Attachment #4

SD Aeronautics Commission

2020 South Dakota State Aviation System Plan & Aviation Economic Impact Study

June 18, 2020



State Aviation System Plan

Project Team







Agenda

- Project Overview
- Study Findings
- Next Steps
- Questions



Project Overview





South Dakota State Aviation System Plan (SDSASP)



Economic Impact Study (EIS)



Purpose of the SDSASP

• Provide a blueprint for development and continued preservation of South Dakota's aviation assets.



System Plan

What's Been Accomplished So Far?





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System Plan



What Drives the SDSASP?





2020 SDSASP: Inventory, Airport Roles, and Activity Forecasts



Inventory Process

- Provides comprehensive baseline data
- Organized by types of facilities and services
- Sourced from airport manager surveys, and official sources (FAA, SDDOT, Master Plans, etc.)



Summary of Airport Roles

- Reviewed FAA classifications
- Evaluated 2010 methodology and made revisions
- Assigned 2020 SDSASP roles
- Assigned facility and service targets based on airport roles

Airport Role	Number of Airports	Example Airport
Commercial Service	5	Watertown Regional
Large General Aviation	7	Brookings Regional
Medium General Aviation	16	Millbank Municipal
Small General Aviation	27	McLaughlin Municipal
Basic Service	1	Howard Municipal
Total System Airports	56	



Revised Methodology

Role	Runway (min)	Approach	Weather	Services	Fuel	ARC
Commercial Service	6,500ft	Precision	Yes	Major	JetA/100LL	C-II
Large General Aviation	5,000ft	Non-precision	Yes	Minor	JetA/100LL	C-I
Medium General Aviation	4,200ft	Non-precision	Yes	On-call	100LL	B-II
Small General Aviation	3,000ft	Visual	No	No	No	B-I
Basic Service	No Min	Visual	No	No	No	A-I

Airport Example:



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Facility and Service Targets

FACILITY AND SERVICE TARGETS							
Description	Commercial Service	Large GA	Medium GA	Small GA	Basic Service		
AIRSIDE FACILITIES							
Airport Reference Code	C-II	C-I	B-II	B-I or below	A-I		
Primary Runway Length	Minimum 6,500'	Minimum	Minimum	Minimum	Not a Target		
Primary Runway Width	Minimum 100'	Minimum 100'	Minimum 75'	Minimum 60'	Minimum 50'		
Primary Runway Surface	Paved	Paved	Paved	Paved	Not a Target		
Type of Parallel Taxiway	Full parallel	Full parallel	Turnarounds meet standards (both ends)	Exits as needed	Not a Target		
Type of Runway Approach	Precision	Non- precision	Non- precision	Visual	Visual		
Runway Lighting	MIRL	MIRL	MIRL	LIRL	Not a Target		
Taxiway Lighting	MITL	MITL	MITL	Not a Target	Not a Target		
	5	SERVICES					
Fuel	100LL & Jet A	100 LL & Jet	100LL	Not a Target	Not a Target		
Comp plan define land uses	Yes	Yes	Yes	Yes	Yes		



Airport Report Cards

<u>Aberdeen</u>	Airport Name: Aberdeen Regional Airport FAA Identifier: ABR Associated City: Aberdeen 2020 SDSASP Classification: Commercial Service			
Target Category ¹	Commercial Service Target	Current Condition	Meets 2020 Target?	
	AIRSIDE FACILITIES			
Airport Reference Code	C-II	C-II	Yes	
Primary Runway Length	Minimum 6,500'	6,900'	Yes	
Primary Runway Width	Minimum 100'	100'	Yes	
Primary Runway Surface	Paved	Concrete	Yes	
Primary Taxiway Type	Full Parallel	Full Parallel	Yes	
Primary Runway Approach	Precision Instrument (PI)	PI	Yes	
Primary Runway Lighting	Medium Intensity Runway Lighting (MIRL)	HIRL ⁴	Yes	
Primary Taxiway Lighting	Medium Itensity Runway Lighting (MITL)	MITL	Yes	
Visual Guidance Slope Indicator	Both Runway Ends (or PI)	P4L/P4L	Yes	
Runway End Identifier Lights - As Required	Both Runway Ends (or PI)	Y/N	Yes	
Rotating Beacon	Yes	Yes	Yes	
Lighted Wind Indicator	Yes - Multiple as Needed	Yes	Yes	
Remote Communications Outlet (RCO) Facilities	Tower or RCO	Yes	Yes	
Wind Coverage or Crosswind Runway	Crosswind Runway or 95% Wind Coverage for NPIAS Facilities	97%	Yes	
	LANDSIDE FACILITIES			
Covered Storage for Based Aircraft ²	100% of Based Aircraft	82%	No	
Overnight Storage for Business Aircraft ³	Typical Avg. Aircraft/Business User Demand	Yes	Yes	
Aircraft Apron	100% of Average Daily Transients	100%	Yes	
Terminal/Administration Building	Yes	Yes	Yes	
Paved Entry/Terminal Parking	Yes	Yes	Yes	
	SERVICES			
Fuel	Jet A & 100LL	Jet A & 100LL	Yes	
Comprehensive Plan Defines Land Uses	Yes	Yes	Yes	
Emergency Plan	Yes	Yes	Yes	
Airport Layout Plan (ALP)	ALP Update Within Last 8 Years	2014	Yes	
Weekday Hours of Operation	Standard Business Hrs/After Hrs On Call	Standard/On Call	Yes	
Weekend Hours of Operation	Standard Business Hrs/After Hrs On Call	Standard/On Call	Yes	
Ground Transportation	Yes (Any Ground Transportation)	Yes	Yes	
Food & Beverage	Yes (Vending)	Yes	Yes	
Posted Contact Information	Yes	Yes	Yes	
Internet Access	Yes	Yes	Yes	
Restroom	Yes	Yes	Yes	
Pilot Area	Yes	Yes	Yes	
Security Plan	Yes	Yes	Yes	
Rental Aircraft	Based	Based	Yes	
Flight Training	Available	Available	Yes	
Aircraft Maintenance/Repair	Major	Major	Yes	
Aircraft Charter	Based	Based	Yes	
Minimum Fixed Base Operator (FBO) Standards	Yes	Yes	Yes	
Weather Reporting	Yes	Yes		

FAA Identifier: BKX Associated City: Brookings 2020 SDSASP Classification: Large General Avia			
Target Category ¹	Large General Aviation Target	Current Condition	Meets 2020 Target?
	AIRSIDE FACILITIES		
Airport Reference Code	C-I	C-IV	Yes
Primary Runway Length	Minimum 5,000'	6,000'	Yes
Primary Runway Width	Minimum 100'	100'	Yes
Primary Runway Surface	Paved	Asphalt	Yes
Primary Taxiway Type	Full Parallel	Full Parallel	Yes
Primary Runway Approach	Non-Precision (NPI)	PI ⁴	Yes
Primary Runway Lighting	Medium Intensity Runway Lighting (MIRL)	HIRL⁵	Yes
Primary Taxiway Lighting	Medium Intensity Taxiway Lighting (MITL)	MITL	Yes
Visual Guidance Slope Indicator	Both Runway Ends (or PI)	P4L/P4L	Yes
Runway End Identifier Lights - As Required	Both Runway Ends (or PI)	N/Y	Yes
Rotating Beacon	Yes	Yes	Yes
Lighted Wind Indicator	Yes	Yes	Yes
Remote Communications Outlet (RCO) Facilities	Not a Target	Yes	N/A
Wind Coverage or Crosswind Runway	Crosswind Runway or 95% Wind Coverage for	Crosswind	Ves
wind coverage of crosswind narway	NPIAS Facilities	Runway	105
2	LANDSIDE FACILITIES	•	I
Covered Storage for Based Aircraft ²	100% of Based Aircraft	111%	Yes
Overnight Storage for Business Aircraft ³	Typical Avg. Aircraft/Business User Demand	Yes	Yes
Aircraft Apron	100% of Average Daily Transients	80%	No
Terminal/Administration Building	Yes	Yes	Yes
Paved Entry/Terminal Parking	Yes	Yes	Yes
	SERVICES	•	
Fuel	Jet A & 100LL	Jet A & 100LL	Yes
Comprehensive Plan Defines Land Uses	Yes	Yes	Yes
Emergency Plan	Yes	Yes	Yes
Airport Layout Plan (ALP)	ALP Update Within Last 10 Years	2014	Yes
Weekday Hours of Operation	Standard Business Hrs/After Hrs On Call	Standard/On Call	Yes
Weekend Hours of Operation	Standard Business Hrs/After Hrs On Call	On Call	No
Ground Transportation	Yes (Any Ground Transportation)	Yes	Yes
Food & Beverage	Yes (Vending)	Yes	Yes
Posted Contact Information	Yes	Yes	Yes
Internet Access	Yes	Yes	Yes
Restroom	Yes	Yes	Yes
Pilot Area	Yes	Yes	Yes
Security Plan	Yes	Yes	Yes
Rental Aircraft	Available	Not Available	No
Flight Training	Available	Available	Yes
Aircraft Maintenance/Repair	Minor	Major	Yes
Aircraft Charter	Available	Not Available	No
Minimum Fixed Base Operator (FBO) Standards	Yes	No	No
Weather Reporting	Yes	Yes	Yes

Brookings



Airport Name: Brookings Regional

Activity Forecasts

Forecast Element	2018 Baseline	2023	2028	2038	SDSASP CAGR 2018-2038	TAF CAGR 2018-2038
		Commercial	Service			
Enplanements	903,098	986,553	1,077,729	1,286,165	1.78%	2.12%
Based Aircraft	411	432	454	501	1.00%	0.84%
Commercial Service Operations	75,004	79,881	85,245	97,617	1.33%	0.74%
GA Operations	125,993	132,420	139,175	153,735	1.00%	0.61%
Military Operations	4,799	4,799	4,799	4,799	Flatlined	Flatlined
Total Operations	205,796	217,100	229,219	256,152	1.10%	0.65%
		General Av	viation			
Based Aircraft	863	892	921	985	0.66%	0.40%
GA Operations	256,924	264,382	272,356	290,354	0.61%	0.08%
Military Operations	974	974	974	974	Flatlined	Flatlined
Total Operations	257,898	265,356	273,510	291,328	0.61%	0.08%

Source: Kimley-Horn, 2020, FAA Terminal Area Forecast (TAF)



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2020 SDSASP: Aviation Issues and System Performance



Top Aviation Issues We Heard

Issue Category	Goal 1: Safety and Security	Goal 2: Maintenance and Infrastructure Development	Goal 3: Accessibility to Users
Infrastructure Needs	.(
(Maintenance & Expansion)	v	•	v v
Aviation Workforce		✓	✓
Land Acquisition/Compatibility	\checkmark	✓	
Compliance	\checkmark	✓	
Revenue Generation		✓	✓
Technology	\checkmark	✓	✓
Air Service			✓
Seasonal Capacity		\checkmark	\checkmark

Who we heard from:

- SD Aeronautics Commission
 SDDOT
- Airport Managers
- FAA
- Medical Transport Pilots
- Aerial Firefighter Pilots

- Project Advisory Committee (PAC)
- Economic Development Specialists
- Agricultural Spraying Operators
- And more



Intermodal Connectivity and Airport Access



- Roadway Connectivity
- Intermodal Integration
 - Public Transit
 - Ground Transportation
 - Interregional Bus Service
- Heavy Rail
- Long-Range Transportation Improvements



Performance Measures

Goal: Safety and Security

Clear Part 77 approaches on their primary runway

Clear Part 77 approaches on their non-primary runway(s)

Control (through fee simple or easements) the land in the RPZs of their primary runway

Control (through fee simple or easements) the land in the RPZs of their non-primary runway(s)

Meeting SDDOT annual inspection standards for RSAs

Goal: Maintenance and Development of Infrastructure

Airports that do not have substantial operations by aircraft with an ARC higher than the critical aircraft

Average primary runway PCI of 70 or greater

Average non-primary runway PCI of 70 or greater

Average taxiway PCI of 60 or greater

Average apron PCI of 50 or greater

Goal: Accessibility to Users

Population within a 30-minute drive of an airport with 24-hour fuel availability (Jet A, 100 LL, or both)

Population within a 30-minute drive of an airport with an AWOS or ASOS (certified weather systems)





2020 SDSASP: Project Recommendations and Cost Estimates



Recommended Projects & System Needs

- Projects needed to achieve PMs
- Projects needed to meet Facility and Service Targets
- All other requested projects on ACIPs

2020 SDSASP Planning Level Costs Estimates, 2020-204	stimates, 2020-2040
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Planning Effort Type	Cost Estimate	Percent of Total Costs
2020 SDSASP PMs	\$28,730,000	3%
2020 SDSASP FSTs	\$90,120,000	8%
Airport (Statewide) CIPs	\$983,650,000	89%
Total Cost	\$1,102,500,000	100%



Investment & Funding Shortfall

Total Future Funding Needs and Shortfall, 2020-2040 (Federal, State, and Local Funding)



Source: Kimley-Horn 2020, KLJ 2020, SDDOT Historical Funding, FAA Grant Histories. Note: Dollar amounts have been rounded.



SDSASP Priority Rating Model (PRM)

- A tool to determine prioritization of needs when resources are limited
- Uses a point system to rate and assign a score to each project, higher scores are prioritized.

Priority Rating Model Summary						
Criteria	Weight	Max Points	% of Total			
Project Purpose	5	20	24%			
SDSASP Performance	5	20	24%			
Associated Facility	4	16	19%			
Timing Considerations	3	12	14%			
Airport Role	2	10	12%			
Funding Source	2	6	7%			
Highest Pos	sible Score	84	100%			



2020 South Dakota Aviation Economic Impact Study (2020 AEIS)



Definitions of Economic Impacts





Summary of Draft Findings





Unique Economic Activities

 Aviation supports unique events and industries that significantly contribute to South Dakota's overall economic output





Airport Lo	cation	Airp	ort Classification
Associated City:	Pierre	Federal:	Nonhub ¹
County:	Hughes	State:	Commercial Service

Airport Activity 2018					
Commercial Operations	11,680	GA Operations	22,500		
Commercial Enplanements	30,230	GA Visitors	17,840		
Commercial Visitors	14,810	Military Operations	500		

	Airport Economic Impacts					
	Source of Impact	Category of Impact	Jobs	Earnings	GDP	Economic Activity
		Direct	120	\$6,631,000	\$8,035,000	\$13,492,000
On-Airport		Subtotal Direct	120	\$6,631,000	\$8,035,000	\$13,492,000
	Airport	Indirect	27	\$1,414,000	\$2,135,000	\$3,814,000
	Operations	Induced	44	\$1,945,000	\$3,271,000	\$5,821,000
		Subtotal Multiplier Effects	70	\$3,359,000	\$5,406,000	\$9,635,000
		Airport Operations Subtotal	190	\$9,990,000	\$13,441,000	\$23,127,000
On-Airport		Direct	13	\$715,000	\$802,000	\$1,665,000
		Subtotal Direct	13	\$715,000	\$802,000	\$1,665,000
	Capital	Indirect	3	\$157,000	\$255,000	\$478,000
		Induced	5	\$210,000	\$352,000	\$628,000
		Subtotal Multiplier Effects	8	\$367,000	\$607,000	\$1,106,000
		Capital Improvements Subtotal	21	\$1,082,000	\$1,409,000	\$2,771,000
Off-Airport	Visitor	Direct	416	\$10,330,000	\$14,950,000	\$27,441,000
		Subtotal Direct	416	\$10,330,000	\$14,950,000	\$27,441,000
		Indirect	49	\$2,272,000	\$4,170,000	\$7,610,000
	Spending	Induced	56	\$2,460,000	\$4,123,000	\$7,362,000
		Subtotal Multiplier Effects	105	\$4,732,000	\$8,293,000	\$14,972,000
		Visitor Spending Subtotal	521	\$15,062,000	\$23,243,000	\$42,413,000
Off-Airport		Direct	322	\$8,000,000	\$11,577,000	\$21,250,000
	Visitor	Subtotal Direct	322	\$8,000,000	\$11,577,000	\$21,250,000
	Spending from	Indirect	38	\$1,760,000	\$3,229,000	\$5,893,000
	Sturgis / Pheasant	Induced	43	\$1,905,000	\$3,193,000	\$5,701,000
	Hunting Only	Subtotal Multiplier Effects	81	\$3,665,000	\$6,422,000	\$11,594,000
		Special Event Subtotal	404	\$11,665,000	\$17,999,000	\$32,844,000
		Direct	871	\$25,676,000	\$35,364,000	\$63,848,000
	Total	Subtotal Direct	871	\$25,676,000	\$35,364,000	\$63,848,000
_		Indirect	117	\$5,603,000	\$9,789,000	\$17,795,000
		Induced	147	\$6,520,000	\$10,939,000	\$19,512,000
		Subtotal Multiplier Effects	264	\$12,123,000	\$20,728,000	\$37,307,000
		Grand Total	1,135	\$37,799,000	\$56,092,000	\$101,155,000

Airport Economic Impact Profiles

Pierre Regional

Developed for each airport and provides economic impacts by:

- Airport Operations
- Capital Improvements
- Visitor Spending
- Special Event Impacts
- Total Impacts



GIS Tool Features

- Web-based service backed by an easily managed excel file
- Allows for continuous system planning
 - Easily updated as data changes
 - Tracks performance towards meeting system goals
- Graphical representation of all SDSASP Performance Measures and Performance Indicators
- Data hub for 2020 SDSASP data
 - Includes filters for a user-friendly experience
 - Reports individual airport data through airport pop-ups
 - Easy to print reports of airport specific data



2020 SDSASP GIS Tool





Next Steps

- Produce:
 - Technical Report
 - Executive Summary
 - GIS Tool User Guide
- www.2020SDSASP.com





Questions?

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