

Agenda: SASP SAC Meeting 3

Date: 04/12/18

Public Involvement Plan Update

Defining the System

Recommended Classifications Discussion

- Review current system
- Outreach – what we heard
- Proposed changes
- Classification roles
- Discussion:
 - Proposed Classification System
 - Naming System

Break

Airport Metrics Discussion

- Proposed name change
 - From Minimum System Objectives to “Airport Measures”, creation of “Airport Indicators”
- Review 2012 MSOs
 - Define and how they were used in 2012
 - What’s important?
 - What’s not important?
 - Requirements vs. Recommendations
 - Discussion
- Airport Measures Moving Forward
 - New or different Airport Measure ideas?
- Airport Indicators Discussion

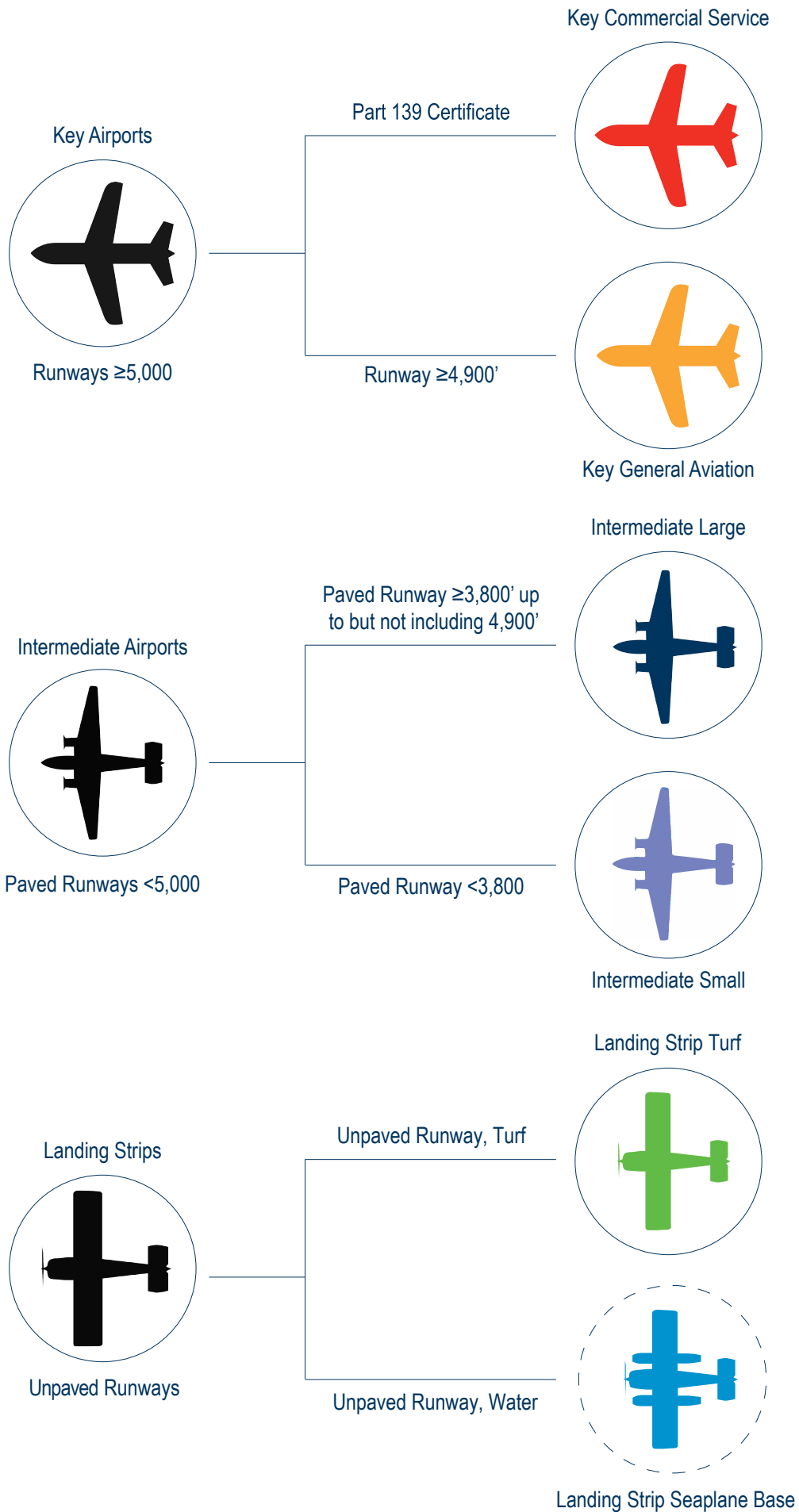
System Metrics Discussion

- Proposed name change
 - From Performance Measures to “System Measures” and “System Indicators”
- Review 2012 Performance Measures
 - What’s important?
 - What’s not important?
- New Set of System Measures
 - New System Measure ideas?
 - Tiered measures
- New Set of System Indicators
 - Are *System Indicators* valuable?
 - Continuous tracking

What’s coming

2012 SASP Airport Classification

Proposed SASP Classification



MnDOT SASP Phase 1 Classification Review

Outreach Summary

The following groups were consulted and outreach meetings held to gather input on the classification system:

- MnDOT Aeronautics Staff
- SASP Advisory Committee (SAC)
- Technical Advisory Committee (TAC)
- Aviation Consultant Community Workshop

What we learned

The following summarizes what was learned in the assessment of the existing classification system:

- The Key Airports may benefit from being split into two categories in order to separate general aviation from commercial service.
- The Intermediate classification includes a wide variety of airport sizes, roles, and uses. This classification may benefit from being divided further.
- Publicly owned public use seaplane bases are not adequately included in the existing classification system. Although none exist today, they may in the future and inclusion may be beneficial.
- The classification system should include reference to the airport's role in the aviation system.
- There are other potential ways MnDOT could utilize classification in the future.
- The FAA ASSET classification system classifies airports differently, but may not be applicable to the SASP classification system.
- The classification names should make their classification relative to other classifications understandable. For example, it is hard to conceptualize the difference between the classification name of 'Basic' and 'Local' in the ASSET classification.
- There may be benefits in classifying airports based on more than just runway length.

Proposed Classification Changes

Key Airports

The 2012 SASP defines Key Airports as airports with a paved and lighted primary runway at least 5,000 feet in length. The existing SASP Key Airport definition is: "Airports with runway lengths of 5,000 feet or more". Minnesota Administrative Rules Chapter 8800 currently requires runways 4,900 feet or longer to be considered an "Other Than Utility Runway" (requiring a 34:1 approach slope). MnDOT proposes to revise the bottom limit of the Key Airport classification to 4,900 feet to correspond with the Minnesota Rules requirement for runways to be Other Than Utility once they reach a length of 4,900 feet. Currently, the longest non-Key Airport's primary runway is 4,794 feet long so this change is not expected to impact any airport's existing classification.

MnDOT recommends subdividing the Key classification into two groupings, those with commercial air service and those without through development of a Key Commercial

classification (Key Airports with a Part 139 Certificate) and a Key General Aviation classification. Key General Aviation airports would be defined as general aviation airports with a paved runway of at least 5,000 feet while Key Commercial Service Airports would be defined as Part 139 Airports with a paved runway of at least 5,000 feet.

Intermediate Airports

The 2012 SASP defines Intermediate Airports as airports with paved and lighted runways less than 5,000 feet. The existing Intermediate classification includes all airports with paved primary runways under 5,000 feet in length. Existing primary runway lengths for this classification range from 2,522 feet to 4,794 feet. This classification includes a wide range of airport sizes, roles, and activity levels. It was determined that subdividing this classification would better group similar airports within the Intermediate classification.

In order to better understand potential groupings of airports within this classification, MnDOT consulted the FAA runway length guidance contained in Advisory Circular (AC) 150/5325-4B. The length recommendations in **Table 1** were developed using the average mean maximum temperature for Minnesota, as well as the average airport elevation for the State.

Table 1 – FAA Recommended Runway Lengths
Minnesota Average Conditions

Aircraft Type	Runway Length
Small Airplanes with Approach Speeds <50 knots	893'
Small Airplanes with Approach Speeds >50 knots	
Small Airplanes with <10 Passenger Seats	
95% of these Small Airplanes	3,300'
100% of these Small Airplanes	3,900'
Small Airplanes with ≥10 Passenger Seats	
Large Airplanes ≤60,000 lbs.¹	
75% of these Airplanes at 60% Useful Load	4,888'
75% of these Airplanes at 90% Useful Load	7,000'
100% of these Airplanes at 60% Useful Load	5,500'
100% of these Airplanes at 90% Useful Load	8,000'

Source: AC 150/5325-4B, Runway Length Requirement for Airport Design

Elevation: 1,168' MSL Temperature: 81.18° F (Average of MN System Airports)

¹ Large Airplanes adjusted for wet and slippery conditions. Unadjusted for non-zero runway gradient.

Intermediate airports serve primarily small aircraft with approach speeds of greater than 50 knots as their primary critical aircraft. Therefore, MnDOT focused on these lengths in determining potential break points within the Intermediate classification.

Typically, general aviation airports serving small aircraft in Minnesota are able to use the 95 percent of small aircraft recommended runway length. FAA guidance indicates that this recommendation is relevant to use for airports serving medium sized population communities

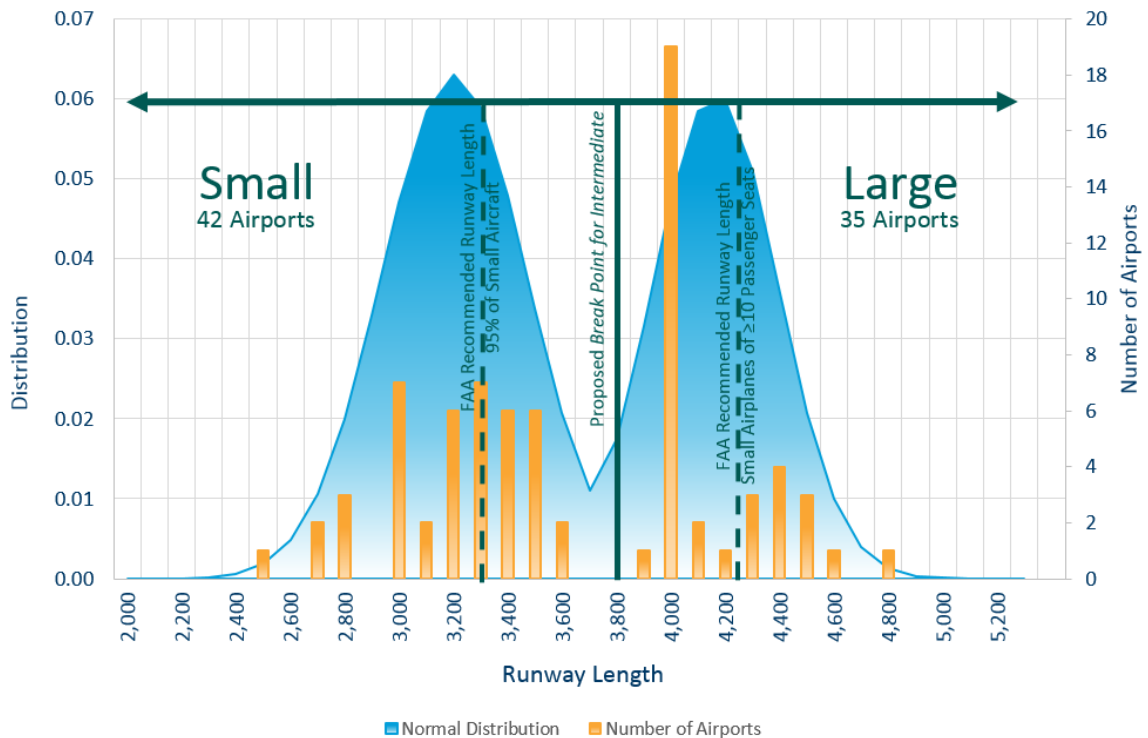
with diverse usage. This length recommendation also includes airports primarily intended to serve low-activity locations, small population communities and remote recreational areas.

The 100 percent of fleet curve is typically reserved for use in communities located on the fringe of a metropolitan area or relatively large population areas remote from a metropolitan area. Typically, this length curve is not applicable for general aviation airports serving small aircraft outside of the Twin Cities Metropolitan area.

The runway length recommendations for small aircraft with 10 or more passenger seats, such as a King Air 200, would be applicable for Intermediate airports serving these larger small aircraft.

The runway lengths of existing Intermediate airports are shown across the X axis on **Chart 1** below with the total number of airports having that runway length shown on the right Y axis. As is depicted, the existing lengths of Intermediate airports cluster around the recommended lengths for 95 percent of small aircraft and small aircraft with ten or more passenger seats (3,300 feet and 4,250 feet, respectively).

Chart 1 - Intermediate Airports Runway Lengths and FAA Recommended Runway Lengths



MnDOT recommends 3,800 feet as the break point for dividing the Intermediate classification into Small Intermediate and Large Intermediate. Runway lengths less than this typically clustering around the FAA recommended lengths for 95 percent of small aircraft, and runways more than this length clustering around the FAA recommended length for small aircraft with ten or more passenger seats.

MnDOT recommends that Intermediate Small airports be defined as airports with a paved runway less than 3,800 feet and Intermediate Large airports be defined as airports with paved runways of at least 3,800 feet up to but not including 4,900 feet.

Landing Strips

As defined in the 2012 SASP, Landing Strips have one or more turf runways. In response to stakeholder input, MnDOT recommends revising the landing strip classification to be defined as airports with an unpaved primary runway or seaplane bases.

Seaplane bases that are not part of an airport with a hard surface runway would be in this classification. Although there are no publicly owned public use seaplane bases (without a corresponding hard surface landing area) currently in the State, this revision will provide for classification of these facilities should they develop. Prior to a seaplane base being part of the system as a Landing Strip, Minnesota Statutes Chapter 360 would need to be revised to include water landing areas and/or sea lanes in the landing strip system defined in statute.

Proposed Classification Roles

The recommended classifications generally serve the following roles. Typically, each larger classification often also fills the roles of smaller classifications.



Landing Strip Turf



Turf Landing Strips include airports with an unpaved primary runway, usually turf.

Airports with unpaved primary runways primarily accommodate single-engine aircraft and some multi-engine aircraft. This type of airport may be unusable during certain conditions such as wet weather, winter months, and during the spring melt. A key function of these airports is supporting the agricultural industry with crop seeding and spraying services, as well as recreational aviation uses.



Landing Strip Seaplane Base



Seaplane bases accommodate both single-engine and multi-engine seaplane users. Key functions of seaplane bases include recreational use and providing access points from which to reach remote areas only accessible by seaplane.



Intermediate Small



Intermediate Small Airports primarily accommodate primarily small single- and multi-engine aircraft with less than 10 passenger seats. Airports in this classification may occasionally also be used by aircraft with more than 10 passenger seats.

Intermediate Small Airports often serve as landing facilities for recreational flights, flight training, emergency medical transports, business flights, agricultural flights, and other general aviation uses.

Intermediate Small Airports enable direct connections across Minnesota and the Central US region.



Intermediate Large



Intermediate Large Airports primarily accommodate small single and multi-engine aircraft including small aircraft with more than 10 passenger seats. Airports in this classification may occasionally also be used by small jets.

Intermediate Large Airports serve as landing facilities for recreational flights, flight training, emergency medical transports, business flights, agricultural flights, cargo distribution, and other general aviation uses.

Intermediate Large Airports enable direct connections across Minnesota and national markets.



Key General Aviation



Key General Aviation airports serve as the primary landing facilities for general aviation jets. They are capable of accommodating most business jets, all single-engine aircraft, and larger multi-engine aircraft.

These airports tend to be located near larger population and economic centers, and are often used for business and air freight activities. Key Airports enable direct connections to national and some global markets.



Key Commercial Service



Key Commercial Service airports serve the same role as Key General Aviation and also support regular airline service and the movement of commercial passengers.

Classification Role Icons



Agriculture



Medical



Recreational



Business



Airline Service



Military



Firefighting



Law Enforcement



Search & Rescue



Flight Training



Cargo



Single Engine



Twin Engine



Jet



Large Jet

Airport Measures by Classification

Red Text: Required by Statute, Rule, etc.

Green Text: Notes to consider

Blue Text: Proposed new Airport Measure

~~Strikethrough Text:~~ Proposed deletion of Airport Measure

FACILITY	KEY		INTERMEDIATE		LANDING STRIP	
	KEY COMMERCIAL SERVICE	KEY GENERAL AVIATION	INTERMEDIATE LARGE	INTERMEDIATE SMALL	LANDING STRIP TURF	LANDING STRIP SEAPLANE BASE
Primary Runway Length	Propose not including runway length as a Minimum System Objective as it is part of what defines classifications.					
Primary Runway Width	150 feet	100 feet (MN Rules require at least 75 feet)	75 feet (MN Rules require at least 60 feet)	75 feet (MN Rules require at least 60 feet)	75 feet (MN Rules require at least 75 feet)	“Sufficient for safe operation”
Runway Lighting						
Primary Runway Approaches						
Parallel Taxiway						
Taxiway Width						
Navigation Systems						
Weather Reporting						
Hangars (for based aircraft)	As needed or remove objective?					
Aprons (for based & transient aircraft)						
Terminals & GA/Administration Buildings						
Automobile Parking						
Perimeter Fencing						
Fuel Facilities						
Approach Surface	Clear of obstructions	Clear of obstructions	Clear of obstructions	Clear of obstructions	Clear of obstructions	
ADMINISTRATIVE	KEY COMMERCIAL SERVICE	KEY GENERAL AVIATION	INTERMEDIATE LARGE	INTERMEDIATE SMALL	LANDING STRIP TURF	LANDING STRIP SEAPLANE BASE
Airport Layout Plan						
Emergency Management Plan						
Minimum Standards						
Airport Zoning						

2018 Airport Measures and Indicators

Airport Measures are developed for areas where MnDOT has the ability, through investment, to directly impact system performance.

Airport Indicators measure areas where MnDOT has little or no ability to influence the outcome but the expectations for transparency and information sharing still exist. Indicators can be driven by market demand, local community growth, or other difficult to influence factors.

System Objective	Potential Airport Measures	Potential Airport Indicators
<p><u>Open Decision Making</u></p> <ul style="list-style-type: none"> • Make transportation system decisions through processes that are inclusive, engaging and supported by data and analysis. • Provide for and support coordination, collaboration and innovation. • Ensure efficient and effective use of resources. 		
<p><u>Transportation Safety</u></p> <ul style="list-style-type: none"> • Safeguard transportation users as well as the communities the systems travel through. • Apply proven strategies to reduce fatalities and serious injuries for aviation. • Foster a culture of aviation safety in Minnesota. 		
<p><u>Critical Connections</u></p> <ul style="list-style-type: none"> • Maintain and improve multimodal transportation connections essential for Minnesotans' prosperity and quality of life. • Strategically consider new connections that help meet performance targets and maximize social, economic and environmental benefits. 		
<p><u>System Stewardship</u></p> <ul style="list-style-type: none"> • Strategically build, manage, maintain and operate all transportation assets. • Rely on system data and analysis, performance measures and targets, agency and partners' needs, and public expectations to inform decisions. • Use technology and innovation to get the most out of investments and maintain system performance. • Increase the resiliency of the aviation system and adapt to changing needs. 		
<p><u>Healthy Communities</u></p> <ul style="list-style-type: none"> • Make fiscally-responsible decisions that respect and complement the natural, cultural, social and economic context. • Integrate land uses and transportation systems to leverage public and private investments. 		

2012 System Measures Summary

System Performance Measures are developed for areas where MnDOT has the ability, through investment or other means, to directly impact system performance. Performance measures have system targets which outline the desired performance outcome.

2018 SASP Objective Alignment	System Measure	System Target	System Performance
Transportation Safety	Percent of system airports with an adequate Safety Zoning Ordinance	100% of system airports should have an adequate safety zoning ordinance adopted by a JAZB or equivalent authority.	81% meet the target
Transportation Safety	Percent of airports that have no obstruction to protected airspace	100% of system airports should be clear of obstructions to FAA FAR Part 77 approach and primary airspace surfaces.	Data collection in progress
Transportation Safety	Percent of system airports that have a weather reporting station on-site or within 30 nautical miles	100% of system airports should have weather reporting stations on-site or be within 30 nautical miles of an airport that has weather reporting on-site.	100% meet the target
Critical Connections	Percent of system airports with adequate approaches appropriate for their classification	100% of system airports should have appropriate approaches. <i>Key – At least one precision approach to the primary runway and a non-precision approach with vertical guidance to the opposite end.</i> <i>Intermediate – At least one runway end with a non-precision approach with vertical guidance.</i> <i>Landing Strip – Visual approaches are appropriate.</i>	32% meet the target
Critical Connections	Percent of system airports within 50 nautical miles of an airport that serves as an alternate for an IFR flight plan	100% of system airports should have an IFR alternate airport within 50 nautical miles (airport with an ILS monitored at all times and weather reporting).	32% meet the target
System Stewardship & Healthy Communities	Percent of system airports with up-to-date planning documents	100% of system airports have up-to-date federal and state approved planning documents that exhibit existing and future development. <i>Key – ALP and Master Plan/LTCP updated or revisited at least every 7 years.</i> <i>Intermediate – ALP and Master Plan/LTCP updated or revisited every 15 years.</i> <i>Landing Strip – Should have an ALP</i>	10% meet the target
System Stewardship	Percent of system airports with navigation systems that are up-to-date	100% of system airports should have up-to-date navigation aids appropriate for its classification.	Data collection in progress
System Stewardship	Runway and parallel taxiway pavement conditions within PCI targets	<i>Key – 85% percent of primary runway pavements should be in “very good” or “excellent” condition (PCI of 70 or greater)</i> <i>All paved airports – 84%percent of all runway and parallel taxiway pavements should be in at least “good” condition (PCI of 55 or greater) and no more than 4% percent of all runway and parallel taxiway pavements should be in “poor condition” (PCI of 40 or less).</i>	77% of Key Airports meet the target 87.8% of runways/taxiways have a PCI of 55 or greater. 5.8% of runways/taxiways rated at a PCI of 40 or less.

2018 System Measures

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2012 System Indicators Summary

System Indicators measure areas where MnDOT has little or no ability to influence the outcome but the expectations for transparency and information sharing still exist. Indicators can be driven by market demand, local community growth, or other difficult to influence factors. They are designed to show trends and help describe how well the overall system is functioning.

2018 SASP Objective Alignment	System Indicator	System Performance
Transportation Safety	Percent of Hospitals with access to an instrument approach either on site or within a 15 minute drive time	77% of hospitals within 15 minutes
Transportation Safety	Total number of aviation related accidents in Minnesota	26 accidents in 2011
Transportation Safety	Total number of aviation related fatalities in Minnesota	2 fatalities in 2011
Critical Connections	Percent of time that pilots can use an airport is primarily dependent on weather conditions.	MnDOT D1 airports usable 363 days per year
Critical Connections	Percent of population that is within a 40, 60, and 90 minute surface travel time to a Key Airport	99% of population within 90 minutes
Critical Connections	Percent of the population that is within 30 minutes surface travel time to a paved and lighted runway	71% of population within 30 minutes
Healthy Communities	Percent of Level 1 and 2 Regional Trade Centers that are within 30 minutes surface travel time to a Key Airport	100% of Level 1 & 67% of Level 2 within 30 minutes
Healthy Communities	Percent of Level 3 Regional Trade Centers that are within 30 minutes surface travel time to at least one Key or Intermediate Airport	100% of Level within 30 minutes
Critical Connections	Percent of the population that is within 60 minutes surface travel time to an airport with scheduled airline service	72% of population within 60 minutes
Critical Connections	Total number of non-stop markets served from Minnesota	138 non-stop markets in 2011
Critical Connections	Total number of originating passengers departing from MSP	7.8 million passengers in 2010
Critical Connections	Annual delay at MSP	1720 flights delayed in 2011
System Stewardship	Percent of airports within 50 nautical miles of an airport with fueling available 24/7	100% of airports within 50 nautical miles
System Stewardship	Percent of airports that are within 50 nautical miles of an airport that has aircraft maintenance and repair facilities.	100% of airports within 50 nautical miles
Healthy Communities	Percent of population that is within 60 minutes surface travel time to scheduled cargo service	75% of population within 60 minutes

2018 System Indicators

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