Appendix E – NPIAS Analysis and Recommendations

This appendix provides additional context to **Chapter 6. System Recommendations** by evaluating and reviewing potential changes to the National Plan of Integrated Airport Systems (NPIAS) and the Nonprimary ASSET classifications for airports in South Dakota. All of the 2020 SDSASP airports are included in the NPIAS as part of the Federal Aviation Administration's (FAA) latest publication *The Report to Congress, NPIAS 2019-2023* (2019-2023 NPIAS). This section reviews the classifications set by the NPIAS and determines if any 2020 SDSASP airports are fulfilling a different role than currently classified based on recently collected data for the 2020 SDSASP.

E.1. Eligibility Criteria for NPIAS Airports

The FAA has established a set of criteria to determine if an airport is eligible for entry into the NPIAS through Order 5090.5: *Formulation of the NPIAS and ACIP* which cancels Orders 5090.3C: *Field Formulation of the National Plan of Integrated Airport Systems (NPIAS)* and *FAA Order 5100.39A: Airports Capital Improvement Plan.* Order 5090.5 brings about key updates to eligibility requirements for airports requesting entry into or withdrawal from the NPIAS and defines general aviation (GA) classifications in the NPIAS that were previously undefined. Additionally, Order 5090.5 includes revisions to the National Priority System (NPS) equation, which determines the prioritization of airport development, to include the airport's role in the National Airport System.[1] Airports are divided into two separate categories: commercial service and GA. Eligibility criteria differs for each category and are provided below.

E.1.1. *Eligibility Criteria*

An **existing commercial service** airport must meet the following criteria:

- Publicly-owned, publicly accessible airport that receives scheduled air carrier service and annually enplanes 2,500 or more passengers

An **existing GA** airport must meet the following criteria:

- Operated by a sponsor eligible to receive federal funding and meet [grant] obligations
- Used by at least ten operational and airworthy aircraft based at the airport validated against the FAA Aircraft Registry (i.e., basedaircraft.com)
- Located at least 30 miles from the nearest NPIAS airport. The 30-mile calculation must consider all existing NPIAS airports within a 30-mile radius, even if it is in an adjacent state.
- Demonstrates an identifiable role in the national system (such as Basic, Local, Regional, or National)
- Included in a state or territory aviation system plan with a role similar to the federal role, and recommended by the airport's state or territory aviation authority to be part of the NPIAS
- No significant airfield design standard deficiencies, compliance violations, or wetland or wildlife issues based on a review by the FAA

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[1] FAA, *Formulation of the NPIAS and the ACIP*, 2019. https://www.faa.gov/regulations_policies/orders_notices/index.cfm/go/document.current/documentNumber/5090.5.

- An existing airport that is included in an accepted state aviation system plan (SASP) (such as the 2020 SDSASP) or a metropolitan aviation system plan

An **existing publicly-owned, public-use heliport** may be considered for inclusion if it is deemed to provide a significant contribution to public transportation and meets the following criteria:

- Operated by a sponsor eligible to receive federal funding and meet obligations
- Used by at least four based rotorcraft for at least two years prior to its request for inclusion
- Experiences 400 annual instrument flight rule (IFR) operations
- Included in the state airport system plan (such as the 2020 SDSASP)

E.1.2. *Additional Requirements*

A **proposed commercial service or GA airport** must meet the applicable eligibility criteria listed previously and meet the following additional requirements:[2]

- Demonstrates how it will meet the operational activity required [for its proposed role] within the first five years of operations through a forecast validated by the FAA (the operational activity cannot be based on attracting demand from other airports, unless there is safety or standard deficiencies at these other airports)
- Provides enhanced facilities that will accommodate the current aviation activity and improve functionality as well as provide room for future development based on imminent justified demand
- Shows a benefit-cost analysis rating of 1.0 or more (information on when and how to conduct a benefit-cost analysis is in FAA Order 5100.38, Airport Improvement Program Handbook, and FAA Airport Benefit-Cost Analysis Guidance)
- Presents a detailed financial plan for the proposed airport to accomplish its construction and ongoing maintenance
- Level of local support/consensus is adequate to achieve the development of the new airport

In addition to these specific eligibility requirements, FAA Order 5090.5 provides a number of considerations the FAA employs when reviewing NPIAS entry requests. These considerations pertain to the airport's level of financial self-reliance, the airport sponsor's ability and willingness to support the airport, current design standard deficiencies or other potential federal compliance issues (e.g., non-aeronautical activity on airport property), and the airport's role in meeting current and project future aviation demands. Additional details about these factors are available in Table 3.4 of FAA Order 5090.5.

E.2. Current NPIAS Classifications

NPIAS airports are grouped into two major categories: Primary and Nonprimary. Of the 3,321 current NPIAS airports in the U.S., 380 are categorized as Primary, with the remaining 2,941 categorized as Nonprimary. **Table 3-3** in **Chapter 3. Airport Roles** details each of the 56 system airports' NPIAS classifications.

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[2] According to FAA Order 5090.5, a proposed GA airport that does not meet all of these additional requirements may be considered for inclusion under special circumstances. Special circumstances are those that demonstrate an airport fulfills a unique role in the national system, such as serving an isolated community, a Native American community, or providing other essential roles such as U.S. Marshals, U.S. Postal Service, or U.S. Forest Service.

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E.2.1. *South Dakota's Current Primary Airports*

Primary airports are public airports with scheduled air carrier service that generate 10,000 passenger enplanements or more per year. These airports are further sub-categorized as follows:

- **Large**: Generates 1% or more of total U.S. passenger enplanements
- **Medium**: Generates at least 0.25%, but less than 1% of total U.S. passenger enplanements
- **Small**: Generates at least 0.05%, but less than 0.25% of total U.S. passenger enplanements
- **Nonhub**: Generates more than 10,000 annual passenger enplanements, but less than 0.05% of total U.S. passenger enplanements.

The *2019-2023 NPIAS Report* lists three airports in South Dakota as primary airports, and these three airports consist of one Small hub and two Nonhub airports. **Section E.3.1** includes NPIAS recommendations for re-classification of two Nonprimary airports as Primary airports.

E.2.2. *South Dakota's Current Nonprimary Airports*

Nonprimary airports include GA airports and airports with commercial service generating less than 10,000 annual enplanements. These airports are further sub-categorized as follows:

- **Commercial Service:** Public airports receiving scheduled passenger service and between 2,500 and 9,999 enplaned passengers per year
- **Reliever:** Public or private airports designated by the Secretary of Transportation to relieve traffic congestion at nearby commercial service airports and provide improved GA access to the overall community
- **General Aviation:** Public-use airports that do not have scheduled air carrier service or have scheduled service with less than 2,500 annual enplanements

Fifty-three of the airports included in the 2020 SDSASP are designated as Nonprimary NPIAS airports in the *2019-2023 NPIAS Report* and all but one (Pierre Regional Airport) are classified as GA. As noted in the previous section, two of these airports currently meet the criteria as Primary airports and should be re-classified as primary airports (see **Section E.3.1**). In addition, there are two additional Nonprimary NPIAS airports in South Dakota (Presho Municipal Airport and Kadoka Municipal Airport) that are not included in the 2020 SDSASP but are technically included in the NPIAS as of the publication of this study. More information about recommendations for these two excluded airports is included in **Section E.3.2**.

E.3. NPIAS Evaluation and Recommendations

The evaluation of current NPIAS airport classifications using updated information collected for the 2020 SDSASP resulted in recommendations for both Primary and Nonprimary airports, as provided in the following two sections.

E.3.1. *Primary Airport Recommendations*

While **Section E.2.1** states that there are three Primary airports in South Dakota, the 2020 SDSASP recognized that there are five Primary airports based on updated enplanement data from the FAA (as mentioned in **Table 3-3** in **Chapter 3. Airport Roles**). Shortly after publication of the *2019-2023 NPIAS Report* there were two airports in South Dakota (Pierre Regional Airport and Watertown Regional Airport) that reached the 10,000-enplanement threshold, which is the minimum criteria to be classified as a Primary Nonhub airport.

Table E-1 shows the NPIAS classifications from the *2019-2023 NPIAS Report* and the recommended changes to those classifications based on more recent enplanement data from the FAA. Those airports that are receiving recommendations to move up to a higher classification are indicated in green font in **Table E-1**. The other three Primary airports in South Dakota continue to meet the criteria for their NPIAS classification as published. These recommendations are accounted for in **Chapter 3. Airport Roles**.

Table E-1: Recommended NPIAS Classifications

Associated City	Airport Name	FAA ID	2019 NPIAS Classification	2018 Annual Enplanements	Percent of National Enplanements (887,027,038)	2020 SDSASP Recommended NPIAS Classification
Aberdeen	Aberdeen Regional	ABR	Nonhub	28,337	0.003%	Nonhub
Pierre	**Pierre Regional**	PIR	Nonprimary Regional	33,903	0.003%	**Nonhub**
Rapid City	Rapid City Regional	RAP	Nonhub	297,133	0.034%	Nonhub
Sioux Falls	**Sioux Falls Regional/ Joe Foss Field**	FSD	Small Hub	530,931	0.060%	Small Hub
Watertown	**Watertown Regional**	ATY	Nonprimary Regional	12,794	0.001%	**Nonhub**

Sources: 2019-2023 NPIAS; FAA Terminal Area Forecast (TAF) 2018; Kimley-Horn, 2020

E.3.2. *Nonprimary Airport Recommendations*

As mentioned in **Chapter 1. Study Design and System Goals** and **Section E.2.2**, there are two Nonprimary NPIAS airports that have been excluded from the 2020 SDSASP:

- Kadoka Municipal Airport
- Presho Municipal Airport

Both airports have expressed interest in being excluded from the NPIAS as they have not received FAA Airport Improvement Program (AIP) grants and have limited airport activity. Airports must apply to be excluded from the NPIAS and meet the exclusion criteria shown in **Table E-2**.

Table E-2: Exclusion from the NPIAS Criteria

NPIAS/ASSET Classification	Eligibility for Exclusion Criteria
Unclassified Airports (Kadoka Municipal)	- Must have been identified by the FAA as Unclassified for a minimum of four consecutive years (last two NPIAS Reports) - Does not support critical function in the national airport system
Classified Airports (Presho Municipal)	- Must have had declining aeronautical activity at the airport over the last ten years and is now classified as Local or Basic - Does not support a critical function in the NAS - Does not serve an irreplaceable role in the NAS and NPIAS

Source: FAA Order 5090.5: Formulation of the NPIAS and ACIP

Table E-3 shows historical aeronautical activity for Presho and Kadoka Municipal airports. As the data shows, both airports have been experiencing a relatively consistent decline in their total operations and based aircraft over the last ten years, with each airport only experiencing a growth year once or twice over the decade. Neither airport serves a critical community function such as supporting U.S. Forest

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Service (USFS), United States Postal Service (USPS), U.S. Customs or Border Protection, or U.S. Marshals services.

Table E-3: Historical Aeronautical Activity at Presho and Kadoka Municipal Airports

Presho Municipal Airport (Basic)			Kadoka Municipal Airport (Unclassified)		
Year	Based Aircraft	Total Operations	Year	Based Aircraft	Total Operations
2009	8	4,900	2009	3	350
2010	0	4,900	2010	3	174
2011	9	5,040	2011	3	60
2012	8	3,840	2012	4	66
2013	8	2,700	2013	3	66
2014	8	2,900	2014	3	56
2015	8	2,284	2015	2	34
2016	11	2,284	2016	2	56
2017	11	2,284	2017	2	56
2018	11	2,284	2018	2	56
2019	11	2,284	2019	2	56

Sources: Airport Form 5010; FAA TAF 2009-2019; Kimley-Horn, 2020

Kadoka Municipal Airport has been designated Unclassified for the past four years and since it does not serve a critical function it is eligible to apply for exclusion from the NPIAS. Presho Municipal Airport is classified as Basic but does not serve a critical function, does not serve an irreplaceable role in the NAS or NPIAS, and has been experiencing mostly a decline in aeronautical activity over the past ten years. Other than the growth in based aircraft, Presho is also eligible to apply for exclusion from the NPIAS.

Based on the information presented for Presho and Kadoka Municipal Airports, it is recommended that the airports, SDDOT, and the FAA coordinate to evaluate the impacts of these two facilities exiting the NPIAS and pursue official requests for removal.

E.4. Non-NPIAS Evaluation and Recommendations

There are ten publicly-owned and publicly-used non-NPIAS airports in South Dakota that have not been included in the 2020 SDSASP. This section reviews those ten airports to determine if they may be eligible for inclusion in the NPIAS since the last NPIAS report. An airport is eligible for NPIAS inclusion if they meet the criteria previously noted in **Section E.1**. **Table E-4** shows the non-NPIAS airports in South Dakota as well as their based aircraft data and approximate distance away from the nearest NPIAS airports. Distances between airports were measured "as the crow flies" using Google Earth.

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Table E-4: Review of South Dakota's Non-NPIAS Airports

Associated City	Airport Name	FAA ID	Based Aircraft	Distance to Nearest NPIAS Airport	
Arlington	Arlington Municipal	3A9	4	17 mi	Brookings Municipal
Clear Lake	Clear Lake Municipal	5H3	3	25 mi	Watertown Regional
Corsica	Corsica Municipal	D65	4	22 mi	Platte Municipal
Fairburn	Custer State Park Airport	3V0	0	13mi	Custer County
Herreid	Herreid Municipal	5T4	0	21mi	Eureka Municipal
Isabel	Isabel Municipal	3Y7	0	30 mi	Cheyenne, Eagle Butte
Kimball	Kimball Municipal	6A6	1	17 mi	Chamberlain Municipal
Lake Andes	Lake Andes Municipal	8D8	1	14 mi	Wagner Municipal
Timber Lake	Timber Lake Municipal	D58	7	30mi	McLaughlin Municipal
White River	White River Municipal	7Q7	0	20 mi	Murdo Municipal

Sources: Airport 5010; Google Earth; Kimley-Horn, 2020

Based on the information presented in **Section E.1**, none of the non-NPIAS airports meet the minimum based aircraft criteria and are 30 or less miles away from the closest NPIAS airport. Therefore, there are no recommendations for additional airports in South Dakota to be considered for NPIAS inclusion.

E.5. ASSET Overview and Criteria

To capture the diverse functions and economic contributions of Nonprimary airports, the FAA conducted two reviews of the network of Nonprimary facilities in the NPIAS. In 2012, the results were compiled into *General Aviation Airports: A National Asset (ASSET)*. This report acknowledges the following five key aeronautical functions provided by the GA and Nonprimary airport system:

- Emergency preparedness and response
- Critical community access for remote areas
- Commercial, industrial, and economic activity functions
- Access to tourism and special events
- Other aviation-specific functions, including corporate flights and flight instruction

Four ASSET categories were introduced to provide policymakers with a better understanding of the vast and diverse nature of the Nonprimary aviation system. The categories are primarily based on existing activity levels, number and type of based aircraft, and volume and types of flights. The ASSET categories also recognize NPIAS airports that are Unclassified, as they do not meet other criteria and have limited activity and number of based aircraft. If a Nonprimary airport is eligible for inclusion in the NPIAS, it is also classified within the appropriate ASSET category. The following defines the ASSET categories and lists the inclusion criteria for Nonprimary airports:

- **National.** Located in metropolitan areas near major business centers and support flying throughout the nation and world. These airports provide pilots with attractive alternatives to the busy primary airports. National airports have high levels of activity, averaging approximately 250 total based aircraft, including 30 jets. Eligibility criteria for this category are:

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- o 5,000+ instrument operations, 11+ based jets, 20+ international flights, or 500+ interstate departures; or
- o 10,000+ enplanements and at least one charter enplanement by a large certified air carrier; or
- o 500+ million pounds of landed cargo weight

- **Regional.** Located in metropolitan areas and serve relatively large populations. These airports support regional economies with interstate and some long-distance flying and have high levels of activity including limited air carrier service. Regional airports average about 100 total based aircraft, including three jets. Eligibility criteria for this category are:

  - o Metropolitan Statistical Area (metro or micro) and 10+ domestic flights over 500 miles, 1,000+ instrument operations, 1+ based jet, or 100+ based aircraft; or
  - o The airport is located in a metropolitan or micropolitan statistical area, and the airport meets the definition of commercial service

- **Local.** Provide communities with access to local and regional markets. Local airports are located near larger population centers but not necessarily in metropolitan areas. They accommodate flight training and emergency services and can be associated with moderate levels of activity. Local airports average about 34 based propeller aircraft and no jets. Eligibility criteria for this category are:

  - o 10+ instrument operations and 15+ based aircraft; or
  - o 2,500+ passenger enplanements

- **Basic.** Fulfill the principal role of a community airport providing a means for private GA flying, linking the community with the NAS, and making other unique contributions. In some instances, the airport is the only way to access the community and provides emergency response access such as emergency medical, firefighting, and/or mail delivery. These airports have moderate levels of activity with an average of 10 based propeller aircraft and no jets. Eligibility criteria for this category are:

  - o 10+ based aircraft; or
  - o 4+ based helicopters; or
  - o The airport is located 30+ miles from the nearest NPIAS airport; or
  - o The airport is identified and used by the U.S. Forest Service, or U.S. Marshals, or U.S. Customs and Border Protection (designated, international, or landing rights), or U.S. Postal Service (air stops), or has Essential Air Service; or
  - o The airport is a new or replacement facility activated after January 1, 2001; and
  - o Publicly owned or privately owned and designated as a reliever with a minimum of 90 based aircraft

In addition to the four classifications, there were nearly 500 airports that the FAA could not classify. These airports were referred to as Unclassified based on the limited activity identified at the airports. FAA then undertook additional analysis and in March 2014, the FAA published *ASSET 2: In-Depth Review of the 497 Unclassified Airports*. That publication resulted in four airports being removed from the NPIAS, 212 airports moved into one of the four categories, and 281 remaining unclassified.

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In the first ASSET study released in 2012, 39 of South Dakota's 53 Nonprimary airports were classified as either National, Regional, Local, or Basic, with 14 left Unclassified. In 2014, the second ASSET study reported six Unclassified airports. In the latest NPIAS, only two of South Dakota's NPIAS airports remain Unclassified. The classifications from the ASSET study and the current NPIAS report for 2020 SDSASP airports are reflected in **Table E-5.**

Table E-5: ASSET Classifications of SDSASP Airports 2012, 2014, and 2019

ASSET Category	ASSET Classification			2020 SDSASP Airport Examples
	2012 ASSET	2014 ASSET	2019-2023 NPIAS Report	
National	0	0	0	N/A
Regional	2	1	3	Mitchell Municipal Airport
Local	11	11	17	Chamberlain Municipal Airport, Clark Municipal Airport
Basic	26	35	31	Harding County Airport, Canton Municipal Airport
Unclassified	14	6	2	Edgemont Municipal Airport, Howard Municipal Airport

Sources: ASSET; ASSET 2; 2019-2023 NPIAS Report; Kimley-Horn, 2020

E.6. ASSET Evaluation

This section includes an evaluation of the *2019-2023 NPIAS Report* classifications for the 51 Nonprimary airports[3] in the SDSASP using the ASSET criteria and the more recent data collected for the 2020 SDSASP. This evaluation was conducted to determine if there are any airports in the SDSASP that may be eligible for changes to their ASSET category.

During this evaluation it was determined that 12 system airports experienced enough of a change in their airport activity to be potentially recategorized during the next NPIAS update.

Table E-6 summarizes the Nonprimary airports in the 2020 SDSASP that warrant a change in ASSET category. Red text is used to indicate when an airport is being recommended to move down a classification, while green text is used to demonstrate when an airport moves up a classification in **Table E-6**. It is important to note that Watertown Reginal and Pierre Regional Airports experienced changes to their airport activity that moved them from Nonprimary airports to Primary airports and therefore those NPIAS classifications have been captured in **Table E-1**.

Table E-6: Changes to ASSET Classifications

Associated City	Airport Name	FAA ID	2019 ASSET Role	Requirements for Basic Classification (Both Needed)		2020 SDSASP Asset Role
				Based Aircraft (10 Minimum)	Miles from NPIAS Airport (30+)	
Britton	Britton Municipal	BTN	Basic	6	28	**Unclassified**
De Smet	Wilder Field	6E5	Basic	9	28	**Unclassified**

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[3] Although 53 Nonprimary airports are shown in the *2019-2023 NPIAS Report,* this evaluation includes 51 of those airports, as two of them (Pierre Regional Airport and Watertown Regional Airport) are recommended for reclassification as Primary airports and therefore would not be eligible for an ASSET role.

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Associated City	Airport Name	FAA ID	2019 ASSET Role	Requirements for Basic Classification (Both Needed)		2020 SDSASP Asset Role
				Based Aircraft (10 Minimum)	Miles from NPIAS Airport (30+)	
Eureka	Eureka Municipal	3W8	Basic	4	21	**Unclassified**
Milbank	Milbank Municipal	1D1	Basic	9	9	**Unclassified**
Webster	The Sigurd Anderson	1D7	Basic	4	29	**Unclassified**
Wessington Springs	Wessington Springs	4X4	Basic	4	27	**Unclassified**
Associated City	Airport Name	FAA ID	2019 ASSET Role	Requirements for Local Classification (Either/Or)		2020 SDSASP Asset Role
				10+ Instrument Ops & 15+ Based Aircraft	2,500+ Passenger Enplanements	
Redfield	Redfield Municipal	1D8	Local	60 Instrument Ops & 11 Based Aircraft	N/A	**Basic**
Canton	Canton Municipal	7G9	Basic	16 Instrument Ops & 16 Based Aircraft	N/A	**Local**
Custer	Custer County	CUT	Basic	98 Instrument Ops & 16 Based Aircraft	N/A	**Local**
Winner	Winner Regional	ICR	Basic	1,554 Instrument Ops & 16 Based Aircraft	N/A	**Local**
Associated City	Airport Name	FAA ID	2019 ASSET Role	Requirements for Regional Classification (MSA AND Flight over 500mi OR Based Jet OR Based Aircraft)				2020 SDSASP Asset Role
				MSA (Micro or Metro)	10+ Domestic Flights over 500 miles	1+ based Jet	100+ Based Aircraft	
Huron	Huron Regional	HON	Local	Yes	306	4	26	**Regional**
Spearfish	Black Hills – Clyde Ice Field	SPF	Local	Yes	336	1	70	**Regional**

Sources: 2019-2023 NPIAS; Basedaircraft.com; FAA ASSET Data, 2019; Kimley-Horn, 2020

As shown, the ASSET evaluation results in six Basic airports moving down to an Unclassified role, and one airport moving down from Local to Basic classification. The evaluation also shows three Basic airports moving up to the Local classification. In addition, two Local airports move up to the Regional classification. Therefore, of the 12 recommended reclassifications, seven are moving down a classification, while the remaining five airports are moving up a classification. **Table 3-5** in **Chapter 3. Airport Roles** shows the ASSET classifications for the 51 system Nonprimary airports.

E.7. Summary of NPIAS Analysis and Recommendations

This appendix summarizes the criteria used to evaluate airports for NPIAS and ASSET inclusion and classification, as well as offers recommendations for how these classifications may change when the NPIAS and ASSET are updated. Recommendations were based on existing criteria and recent data

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collected during the 2020 SDSASP. Recommendations made in this appendix are informational only and do not indicate any official changes to the NPIAS or ASSET by the FAA.