EMAIL WITH INSTRUCTIONS

MEETING REMINDER

When: 4-7 PM on July 11

Where: City of Aspen Police Station Community Room (upstairs) with breakouts at Pitkin County Administration and Sheriffs Office next door.

ASE Vision Participants,

I am sending this e-mail and link to materials on behalf of the Airport Vision Committee leadership. Our next meeting is July 11th from 4:00-7:00 where we will begin the continua exercises previewed at the end of our June meeting. The first set of continua are designed to help us more specifically understand and quantify community values and objectives related to quality of life and environment:

- Defining 'Just Big Enough' & 'Right Sized' - Airport Commercial Enplanement Target;
- Air Quality - Target for Overall Airport Emissions; and
- Noise - Target for Airport Noise Intensity

In preparation for the July 11th meeting, please review each of the continua, and think about where on each a final airport vision and future projects should aspire. At the July 11th meeting, each advisory group will have an initial 'dot voting' exercise where every participant will be given one dot to place on the continua followed by a round robin conversation about the results. After conversation each advisory group will have a final 'dot voting' exercise for each continua. The Vision Committee will wait to do their final dot vote until the results from each of the advisory groups are presented to Vision

Committee members. The following materials are provided by clicking here as background to help inform your deliberation:

- April 29 Values Summary
- Aspen/Pitkin County Airport Improvements Environmental Assessment Chapter 1: Background and Proposed Action

- Aspen/Pitkin County Airport Improvements Environmental Assessment Chapter 2: Purpose and Need
- Aspen/Pitkin County Airport Trends
- Q&A to Date

In the interest of efficiency and sustainability, current and future continua and background information will be available both digitally and in print, if you would like a print edition, **please email** Info@ASEvision.com **by July 5th and we will prepare a notebook for you.**

As the Airport Vision Committee leadership has already emphasized, "this is when each of us gets to decide exactly how we think our future airport should reflect the core community values we identified on April 29th."

Thank you for your ongoing commitment to creating a community vision for our future airport. We look forward to seeing you on July 11 in the Community Room of the Aspen Police Station.

Sincerely,

Jon Peacock, County Manager

PITKIN COUNTY
ADMINISTRATION

VALUES SUMMARY

Revised 6/27/19

ASE Community Values Summary

from April 29, 2019 ASE Vision Airport Advisory Group Meeting

Safety in the Air and on the Ground

Adaptable, Flexible, Future-Proof

- Ability to serve aircraft of the future
- Ability to adapt to future uses. Preserve space for future.

Environmental Responsibility. Address:

- Noise Pollution
- Air Pollution
- Carbon emissions – aspire to net carbon neutrality
- Light Pollution
- Sustainability – energy efficiency
- Respect wildlife habitat, open space and natural surroundings

Community Character – Reflect local culture and values

- Connection to place: It should *feel like* Aspen and Pitkin County
- Unique mountain airport feeling – unpretentious
- Tell Aspen story: reflect culture, mining heritage, skiing, ranching, etc.
- Retain rural and small-town feel
- "Small is important" "Don't build it too big" "One story above ground"
- "Reasonable growth" "Modest expansion"
- Control growth through number of gates, etc.
- *"Just Big Enough" "Right-Sized"*

Economic Vitality

- Adaptable to the economic sustainability of our resort
- Convenience: More direct flights
- More carriers and competition
- Take valley growth into consideration

Warm and Welcoming

- Friendly and personable for both residents and visitors
- Comfortable with excellent food & drink amenities
- Guest-friendly for stranded passengers and peak crowds.
- Stress free
- Improved, but not so different from today. Still welcoming.
- Views of mountains
- A practical airport: Better waiting rooms and employee areas
- Convenient access to/from airport

Design Excellence

- Unique – Distinctive – Great architecture
- Should look like Aspen – Small is important – Small but beautiful
- Incorporate mountain surroundings
- No jet bridges
- Awe-inspiring views
- It should be surprising!

Efficiency – an airport that works well

- Well planned. Better functionality than today
- Incorporate new technology
- Efficient in service, time, operations
- In design, give commercial passengers priority over private planes
- Reliable gateway for visitors

Preserve High Quality of Life

- Neighbor Friendly
- Mitigate noise.
- Maintain curfew

Convenient and Easy Ground Transportation

- Multi-modal transit options
- Seamless connectivity to transit

CONTINUA

QUALITY OF LIFE: DEFINING "JUST BIG ENOUGH" & "RIGHT-SIZED"

AIRPORT COMMERCIAL ENPLANEMENT TARGET

MINIMIZE ENPLANMENTS

- **Enplanements decrease approx. 40% to 163K.**
  - Reduce to 2-3 gates.
  - Reconfigure existing space/ terminal and fix safety and ADA issues.

DECREASE CAPACITY

- **Enplanements decrease to approx. 2008 levels (approx. 213K/yr.).**
  - 50K-75K sf. terminal.
  - 3-5 gates (depending on aircraft type).

ACCOMMODATE LIMITED GROWTH

- **Current enplanements plus approx. 0.8% annual growth (approx. 305K/yr. in 2028).**
  - New 75K-90K sf. terminal.
  - 4-8 gates (depending on aircraft type).

ACCOMMODATE SIGNIFICANT GROWTH

- **Current enplanements plus 3% annual growth (approx. 370K/yr. in 2028).**
  - Environmental Assessment Terminal Clearance is 140K sf. terminal with 10 gates.
  - 8-12 gates (depending on aircraft type).
  - New 120K-140K sf. terminal.

MAXIMIZE ENPLANEMENTS

- **Enplanements grow greater than 3%/yr. (370K+).**
  - New 140K+ sf. terminal.
  - 10+ gates (depending on aircraft type).

CURRENT CONDITIONS

- **2018 Enplanements** **284K**
- **Current Number of Gates** . . . . . .8 (plus two overnight parking positions)
- **Terminal**. . . . . .47K sf.
- Current Enplanements suggest an 60K-85K sf. terminal with 8 gates plus two overnight parking positions

ASE VISION

QUALITY OF LIFE & ENVIRONMENT: AIR QUALITY

TARGET FOR OVERALL AIRPORT EMISSIONS

REDUCE OVERALL AIRPORT EMISSIONS (AIRCRAFT & FACILITIES) BY 20-30%

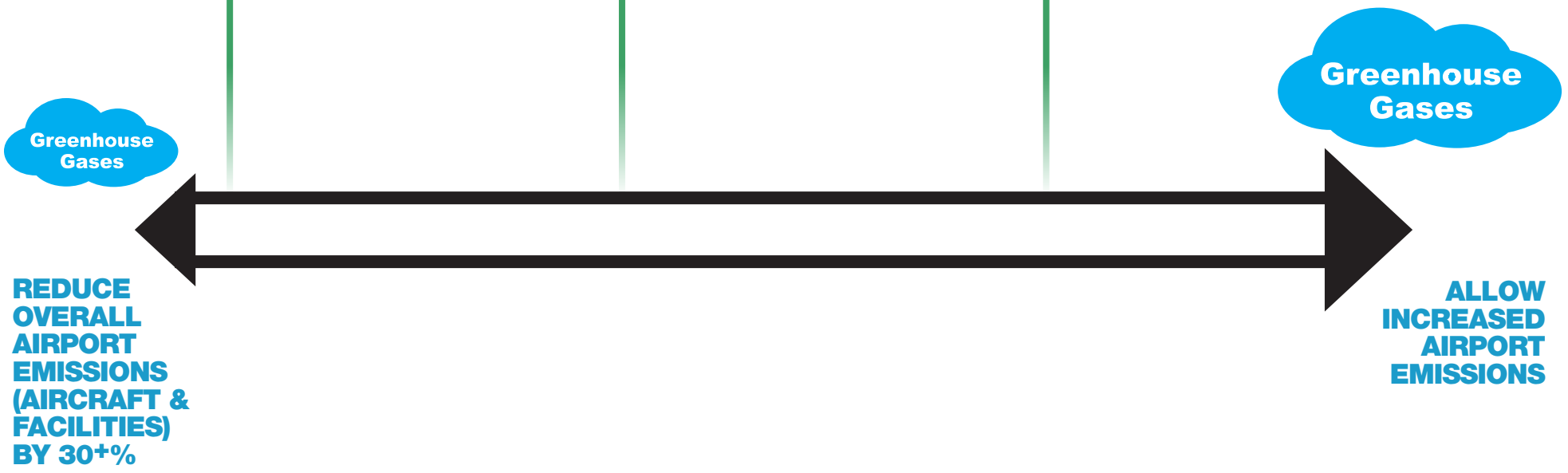
- Implement energy conservation/ renewable energy projects regardless of cost recovery over their useful life.

REDUCE OVERALL AIRPORT EMISSIONS (AIRCRAFT & FACILITIES) BY 15-20%

- Implement energy conservation/ renewable energy projects that pay for themselves over their useful lives.

MAINTAIN OVERALL AIRPORT EMISSIONS (AIRCRAFT & FACILIITIES)

- Implement energy conservation/ renewable energy projects with a positive economic impact over their useful life.



ASE VISION

QUALITY OF LIFE & ENVIRONMENT: NOISE

TARGET FOR AIRPORT NOISE INTENSITY

REDUCE NOISE LEVELS BY 20-30%

- Reduce average day-night noise levels, number of single high noise events, and noise intensity from airport operations on the ground.

REDUCE NOISE LEVELS BY 15-20%

- Reduce average day-night noise levels, number of single high noise events, and noise intensity from airport operations on the ground

SAME INTENSITY AS TODAY

- Maintain average day-night noise level and number of single high noise events to those experienced today.
- Maintain noise intensity from airport operations on the ground to that experienced today.

REDUCE NOISE LEVELS BY 30+%

ALLOW INCREASED NOISE LEVELS

ASE VISION

BACKGROUND INFORMATION

CHAPTERS 1 & 2 OF ENVIRONMENTAL ASSESSMENT

Chapter 1 - Background and Proposed Action

Pitkin County, as owner and operator of Aspen/Pitkin County Airport (ASE), is proposing improvements to ASE. These improvement projects require a modification to the Airport Layout Plan (ALP)[1]. In addition, the County will seek federal funding assistance. Both actions, approval of the ALP and federal funding, are considered federal actions. Pursuant the requirements of the National Environmental Policy Act of 1969 (NEPA), the approving federal agency must disclose the environmental consequences of the action(s) before a federal action can be undertaken. The Federal Aviation Administration (FAA) is the responsible federal agency for these projects. To disclose any potential environmental consequences of the proposed actions, this Draft Environmental Assessment (EA) has been prepared in accordance with Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 CFR 1500-1508), FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions.*

This EA includes the following components:

- Chapter 1: Background and Proposed Action;
- Chapter 2: Purpose and Need;
- Chapter 3: Alternatives;
- Chapter 4: Affected Environment and Environmental Consequences; and
- Chapter 5: Preparers.

This chapter provides background on the proposed actions and the existing airport facilities related to the proposed actions.

1.1 Proposed Projects

This EA evaluates the potential impacts related to projects and actions proposed by the Airport Sponsor (Pitkin County) for FAA approval. These projects, which are shown in **Figure 1-1,** include:

- Shifting the runway 80 feet to the west, widening the runway to 150 feet, strengthening to allow up to 150,000 pounds landing weight and associated projects including but not limited to:
    - Realignment of the perimeter road and Owl Creek Road and Bike Path within the Colorado Department of Transportation (CDOT) right-of-way
    - Relocation of associated Navigational Aids (NAVAIDs), and runway/taxiway lighting
    - Change of the wingspan and aircraft weight restriction policy implemented by the County in 2001 (removing the current restrictions, and allowing aircraft up to 118 feet wingspan and with an aircraft weight up to 150,000 pound per FAA design group D-III)
    - Piping of Owl Creek
    - Amending flight procedures to accommodate the shift in runway location

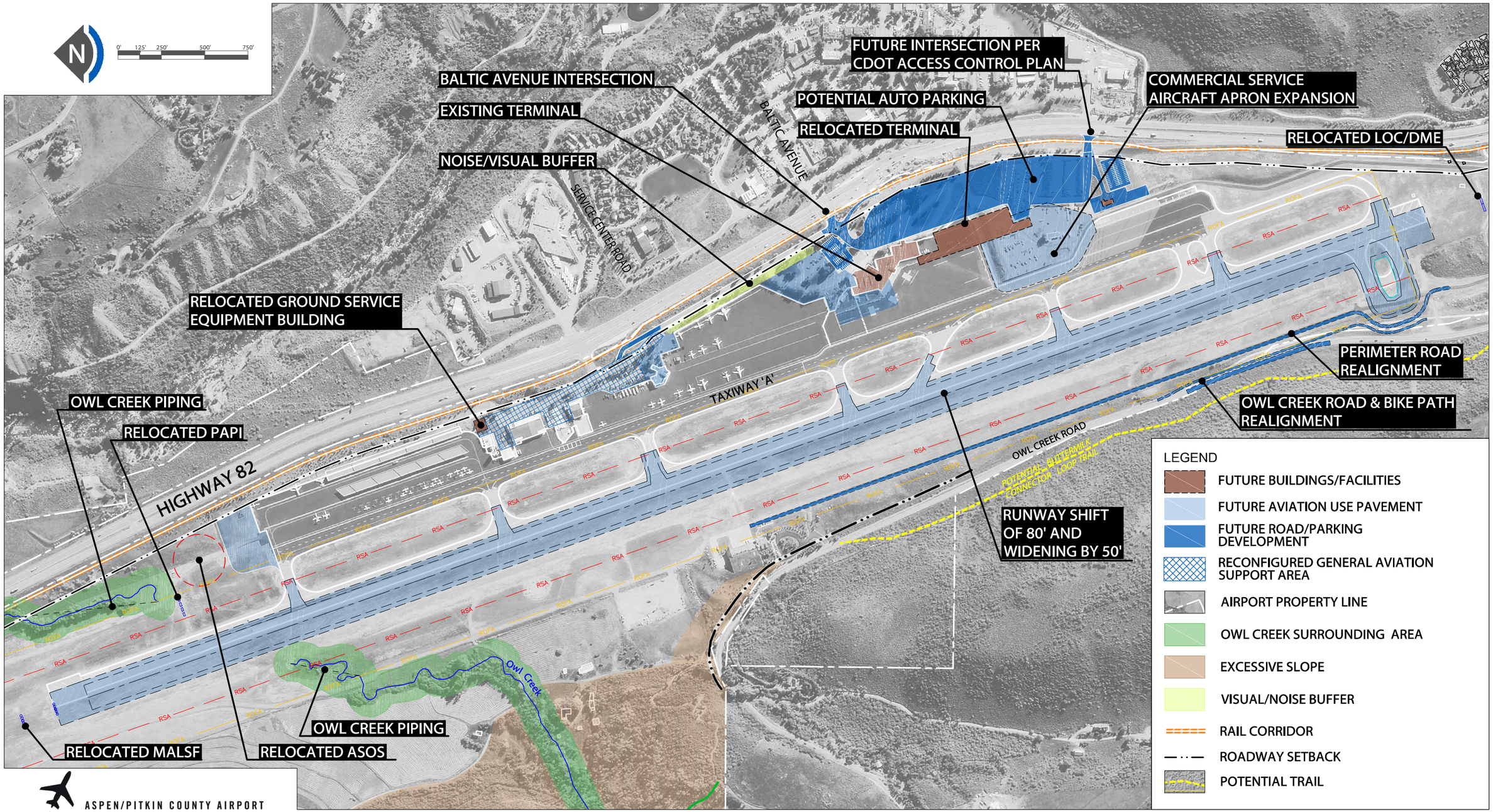
[1] An ALP graphically shows existing airport facilities as well as proposed long-term improvements

- Terminal Area Improvements
    - Construction of a replacement terminal
    - Construction of associated parking
    - Re-configuration of the terminal roadway and recirculation roadway
    - Integration of the passenger terminal with public transit
    - Relocation of ancillary facilities, such as rental car facilities
    - Demolition of existing passenger terminal facilities
    - Commercial service aircraft apron expansion
    - Construction of a noise barrier along the general aviation (GA) apron area

1.2 Airport Information

ASE is located about three miles northwest of Aspen's Central Business District, within Pitkin County, Colorado. ASE is situated west of Highway 82 on the northern limits of the Aspen Area Urban Growth Area. **Figure 1-2**, *AIRPORT LOCATION MAP*, illustrates ASE's location with respect to the surrounding cities within the valley. Basalt, Carbondale, and Glenwood Springs are located north and west of Aspen, with Independence Pass located east of the City of Aspen, that provides summer access to Denver. **Figure 1-3**, *AIRPORT VICINITY MAP*, shows a more detailed drawing of the surrounding airport environs. ASE has an elevation of 7,820 feet above mean sea level (AMSL).

The City of Aspen is the county seat and the most populous municipality of Pitkin County. Based on the 2010 Census, the city population was 6,658, and that increases significantly during the winter, as the Aspen area is an internationally recognized ski resort, and during certain summer events. Aspen is situated in a remote area of the Rocky Mountains' Sawatch Range and Elk Mountains, along the Roaring Fork River on the Western Slope, 11 miles west of the Continental Divide.



ASPEN/PITKIN COUNTY AIRPORT
IMPROVEMENTS
ENVIRONMENTAL ASSESSMENT

Figure 1-1 **Proposed Projects**

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SOURCE : Google Map Data, 2016.

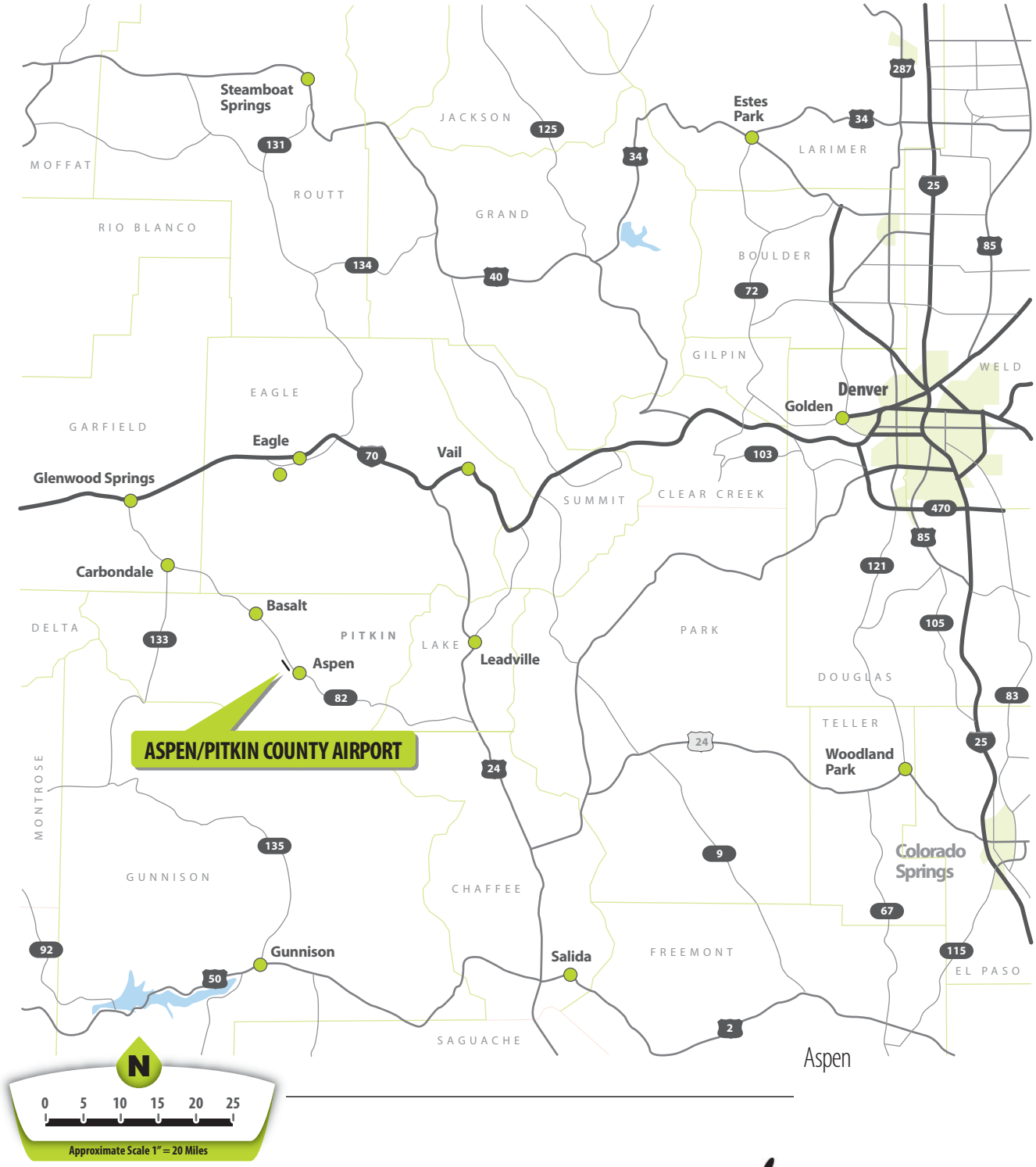


Figure 1-2 **Airport Location Map**

APPROXIMATE SCALE 1" = 40 MILES

ASPEN/PITKIN COUNTY AIRPORT
IMPROVEMENTS
ENVIRONMENTAL ASSESSMENT

SOURCE : City of Aspen/Pitkin County GIS Database.

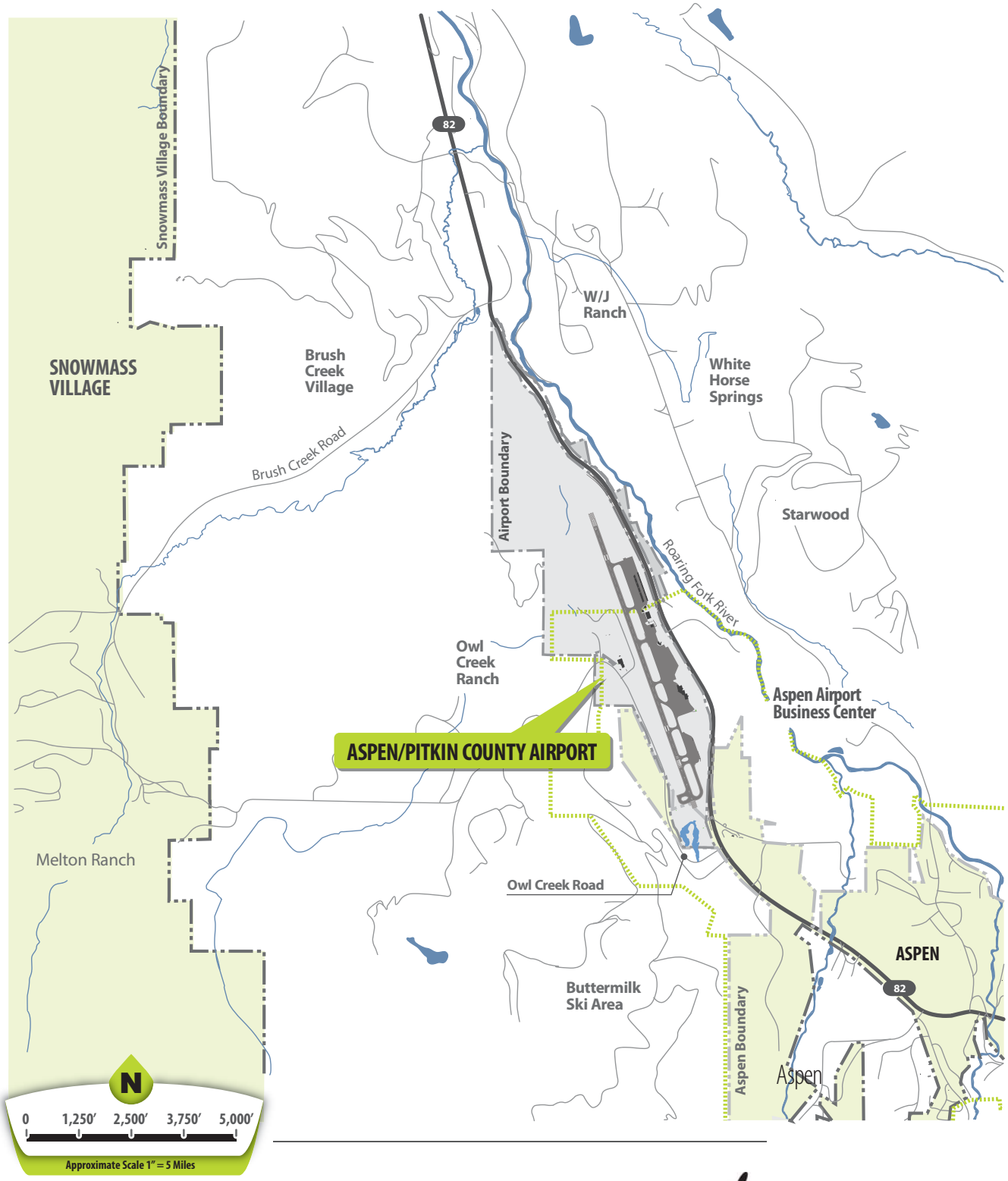


Figure 1-3 **Airport Vicinity Map**

Urban Growth Boundary

ASPEN/PITKIN COUNTY AIRPORT
IMPROVEMENTS
ENVIRONMENTAL ASSESSMENT

1.3 Background - Historical Planning Efforts

Pitkin County currently limits the size of aircraft that can operate at ASE through Section 10.12.030(C) of the Pitkin County Code. This section, adopted in 2001, prohibits the operation of aircraft with "a tip-to-tip wingspan of greater than 95 feet." The wingspan restriction was required because ASE could not satisfy all of the applicable FAA design standards without significant improvements. The FAA approved modifications to design standards for ASE based on the Pitkin County Code. The non-standard conditions that do not meet FAA current airfield design standards include the separation distance between the runway and taxiway, between the taxiway and parked aircraft, and between the runway and the locations at which aircraft wait to enter the airfield until receiving permission from the Airport Traffic Control Tower (ATCT), known as the "holding position."

In 2012, the County completed a Master Plan Update and submitted an updated ALP to the FAA for review and approval. The Master Plan called for projects improving the east side area (including a passenger terminal replacement), a parking garage on the east side, a full parallel taxiway for the west side, and development for a potential second Fixed Base Operator (FBO). The ALP was partially approved on a conditional basis in August of 2013 for projects on the east side (terminal replacement, etc.), but not for projects on the west side (the full parallel taxiway on the west side and the second FBO were not included in the FAA approval). The conditional basis of the ALP approval was subject to subsequent NEPA compliance.

No runway changes were recommended in the Master Plan because that study assumed continuation of the County's wingspan policy and the taxiway/runway design Modification to Standards granted by the FAA[2]. Changes in the air carrier fleet were not expected at the time the Master Plan was completed.

In 2014, the County commissioned an Air Service Study to consider how the industry was expected to evolve with changes that were occurring in aircraft fleet. That study found that the regional jets with wingspans less than 95 feet will be phased-out by commercial operators by 2028. This means that if ASE retained the 95-foot wingspan restriction, the airlines would not be able to provide similar scheduled commercial passenger air service at ASE in the future because the aircraft contained in their fleet would not meet those specifications. Thus, the Air Service Study noted a substantial dilemma for Pitkin County: either risk the loss of commercial passenger jet service to/from ASE or modify the airfield to enable commercial service by the jet aircraft that could be in service in the future. The Air Service Study analyzed options that would enable ASE to retain commercial passenger service, similar to what occurs today (but with aircraft that will be in operation), and the recommendations of that study are brought forward into the analysis of this EA. The lifting of the wingspan restriction would require a vote of the Pitkin County Board of County Commissioners. Therefore, this EA evaluates both the east side improvement projects (new passenger terminal and parking garage) proposed in the 2012 Master Plan Update, as well as the airfield improvements from the Air Service Study. Both efforts are reflected in the 2015 ALP Update referenced in the remainder of this report.

[2] FAA's design standards are mandatory for airports that receive federal funding through the Airport Improvement Program. When an airport cannot meet all of the standards due to physical constraints, FAA must approve a modification to standards that will maintain an acceptable level of safety.

1.4 Other Considerations

In May 2017, the FAA's Western Service Area (WSA) Operations Support Group (OSG) determined that ASE air traffic control's (ATC) techniques of modifying an aircraft's flight path while on the LINDZ EIGHT departure procedure was not in line with FAA rules and regulations. As a result, the FAA suspended the technique causing an increase in separation distances between arriving aircraft, which has decreased the number of operations per hour. Though ASE is able to accommodate the same number of flights on a daily basis, the flights are now spread out throughout the day. Though this is slightly different from what was analyzed in this EA, it would not result in a change in the impacts disclosed since the total number of daily operations have remained the same. The FAA is working diligently to return ASE to pre-May 2017 operational rates and conditions with the publishing of a VFR Departure Procedure, the COZY ONE, in October of 2017 and amending ATC techniques.

During the fall of 2017, the FAA will begin developing Performance Based Navigation (PBN) procedures in order to increase operational efficiency and safety. This review process could take up to two years to complete and will consider the proposed actions included in this EA. Any changes to existing published procedures or any new procedures identified as part of this process will be analyzed in a separate NEPA document.

Chapter 2 – Purpose and Need

This chapter identifies the Purpose and Need for the Proposed Federal Actions. In general terms, the purpose and need for a project identifies the issues, goals, and objectives associated with the project, answering questions like "Why is the project needed?", "What problem is being solved?" and "What purpose will it serve?" This chapter also provides a list of federal, state, and local actions, as well as an anticipated timeframe for the Proposed Actions and associated projects.

The proposed projects are categorized as those projects related to the Runway Reconfiguration (to meet FAA airfield design standards) and those projects related to the Terminal Area Improvements (improving the efficiency of ASE). Therefore, two purposes and several needs are described below as related to the two separate projects.

2.1 Purpose and Need of the Runway Reconfiguration

2.1.1 Background

2.1.1.1 FAA Airfield Design Standards.

FAA Advisory Circular (AC) 150/5300-13A, *Airport Design*, identifies the standards that FAA has established for airfields to ensure operational safety. The Airport Reference Code (ARC) is a system developed by the FAA to relate airport design criteria to the operational and physical characteristics of the aircraft that use an airport. The ARC has two components. The first component, depicted by a letter A through E, is the aircraft approach category and relates to certified aircraft approach speed. Based on FAA AC 150/5300-13A, aircraft are grouped into five approach speed categories:

- Category A: Approach speeds less than 91 knots;
- Category B: Approach speed of 91 knots or more, but less than 121 knots;
- Category C: Approach speed of 121 knots or more, but less than 141 knots;
- Category D: Approach speed of 141 knots or more, but less than 166 knots; and
- Category E: Approach speed of 166 knots or more.

Aircraft Approach Categories A and B typically include small piston engine aircraft and a limited number of smaller, commuter turboprops and business jets. Category C consists of business jets as well as commercial service regional and other commercial jet and propeller aircraft. Categories D and E include some business jet models and some high performance smaller jets, as well as larger jet aircraft generally associated with wide-body commercial and/or military use.

The second component of the ARC, depicted by a Roman numeral, is the airplane design group, which is categorized by wingspan or tail height. Where an airplane is in two categories, the most demanding category should be used.

Under the County's current wingspan and weight limit, ASE is an ARC D-III airport. D-III includes aircraft with a wingspan up to 118 feet. However, even though ASE has a D-III ARC, it does not fully comply with D-III standards. For this reason, the FAA previously provided a Modification to Standards when the County enacted its 95-foot wingspan restriction. The design standards are included in **Table 2-1**.

Table 2-1 ARC D-III Standards and Deficiencies – ASE

	Existing ASE Condition	FAA Standard	Difference/Shortfall
Runway/Taxiway Separation	320 feet	400 feet	80 feet
Runway Width	100 feet	150 feet	50 feet
Weight Limit	100,000 lbs	150,000 lbs	50,000 lbs

Source: FAA AC 150/5300-13, Airport Design; Mead & Hunt, 2016

To achieve the FAA airfield design standards, Pitkin County would be required to increase the runway-to-taxiway separation by 80 feet and to increase the width of the runway by 50 feet.

According to FAA AC 150/5200-13A, Runway Safety Areas must be "cleared and graded and have no potentially hazardous ruts, humps, depressions or other surface variations." Additionally, the Object Free Area should also not contain objects that are non-essential for air navigation or aircraft ground maneuvering purposes. This means that Owl Creek Road and the Owl Creek Bike path would need to be relocated outside of the Object Free Area.

Wildlife Considerations: A wildlife hazard management plan (WHMP) for ASE was completed in the summer of 2012. The purpose of the plan was to identify specific wildlife hazards at ASE and then provide recommendations. This fulfills the legal requirements set forth in 14 CFR Part 139.337(e). Owl Creek was identified in the WHMP as an attractant within the critical zone, which is the area within 10,000 feet of ASE as measured from the nearest aircraft operations area. The separation distances are based on (1) flight patterns of aircraft, (2) altitude at which most strikes occur, and (3) recommendations from the National Transportation Safety Board. Nationwide approximately 75 percent of all bird-aircraft strikes by civilian aircraft occur within this critical zone. While removing this wildlife attractant from the critical zone is not a mandate for the Runway Reconfiguration, it would occur at the same time, and thus, under the terms of NEPA for actions occurring in a similar time, is considered as part of the Runway Reconfiguration.

2.1.1.2 Current and Forecast Fleet Mix.

In 2014, under the Air Service Study, coordination with air carriers indicated that the existing aircraft currently serving ASE under the 95-foot wingspan restriction are being phased-out of the commercial service fleet and being replaced by aircraft with larger wingspans and higher seat counts by 2028. According to the Air Service Study, the CRJ-700 and the Q-400 are the only commercial aircraft that are able to operate in and out of ASE year-round that are under the 95-foot wingspan restriction. Since the start of this Study the Q-400, a propeller aircraft, has already stopped operating at ASE.

Based on this information, the Air Service Study examined the existing and future aircraft to determine whether the commercial service fleet will contain aircraft that can operate at ASE within the current 95-foot restriction both from a wingspan and a performance standpoint. Aircraft technical specifications are provided in **Table 2-2.** The table illustrates that other than the CRJ-700 which is being phased-out, no existing or future aircraft meet three important criteria: 1) the 95-foot wingspan, 2) the current weight limit and 3) can operate out of ASE with the current airfield configuration. The existing shorter wingspan aircraft, such as the E-170, E-175, E-190, and E-195, are not capable of operating in and out of Aspen due to how the aircraft operate related to the extreme terrain. Those future aircraft that can operate at ASE from a performance standpoint all have wingspans longer than 95 feet.

For ASE to continue to support future jet-based commercial passenger service, the County would need to meet all FAA design standards and remove the 95-foot wingspan restriction. Coupled with the removal of the restriction, the FAA would require the County to reconfigure the airfield to meet its current airfield design standards.

This forecast takes into account that the wingspan restriction will be lifted in the future and assumes that as soon as the wingspan restriction is lifted, airline and corporate operators will start using larger aircraft at ASE. As a result, the forecast identified the aircraft operations that would be affected and the aircraft that would replace the phased-out aircraft. **Table 2-3** shows the forecasts for the No Action and With Project scenarios. The forecast in the 2015 ALP Update assumes an unconstrained forecast (i.e. that in the future [2028], the airfield will be in compliance with FAA design standards), allowing for the longer-wing air carrier fleet to operate at ASE. This forecast was reviewed and approved by the FAA (**Appendix 10**). The No Action therefore, will represent a constrained scenario, where air carrier operations will be limited to turboprop activity, paired with an increase in general aviation (GA) charter jet operations to account for the reduction in service via the air carriers. The No Action would likely have the same number of operations, but due to the lower seating capacity of the turboprops, enplanements would likely decrease, when compared to the With Project Scenarios.

Table 2-2 Aircraft Technical Specifications – ASE						
	Wingspan					
Aircraft Type	Feet/Inches	Meter	Max Landing Weight (lbs.)	ASE Performance Capable	Meets/Does Not Meet ASE Operational Restrictions	Number of Seats
Current Aircraft						
CRJ-700	76' 3"	23.2	67,000	Yes	Meets	64-70
Q-400[3]	93' 3"	28.4	62,000	Yes	Meets	70
CRJ-900	81' 7"	24.9	73,500	No	Meets	76
CRJ-1000	85' 11"	26.2	81,500	No	Meets	100
E-170	85' 4"	26.0	72,312	No	Meets	70
E-175	85' 4"	26.0	74,957	No	Meets	78-88
E-190	94' 3"	28.7	94,799	No	Meets	97
E-195	94' 3"	28.7	99,208	No	Meets	106
Future Regional Aircraft						
E-175 E2	101' 7"	31.0	86,201	Yes*	Does not meet	80
E-190 E2	110' 6"	33.7	109,018	Yes*	Does not meet	97
E-195 E2	115'"	33.7	118,498	TBD*	Does not meet	118
MRJ-70 Standard	95' 9"	29.2	79,807	TBD	Does not meet	70
MRJ-90 Standard	95' 9"	29.2	83,776	TBD	Does not meet	90
CS100 Base	115' 1"	35.1	110,000	Yes	Does not meet	110-135
CS300 Base	115' 1"	35.1	121,500	Yes	Does not meet	135
Comparison Non-Regional Aircraft						
Airbus A319	111' 11"	34.1	138,000	Yes**	Does not meet	126-144
Boeing 737-700 MAX	117 '5"	35.7	128,928	Yes**	Does not meet	118-143
Boeing 717	93' 5"	28.5	100,000	Yes**	Does not meet	110

Source: Air Service Study, Manufacturers Coordination, Jviation, 2014
Note: ASE Operational restriction includes the 95 ft. wingspan restriction and the 100,000 lb. weight restriction. Performance capability refers to the aircrafts ability to fly in an out of ASE (based on the constrained terrain) under an air carriers ops specs.
*Data on E-Jets E-2 are preliminary
** Potentially performance capable, but likely limited during hotter summer months. Pending airline coordination will help determine if these aircraft could meet airline safety requirements for performance.

3 Note the Q-400 has stopped operating at ASE since January 2016.

Table 2-3 Summary of Aviation Activity Forecasts, 2015-2033								
			Actual	Forecasts				
A/C Operations by Type			2015 Actual	2023 No Action and With Terminal Project	2028 No Action Runway and With Terminal Project	2028 Runway Project: First Year of Implement-ation	2033 No Action	2033 Runway Project: Out Year
	Scheduled Commuter (less than 50 seats)		36	0	0	0	0	0
Air Carrier Aircraft	**Total Air Carrier**		**8,950**	**10,012**	**9,245**	**10,877**	**10,037**	**11,808**
	Less than 95 ft	Total Air Carrier (wingspan less than 95') Total	8,950	10,012	9,245	6,877	10,037	938
		CRJ-700	*8,950*	*10,012*	*4,623*	*3,439*	*0*	*0*
		Turboprop	*0*	*0*	*4,622*	*3,438*	*10,037*	*938*
	Greater than 95 ft	Total Air Carrier (wingspan greater than 95')	0	0	0	4,000	0	10,870
		New generation regional jets	*0*	*0*	*0*	*3,453*	*0*	*9,228*
		737-MAX	*0*	*0*	*0*	*547*	*0*	*1,642*
GA and Air Taxi Aircraft	**GA and Air Taxi Total**		**30,001**	**27,550**	**30,059**	**28,427**	**31,106**	**29,335**
	Single Piston		*3,935*	*3,614*	*3,729*	*3,729*	*3,848*	*3,848*
	Twin Piston		*2,097*	*1,926*	*1,987*	*1,987*	*2,050*	*2,050*
	Single TP		*998*	*917*	*946*	*946*	*976*	*976*
	Twin TP		*1,662*	*1,526*	*1,574*	*1,574*	*1,625*	*1,625*
	Jet		*20,816*	*19,116*	*21,356*	*19,724*	*22,125*	*20,354*
	Helo		*493*	*453*	*467*	*467*	*482*	*482*
Military Aircraft	**Military Local**		**81**	**30**	**30**	**30**	**30**	**30**
	Military Itinerant		**156**	**107**	**107**	**107**	**107**	**107**
TOTAL	**Total Aircraft operations**		**39,224**	**37,699**	**39,441**	**39,441**	**41,280**	**41,280**
	Total Enplanements		**233,541**	**263,153**	**258,860**	**296,140**	**281,036**	**333,259**

Source: 2015 data: ATADS 2016. 2015 ALP Update – Forecast Chapter, Jviation 2015.
+Note: For 2023 the number of operations for the No Action and the Terminal are the same because there would be no operational changes in the year of implementation for the Terminal Project.

ASE is served by three airlines (American, Delta, and United). Currently, the CRJ-700 (a regional jet) is the only commercial aircraft that meets the 95-foot wingspan restriction and is operating in and out of ASE year-round. The Q-400 was retired in January 2016 and no longer operates at ASE. Therefore, 100% of these commercial service flights now operate the CRJ-700. **Table 2-4** shows the city pair markets served to/from ASE.

During the Air Service Study, coordination with airlines indicated that many of the 70 seat regional jets and turboprops will be retired by 2025 and will likely be replaced with larger regional jet aircraft such as the Embraer E175 E2, E190 E2, or the E195 E2 that have 80-144 seats, or be replaced by newer aircraft such as the Embraer E170 and Mitsubishi (MRJ-70) that are 70-86 seat regional jet aircraft. Given the length of the runway at ASE, the altitude, and the surrounding terrain, service by larger commercial air carrier aircraft may not be able to consistently operate with full passenger and baggage loads. It is not possible to determine how established airlines would alter their operation (i.e., weight/payload restriction, aircraft operating performance) to allow large aircraft such as B737 to operate at ASE once ASE meets all applicable FAA design standards. The Air Service Study indicated that technically the B737 aircraft could operate at ASE once it meets all FAA design standards. Discussions with air carriers have indicated that the 737-MAX could potentially operate out of ASE with the runway relocation to meet FAA standards, but likely operating under payload restrictions in certain conditions. While no air carrier has officially expressed interest in operating the 737 out of ASE, it is a potential condition that the EA will address. Therefore, this EA will discuss the modeling assumptions for inclusion of a conservative fleet mix, including a number of operations by the 737 in the future conditions (With Project).

Table 2-4 Non-Stop ASE Markets in 2015

Airline	Markets
United	Aspen/Pitkin County Airport (ASE) - Chicago O'Hare International Airport (ORD)
United	Aspen/Pitkin County Airport (ASE) - Houston Intercontinental Airport (IAH)
United	Aspen/Pitkin County Airport (ASE) - Denver International Airport (DEN)
United	Aspen/Pitkin County Airport (ASE) - Los Angeles International Airport (LAX)
United	Aspen/Pitkin County Airport (ASE) - San Francisco International Airport (SFO)
Delta	Aspen/Pitkin County Airport (ASE) - Hartsfield-Jackson Atlanta International Airport (ATL)
Delta	Aspen/Pitkin County Airport (ASE) - Minneapolis-St. Paul International Airport (MSP)
American	Aspen/Pitkin County Airport (ASE) - Dallas/Fort Worth International Airport (DFW)
American	Aspen/Pitkin County Airport (ASE) - Los Angeles International Airport (LAX)

Note some markets are not served year-round.
Source: 2015 ALP Update, Jviation, 2015

2.1.2 Purpose and Need Statement for the Runway Reconfiguration.

Airlines are changing their aircraft fleet in response to air travel demand and it is expected that the aircraft serving ASE, which meet the County's wingspan and weight limit, will eventually be withdrawn from service in favor of larger aircraft with greater wingspan and passenger seating. Based upon manufacturer information, aircraft replacing the CRJ-700 will not meet the wingspan and weight criteria. Unless the current wingspan policy is rescinded, the Airport risks the loss/reduction of commercial passenger service as it stands today. Before the County can rescind its current policy, FAA will require that the airfield be brought into compliance with current airfield design standards.

Given these factors, the purpose of the proposed runway reconfiguration is to enable ASE to accommodate the anticipated future aircraft and bring the airfield into compliance with the FAA airfield design criteria, allowing for safe separation of aircraft movement on the airfield.

2.2 Purpose and Need of the Terminal Improvements

The purpose and need for improvements to the passenger terminal at ASE are related to deficiencies in the current terminal, issues associated with the current roadway configuration and passenger parking, and deficiencies in the apron area where aircraft are parked, as discussed below**.**

2.2.1 Terminal Deficiencies

The existing terminal is a 45,000-square foot, single-level structure that is divided into three general areas: a ticketing area to the north, a departure area in the center, and a baggage claim area to the south. The terminal building is situated near the middle of the airfield, on the east side of the runway/taxiway complex. A single common departure lounge supports the ground loading of commercial passengers to the adjacent terminal apron aircraft parking positions. There are no enclosed passenger loading bridges. Existing terminal building use areas include airline ticket counters, baggage handling areas, passenger waiting areas, rental car counters, snack bar/restaurant area, and airport/airline administration offices.

According to the analysis completed in the 2012 Master Plan Update, "Despite previous terminal expansion measures in 1986-1987, passenger demand at ASE has outpaced facility capacity, putting a strain on ASE facilities and roadways during peak activity periods. Also, the current use areas are not configured in an efficient manner, resulting in some spaces that are oversized and many spaces that are undersized to fulfill their intended function. As the building continues to age, the recurring costs to keep the facility in good repair will continue to increase without major investment in newer and more efficient building systems."

The existing building has substantial deficiencies in meeting life/safety needs. A review of the building life safety/fire protection systems, mechanical systems, and electrical systems was performed by BCER, Inc. Numerous deficiencies were identified in these building systems. Some systems with deficiencies included the sprinkler systems, exterior deluge systems (exterior fire protection), insufficient number of fire hydrants, and the fire alarm system. Other deficiencies that were identified included ramp and restroom areas that don't comply with the Americans with Disabilities Act (ADA), poor access to rooftop heating, ventilation and air conditioning (HVAC) systems, duct work, boiler plant, roof conduits in need of repair; and the need to remediate electrical deficiencies, test and replace egress lighting, perform thermal image scanning of electrical systems, provide emergency power via generator to certain areas, among others.

Additionally, Pitkin County and the City of Aspen have jointly created and adopted an Efficient Building (EB) program to encourage sustainable and efficient construction in the County, something that would be cost prohibitive to meet with the current terminal. As a result, the existing facility does not enable Pitkin County to reduce its energy use and carbon footprint.

The following areas were cited in the 2012 Master Plan Update as being deficient in space relative to the existing and future demand. Full details of the terminal deficiencies are described in the full Master Plan Update (available at ASE airport offices).

2.2.1.1 Gate Areas/Hold Room Deficiencies

The gate areas represent the single largest undersized existing area at ASE. All flights board from doors that are too close together, which results in passenger confusion and congestion. As flights are called, passengers often approach the wrong door and attempt to board aircraft for which they are not flying and then when identified, block access for others. The hold room is currently too crowded on peak weekends in the winter, during normal daily operations. Four to five flights are typically waiting to board at a time. Furthermore, there is only one hold room service counter that houses too many staff, leading to a perception by passengers that customer service is poor. There is also limited room for adequate concessions and restrooms on the secure side due to the hold room deficiencies. Under the assumption that the new commercial service aircraft in the future will have greater seat capacity, these deficiencies in the hold room will only be made worse.

Forecasts in the Master Plan Update indicate that in 2017, eight gates would be required during the average day, peak hour and 10 would be required for the peak day, peak hour. The existing terminal only has four actual gates; however, parking is available for six aircraft. Therefore, the existing terminal facilities and accompanying apron would not be able to meet the projected future passenger and associated aircraft activity.

2.2.1.2 Transportation Security Administration (TSA)

A large constraint placed on the passenger terminal building has been the required adaptation of an older building to modern security standards and practices. The existing building was not designed to accommodate present security protocols and standards and as a result, the current security checkpoint encroaches on other spaces. This encroachment of one space into another reduces efficiency and causes terminal crowding.

The security processing area is typically a pinch point of congestion for both passenger and baggage screening. Based on discussions with TSA during the Master Plan, the TSA screeners should process 200 passengers per lane per hour; however, they typically only process 130 passengers, creating long lines and the potential for passengers to miss flights. Additionally, the baggage screening area is inadequate and inefficient. Part of this is related to a higher-than-average bag count per passenger and an abundance of oversized baggage (skis, etc.) that slows the processing rate of the machines. Additional space for TSA is required for passenger screening, baggage screening, a training room, staff break room, and office space.

2.2.1.3 Baggage Service Office

The baggage service office is insufficient. When weather inevitably causes delays preventing passenger bags from making their connection through Denver, baggage trucks from Denver often deliver hundreds of bags at a time. There is presently no secure space to accommodate this influx of luggage and the bags are placed on the floor indefinitely for people to retrieve on the honor system. This presents both a potential security threat and a liability for ASE.

2.2.1.4 Rental Car Operators

The rental car operators currently lack adequate space in the baggage claim areas of the terminal for personnel as well as places to store vehicles ready for rental. They have substantially less space at ASE in terms of ready parking positions and equipment storage as they do at comparably sized airports.

The crowded condition at the rental counters is both a nuisance to customers and presents a potential privacy violation in that neighboring customers could easily overhear/oversee sensitive information. Furthermore, child seats are stored in front of the counters or in an unheated shed in the parking lot because there is not enough room behind the counters. These factors add up to customer queues of up to 7-10 people during peak hours.

2.2.1.5 Summary of Terminal Deficiencies

The existing terminal is deficient in many of the functional areas at current and future activity levels. Some of the largest deficiencies are associated with baggage and public circulation areas, as well as mechanical/electrical and building support systems space. As discussed earlier, these deficiencies are expected to be worse with higher passenger levels associated with the aircraft that would replace the CRJ-700 when it is phased out.

2.2.2 Terminal Circulation Road Requirements and Parking Needs.

Data presented in the 2012 Master Plan Update indicates a total of 257 long-term and 223 short-term stalls would be needed to accommodate the air travel demand in 2017, for a combined total of 480 additional passenger parking stalls. Today, approximately 270 public parking stalls are available, but in 2017, 480 parking spaces would be needed, an increase of 210 stalls or 77 percent. By 2027, 566 public parking stalls would be needed, resulting in a shortage of 296 stalls or a 110 percent deficit.

Forecasts also indicate that, for 2017, 88 stalls will be needed for employee parking versus the 69 stalls available (a shortage of 19 stalls), as shown in **Table 2-5**. By 2027, this deficit would increase to 35 employee stalls, as 104 stalls would be needed then, but only 69 are available today. Additionally, 2017 forecasts indicate that 150 ready/return rental car stalls and 97,000 SF for rental car overflow storage parking will be needed. The sum of these stated parking needs is 1,550 parking stalls for 2017, and 1,713 in 2027, shown in **Table 2-5**.

Table 2-5 Parking Requirements			
Description	Existing Terminal Parking	2017 Parking Stall Needs	2027 Parking Stall Needs
Airline Functions			
Short Term Parking	115	223	263
Long Term Parking	155	257	303
Employee Parking	69	88	104
Rental Car Ready Return	58	150	226
Rental Car Storage	265	363	428
RFTA Park-n-ride	0	225	205
Commercial Development Parking	0	244	184
Total Parking Requirement	**662**	**1,550**	**1,713**

Source: Mead & Hunt, Inc.

2.2.3 Apron area needs.

The existing commercial service terminal apron currently slopes down toward the terminal building. This creates public health and safety issues. During periods of intense rain, the terminal has occasionally flooded due to this sloping issue.

Additionally, according to the 2012 Master Plan Update, the commercial service apron is undersized. Forecasts in the Master Plan indicated that, in 2017, eight gates would be required to serve the average day-peak hour and 10 would be required for the peak day-peak hour. This means that up to 10 aircraft could be parked at one time on the terminal apron. The Master Plan Update analyzed parking based on the existing type of aircraft operating at ASE with the 95-foot wingspan restriction in place. Based on this analysis, there is apron area currently available for six aircraft of current wingspans (under 95 feet). Therefore, the existing apron is already deficient based on current aircraft and existing and future passenger activity. This deficiency could be made worse by the potential future change in aircraft, which would have longer wingspans and would require more apron space. With the higher capacity aircraft that would operate at ASE in the future if ASE meets all FAA design standards and the wingspan restriction is lifted, the peak number of aircraft would not likely increase because their larger capacity.

2.2.4 The need to reduce apron noise on surrounding communities.

Coordination with the public during the Master Plan Update identified noise from the GA apron as a substantial concern for the businesses and residences near the Airport Business Center. The GA apron can be very busy during peak times in the summer and the winter, with numerous business jets parked. Jets are generally parked with Auxiliary Power Units (APUs) running, facing Highway 82 and the Airport Business Center (ABC).

These units are run prior to taking off, during maintenance, and sometimes for hours while waiting for clients. This creates noise in the surrounding community. While this project is not directly related to the needed terminal improvements, its need could be addressed at about the same time as the terminal improvements.

2.2.5 Purpose and Need Statement for the Terminal Improvements Projects.

The existing terminal is unable to efficiently accommodate existing and forecast passenger demand. The purpose is to meet the existing and future passenger and staff needs at ASE and improve operational efficiency of the terminal space and apron areas.

2.3 Federal Actions

The types of actions likely to be undertaken by the FAA include:

- Unconditional approval of the proposed actions as shown on the ALP;
- Federal funding for the proposed actions under the Airport Improvement Program (AIP);
- Modifications to existing procedures;
- Approval of an amendment to the Airport's Certification Manual per 14 C.F.R.139 (Aircraft Rescue and Firefighting Requirements) and 49 U.S.C. 44502(b); and
- Relocation or upgrade of existing NAVAIDs per 49 U.S.C. 44502(a)(1).

2.4 Actions by Other Agencies

Permits and clearances would also be required from various federal, state, and local agencies such as the US Army Corps of Engineers and various departments within the State of Colorado. The agencies will be coordinated with during the development of this EA. See **Chapter 4**, *Affected Environment and Environmental Consequences* and **Chapter 5***, Mitigation and Best Management Practices*, for more detailed information about permits and clearances.

2.5 Airport Operator Actions

The actions expected by the Airport Sponsor include:

- Application for federal financial assistance;
- Application for and approval of a building and grading permit;
- Formal approval (public hearing) from the BOCC to accept the EA and forward it to the FAA for their independent review;
- Airport Design Guidelines Review and Approval;
- Local Land Use Approval: Location and Extent Review approval (for each phase of construction); and
- Construction of the Preferred Alternative.

2.6 Action Funding and Time Frame

According to the 2015 ALP Update, during the preliminary engineering, the total preliminary cost estimates for updates to the terminal area and the runway shift were identified, as well as when the projects would be completed.

The Terminal Area (design, terminal construction, apron construction, parking, and roadway improvements) would cost approximately $90,475,777 for either alternative, but dependent on final design and finishes selected. This would be completed in 2018-2022. The Runway Shift (design and construction) would cost approximately $87,488,974. These projects would be completed during the 2023-2027 timeframe so that the new runway is functional at the time that the air carrier fleet would be retired and switched over to the longer wingspan.

The Runway Reconfiguration, Terminal improvements and associated improvements would be completed using a combination of local, State and Federal funding paired with money from the Passenger Facility Charge (PFC) fund.

ASPEN/PITKIN COUNTY AIRPORT TRENDS

Kimley»Horn

TECHNICAL MEMORANDUM

To: John Kinney
Airport Director
Aspen-Pitkin County Airport

From: Brian Gulliver, P.E.
Kimley-Horn and Associates, Inc.

Date: June 3, 2019

Subject: ASE Airport Performance Evaluation

INTRODUCTION

At the request of the Aspen-Pitkin County Airport (ASE), Kimley-Horn was tasked with generating an Airport Performance Evaluation of (9) specific airport performance metrics (outlined below). A summary of the analysis and results is provided in this technical memo.

PERFORMANCE METRICS

METRIC		DATA RANGE
1)	Historical Enplanements	2008-2018
2)	Air Carrier Flights	2008-2018
3)	Air Carrier Operations	2008-2018
4)	Air Carrier Flight Cancellations	2008-2018
5)	Air Carrier Diversions	2008-2018
6)	Air Carrier Delays	2008-2018
7)	TSA Baggage Screening	2016-2018
8)	Fuel Sales	2015-2018
9)	Parking Fees	2017-2018

SUMMARY OF RESULTS

HISTORICAL ENPLANEMENTS (See Attachment 1)

Enplanement is defined as the act or process of a passenger boarding an aircraft. Enplanements at the Airport have sporadically grown since 2008 yielding an average annual compounding growth rate of 2.9% through 2018. The growth rate has been even stronger since 2014 at 6.9%. During this timeframe, 2018 observed a record number of Enplanements (283,848) while 2013 observed an eleven-year minimum (206,686).

AIR CARRIER FLIGHTS (See Attachment 2)

Air Carrier Flight is defined as any scheduled air carrier aircraft arriving from a domestic origin. Annual Air Carrier (AC) Flights at ASE decreased from 5,799 flights in 2008 to a minimum of 4,436 flights in 2013. AC Flight numbers rebounded and steadily increased to a maximum of 6,408 flights in 2018. The Average Annual Compounding Growth Rate observed from 2008 through 2018 is 1.0% while an accelerated growth is noted from 2013 to 2018 at 3.4%. On average, slightly more than half (51%) of all arrivals occur between December and March.

AIR CARRIER OPERATIONS (See Attachment 3)

Air Carrier Operation is defined as the sum of scheduled On-Time Flights, Air Carrier Delays, Weather Delays, National Aviation System Delays, Security Delays, Aircraft Late Arrivals, Cancellations, and Diversions. Since 2008, the Average Annual Compounding Growth Rate for Air Carrier Operations is 2.7% indicating an upward trend in operations at the Airport. The eleven-year low was recorded in 2015 at 3,620 operations while the maximum was recorded in 2018 at 6,861 operations.

AIR CARRIER FLIGHT CANCELLATIONS (See Attachment 4)

Air Carrier Flight Cancellation is defined as any scheduled arrival aircraft service that is terminated before departure due to unforeseen circumstances. Annual Arrival Air Carrier Cancellations at ASE peaked in 2008 (392 flights) while the minimum number of cancellations was recorded in 2015 (143 flights). Since 2015, AC Flight Cancellations have increased steadily through 2018 by 48 cancellations per year on average. Between 3.6% and 8.0% of arriving flights are cancelled each year.

AIR CARRIER DIVERSIONS (See Attachment 5)

Air Carrier Diversion is defined as any scheduled arrival aircraft service that is re-routed to an airport different from its original destination. Since 2008, approximately 2.8% (average annual percentage of operations) of arrival flights at the Airport were diverted. Arrival Air Carrier diversions peaked in 2014 at 5.5% while the minimum percentage of diversions was recorded in 2008 at 0.8%.

AIR CARRIER DELAYS (See Attachment 6)

Air Carrier Flight Delay is defined as any scheduled arrival aircraft service that arrives 15 or more minutes later than the planned arrival time at the destination gate. Since 2008 at ASE, approximately 23% of arrival flights are delayed on an average annual basis. The eleven-year minimum and maximum was recorded in 2010 and 2014 at 19% and 32% of flights respectively. When combined, Air Carrier and Late Arrival operations account for the majority (70%) of the delays at ASE.

TSA BAGGAGE SUMMARY (See Attachment 7)

Any unique baggage item screened and processed via TSA is considered in the calculation of the baggage summary at ASE Airport. TSA Processed the highest volume of bags at ASE in 2018 (238,303) while 2017 recorded a three year low (216,189). On an average monthly basis (2016 – 2018), January, February, and March experienced the highest volume of bags. March recorded the highest daily average of 1,341 bags. During the off-season months, July and August experienced higher volumes of baggage due to Summer vacation in the Aspen-Pitkin County area.

FUEL SALES (See Attachment 8)

Fuel Sale is defined as the quantity of money generated via purchase of eligible fuel provided by the Aspen-Pitkin County Airport. A Fuel Flowage Fee ($0.12 per gallon of fuel) is utilized to calculate the monetary amount of fuel sold. Annual fuel sales at the Airport averaged $500,000 annually from 2015 - 2018. July recorded annual highs averaging $73,140 and May recorded annual lows around $7,679.

PARKING REVENUE (See Attachment 9)

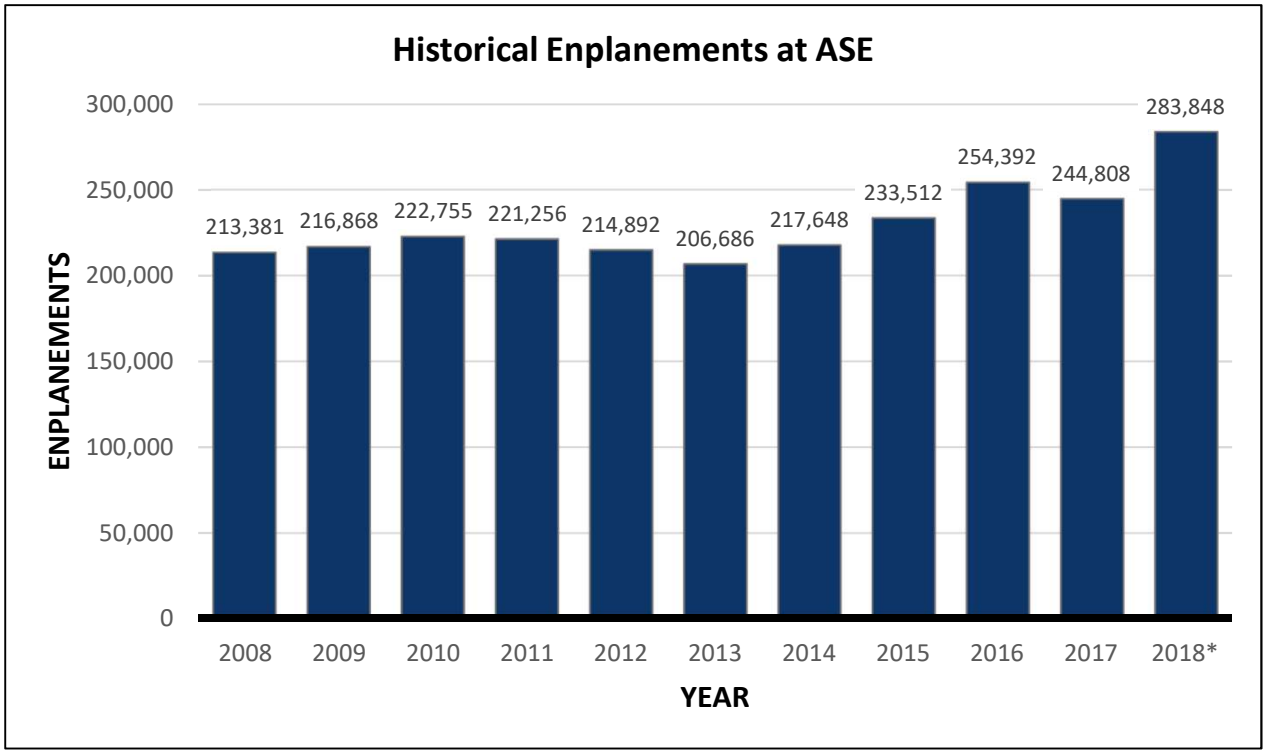
Parking Revenue is defined as the quantity of fees generated via vehicle parking services provided by the Airport. A vehicle parking fee is utilized to calculate the monetary amount (revenue) of parking services provided to its customers. Average monthly parking revenue increased the Airport from $43,532 to $59,451 in 2017 and 2018 accordingly. In 2017, the monthly high was recorded in August ($58,914) while 2018's high was recorded in October ($69,121). Monthly parking revenue remained the highest in the late Summer months through the Fall (August – November) in both 2017 and 2018. Higher parking volumes in this time frame is primarily due to summer vacation in the Aspen-Pitkin County area. Gross parking fees increased by 37% from 2017 to 2018.

HISTORICAL ENPLANEMENTS

Historical Enplanements at ASE			
Year	Enplanements	Annual Growth Rate	Rank - U.S. CSA
2008	213,381	17.1%	172
2009	216,868	1.6%	170
2010	222,755	2.7%	171
2011	221,256	-0.7%	172
2012	214,892	-2.9%	177
2013	206,686	-3.8%	177
2014	217,648	5.3%	175
2015	233,512	7.3%	172
2016	254,392	8.9%	170
2017	244,808	-3.8%	173
2018*	283,848	1.2%	N/A
*Bureau of Transportation (BTS.gov) T-100 Database			

Compounding Growth Rate 2008-2018*
2.9%

Source: Passenger Boarding (Enplanement) and All-Cargo Data for U.S. Airports, May 2019, FAA.gov.



Historical Enplanements Summary

Enplanement is defined as the act or process of a passenger boarding an aircraft. Enplanements at the Airport have sporadically grown since 2008 yielding an average annual compounding growth rate of 2.9% through 2018. The growth rate has been even stronger since 2014 at 6.9%. During this timeframe, 2018 observed a record number of Enplanements (283,848) while 2013 observed an eleven-year minimum (206,686).

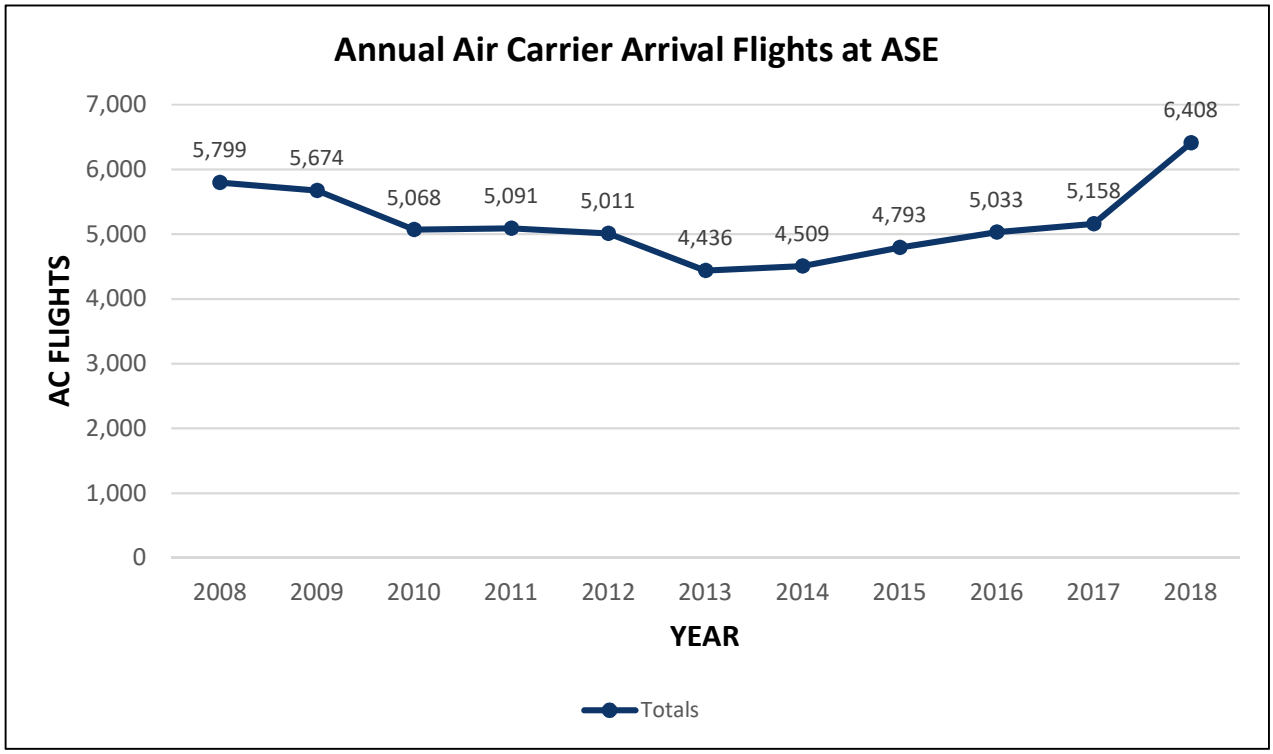
AIR CARRIER FLIGHTS (ARRIVALS)

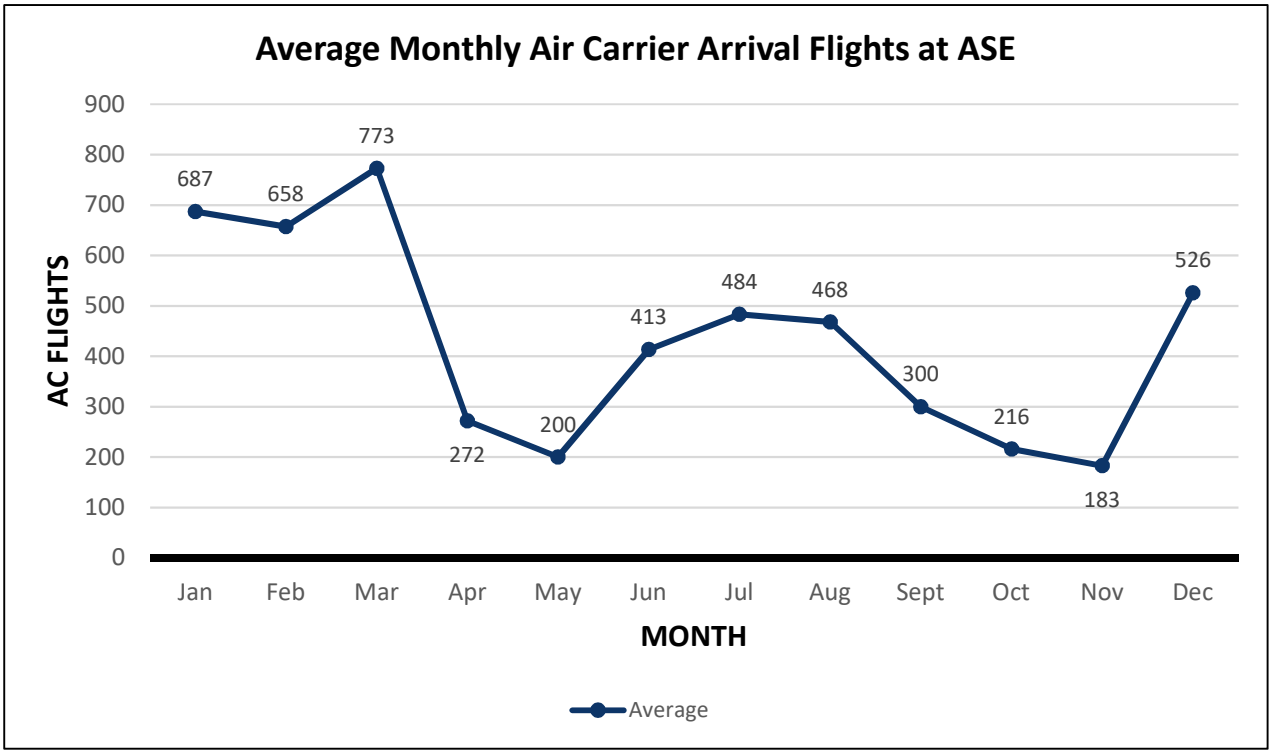
Summary of Arrival Air Carrier (AC) Flights at ASE													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Totals**
2008	617	609	699	305	344	532	595	580	397	352	294	475	**5,799**
2009	625	648	678	337	317	490	540	549	385	321	272	512	**5,674**
2010	730	632	726	306	261	394	466	440	289	174	133	517	**5,068**
2011	714	606	733	293	176	409	478	481	228	171	190	612	**5,091**
2012	748	760	861	275	138	365	456	421	240	147	157	443	**5,011**
2013	593	587	637	220	143	387	464	424	252	149	128	452	**4,436**
2014	547	587	749	214	174	368	448	408	256	196	130	432	**4,509**
2015	674	620	800	271	147	373	436	389	257	173	140	513	**4,793**
2016	717	720	771	216	119	352	490	451	298	203	133	563	**5,033**
2017	671	665	831	173	139	381	502	475	328	215	184	594	**5,158**
2018	921	800	1,020	384	244	497	444	529	370	276	251	672	**6,408**
Average	687	658	773	272	200	413	484	468	300	216	183	526	**5,180**
Grey Highligh represents peak season travel from January through March.													

Source: Bureau of Transportation Statistics T-100 Segment Data, May 2019, BTS.gov.

Compounding Growth Rate 2008-2018
1.0%

Compounding Growth Rate 2013-2018
7.6%





Air Carrier Arrival Flights Summary

Air Carrier Flight is defined as any scheduled air carrier aircraft arriving from a domestic origin. Annual Air Carrier (AC) Flights at ASE decreased from 5,799 flights in 2008 to a minimum of 4,436 flights in 2013. AC Flight numbers rebounded and steadily increased to a maximum of 6,408 flights in 2018. The Average Annual Compounding Growth Rate observed from 2008 through 2018 is 1.0% while an accelerated growth is noted from 2013 to 2018 at 3.4%. On average, slightly more than half (51%) of all arrivals occur between December and March.

AIR CARRIER OPERATIONS (ARRIVAL)

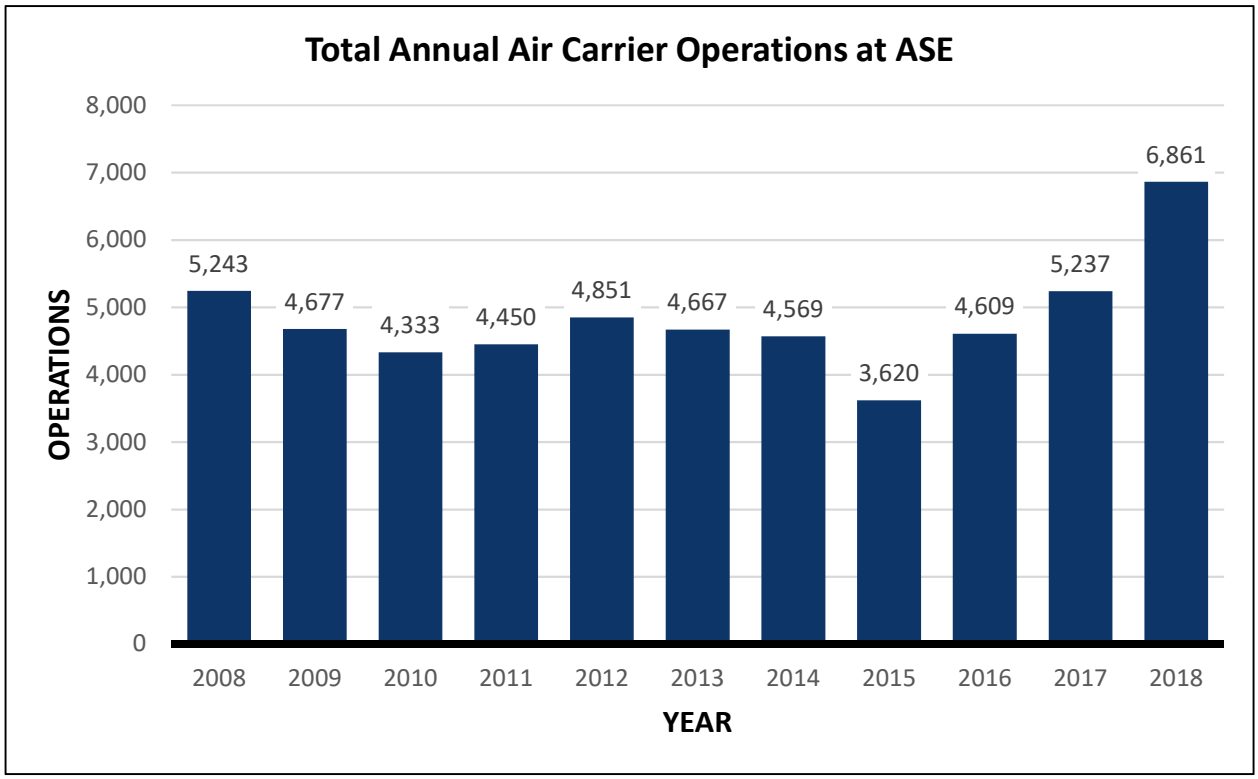
Year	Operations	Annual Growth Rate
2008	5,243	-0.1%
2009	4,677	-10.8%
2010	4,333	-7.4%
2011	4,450	2.7%
2012	4,851	9.0%
2013	4,667	-3.8%
2014	4,569	-2.1%
2015	3,620	-20.8%
2016	4,609	27.3%
2017	5,237	13.6%
2018	6,861	31.0%
TOTAL OPERATIONS	**53,117**	

Compounding Growth Rate 2008-2018
2.7%

Notes:

(1) Operations defined as the sum of On-Time flights, AC Delays, Weather Delays, National Aviation System Delay, Security Delay, Aircraft Late Arrivals, Cancellations, and Diversions

Source: Bureau of Transportation Statistics T-100 Segment Data, May 2019, BTS.gov.



Air Carrier Operations (Arrival) Summary

Air Carrier Operation is defined as the sum of scheduled On-Time Flights, Air Carrier Delays, Weather Delays, National Aviation System Delays, Security Delays, Aircraft Late Arrivals, Cancellations, and Diversions. Since 2008, the Average Annual Compounding Growth Rate for Air Carrier Operations is 2.7% indicating an upward trend in operations at the Airport. The eleven-year low was recorded in 2015 at 3,620 operations while the maximum was recorded in 2018 at 6,861 operations.

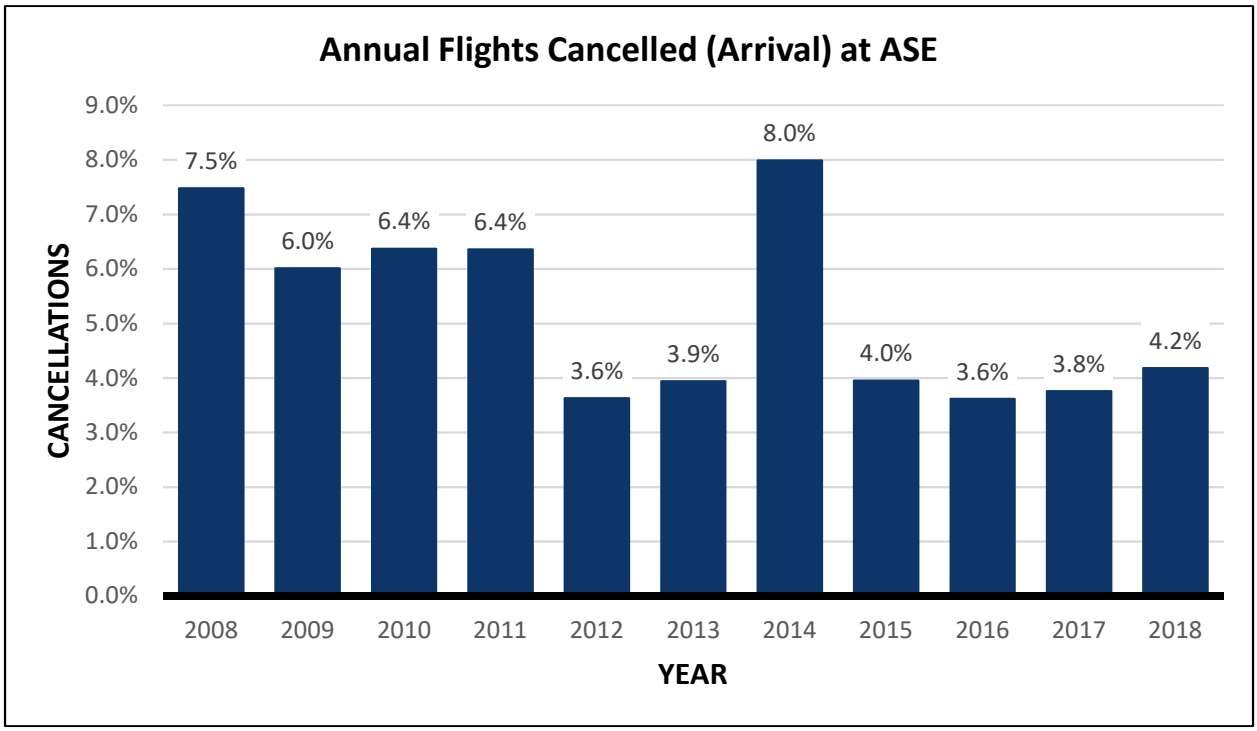
AIR CARRIER FLIGHTS CANCELLED (ARRIVAL)

Year	Cancelled	% Cancelled
2008	392	7.5%
2009	281	6.0%
2010	276	6.4%
2011	283	6.4%
2012	176	3.6%
2013	184	3.9%
2014	365	8.0%
2015	143	4.0%
2016	167	3.6%
2017	197	3.8%
2018	287	4.2%
AVERAGE	250	5.2%

Notes:

(1) Operation Categories: Cancellation, On-Time Flight, Air Carrier Delay, Weather Delay, National Aviation System Delay, Security Delay, Aircraft Late Arrival, and Diversion

Source: Bureau of Transportation Statistics T-100 Segment Data, May 2019, BTS.gov.



Cancelled Flights (Arrival) Summary

Air Carrier Flight Cancellation is defined as any scheduled arrival aircraft service that is terminated before departure due to unforeseen circumstances. Annual Arrival Air Carrier Cancellations at ASE peaked in 2008 (392 flights) while the minimum number of cancellations was recorded in 2015 (143 flights). Since 2015, AC Flight Cancellations have increased steadily through 2018 by 48 cancellations per year on average. Between 3.6% and 8.0% of arriving flights are cancelled each year.

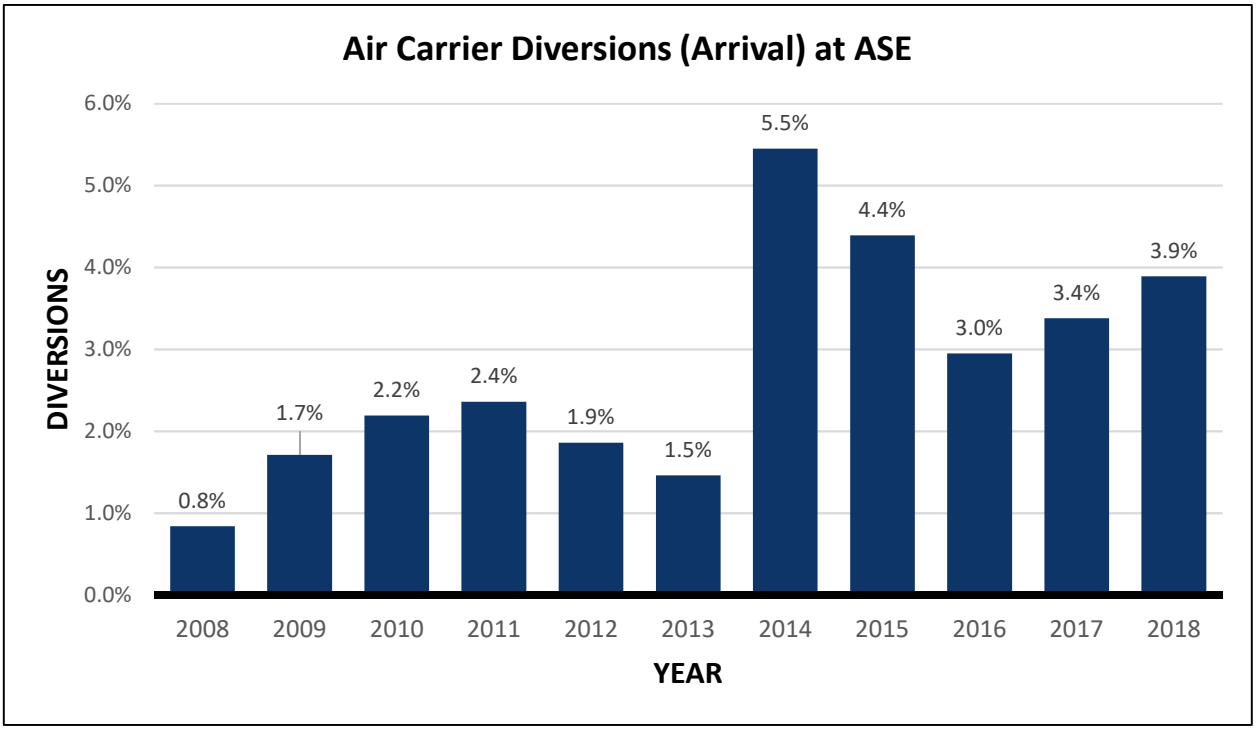
AIR CARRIER DIVERSIONS (ARRIVAL)

Year	Diverted	% Diverted
2008	44	0.8%
2009	80	1.7%
2010	95	2.2%
2011	105	2.4%
2012	90	1.9%
2013	68	1.5%
2014	249	5.5%
2015	159	4.4%
2016	136	3.0%
2017	177	3.4%
2018	267	3.9%
AVERAGE	134	2.8%

Notes:

(1) Operation Categories: Cancellation, On-Time Flight, Air Carrier Delay, Weather Delay, National Aviation System Delay, Security Delay, Aircraft Late Arrival, and Diversion

Source: Bureau of Transportation Statistics T-100 Segment Data, May 2019, BTS.gov.



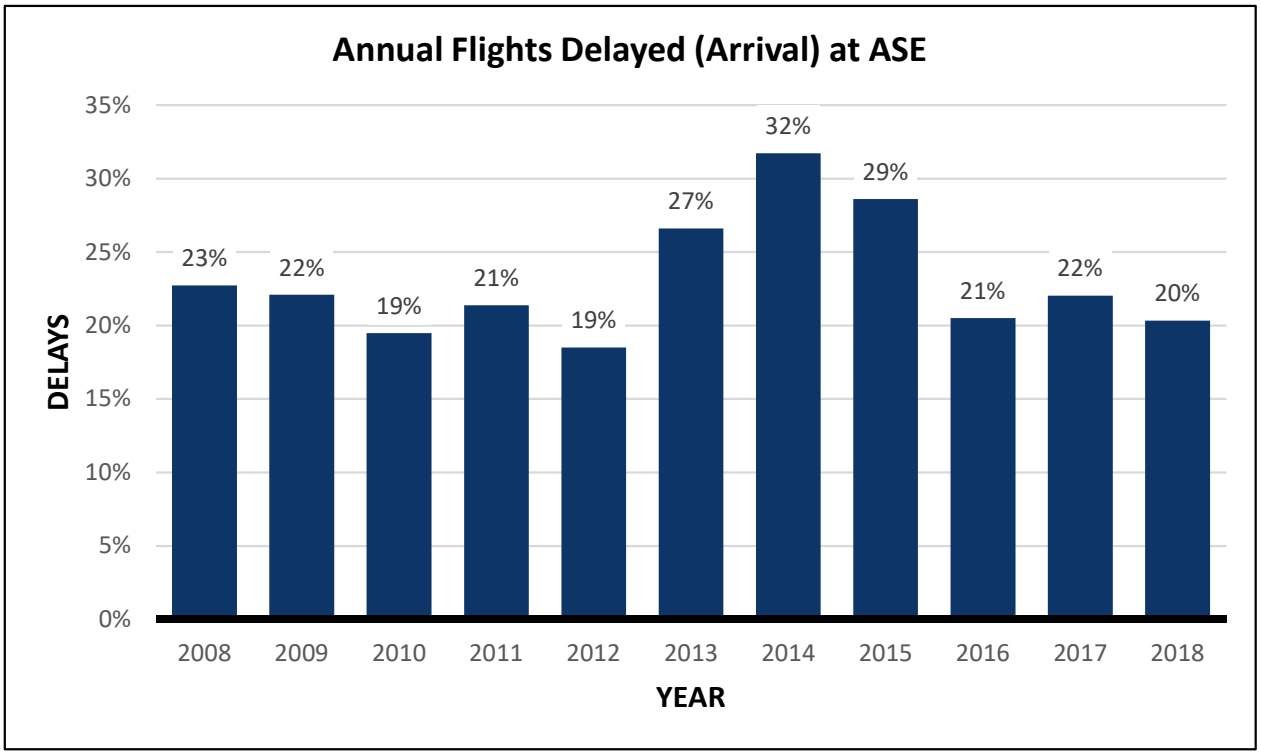
Air Carrier Diversions (Arrival) Summary

Air Carrier Diversion is defined as any scheduled arrival aircraft service that is re-routed to an airport different from its original destination. Since 2008, approximately 2.8% (average annual percentage of operations) of arrival flights at the Airport were diverted. Arrival Air Carrier diversions peaked in 2014 at 5.5% while the minimum percentage of diversions was recorded in 2008 at 0.8%.

AIR CARRIER FLIGHTS DELAYED (ARRIVAL)

	Delay Classification					Summary	
Year	Air Carrier	Weather	NAS	Security	Late Arrival	TOTAL	% Delay
2008	467	109	143	4	468	1,191	23%
2009	404	119	214	2	293	1,032	22%
2010	299	54	180	3	308	844	19%
2011	348	38	245	1	319	951	21%
2012	335	48	169	1	327	880	19%
2013	456	57	262	2	463	1,240	27%
2014	533	76	324	0	516	1,449	32%
2015	364	60	296	6	309	1,035	29%
2016	309	63	282	1	290	945	21%
2017	368	79	312	3	391	1,153	22%
2018	412	86	441	1	455	1,395	20%
AVERAGE	390	72	261	2	376	1,101	23%

Source: Bureau of Transportation Statistics Airline Service Quality Performance 234, May 2019. BTS.gov.



Delay Class Definitions:

Air Carrier Delay: The cause was due to circumstances within the airline's control (e.g. maintenance or crew problems, aircraft cleaning, baggage loading, fueling, etc.).

Weather: Significant meteorological conditions (actual or forecasted) that, in the judgment of the carrier, delays or prevents the operation of a flight such as tornado, blizzard or hurricane.

National Aviation System (NAS): Delays and cancellations attributable to the national aviation system that refer to a broad set of conditions, such as non-extreme weather conditions, airport operations, heavy traffic volume, and air traffic control.

Security: Delays or cancellations caused by evacuation of a terminal or concourse, re-boarding of aircraft because of security breach, inoperative screening equipment and/or long lines in excess of 29 minutes at screening areas.

Late-Arriving Aircraft: (5) Late-Arriving Aircraft: previous flight with same aircraft arrived late, causing the present flight to depart late.

Air Carrier Delays (Arrival) Summary

Air Carrier Flight Delay is defined as any scheduled arrival aircraft service that arrives 15 or more minutes later than the planned arrival time at the destination gate. Since 2008 at ASE, approximately 23% of arrival flights are delayed on an average annual basis. The eleven-year minimum and maximum was recorded in 2010 and 2014 at 19% and 32% of flights respectively. When combined, Air Carrier and Late Arrival operations account for the majority (70%) of the delays at ASE.

TSA BAGGAGE SCREENING

	Month	Total Baggage Count	Daily Avg.	Daily Min.	Daily Max.
2016	January	37,156	1,199	129	2,687
	February	38,068	1,313	79	2,415
	March	40,901	1,319	547	1,913
	April	10,921	390	66	1,678
	May	4,125	133	85	231
	June	10,427	348	150	720
	July	18,490	596	413	872
	August	18,012	581	345	867
	September	11,122	371	254	516
	October	7,258	234	125	454
	November	4,826	161	73	375
	December	22,134	714	129	1,834

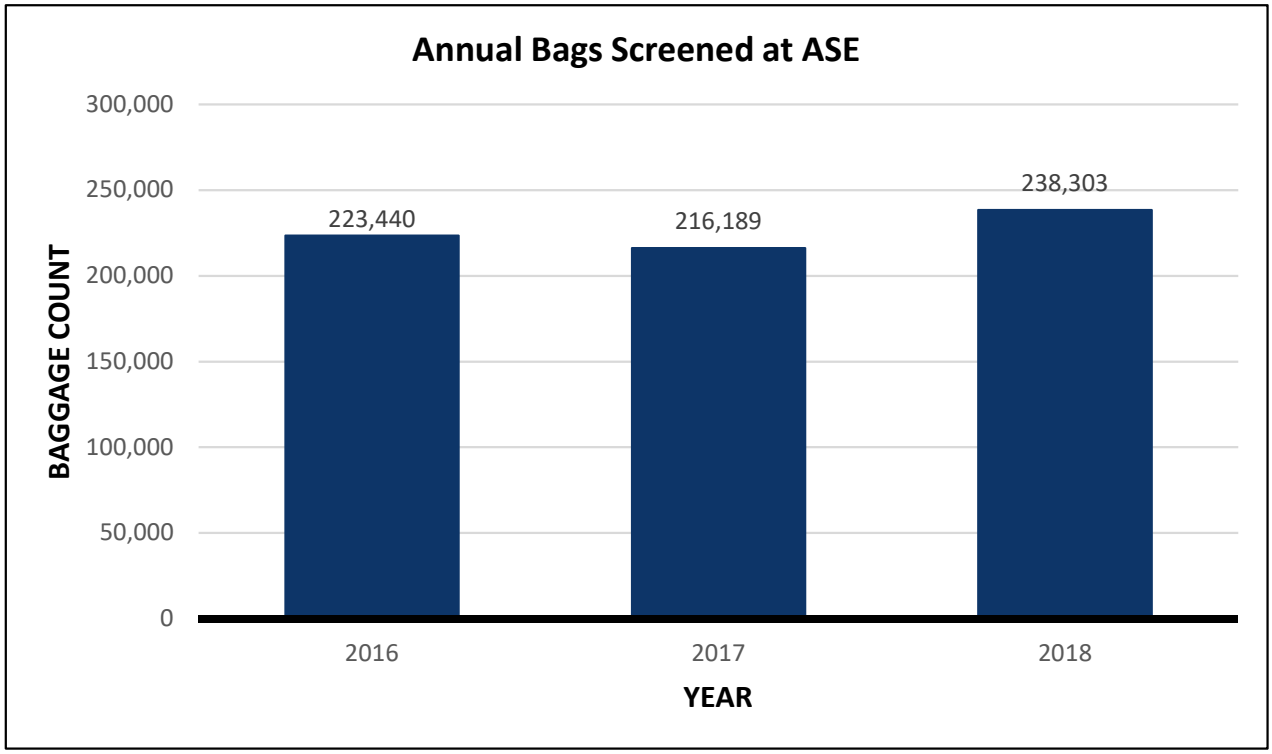
	Month	Total Baggage Count	Daily Avg.	Daily Min.	Daily Max.
2017	January	39,844	1,285	31	2,429
	February	34,454	1,231	160	2,195
	March	42,224	1,362	586	2,132
	April	8,682	289	87	1,370
	May	3,542	114	75	184
	June	10,325	344	40	692
	July	17,260	557	146	828
	August	16,637	537	338	777
	September	10,968	366	93	640
	October	7,462	241	137	509
	November	5,443	181	65	423
	December	19,348	624	113	1,986

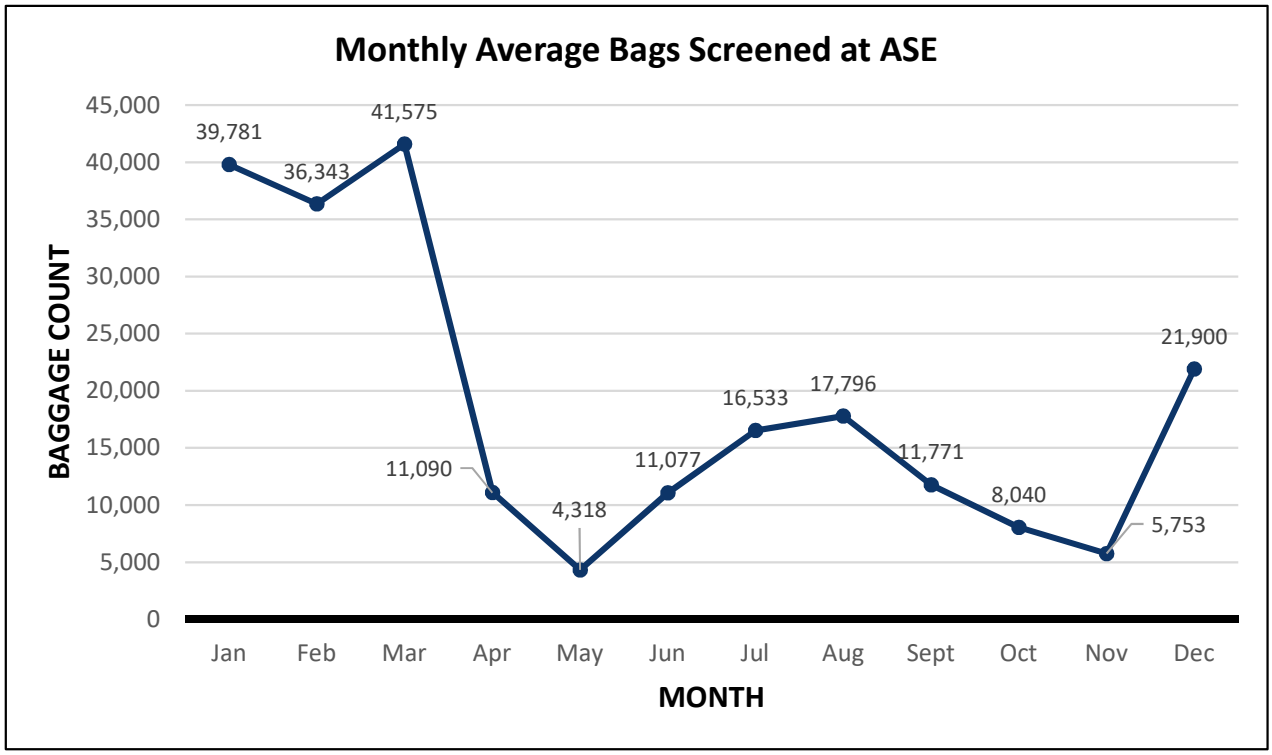
	Month	Total Baggage Count	Daily Avg.	Daily Min.	Daily Max.
2018	January	42,343	1,366	563	2,865
	February	36,507	1,304	662	2,314
	March	41,601	1,342	608	2,119
	April	13,666	456	131	1,618
	May	5,287	171	114	246
	June	12,479	416	189	772
	July	13,850	447	28	759
	August	18,740	605	376	853
	September	13,222	441	304	673
	October	9,399	304	178	458
	November	6,990	233	108	475
	December	24,219	782	242	2,313

Source: TSA Baggage at ASE, May 2019. Office of the ASE Controller.

Annual Baggage Summary at ASE	
Year	**Total Bags Screened**
2016	223,440
2017	216,189
2018	238,303

Monthly Baggage Average at ASE				
Month	**Average Bags Screened**	**Daily Avg.**	**Daily Min.**	**Daily Max.**
Jan	39,781	1,283	241	2,660
Feb	36,343	1,283	300	2,308
Mar	41,575	1,341	580	2,055
Apr	11,090	378	95	1,555
May	4,318	139	91	220
Jun	11,077	369	126	728
Jul	16,533	533	196	820
Aug	17,796	574	353	832
Sept	11,771	393	217	610
Oct	8,040	260	147	474
Nov	5,753	192	82	424
Dec	21,900	707	161	2,044





TSA Baggage Summary

Any unique baggage item screened and processed via TSA is considered in the calculation of the baggage summary at ASE Airport. TSA Processed the highest volume of bags at ASE in 2018 (238,303) while 2017 recorded a three year low (216,189). On an average monthly basis (2016 – 2018), January, February, and March experienced the highest volume of bags. March recorded the highest daily average of 1,341 bags. During the off-season months, July and August experienced higher volumes of baggage due to Summer vacation in the Aspen-Pitkin County area.

FUEL SALES

	Month	Ineligible Fuel (Gallons)	Eligible Fuel (Gallons)	Fuel Sales Total ($)
2015	January	423,130	395,294	$ 47,435
	February	352,217	353,348	$ 42,402
	March	487,295	500,824	$ 60,099
	April	91,694	114,444	$ 13,733
	May	38,709	48,793	$ 5,855
	June	148,980	292,705	$ 35,125
	July	164,096	616,414	$ 73,970
	August	152,771	492,790	$ 59,135
	September	83,003	358,782	$ 43,054
	October	26,333	142,404	$ 17,089
	November	26,249	147,374	$ 17,685
	December	315,825	407,744	$ 48,929
	2015 TOTALS	**2,310,301**	**3,870,917**	**$ 464,510**

	Month	Ineligible Fuel (Gallons)	Eligible Fuel (Gallons)	Fuel Sales Total ($)
2016	January	445,781	457,381	$ 54,886
	February	439,247	441,115	$ 52,934
	March	530,588	496,219	$ 59,546
	April	86,186	99,518	$ 11,942
	May	46,501	63,350	$ 7,602
	June	168,025	393,723	$ 47,247
	July	213,369	632,349	$ 75,882
	August	225,609	577,377	$ 69,285
	September	114,996	330,883	$ 39,706
	October	49,944	209,382	$ 25,126
	November	34,133	135,869	$ 16,304
	December	420,987	405,819	$ 48,698
	2016 TOTALS	**2,775,368**	**4,242,983**	**$ 509,158**

	Month	Ineligible Fuel (Gallons)	Eligible Fuel (Gallons)	Fuel Sales Total ($)
2017	January	436,440	474,693	$ 56,963
	February	553,487	394,985	$ 47,398
	March	573,024	571,105	$ 68,533
	April	78,990	120,714	$ 14,486
	May	32,061	79,262	$ 9,511
	June	232,896	391,400	$ 46,968
	July	306,725	629,145	$ 75,497
	August	285,481	567,813	$ 68,138
	September	173,633	444,602	$ 53,352
	October	107,292	198,361	$ 23,803
	November	73,346	122,603	$ 14,712
	December	444,510	439,433	$ 52,732
	2017 TOTALS	**3,297,884**	**4,434,117**	**$ 532,094**

	Month	Ineligible Fuel (Gallons)	Eligible Fuel (Gallons)	Fuel Sales Total ($)
2018	January	726,937	509,852	$ 61,182
	February	738,441	261,600	$ 31,392
	March	637,683	596,443	$ 71,573
	April	152,064	152,239	$ 18,269
	May	103,159	64,565	$ 7,748
	June	261,546	401,478	$ 48,177
	July	212,627	560,096	$ 67,212
	August	294,095	530,533	$ 63,664
	September	203,679	399,398	$ 47,928
	October	135,542	116,952	$ 14,034
	November	145,432	107,102	$ 12,852
	December	557,986	401,151	$ 48,138
	2018 TOTALS	**4,169,192**	**4,101,408**	**$ 492,169**

Annual Fuel Sales Summary			
Year	Ineligible Fuel (Gallons)	Eligible Fuel (Gallons)	Fuel Sales Total ($)
2015	2,310,301	3,870,917	$ 464,510
2016	2,775,368	4,242,983	$ 509,158
2017	3,297,884	4,434,117	$ 532,094
2018	4,169,192	4,101,408	$ 492,169

Monthly Fuel Sales Summary			
Year	Ineligible Fuel (Gallons)	Eligible Fuel (Gallons)	Fuel Sales Total ($)
Jan	508,072	459,305	$ 55,117
Feb	520,848	362,762	$ 43,531
Mar	557,148	541,148	$ 64,938
Apr	102,234	121,729	$ 14,607
May	55,108	63,992	$ 7,679
Jun	202,862	369,826	$ 44,379
Jul	224,204	609,501	$ 73,140
Aug	239,489	542,128	$ 65,055
Sep	143,828	383,416	$ 46,010
Oct	79,778	166,775	$ 20,013
Nov	69,790	128,237	$ 15,388
Dec	434,827	413,537	$ 49,624

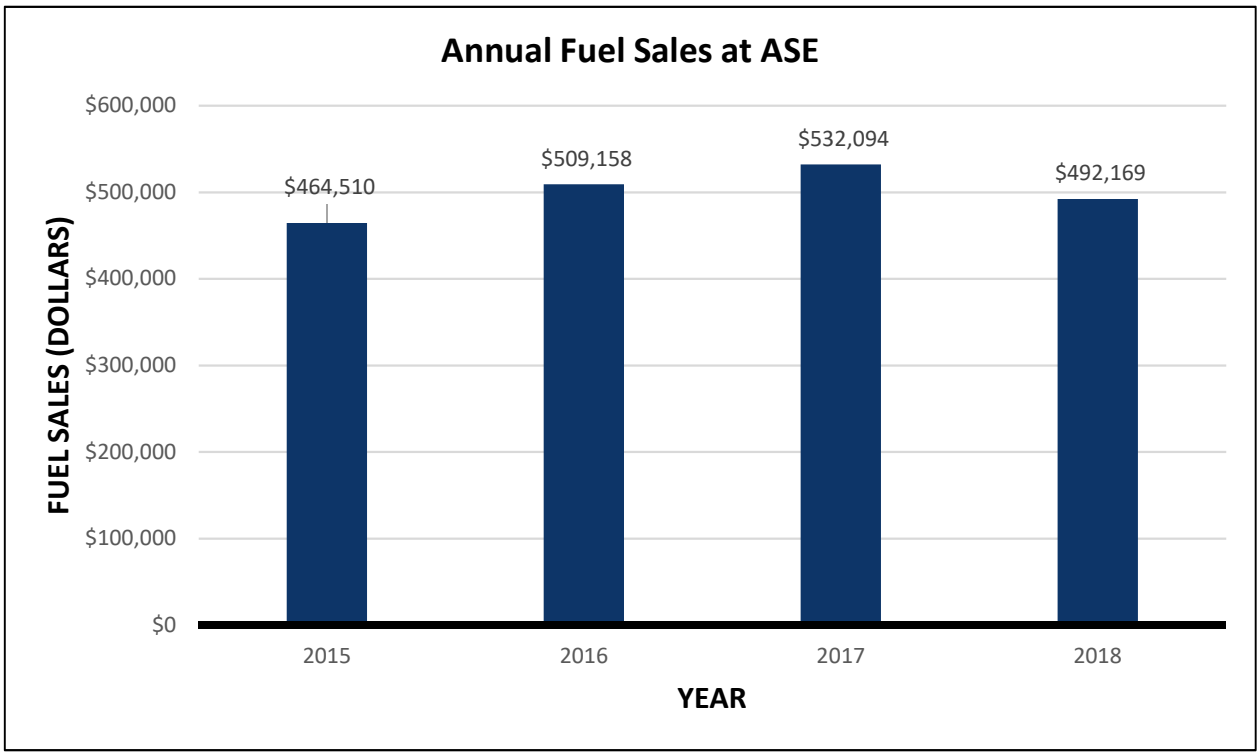
Source: Fuel Sales at ASE, May 2019. Office of the ASE Controller.

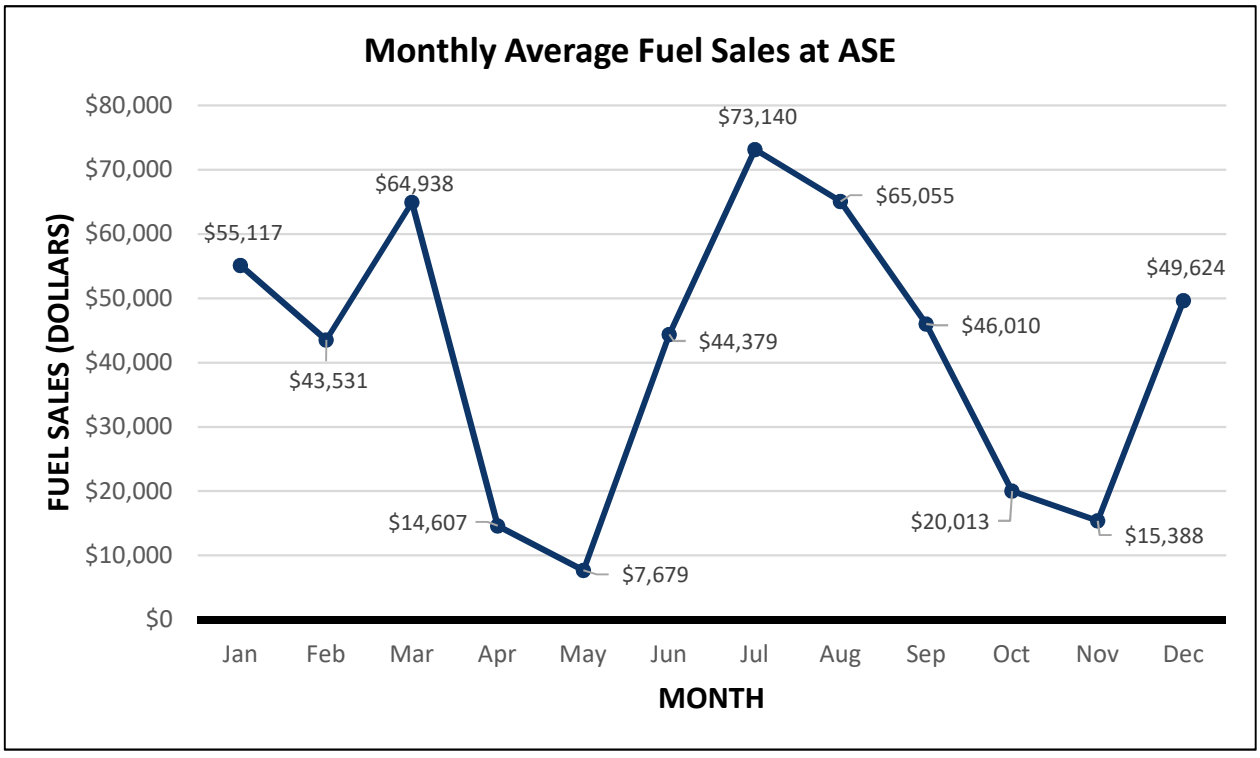
Notes:

(1) ASE Fuel Flowage Fee is $0.12 per gallon

(2) Ineligible Fuel defined as the sum of the fuel lost due to shrinkage plus 'All Airlines (Avfuel)'

(3) Eligible Fuel defined as the sum of 'JET' plus 'Avgas' minus 'All Airlines (Avfuel)'





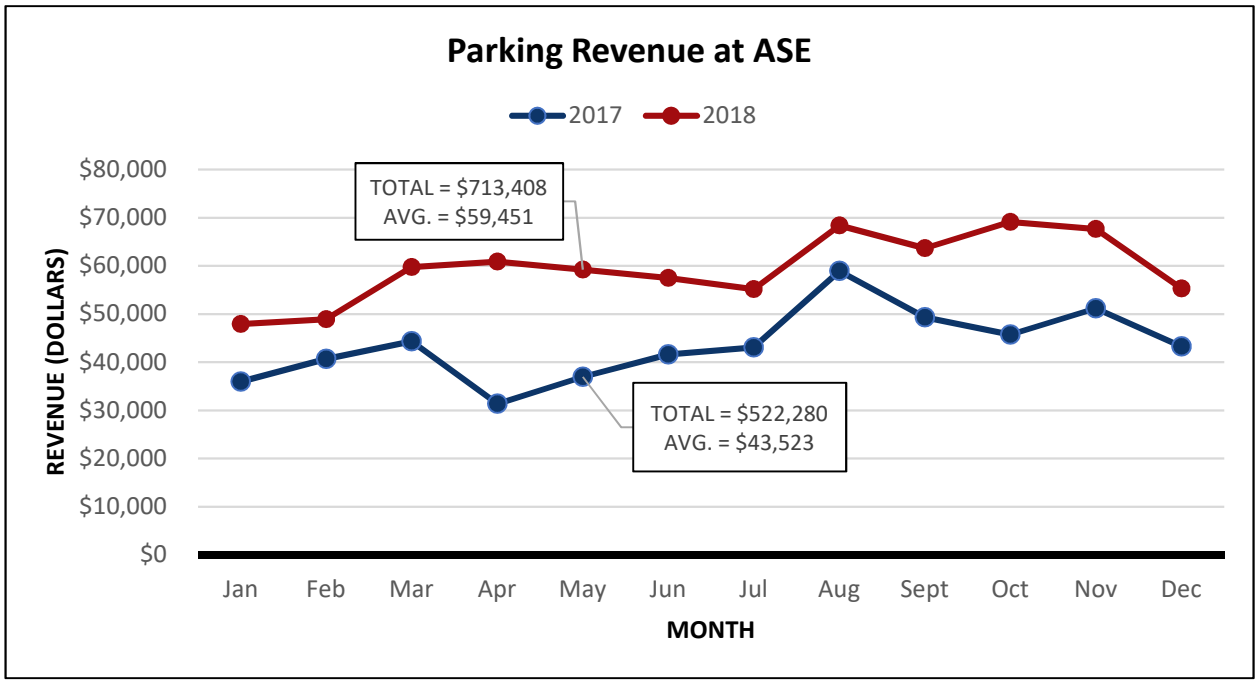
Fuel Sales Summary

Fuel Sale is defined as the quantity of money generated via purchase of eligible fuel provided by the Aspen-Pitkin County Airport. A Fuel Flowage Fee ($0.12 per gallon of fuel) is utilized to calculate the monetary amount of fuel sold. Annual fuel sales at the Airport averaged $500,000 annually from 2015 - 2018. July recorded annual highs averaging $73,140 and May recorded annual lows around $7,679.

PARKING REVENUE

	GROSS PARKING FEE	
MONTH	2017	2018
January	$35,973	$47,909
February	$40,685	$48,877
March	$44,357	$59,742
April	$31,341	$60,903
May	$36,942	$59,204
June	$41,597	$57,488
July	$43,074	$55,172
August	$58,914	$68,384
September	$49,320	$63,687
October	$45,688	$69,121
November	$51,139	$67,660
December	$43,250	$55,261
AVERAGE FEE	**$43,523**	**$59,451**
TOTAL FEE	**$522,280**	**$713,408**

Source: Annual Fuel Sales at Aspen-Pitkin County Airport. Office of the ASE Controller, May 2019.



Parking Revenue Summary

Parking Revenue is defined as the quantity of fees generated via vehicle parking services provided by the Airport. A vehicle parking fee is utilized to calculate the monetary amount (revenue) of parking services provided to its customers. Average monthly parking revenue increased the Airport from $43,532 to $59,451 in 2017 and 2018 accordingly. In 2017, the monthly high was recorded in August ($58,914) while 2018's high was recorded in October ($69,121). Monthly parking revenue remained the highest in the late Summer months through the Fall (August – November) in both 2017 and 2018. Higher parking volumes in this time frame is primarily due to summer vacation in the Aspen-Pitkin County area. Gross parking fees increased by 37% from 2017 to 2018

LINKS TO EA/GHG INVENTORY/NOISE STUDY/Q&A

Environmental Assessment Link

https://drive.google.com/file/d/1_K7FPDebSh9pVa6rhgOUFGFuFzYKms7L/view

Greenhouse Gas Inventory

https://pitkincounty.com/DocumentCenter/View/18380/2014-Pitkin-County-Greenhouse-Gas-Emissions-Inventory?bidId=

Noise Study

https://pitkincoco.civicclerk.com/Web/GenFile.aspx?ad=4141

Q&A

https://www.asevision.com/project-information/questions-and-answers/