MinnesotaGO
A Collaborative Vision for Transportation

State Aviation System Plan

SASP Advisory Committee – Meeting #3

MnDOT Office of Aeronautics

Agenda

- Public Involvement Plan Update
- Defining the System
- Classification Review
- Minimum System Objectives
- Performance Measures
- Next Steps

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Public Involvement Plan Update

Defining the System

State System Definition

- Publicly-owned, public-use airports will continue to be the state's "System of Airports"
  - Seaplane Bases
- However, the following will also be acknowledged in the plan and shown on a map:
  - Privately-owned, public-use airports
  - Publicly-owned, private-use airports
  - Privately-owned, private-use airports (within 5 miles of a public-use airport)
  - Heliports

Airport Classification Review

Overview of Current Classifications

Key 

Intermediate 

Landing Strip 

Key Airports

- Paved, lighted runway
- ≥ 5,000 ft of runway
- Accommodates business jets and large multiengine aircraft
- Possible scheduled airfreight and airline service
- Near larger population and economic centers

Intermediate Airports

- Paved, lighted runway
- < 5,000 ft of runway
- Accommodates some multiengine and some small business jets
- Often support emergency medical transports and manufactured parts distribution
- Enable direct connections across Minnesota and the Midwest

Landing Strips

- Turf, possibly lighted runway
- Accommodates most single-engine and some multi-engine aircraft
- May be unusable during wet weather and winter months
- Supports agricultural industry

Stakeholder Outreach – What we heard

- Consider splitting out Commercial Service from Key airports
- Intermediate classification is too broad
- Need a roadmap for classification change
- Have classifications better communicate role to community
- Classification system does not currently allow for inclusion of seaplane bases

Stakeholder Outreach – What we heard

- 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 provide a clear hierarchy.
- There may be benefits in classifying airports based on more than just runway length.

Proposed Changes – Key Airports

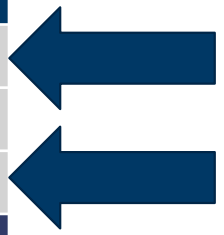
- Revise Key Airport definition to include airports with runway lengths of 4,900 feet or more.
  - Length corresponds to requirement in Minnesota Rules for runways of 4,900 feet or more to be “Other Than Utility.” There may be benefits to align the two requirements.
  - The longest existing Intermediate airport runway is 4,794 feet.
- Divide Key Airports into:
  - General Aviation
  - Commercial Service (Part 139 Certificate)

Proposed Changes – Intermediate Airports

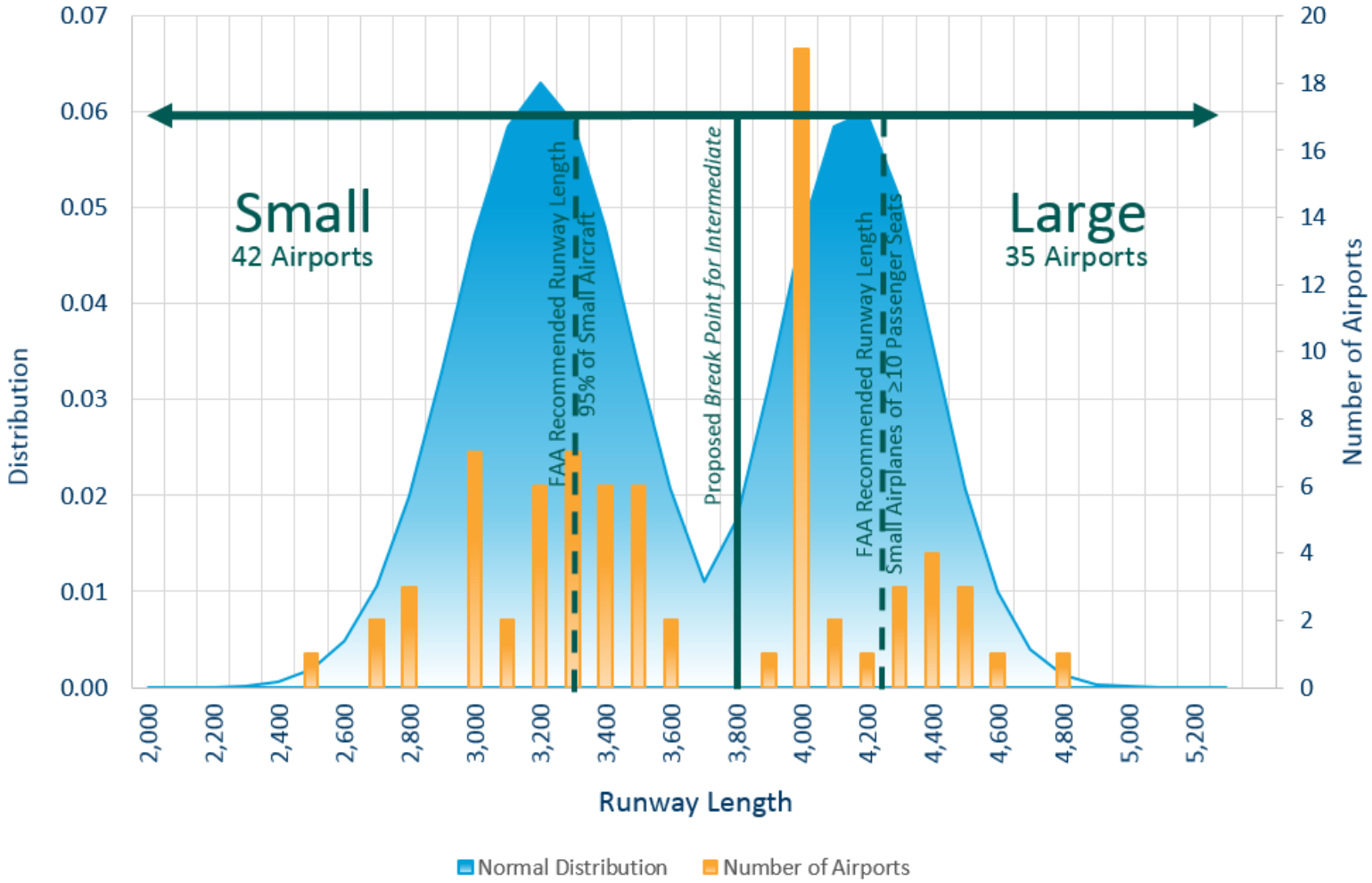
- Divide Intermediate Airports into two groupings based on runway length.
- FAA Runway Length recommendations were consulted for the average mean maximum temperature and average elevation.

Proposed Changes – Intermediate Airports

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	4,250’
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’



Proposed Changes – Intermediate Airports



Proposed Changes – Intermediate Airports

- MnDOT is proposing the following changes to the Intermediate classification
  - Intermediate Small: Airports with a paved runway less than 3,800 feet
  - Intermediate Large: Airports with a paved runway of at least 3,800 feet up to but not including 4,900 feet.

Proposed Changes – Landing Strip Airports

- MnDOT is proposing the following changes to the Landing Strip classification
  - Revise definition to be: airports with an unpaved primary runway or seaplane bases.
- Note: Prior to a seaplane base being part of the public airport system as a Landing Strip, statutes may need to be revised to include water landing areas and/or sea lanes in the landing strip system defined in statute.

Landing Strip Turf Role

Airports with unpaved primary runways primarily accommodate single-engine aircraft and some multi-engine aircraft.

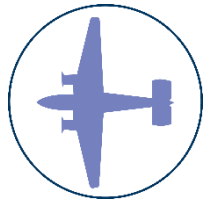
- May be unusable during certain conditions such as wet weather, winter months, and during the spring melt.
- Supports the agricultural industry with crop seeding and spraying services, as well as recreational aviation uses.

Landing Strip Seaplane Base Role

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 Role



- Primarily accommodate primarily small single- and multi-engine aircraft with less than 10 passenger seats
- May occasionally also be used by aircraft with more than 10 passenger seats
- Often serve as landing facilities for recreational flights, flight training, emergency medical transports, business flights, agricultural flights, and other general aviation uses
- Enable direct connections across Minnesota and the Central US region

Intermediate Large Role

- Primarily accommodate small single and multi-engine aircraft including small aircraft with more than 10 passenger seats
- May occasionally also be used by small jets
- Serve as landing facilities for recreational flights, flight training, emergency medical transports, business flights, agricultural flights, cargo distribution, and other general aviation uses
- Enable direct connections across Minnesota and national markets

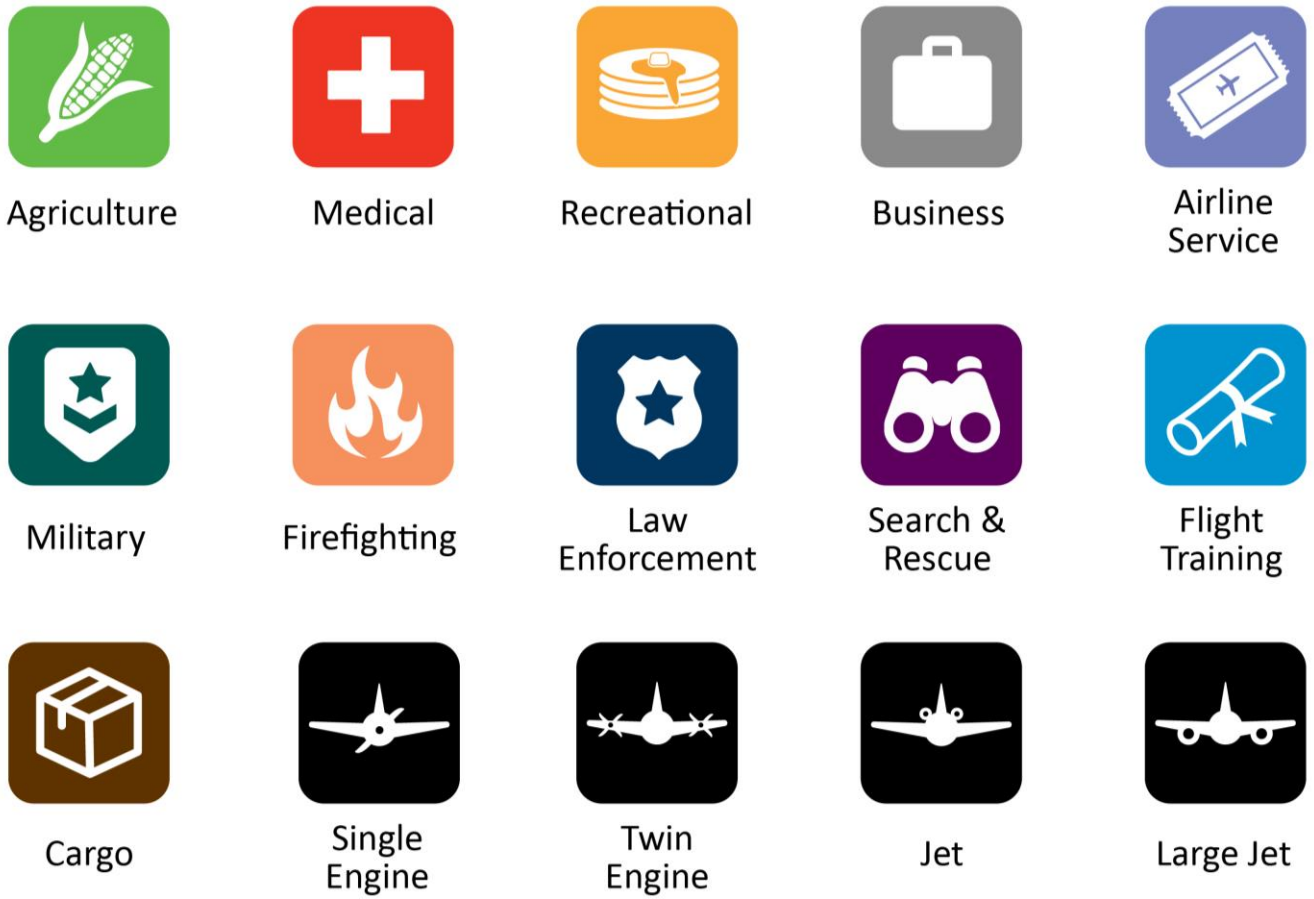
Key General Aviation Role

- Serve as the primary landing facilities for general aviation jets
- Capable of accommodating most business jets, all single-engine aircraft, and larger multi-engine aircraft
- Tend to be located near larger population and economic centers, and are often used for business and air freight activities
- Enable direct connections to national and some global markets

Key Commercial Service Role

- Serve the same role as Key General Aviation
- Also support regular airline service and the movement of commercial passengers

Classification Roles

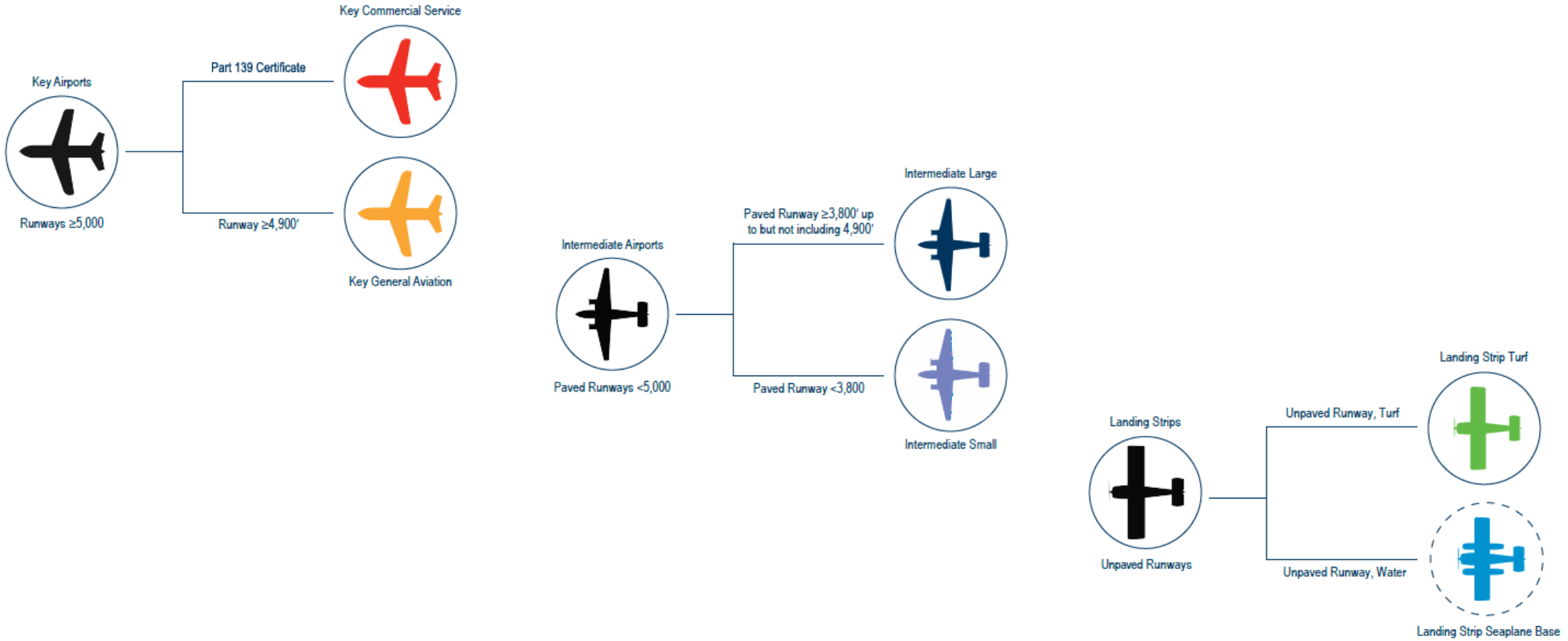


(Reference Handout)

Any others?

Proposed Classification

- Comment on Classifications themselves, we'll talk about names next



Classification Naming Discussion

1	KEY COMMERCIAL SERVICE	KEY GENERAL AVIATION	INTERMEDIATE LARGE	INTERMEDIATE SMALL	LANDING STRIP TURF	LANDING STRIP SEAPLANE BASE
2	KEY COMMERCIAL SERVICE	KEY GENERAL AVIATION	INTERMEDIATE BUSINESS	INTERMEDIATE COMMUNITY	LANDING STRIP TURF	LANDING STRIP SEAPLANE BASE

Break

Performance Metrics

Minimum System Objectives and Performance Measures Proposed Name Change

2012

Overarching Term:	**Minimum System Objectives and Performance Measures**		
Scope:	Airport	System	
Name:	Minimum System Objectives	Performance Measures	System Indicators

Proposed New

Overarching Term:	**Performance Metrics**			
Scope:	Airport		System	
Name:	Airport Measures	Airport Indicators	System Measures	System Indicators

Measure vs. Indicator

- Measure
  - areas where MnDOT has the ability, through investment or other means, to directly impact system performance
- Indicator
  - areas where MnDOT has little or no ability to influence the outcome but the expectations for transparency and information sharing still exist

Measure vs. Indicator – 2012 Examples

Measure

Percent of system airports with an adequate Safety Zoning Ordinance

Target

100%

Performance

81%

Indicator

Total number of non-stop markets served from Minnesota

Target

-

Performance

138 in 2011

Purpose of Measures

- Measure what's important
  - Limited resources to measure things
- Creates tension in the system
  - Gap between what is and what should be
- The best measures have an "ideal" target
  - Interim targets are ok

Purpose of Indicators

- System 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.
- Over time indicators provide quantitative information for MnDOT authorities and decision makers.

Minimum System Objectives (Airport Metrics)

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Airport Measure Example

- Ex: Runway Width

FACILITY	KEY AIRPORTS	INTERMEDIATE AIRPORTS	LANDING STRIPS
Primary Runway Length & Width	5,000 Feet 100 Feet	2,400 Feet 75 Feet	2,000 Feet 75 Feet

- How we used it:

Airside Facilities:	Base Year	Minimum System Objectives	Recommended
Runway Length (Feet)	3,103	2,400 Feet	No Change
Runway Width (Feet)	60	75 Feet	Widen
Parallel Txy/Turnaround	Turnaround	Turnaround	No Change
Runway Lighting	LIRLs	MIRLs or LIRLs	No Change
Weather Reporting	No	As Needed	No Change
Fuel	100LL	24/7 100LL Desirable	No Change
Transient Aircraft Apron (SY)	3,100	Unhangared Based Aircraft & Peak Hour Itinerant Ops	No Change
Based Aircraft Apron (SY)	NP		
Based Tie Downs (Each)	NP		

Airport Measures Discussion

- What facilities are important?
- What facilities are not important?
- Requirements vs. Recommendations

(refer to blank Airport Measures Handout)

FACILITY	KEY AIRPORTS	INTERMEDIATE AIRPORTS	LANDING STRIPS
Primary Runway Length & Width	5,000 Feet 100 Feet	2,400 Feet 75 Feet	2,000 Feet 75 Feet
Parallel Taxiway Length	Full Parallel	Full Parallel if Airport Has More Than 20,000 Annual Ops	No Minimum
Primary Runway Approaches	Precision	Non-Precision	Visual
Navigation Systems	Wind Cone, Rotating Beacon, PAPIs, REILs & MALSR or Other Approach Lighting System	Wind Cone, Rotating Beacon, PAPIs, REILs or Greater Approach Lighting System	Wind Cone & Rotating Beacon if Airport is Lighted
Runway Lighting	HIRL for Airline Service and MIRL for All Other	LIRL or Greater	LIRL
Weather Reporting	AWOS/ASOS	AWOS/ASOS as Needed	No Minimum
Hangars (For Based Aircraft)	100 percent of Jets/TP 95 percent of SEP & MEP	100 percent of Jets/TP 95 percent of SEP & MEP	- 95 percent of SEP & MEP
Aprons (For Based & Transient Aircraft)	All Based Aircraft Not In Hangars + Peak Hour Itinerant Operations	All Based Aircraft Not In Hangars + Peak Hour Itinerant Operations	All Based Aircraft Not In Hangars + Peak Hour Itinerant Operations
Terminals & GA/Administration Buildings	Terminal at Airline Service Airports & GA/Administration Building at Non-Airline Service	GA/Administration Building	Restroom
Automobile Parking	1 Space for Each Based Aircraft & 50 percent Increase for Employee and Visitor Parking	1 Space for Each Based Aircraft and 25 percent Increase for Employee and Visitor Parking	1 Space for Each Based Aircraft
Perimeter Fencing	Entire Airport	Entire Airport Desirable	Separate Auto from Airside
Fuel Facilities	24 Hr. 100LL & Jet A	24 Hr. 100LL Desirable	100LL as Needed

Airport Measures Moving Forward

- How Airport Measures align with proposed new classifications
  - 6 classifications instead of 3, therefore potential for more resolution
- New or different Airport Measure ideas?

(refer to blank Airport Measures chart)

FACILITY	KEY COMMERCIAL SERVICE	KEY GENERAL AVIATION	INTERMEDIATE LARGE	INTERMEDIATE SMALL	LANDING STRIP TURF	LANDING STRIP SEAPLANE BASE
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"**

Airport Indicators Discussion

- Indicators - areas where MnDOT has little or no ability to influence the outcome but the expectations for transparency and information sharing still exist
- New category
- Examples:
  - Based aircraft
  - Airport Operations
  - Services
  - # of commercial operators
- Other Indicators? (reference Airport Measures and Indicators Worksheet)

Performance Measures (System Metrics)

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System Measure Example

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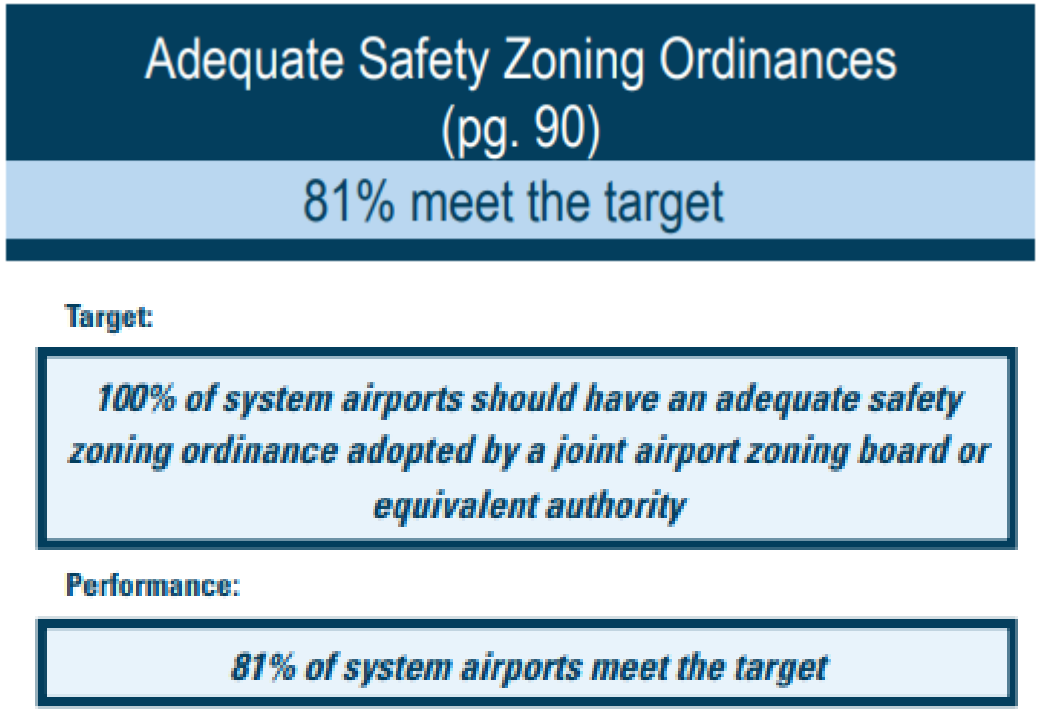


System Measures Discussion

- What's important?
- What's not important?

(reference System Measures Summary)

New System Measures Discussion

- New performance measure ideas?

  (Reference System Measures Worksheet)

- Tiered measures
  - Measures level of deviation from target (stoplight analogy)
- Continuous tracking
  - Appropriate update cycle

System Indicator Example

Indicator

Total number of non-stop markets served from Minnesota

Target

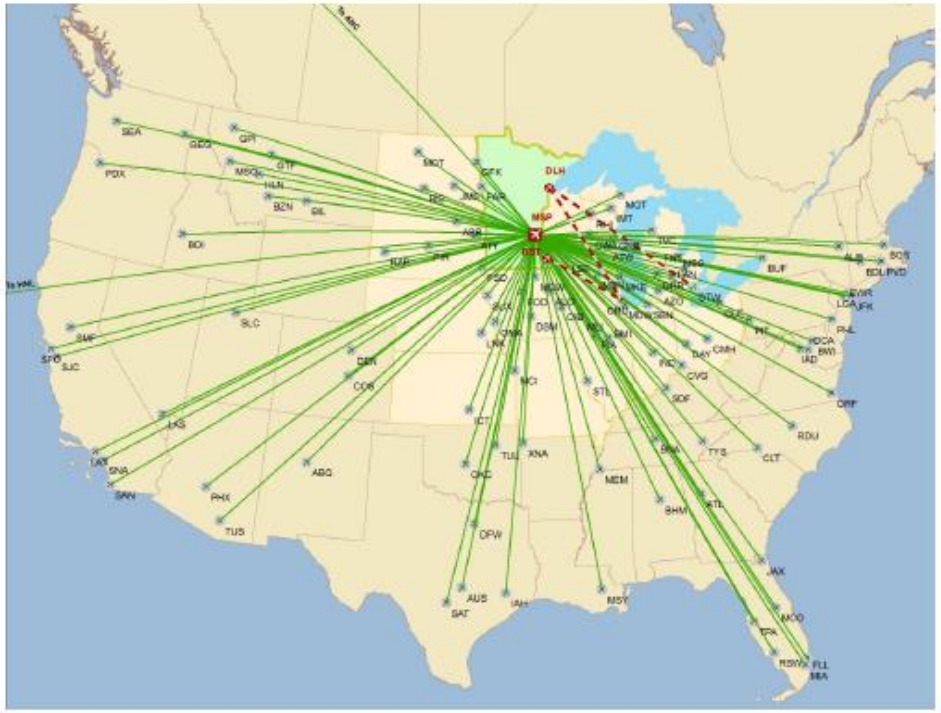
-

Performance

138 in 2011

Non-stop Airline Service Markets
(pg. 133)
138 nom-stop markets in 2011

Figure 6-19: Domestic Non-Stop Airline Service Markets from Minnesota



System Indicators Discussion

- Definition of Indicator

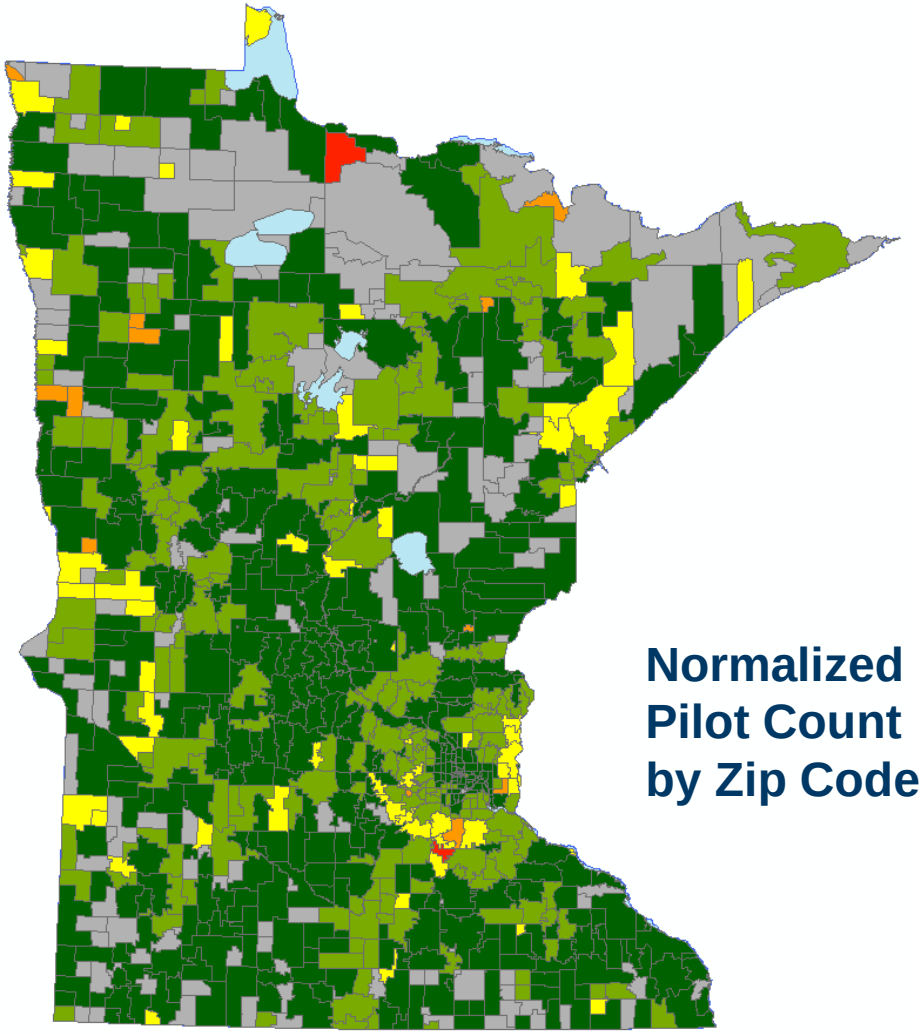
  (Reference System Indicator Summary)

- What's important?
- What's not important?

New System Indicators

- Examples:
  - Aircraft based in state
  - Licensed pilots
- Other Indicators?

(reference System Indicators Worksheet)



Normalized Pilot Count by Zip Code

What’s coming

- Minnesota Airports Conference, April 18-20
- Economic Impact Study
- Phase 2
  - Collect Data
  - Publish the document
  - Chart out Aeronautics family of plans
- Meeting 4!, Combined with TAC