

Minnesota  
A Collaborative Vision  
for Transportation



# State Aviation System Plan

## SASP Technical 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



# 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**



# Classification – 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**



# Classification – 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

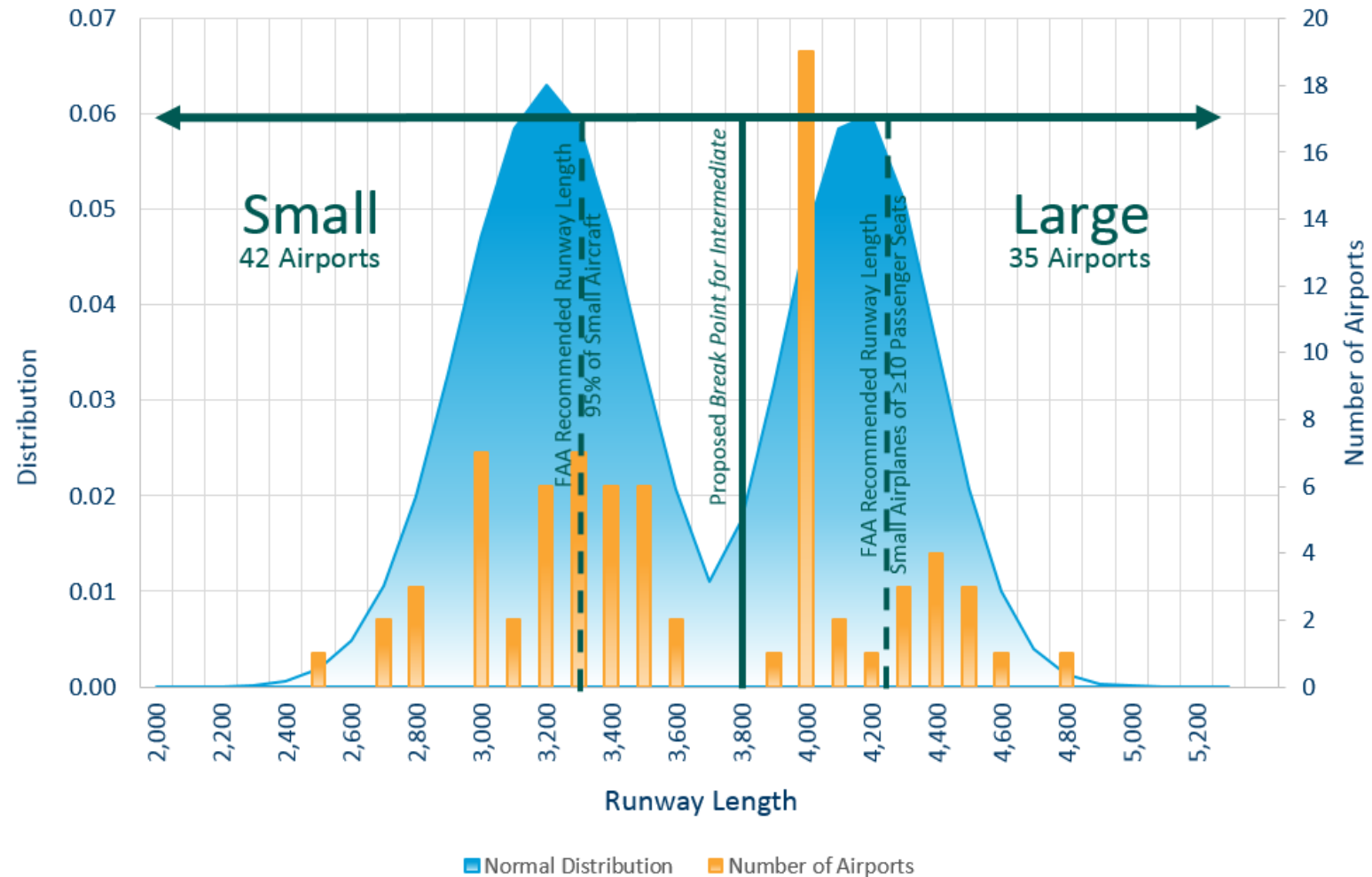
- Divide Intermediate Airports into two groupings based on runway length.
- FAA Runway Length recommendations were consulted for the average mean maximum temperature and average elevation.

# Proposed Changes – Intermediate Airports

Aircraft Type	Runway Length
Small Airplanes with Approach Speeds <50 knots	893'
<b>Small Airplanes with Approach Speeds &gt;50 knots</b>	
<b>Small Airplanes with &lt;10 Passenger Seats</b>	
95% of these Small Airplanes	3,300'
100% of these Small Airplanes	3,900'
Small Airplanes with ≥10 Passenger Seats	4,250'
<b>Large Airplanes ≤60,000 lbs.<sup>1</sup></b>	
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



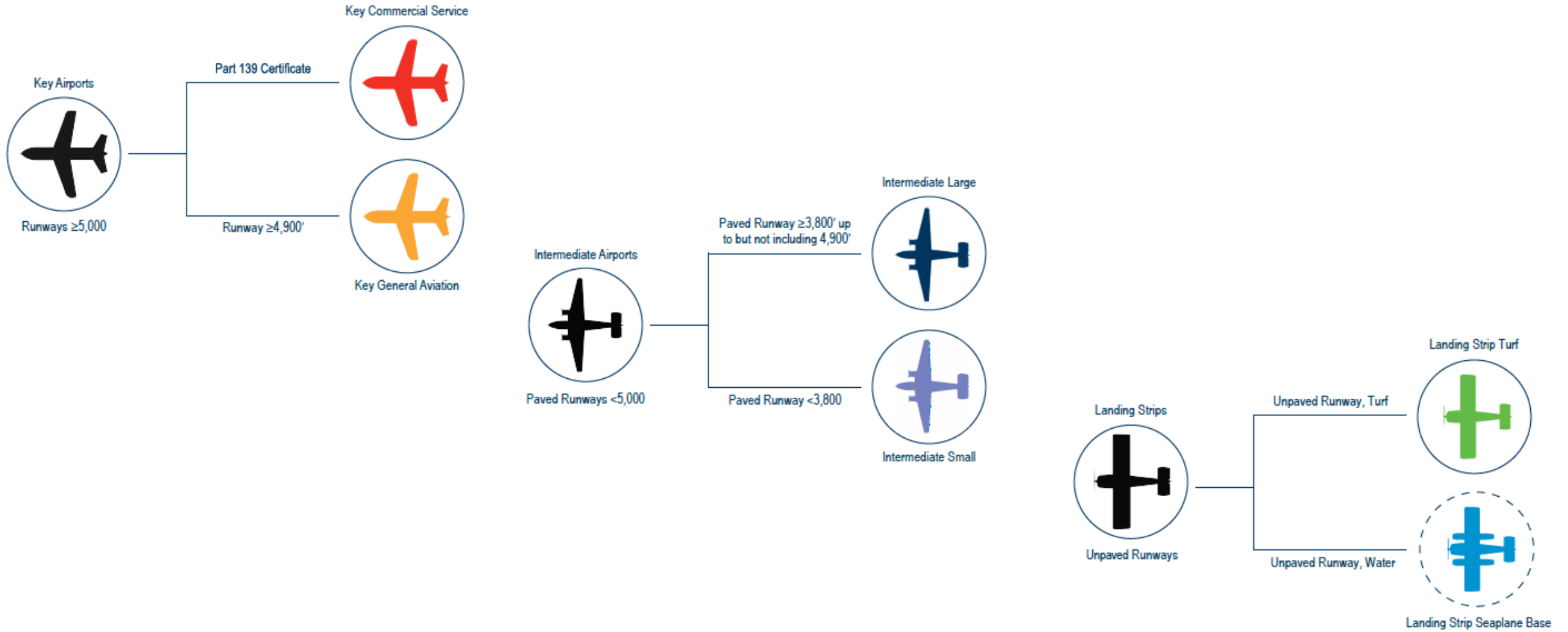
# Proposed Changes – Intermediate Airports

- 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.

# Proposed Classification





# Classification Roles



Agriculture



Medical



Recreational



Business



Airline Service



Military



Firefighting



Law Enforcement



Search & Rescue



Flight Training



Cargo



Single Engine



Twin Engine



Jet

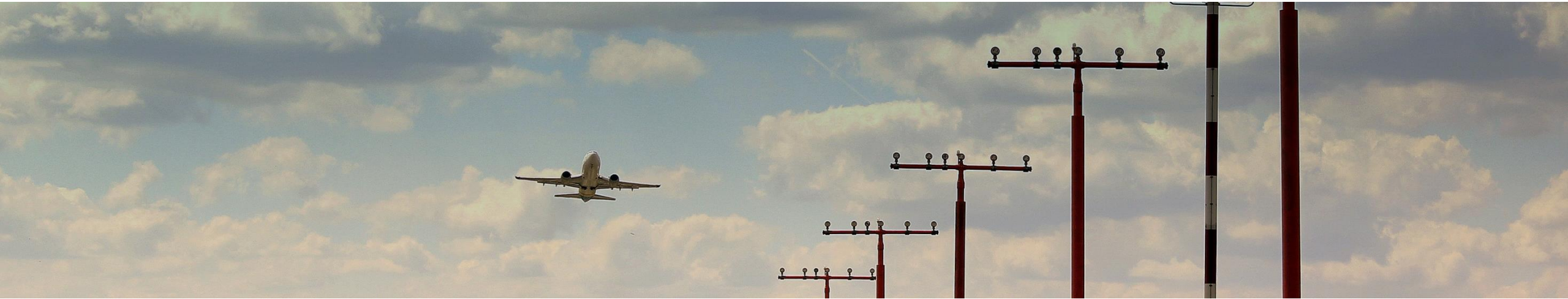


Large Jet

(Reference Handout)

# SAC – What we heard

- Generally supportive of new classification scheme after explanation
- Some discussion around whether Intermediate break point should be 3800' or 3900'
- Plan should provide clear roadmap to move one classification to another
- Loved the role icons and their ability to communicate what goes on at an airport – both generally in a classification and at specific airports



# 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.



- YOU
- More relevant, to more people, more of the time

# Small Group Roles

- Spokesperson
- Note Taker
  - Turn in “official” notes after meeting



# Minimum System Objectives (Airport Metrics)

# Minimum System Objectives and Performance Measures

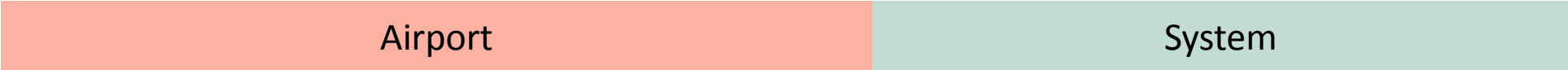
## Proposed Name Change

**2012**

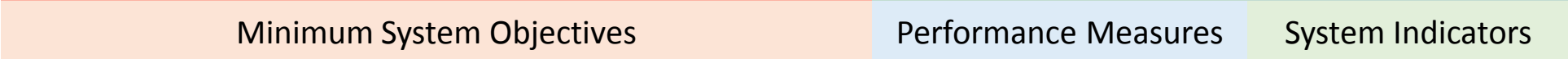
Overarching Term:

**Minimum System Objectives and Performance Measures**

Scope:



Name:



**Proposed New**

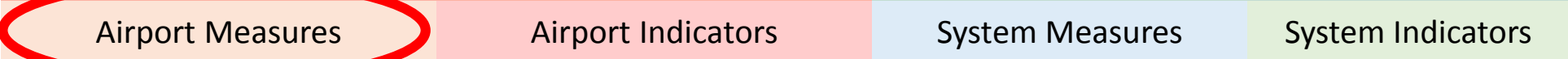
Overarching Term:

**Performance Metrics**

Scope:



Name:



# 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 / not important?
- Additional Airport Measure ideas
- Provide Feedback on Chart Parameters
  - Potential for more resolution with extra classifications
- Requirements vs. Recommendations

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

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"



# Break



# Performance Measures (System Metrics)



# Minimum System Objectives and Performance Measures Proposed Name Change

## 2012

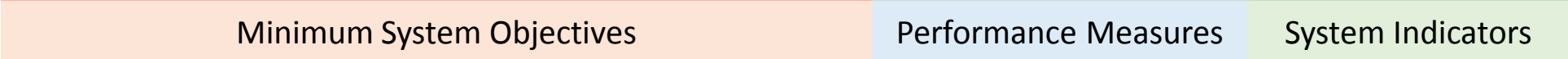
Overarching Term:

**Minimum System Objectives and Performance Measures**

Scope:



Name:



## Proposed New

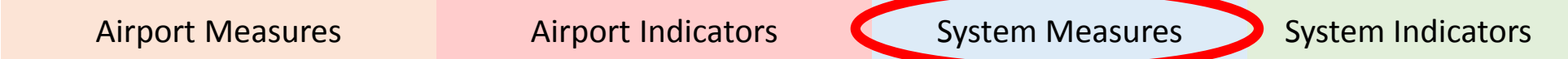
Overarching Term:

**Performance Metrics**

Scope:



Name:



# System Measure Example

## Measure

Percent of system airports with an adequate Safety Zoning Ordinance

## Target

100%

## Performance

81%

Adequate Safety Zoning Ordinances  
(pg. 90)

81% meet the target

**Target:**

*100% of system airports should have an adequate safety zoning ordinance adopted by a joint airport zoning board or equivalent authority*

**Performance:**

*81% of system airports meet the target*

# System Measures Discussion

- Continue to measure
  - Is it important or not?
- Targets
  - Do targets of any existing system measures need tweaking?
- Tiered measures?
  - Measures level of deviation from target (stoplight analogy)
- Continuous tracking
  - Appropriate update cycle
- New performance measure ideas?

Up-to-Date Planning Documents (pg. 140) 10% meet the target	Adequate Safety Zoning Ordinances (pg. 90) 81% meet the target
Up-to-Date Navigational Systems (pg. 150) Data collection in progress	Airport Surfaces Clear of Obstructions (pg. 93) Data collection in progress
Pavement Condition Index (pg. 152) 77% meet the target	Adequate Proximity to Weather Reporting (pg. 96) 100% meet the target
	Adequate Approaches to Airport (pg. 106) 32% meet the target
	Adequate Proximity to Alternate Airport (pg. 110) 87% meet the target



# Indicators

# System Indicator Example

## Indicator

Total number of non-stop markets served from Minnesota

## Target

-

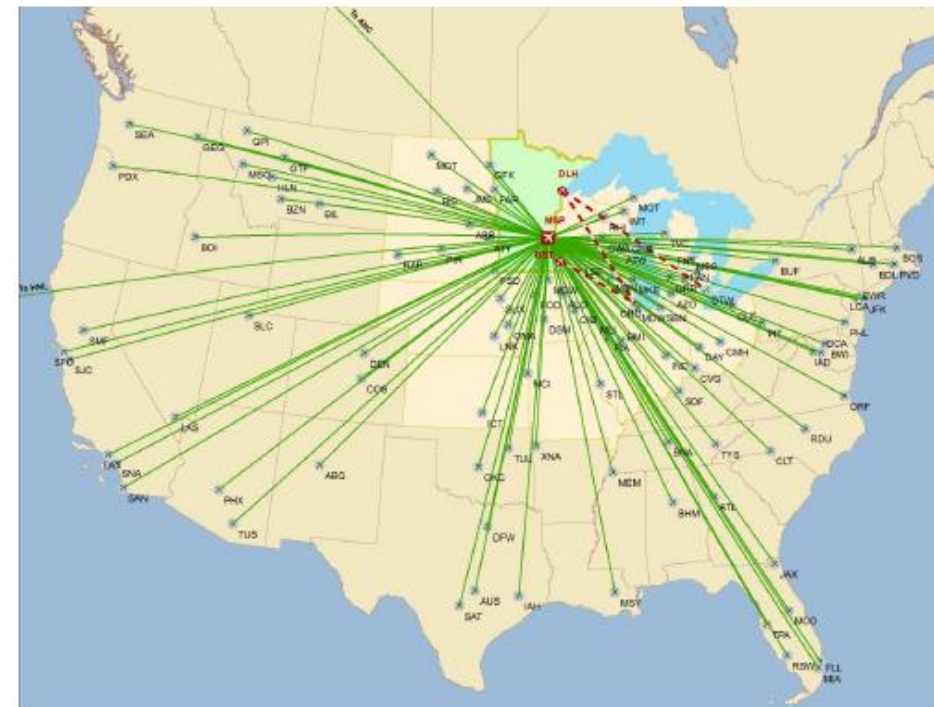
## Performance

138 in 2011

Non-stop Airline Service Markets  
(pg. 133)

138 non-stop markets in 2011

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



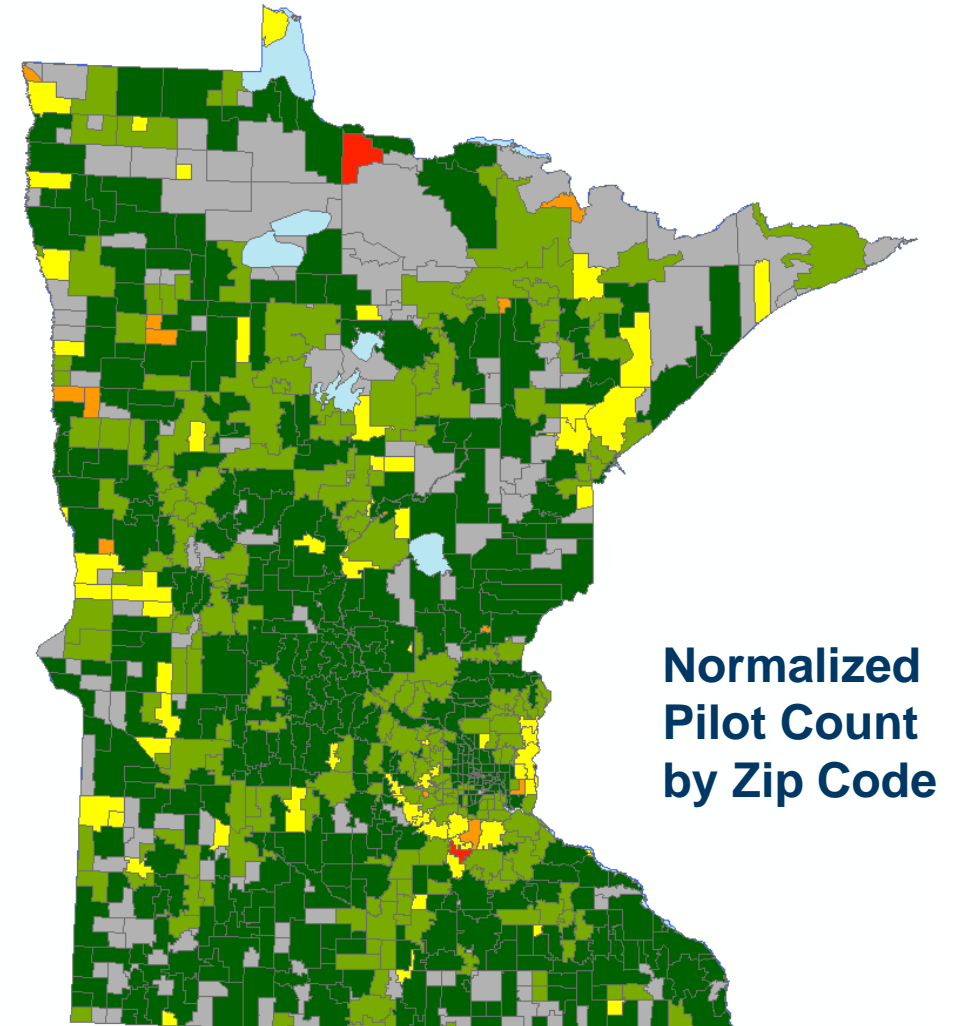
# System Indicators Discussion

- Indicators - areas where MnDOT has little or no ability to influence the outcome but the expectations for transparency and information sharing still exist
- What's important / not important?
- Update Cycle

Emergency Medical Response (pg. 99) 77% of hospitals within 15 minutes	Level 3 Regional Trade Center Proximity to Key & Intermediate Airports (pg. 129) 100% of Level 3 within 30 minutes
Aviation Accidents (pg. 104) 26 accidents in 2011	Population to an Airline Service Airport (pg. 131) 72% of population within 60 minutes
Aviation Fatalities (pg. 105) 2 fatalities in 2011	Non-stop Airline Service Markets (pg. 133) 138 non-stop markets in 2011
Airport Usability (pg. 113) MnDOT D1 airports usable 363 days per year	Originating Passengers (pg. 136) 7.8 million passengers in 2010
Population to a Key System Airport (pg. 122) 99% of population within 90 minutes	Annual Delay at MSP (pg. 138) 1720 flights delayed in 2011
Population to a Paved & Lighted Runway (pg. 124) 71% of population within 30 minutes	24/7 Fueling at Airports (pg. 143) 100% of airports within 50 nautical miles
Level 1 & 2 Regional Trade Center Proximity to Key Airports (pg. 126) 100% of Level 1 & 67% of Level 2 within 30 minutes	Maintenance & Repair at Airports (pg. 145) 100% of airports within 50 nautical miles
	Population to Scheduled Cargo Service (pg. 148) 75% of population within 60 minutes

# Potential New System Indicators

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



# 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?



# What's coming

- Economic Impact Study
- Stakeholder Forums
- Phase 2
  - Collect Data
  - Publish the document
  - Chart out Aeronautics family of plans
- Meeting 4!, Combined with SAC