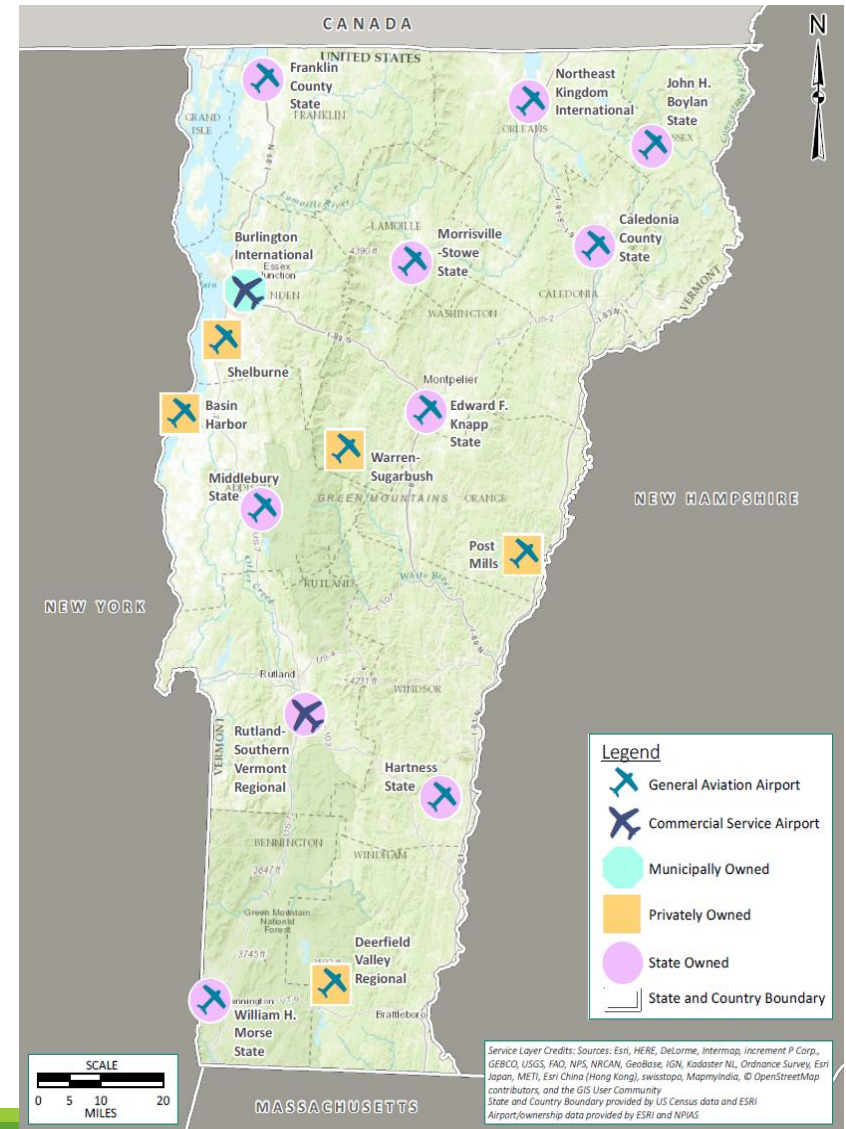
What is the Aviation System Plan?

A long-range 20-year plan to manage the development and operations of Vermont's public-use airports



16 Airports in Vermont are classified as public-use:

- 10 state-owned
- 1 municipal
- 5 private



Why Do We Need this Plan?

- To meet federal aviation requirements. States must maintain a Plan to be eligible for certain types of aviation funding.
- The current Plan is over 10 years old and may no longer reflect current system needs and priorities.



How Will We Develop the Plan?

- Evaluate the adequacy and performance of the State's public use airports
- Develop a vision
- Assess needs
- Develop goals and recommendations to support airport development

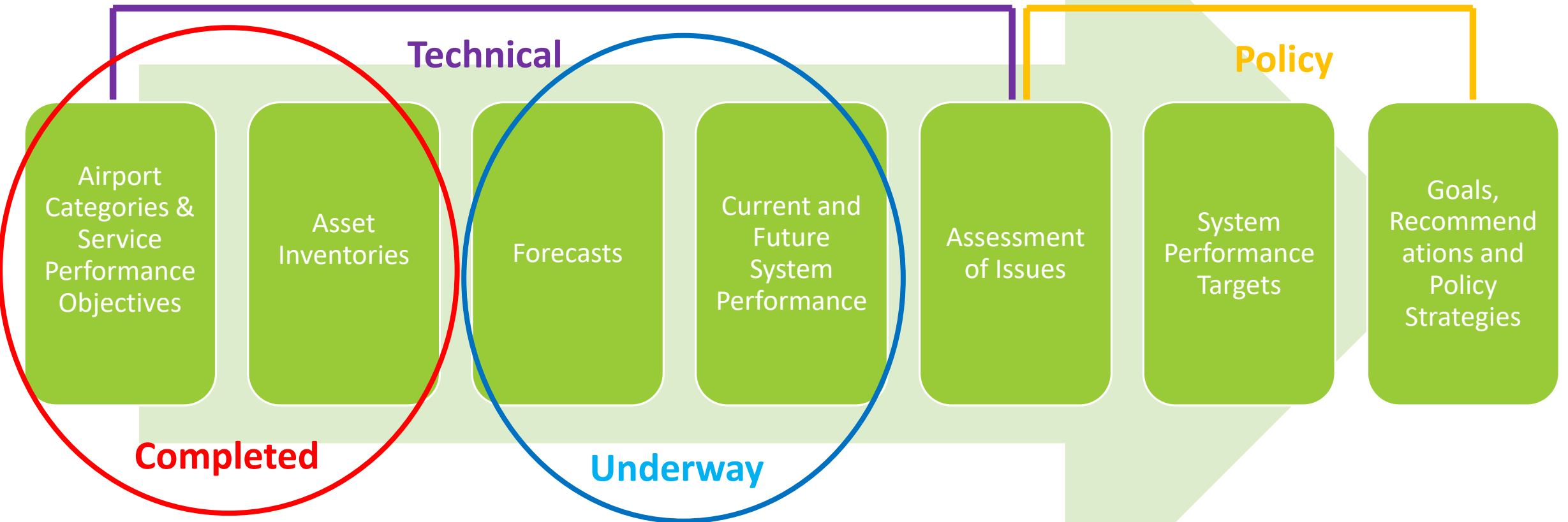


- Aviation Advisory Council
- FBOs / stakeholders
- Public comments

What's Changed Since 2007

- Federal aviation policies and funding
- New FAA standards and guidelines, including updated Advisory Circular on systems planning
- Rapidly evolving aviation technology
- Updated State Long Range Transportation Plan

Plan Development Process



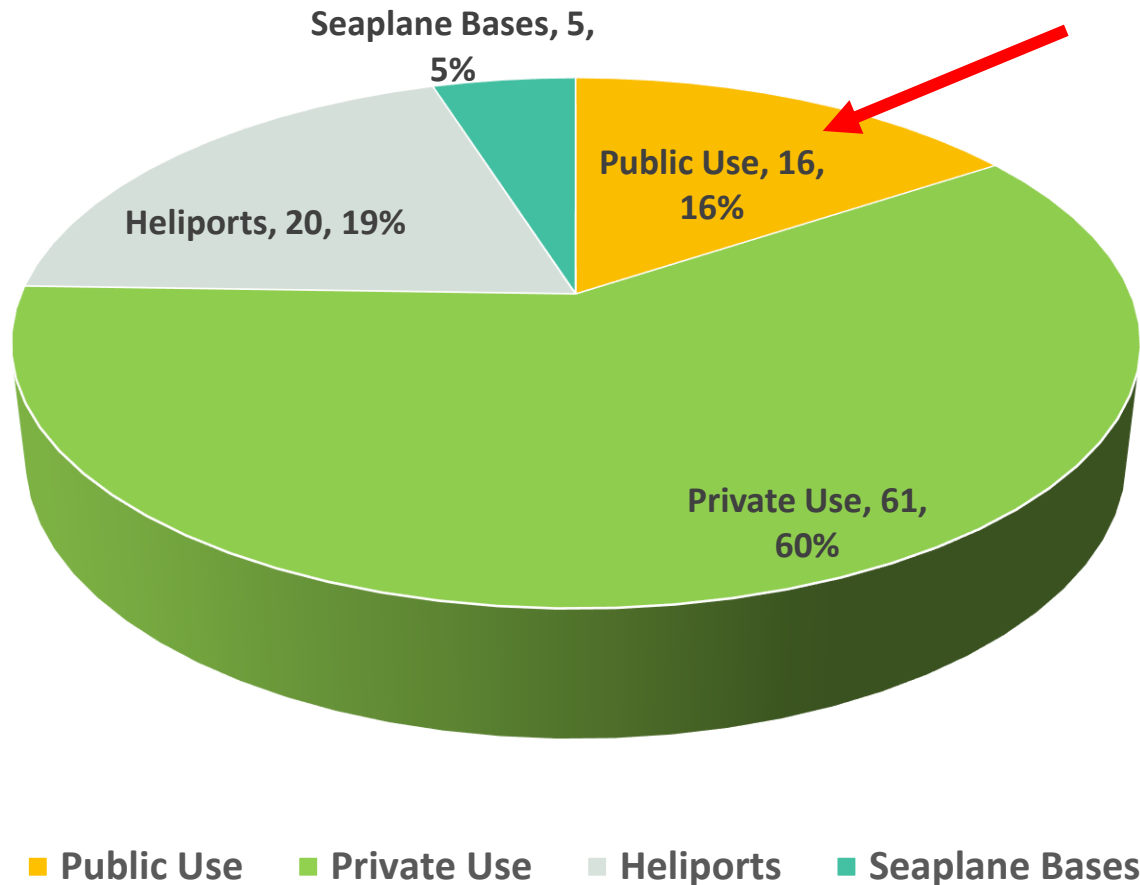
H.620 Marketing of State Airports

Requires that the Agency of Commerce and Community Development:

1. Update the State's Economic Development Marketing Plan to incorporate the marketing of State-owned airports.
 - A. shall consider the State Aviation Systems Plan
 - B. shall address economic development opportunities with respect to each State-owned airport, including the recruitment and expansion of businesses involved in the development and commercialization of next-generation aeronautics technologies
2. Evaluate the feasibility of:
 - A. the installation of electric vehicle charging stations at the airport;
 - B. the installation of electric aircraft charging stations at the airport; and
 - C. the siting of one or more renewable energy generating plants at the airports.

Vermont Airports Profile

Total Airports, Airstrips & Air Bases in Vermont



Economic Impact of Vermont's Public-Use Airports Study (currently underway)

- Will update the 2003 Economic Impact Study:
 - Quantify direct, indirect, and induced jobs and wages.
 - Determine what economic sectors are represented among on-airport businesses.

William H. Morse State Airport



Recent Improvements

- Full-depth reconstruction of runway
- Added partial parallel taxiway
- Improved safety areas (slope leveling)



Identified Needs

- Resurface apron areas
- Upgrade fuel farm

Source: John Likakis, and Bennington Banner

Airport Operations (2017)

Airport Name	Air Carrier	Air Taxi	GA Local	GA Itinerant	Military	Total
Basin Harbor	-	-	-	2,120	62	2,182
Burlington International	12,972	12,131	19,720	19,736	6,241	70,800
Caledonia County State	-	-	5,800	1,280	300	7,380
Deerfield Valley Regional	-	-	1,800	1,300	-	3,100
Edward F. Knapp State	-	625	14,500	8,000	1,000	24,125
Franklin County State	-	-	5,780	2,815	1,500	10,095
Hartness State	-	222	3,752	2,487	150	6,611
John H Boylan State	-	-	127	264	12	403
Middlebury State	-	-	7,200	2,900	800	10,900
Morrisville- Stowe State	-	127	5,023	954	254	6,358
Northeast Kingdom International	-	-	7,234	1,980	238	9,452
Post Mills	-	10	2,920	1,400	-	4,330
Rutland - Southern Vermont Regional	-	1,104	6,187	5,061	30	12,382
Shelburne	-	-	3,820	416	-	4,236
Warren-Sugarbush	-	-	16,520	1,100	-	17,620
William H. Morse State	-	-	5,625	8,627	125	14,377
Total	12,972	14,219	106,008	60,440	10,712	204,351

Runway, Taxiway Facilities & Approach Facilities

Airport Name	Primary Runway		Runway Lighting	Taxiway Type / Lighting (Type/N)	Best Approach
	Length	Width			
Basin Harbor	3,000	90	N/A	N / N	Visual
Burlington International	8,319	150	HIGH / ALS	Full Parallel (Dual) / MITL	Precision
Caledonia County State	3,300	60	MED / REIL	Partial, Stubs / N	Non-Precision
Deerfield Valley Regional	2,650	75	MED	Stubs / N	Visual
Edward F. Knapp State	5,002	100	MED / REIL	Full Parallel /	Precision
Franklin County State	3,000	60	MED / REIL	Partial, Stubs, Turnaround / N	Non-Precision
Hartness State	5,501	100	MED / REIL	Stubs, Turnaround / N	Non-Precision
John H Boylan State	2,650	120	N/A	N / N	Visual
Middlebury State	2,500	50	N/A	Full Parallel / N	Visual
Morrisville- Stowe State	3,700	75	MED / REIL	Turnaround / N	Non-Precision
Northeast Kingdom International	5,000	100	MED / REIL	Partial, Turnaround / N	Non-Precision
Post Mills	2,900	80	N/A	N / N	Visual
Rutland - Southern Vermont Regional	5,003	100	MED / REIL	Partial / MITL	Precision
Shelburne	3,077	60	N/A	N / N	Visual
Warren-Sugarbush	2,575	30	N/A	Turnaround / N	Visual
William H. Morse State	3,704	75	MED / REIL	Stubs / N	Non-Precision

Based Aircraft by Type

Airport Name	Single Engine	Multi-Engine	Jet	Helo	Other	Military	Total ^{1/}
Basin Harbor	-	-	-	-	-	-	0
Burlington International	62	3	14	1	-	28	79
Caledonia County State	18	-	-	-	-	-	18
Deerfield Valley Regional	5	2	-	7	-	-	7
Edward F. Knapp State	50	2	-	1	-	-	52
Franklin County State	68	1	-	-	5	-	69
Hartness State	19	-	-	-	8	-	19
John H Boylan State	3	-	-	-	2	-	3
Middlebury State	32	1	1	1	1	-	34
Morrisville- Stowe State	18	1	-	-	8	-	19
Northeast Kingdom International	19	1	-	-	-	-	20
Post Mills	-	-	-	-	9	-	0
Rutland - Southern Vermont Regional	29	-	-	-	1	-	29
Shelburne	53	-	-	-	4	-	53
Warren-Sugarbush	-	-	-	-	50	-	0
William H. Morse State	23	2	-	1	6	-	25
Total – VTSASP Airports	399	13	15	11	94	28	427
Additional – Non-VTSASP Airports^{2/}	-	-	-	-	-	-	68

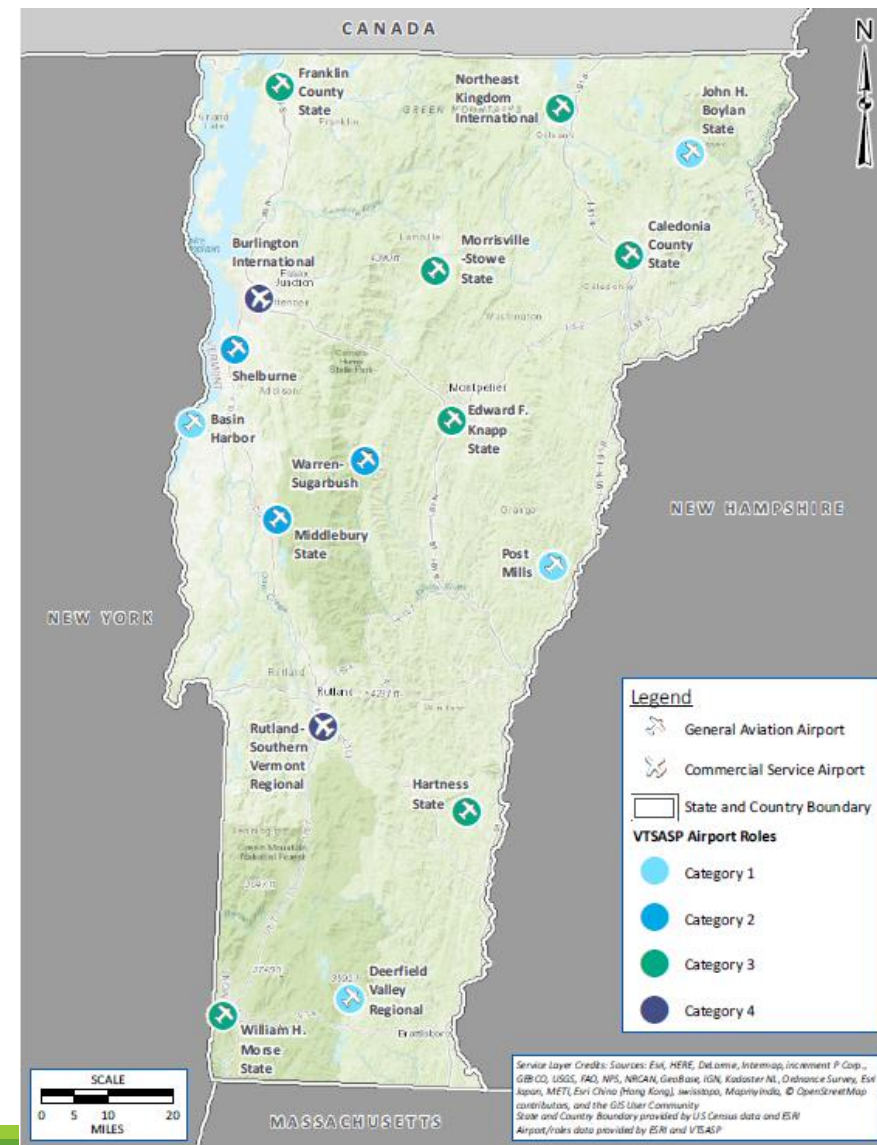
Airport Categories

Category 1 Airports - provide a *basic level of facilities and services* that are best suited to serve single engine piston and light twin engine aircraft.

Category 2 Airports: Category 2 Airports are facilities that *offer a higher level of facilities and services* than Category 1 Airports. Typically have equipment that enhances safety of use during inclement weather, and complimentary facilities and services that may be able to accommodate smaller jet aircraft during favorable conditions.

Category 3 Airports - can *accommodate jet activity* during a broader range of weather conditions, and serve as regional gateways for activities such as corporate aviation, charter services and small cargo-feeder operations.

Category 4 Airports - Facilities with *the most robust compliment of facilities, equipment, and services* that can accommodate the full-range of aircraft in the active fleet – from small, single engine piston aircraft to passenger aircraft and airlines that operate them.



Proposed Facility & Service Standards by Airport Categories: Consultant Recommendations

Category 1

Minimum Facility & Service Standard	Recommended Facilities & Services
Primary Runway Length ($\leq 2,500'$) - Paved or Turf	Primary Runway ($\geq 4,000'$) - Paved
Part-Time Airport Manager on Site (Seasonal OK)	Full-Time Airport Manager on Site (Seasonal OK)
Mogas or 100LL Fuel on Site	100LL Self-Service Aviation Fuel on Site
Basic Terminal Building/Shelter	Part-time Operations Staff on Site or Contracted
	Single-Service SASO or Full-service FBO on Site at Least Part-Time
	Lighted Windsock
	GPS Instrument Approach Procedure

Proposed Facility & Service Standards by Airport Categories: Consultant Recommendations

Category 2

Minimum Facility & Service Standard	Recommended Facilities & Services
Primary Runway (≥4,000') – Paved	Primary Runway (≥5,000')
100LL Self-Service Aviation Fuel on Site	100LL AND Jet-A Self-Service Aviation Fuel on Site
Full-Time Airport Manager on Site (Seasonal OK)	Full-Time Airport Manager on Site
Part-time Operations Staff on Site or Contracted	Full-Time Operations Staff on Site
Single-Service SASO or Full-service FBO on Site at Least Part-Time	One Full-Service FBO on Site Full-Time
Lighted Windsock	Runway and Taxiway Edge Lights
GPS Instrument Approach Procedure	GPS Instrument Approach Procedure with Vertical Guidance
	Terminal Building with Pilot and Visitor Amenities
	Own/Operate Snow-Removal Equipment
	Aircraft/Avionics Maintenance Services on Site
	Rotating Airport Beacon

Proposed Facility & Service Standards by Airport Categories: Consultant Recommendations

Category 3

Minimum Facility & Service Standard	Recommended Facilities & Services
Primary Runway (≥5,000')	On Site Concessions or Restaurant
Full-Time Airport Manager on Site	Precision Instrument Approach (ILS /CAT I)
Full-Time Operations Staff on Site	Rental Cars
Terminal Building with Pilot and Visitor Amenities	No recommended Facilities & Service Objectives related to Scheduled Passenger Service.
100LL AND Jet-A Self-Service Aviation Fuel on Site	
One Full-Service FBO on Site Full-Time	
Runway and Taxiway Edge Lights	
Rotating Airport Beacon	
Own/Operate Snow-Removal Equipment	
Aircraft/Avionics Maintenance Services on Site	
GPS Instrument Approach Procedure with Vertical Guidance	

Proposed Facility & Service Standards by Airport Categories: Consultant Recommendations

Category 4

Minimum Facility & Service Standard	Recommended Facilities & Services
Terminal Building - Full-Time Passenger and/or Cargo Handling Capabilities (TSA, Customs, etc.)	<p>There are no recommended Facilities & Service Objectives for Category 4 Airports. Most appropriate for Airport Master Plans to address requirements based on passenger service demand.</p>
Scheduled Air Passenger/Cargo Service	
Intermodal Transportation Connections at/near Site	
On Site Concessions or Restaurant	
Airport Security Measures (SIDA, Badging, Staff etc.)	
Aircraft Rescue and Firefighting (ARFF)	
Precision Instrument Approach (ILS/CAT I)	
Aircraft/Avionics Maintenance Services on Site	
Rental Cars	

Next Steps - Forecasts & Needs Identification

- What is a likely growth scenario for public-use airports?
- What types of facilities and services will airports require to meet current and future demand?
- What recommendations and strategies will we need to implement identified needs.

Next Steps - Policy Issues

Aviation's Integration with Other Transportation Modes

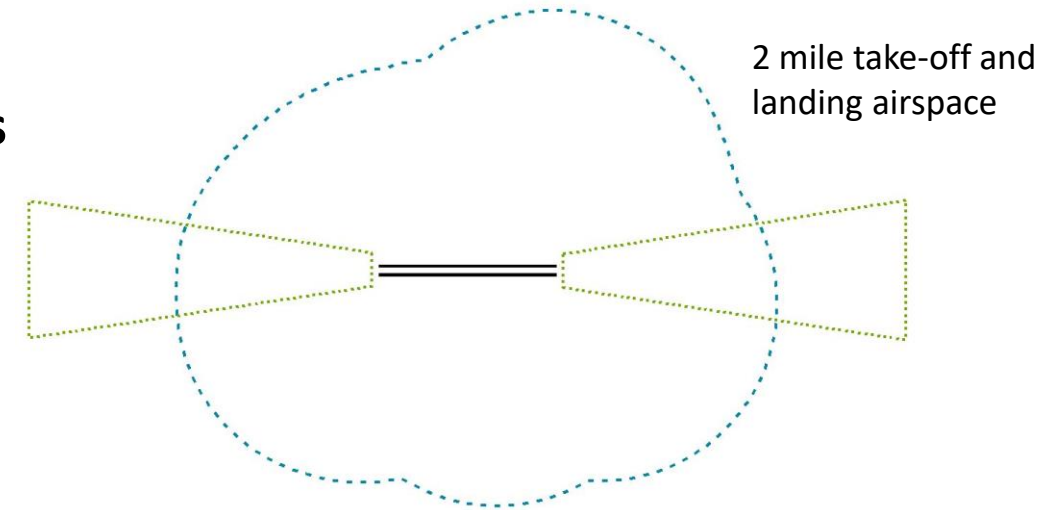
- Passenger connections and interlining
- Freight needs

Land Use-Built Environment Linkages

- Growth of airports and impacts to surrounding communities and environments
- Protecting airports from encroachment

Economic Development

- Economic impacts of airports on local and regional economies, and the state's economy.
- Airport development opportunities



What Comes Next? Policy Issues

Financial Sustainability

- Funding for aviation projects
- Private sector involvement in financing airport improvements

Project Prioritization

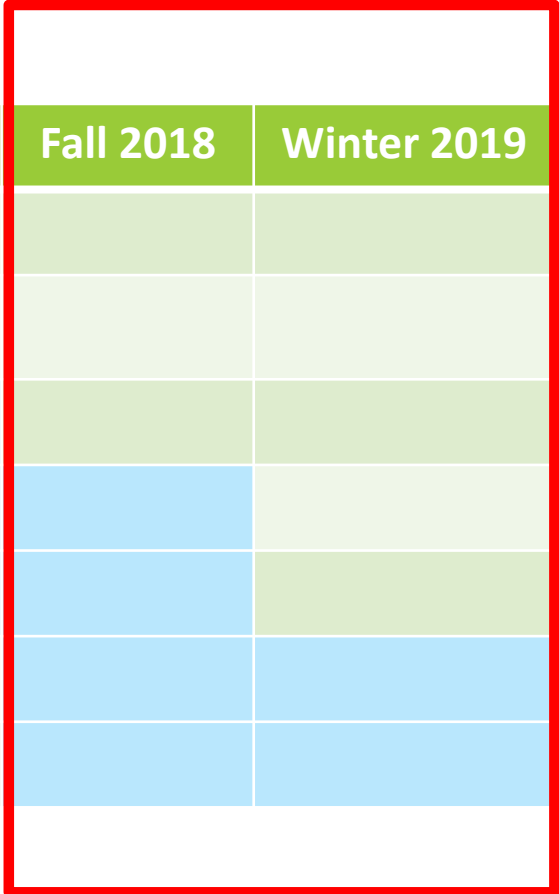
- Addressing FAA priorities and requirements with other priorities, such as economic development.

Technological Developments

- Preparing for evolving technologies such as Next Generation Aircraft System (NextGen)
- Support for emerging technologies

Plan Update Timeline

Task	Spring 2018	Summer 2018	Fall 2018	Winter 2019
Airport Categories & Service / Performance Objectives				
Asset Inventories				
Forecasts				
Current & Future System Performance				
Policy Issues Review				
Goals, Recommendations, and Strategies				



Questions / Comments?

Contacts

Paul Libby, Project Manager
VTrans Rail & Aviation Bureau
E: paul.libby@vermont.gov

Costa Pappis, Planning Support
VTrans Policy & Planning Section
E: costa.pappis@vermont.gov

Project website - <http://vtrans.vermont.gov/aviation/vermont-airport-system-plan>