

DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\BUNYN_KVUSI\KMSP BUNYN1 SID BUNYN KVUSI 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
BUNYN	WP	N45° 24' 27.4631", W093° 03' 18.2156"	8000	VNAV	200	FLY_BY	TF
GPERS	WP	N45° 39' 32.0646", W093° 14' 47.5699"	8000	VNAV	200	FLY_BY	TF
JERAH	WP	N46° 22' 29.1311", W093° 47' 14.8122"	10000	VNAV	200	FLY_BY	TF
KVUSI	WP	N46° 49' 12.0452", W094° 08' 04.7995"	12000	VNAV	240	FLY_BY	TF

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	None assigned
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	L		NO	Enabled	9.6 %	9.8 %
2	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	0.5 %	0.5 %
3	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	24.5 %	24.5 %
4	FAR	N46° 45' 12.0129", W096° 51' 04.7483"	9.0 E	130	DH		NO	Enabled	8.3 %	8.5 %
5	INL	N48° 33' 56.8740", W093° 24' 20.4400"	6.0 E	130	DH		NO	Enabled	8.3 %	8.5 %
6	RZN	N45° 49' 13.6015", W092° 22' 28.2562"	-0.0 E	40	L		NO	Enabled	4.4 %	4.4 %
7	AXN	N45° 57' 30.1977", W095° 13' 57.4854"	7.0 E	130	DH		NO	Enabled	90.2 %	90.2 %
8	DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	L		NO	Enabled	70 %	69.9 %
9	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	96.6 %	96.5 %
10	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0	FGT	DWN	MSP	GPZ		
0.6	DWN	MSP				
2.0	DWN	MSP	GEP			
9.4	GEP	AXN	MSP	RZN		
13.7	GEP	AXN	MSP	DWN		
25.1	MSP	AXN	DWN			
71.5	MSP	AXN				
86.6	MSP	AXN	GPZ			
87.8	MSP	AXN	GPZ	INL	FAR	
92.7	INL	FAR	AXN	GPZ		

DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
---	----------------	--------------	-------------

Available DMEs by Waypoints

Waypoint Before	Waypoint After	DME List	Suggested DMEs
BUNYN	GPERS	FGT, GEP, RZN, AXN, DWN, MSP	
GPERS	JERAH	GEP, AXN, DWN, MSP	
JERAH	KVUSI	GPZ, FAR, INL, AXN, DWN, MSP	

User Data Files

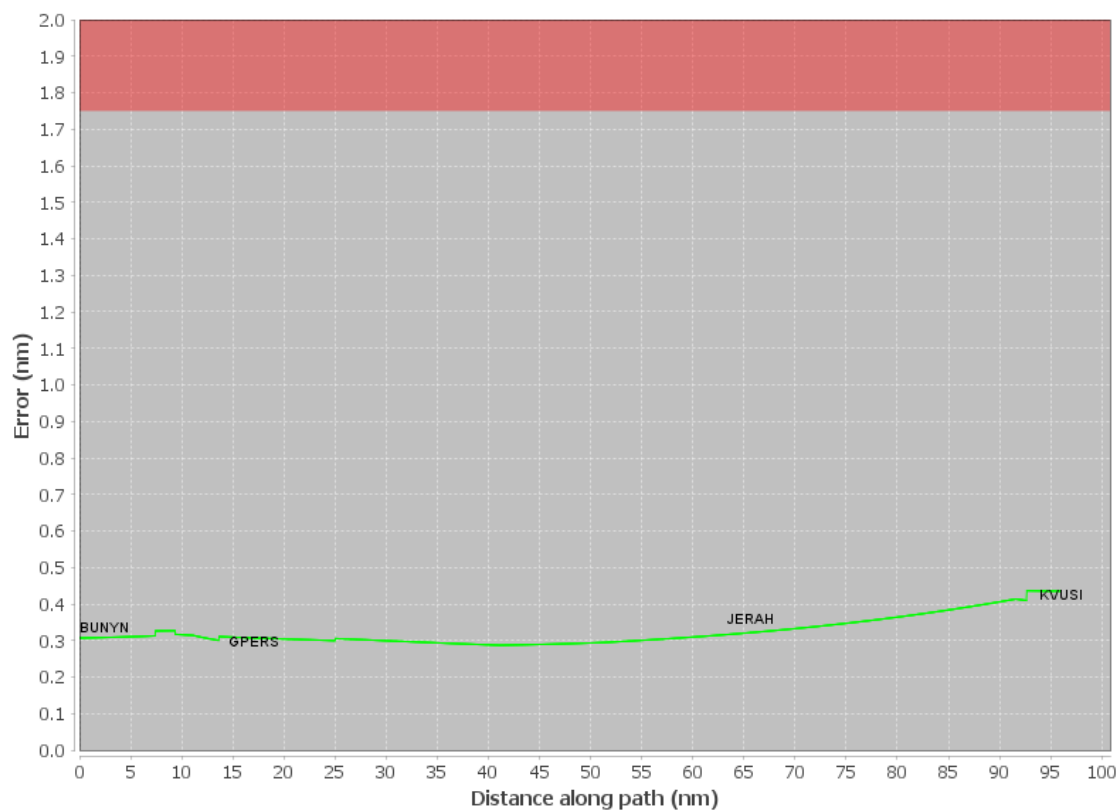
#	File Name
	None

User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		

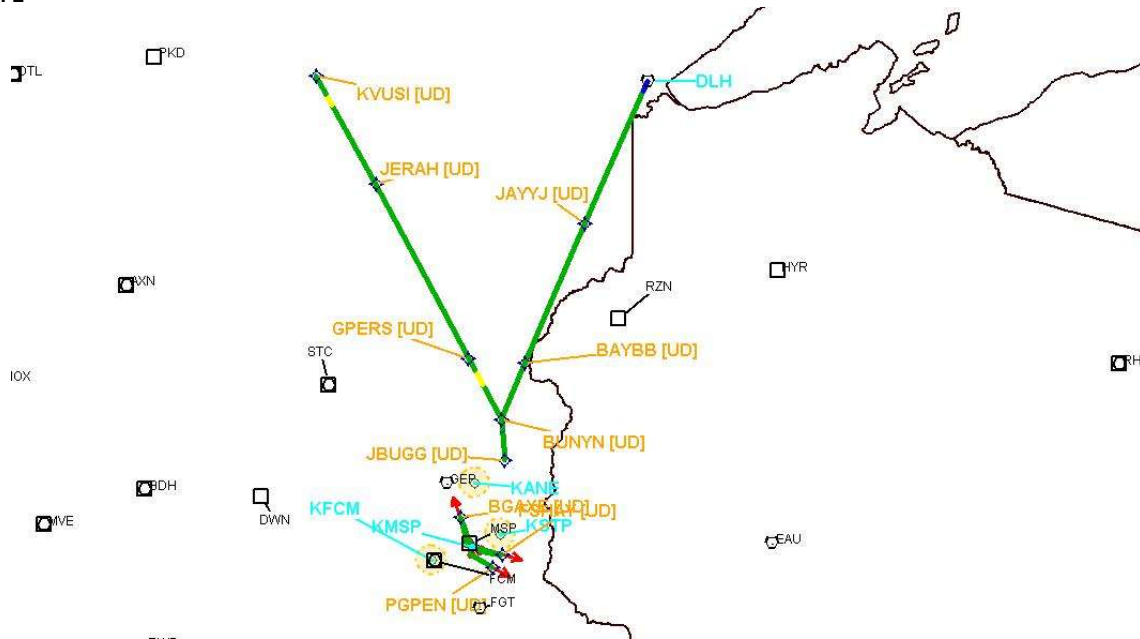
DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI

DME Error



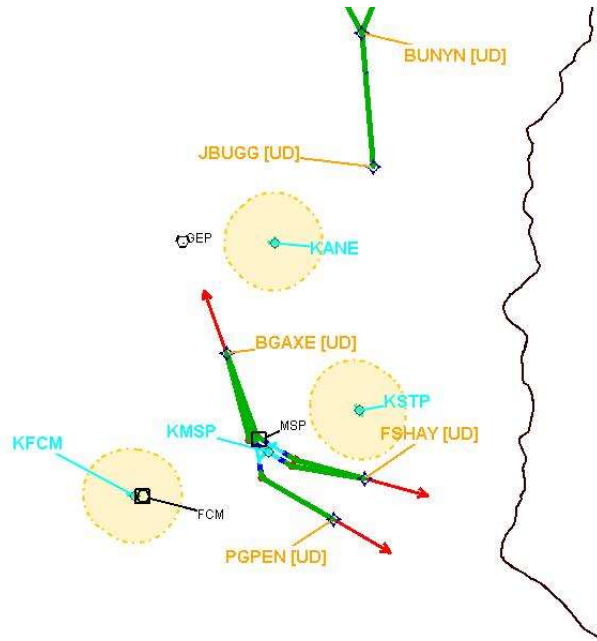
DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI

Graphic Depiction 1



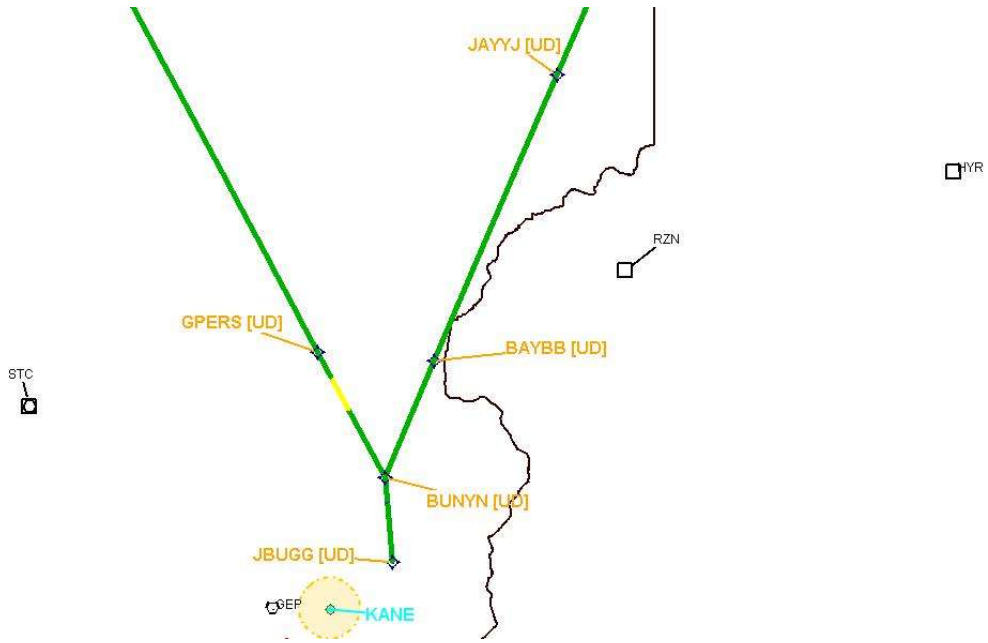
DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI

Graphic Depiction 2



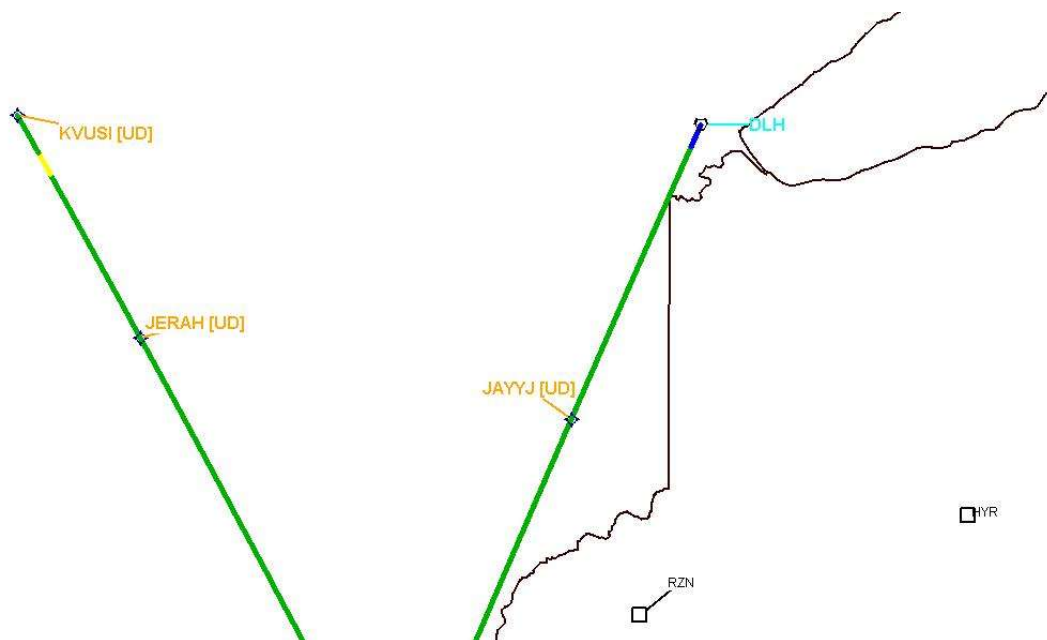
Graphic Depiction 3

DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI



DME DME Assessment Results for BUNYN1 path BUNYN_KVUSI

Graphic Depiction 4



DME DME Assessment Results for BUNYN1 path JBUGG_DLH

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\JBUGG_DLH\KMSP BUNYN1 SID JBUGG DLH 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
JBUGG	WP	N45° 14' 21.8891", W093° 02' 06.2039"	4500	VNAV	200	NO_TURN	TF
BUNYN	WP	N45° 24' 27.4631", W093° 03' 18.2156"	8000	VNAV	200	FLY_BY	TF
BAYBB	WP	N45° 38' 26.4565", W092° 55' 01.5047"	8000	VNAV	200	FLY_BY	TF
JAYYJ	WP	N46° 12' 47.0112", W092° 34' 09.2820"	10000	VNAV	200	FLY_BY	TF
DLH	WP	N46° 48' 07.7897", W092° 12' 10.3291"	12000	VNAV	240	FLY_BY	TF

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	None assigned
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path JBUGG_DLH

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	L		NO	Enabled	35.4 %	35.4 %
2	FCM	N44° 49' 31.2603", W093° 26' 33.6793"	1.0 E	40	L		NO	Enabled	6.4 %	6.4 %
3	DLH	N46° 48' 07.7897", W092° 12' 10.3291"	5.0 E	130	H		NO	Enabled	35.9 %	35.9 %
4	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	39.4 %	39.3 %
5	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	7.8 %	7.8 %
6	RZN	N45° 49' 13.6015", W092° 22' 28.2562"	-0.0 E	40	L		NO	Enabled	58.4 %	58.3 %
7	PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	L		NO	Enabled	6.2 %	6.2 %
8	DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	L		NO	Enabled	38.5 %	38.5 %
9	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	96.6 %	96.4 %
10	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

DME DME Assessment Results for BUNYN1 path JBUGG_DLH

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0	DWN	FGT	GEP	MSP	FCM	
1.9	DWN	MSP	FCM	GEP		
3.5	GEP	MSP				
7.1						
7.3	FGT	DWN	MSP	FCM	GEP	
8.1	DWN	MSP	FCM			
9.2	DWN	MSP				
10.2	FGT	DWN	MSP	FCM	RZN	GEP
10.2	FGT	DWN	MSP	FCM	RZN	
11.2	FGT	DWN	MSP	RZN		
42.7	RZN	MSP	FGT			
47.3	RZN	MSP				
61.3	RZN	DLH	MSP			
61.8	RZN	MSP				
62.3	GPZ	DLH	MSP	RZN		
65.4	GPZ	DLH	MSP			
74.6	GPZ	DLH	MSP	RZN		
78.4	GPZ	DLH	MSP			
84.6	GPZ	DLH	MSP	PKD		
90.9	GPZ	DLH	MSP			
97.7	GPZ	DLH				
98.1						

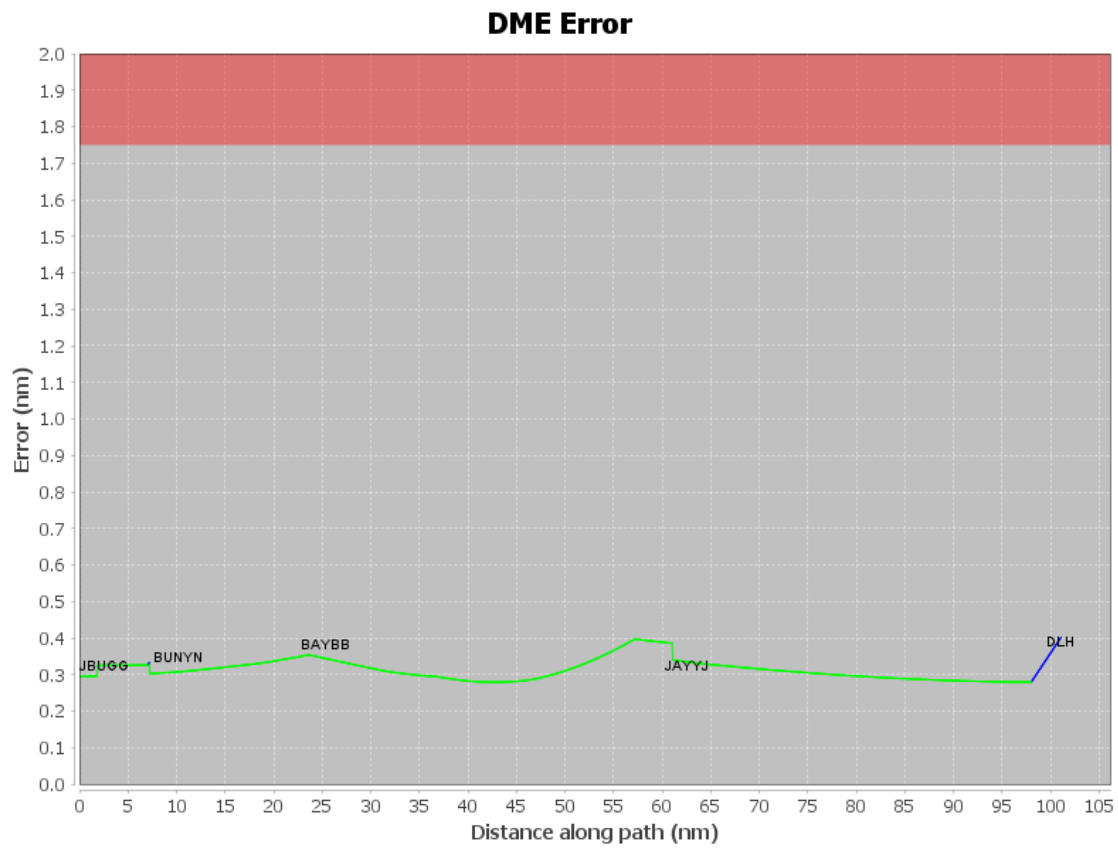
Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N45° 21' 25.4632", W093° 02' 56.5279"	N45° 21' 35.3905", W093° 02' 57.7099"	0.1661
2	N46° 45' 22.6948", W092° 13' 54.1343"	N46° 48' 07.7897", W092° 12' 10.3291"	2.9986

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
JBUGG	BUNYN	FCM, FGT, GEP, DWN, MSP	
BUNYN	BAYBB	FCM, FGT, GEP, RZN, DWN, MSP	
BAYBB	JAYYJ	GPZ, DLH, FGT, RZN, DWN, MSP	
JAYYJ	DLH	GPZ, DLH, RZN, PKD, MSP	

DME DME Assessment Results for BUNYN1 path JBUGG_DLH

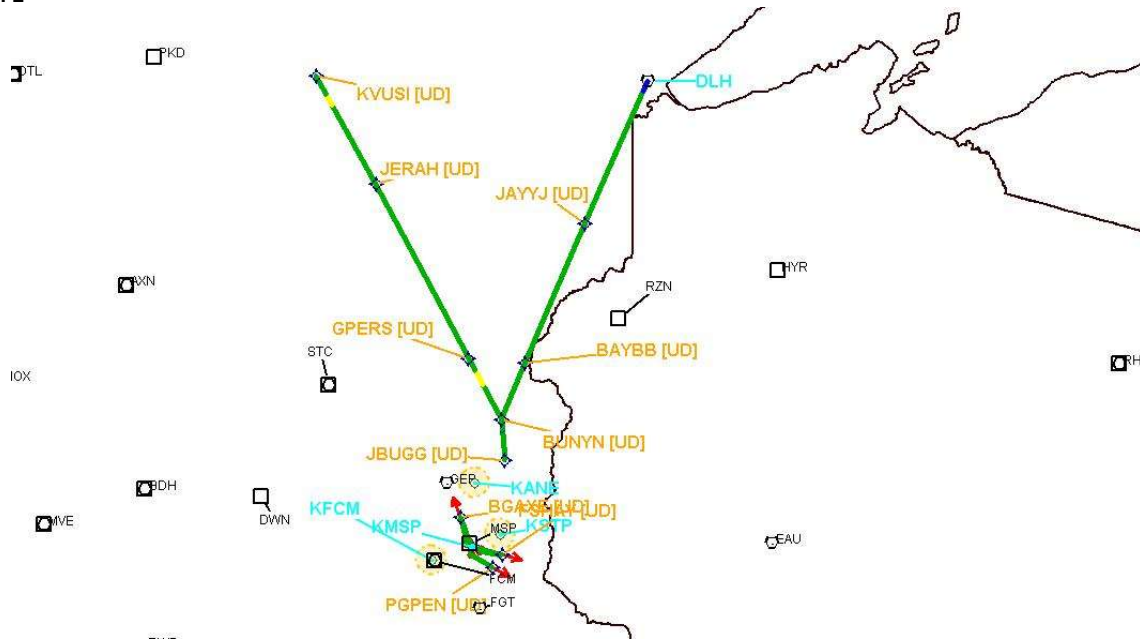
User Data Files								
#	File Name							
None								
User DMEs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		

DME DME Assessment Results for BUNYN1 path JBUGG_DLH

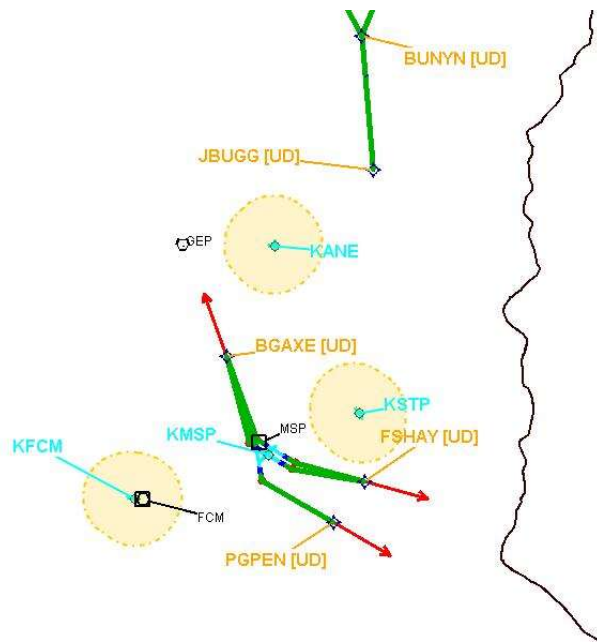


DME DME Assessment Results for BUNYN1 path JBUGG_DLH

Graphic Depiction 1

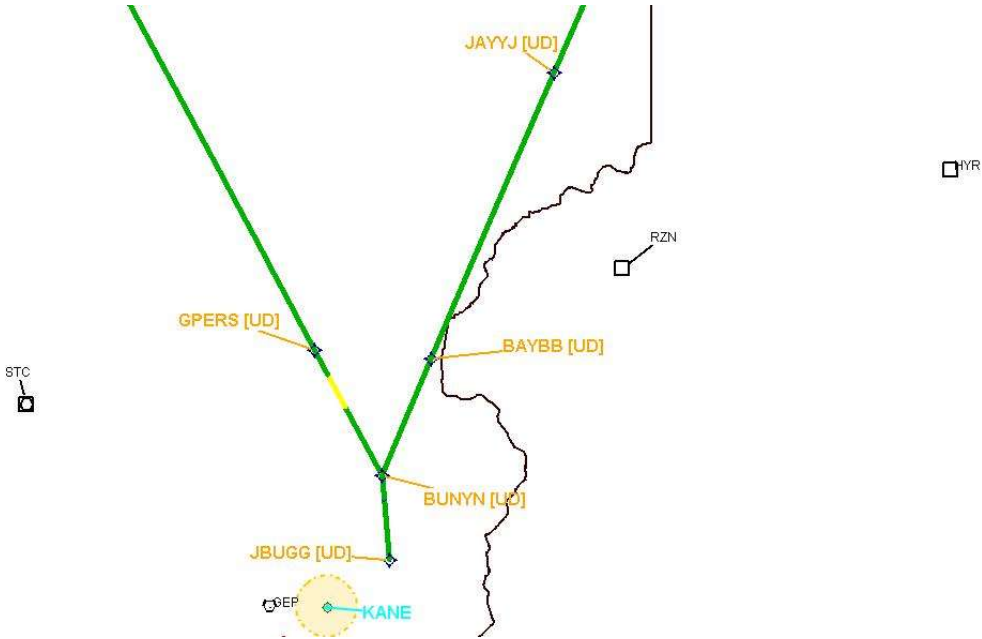


Graphic Depiction 2



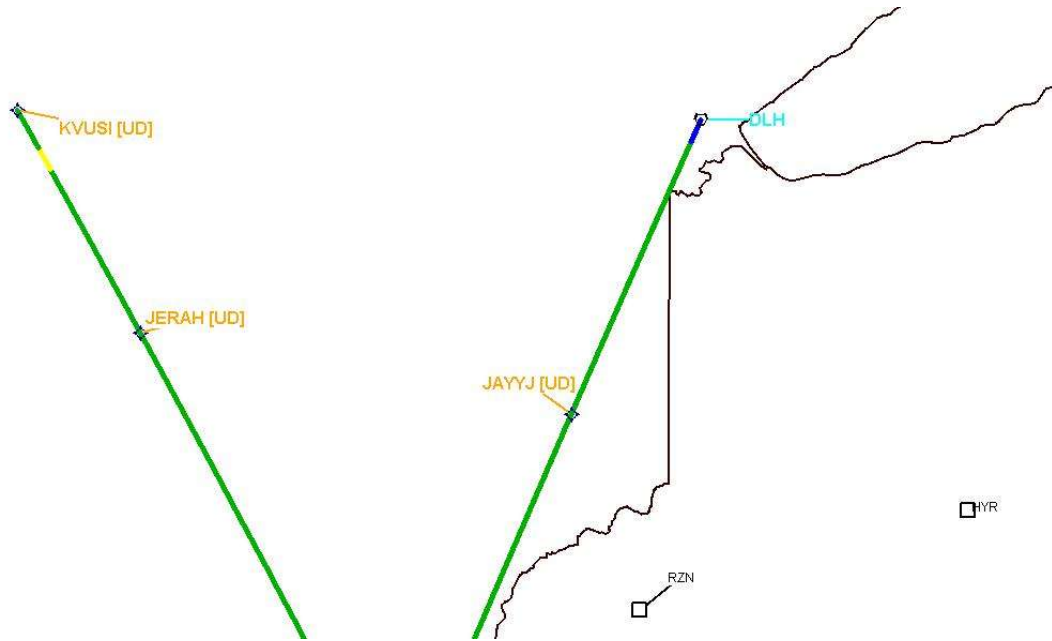
Graphic Depiction 3

DME DME Assessment Results for BUNYN1 path JBUGG_DLH



DME DME Assessment Results for BUNYN1 path JBUGG_DLH

Graphic Depiction 4



DME DME Assessment Results for BUNYN1 path KMSP:RW12L:DER_FSHAY

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\KMSP-RW12L-DER_FSHAY\KMSP BUNYN1 SID RW12L FSHAY 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KMSP:RW12L:DER	WP	N44° 52' 52.5152", W093° 11' 38.2960"	819.5	VNAV	130	FLY_OVER	TF
FSHAY	WP	N44° 50' 55.8240", W093° 03' 03.1437"	3500	VNAV	200	FLY_BY	TF

Climb Gradient:
500.0 ft/NM up to 1342.0 ft MSL
200.0 ft/NM

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path KMSP:RW12L:DER_FSHAY

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	FNX	N43° 38' 15.9267", W094° 24' 47.5134"	0.0 E	130	DH		NO	Enabled	4.4 %	3.9 %
2	FCM	N44° 49' 31.2603", W093° 26' 33.6793"	1.0 E	40	L		NO	Enabled	86.4 %	88.3 %
3	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	81 %	83.2 %
4	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	90.2 %	91.6 %
5	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	60.7 %	63.9 %
6	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
0.5	FNX	GEP				
0.8	FCM	GEP	FNX			
0.8	FCM	GEP				
1.1	FCM	GEP	FGT			
2.3	FCM	FGT	MSP	GEP		

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N44° 52' 51.3905", W093° 11' 35.6994"	N44° 52' 35.6425", W093° 10' 59.3492"	0.5045

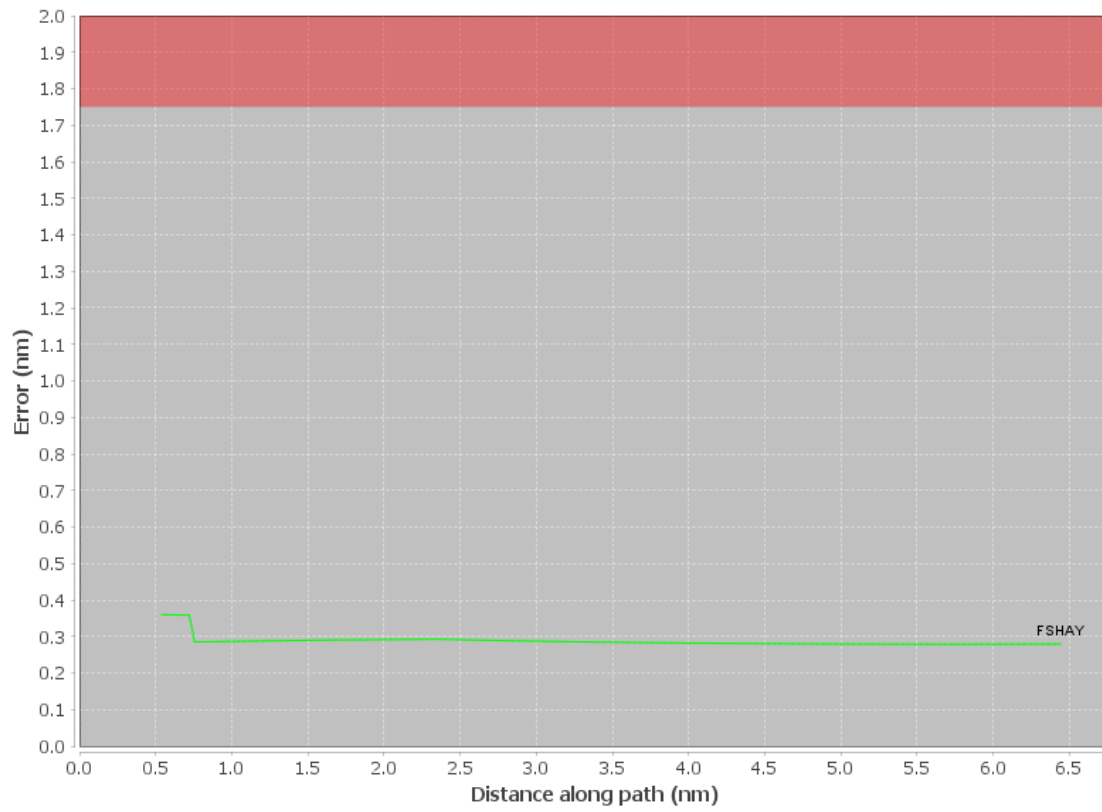
Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KMSP:RW12L:DER	FSHAY	FNX, FCM, FGT, GEP, MSP	

DME DME Assessment Results for BUNYN1 path KMSP:RW12L:DER_FSHAY

User Data Files								
#	File Name							
None								
User DMEs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		

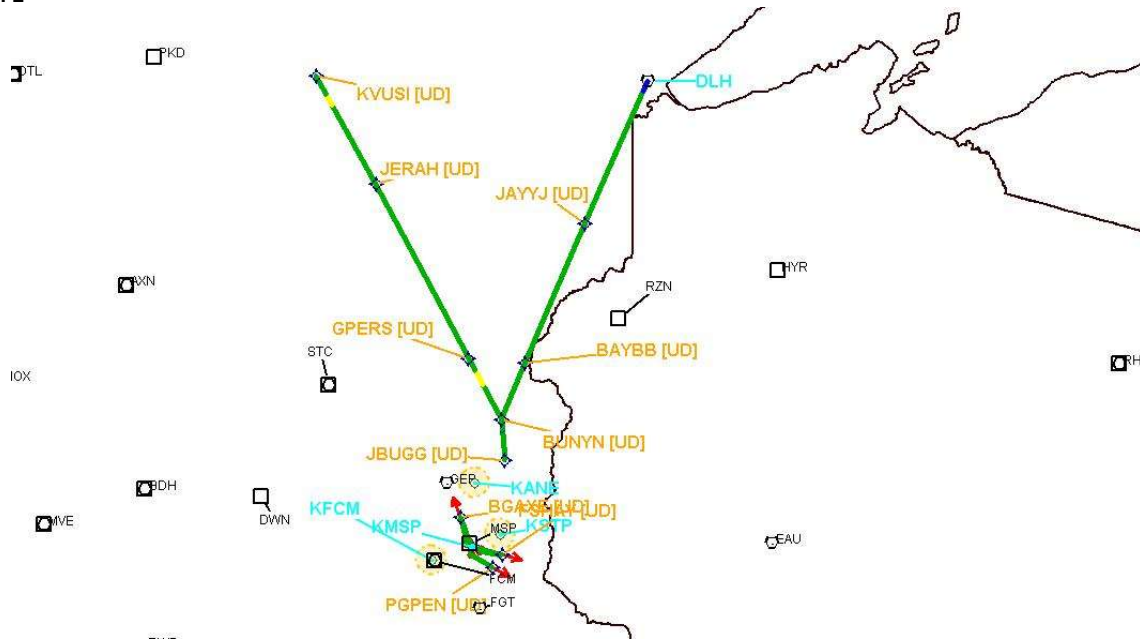
DME DME Assessment Results for BUNYN1 path KMSP:RW12L:DER_FSHAY

DME Error

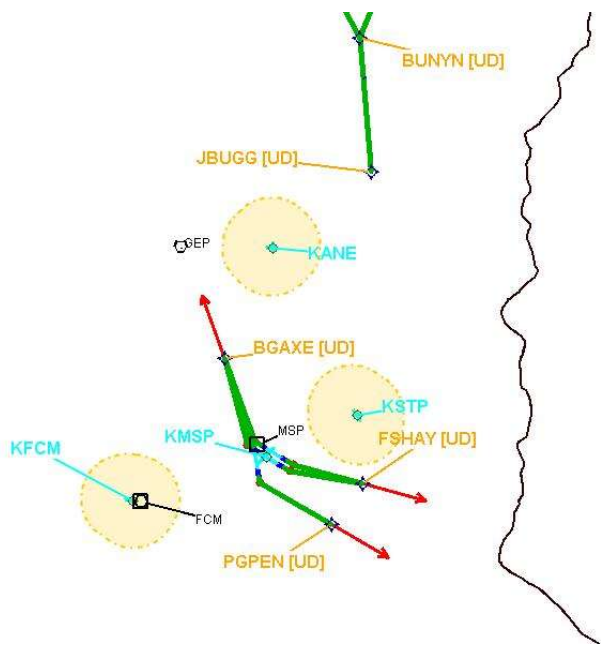


DME DME Assessment Results for BUNYN1 path KMSP:RW12L:DER_FSHAY

Graphic Depiction 1

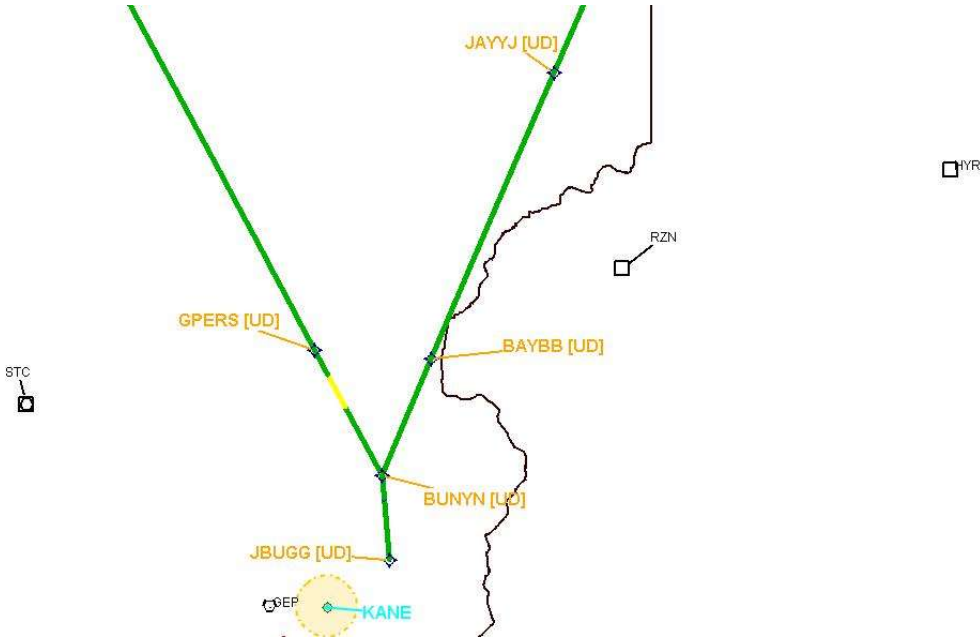


Graphic Depiction 2

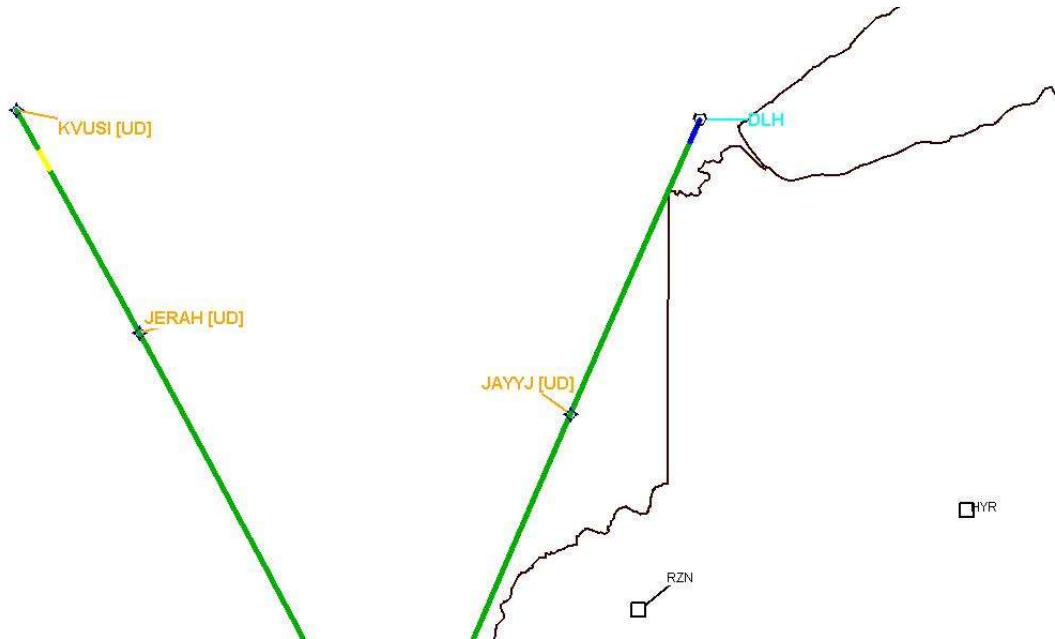


DME DME Assessment Results for BUNYN1 path KMSP:RW12L:DER_FSHAY

Graphic Depiction 3



Graphic Depiction 4



DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\KMSP-RW12R-DER_FSHAY\KMSP BUNYN1 SID RW12R FSHAY 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KMSP:RW12R:DER	WP	N44° 52' 24.6800", W093° 12' 04.2689"	814.4	VNAV	130	FLY_OVER	TF
FSHAY	WP	N44° 50' 55.8240", W093° 03' 03.1437"	3500	VNAV	200	FLY_BY	TF

Climb Gradient:
500.0 ft/NM up to 1342.0 ft MSL
200.0 ft/NM

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	FNX	N43° 38' 15.9267", W094° 24' 47.5134"	0.0 E	130	DH		NO	Enabled	4.1 %	3.7 %
2	FCM	N44° 49' 31.2603", W093° 26' 33.6793"	1.0 E	40	L		NO	Enabled	89.5 %	91 %
3	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	80.1 %	82.3 %
4	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	90.1 %	91.5 %
5	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	61.6 %	64.8 %
6	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
0.6	FNX	GEP				
0.6	FCM	GEP	FNX			
0.8	FCM	GEP				
1.1	FCM	FGT	GEP			
1.1	FCM	GEP				
1.2	FCM	FGT	GEP			
2.3	FCM	FGT	GEP	MSP		

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N44° 52' 23.5819", W093° 12' 01.7348"	N44° 52' 07.1089", W093° 11' 23.7270"	0.5276

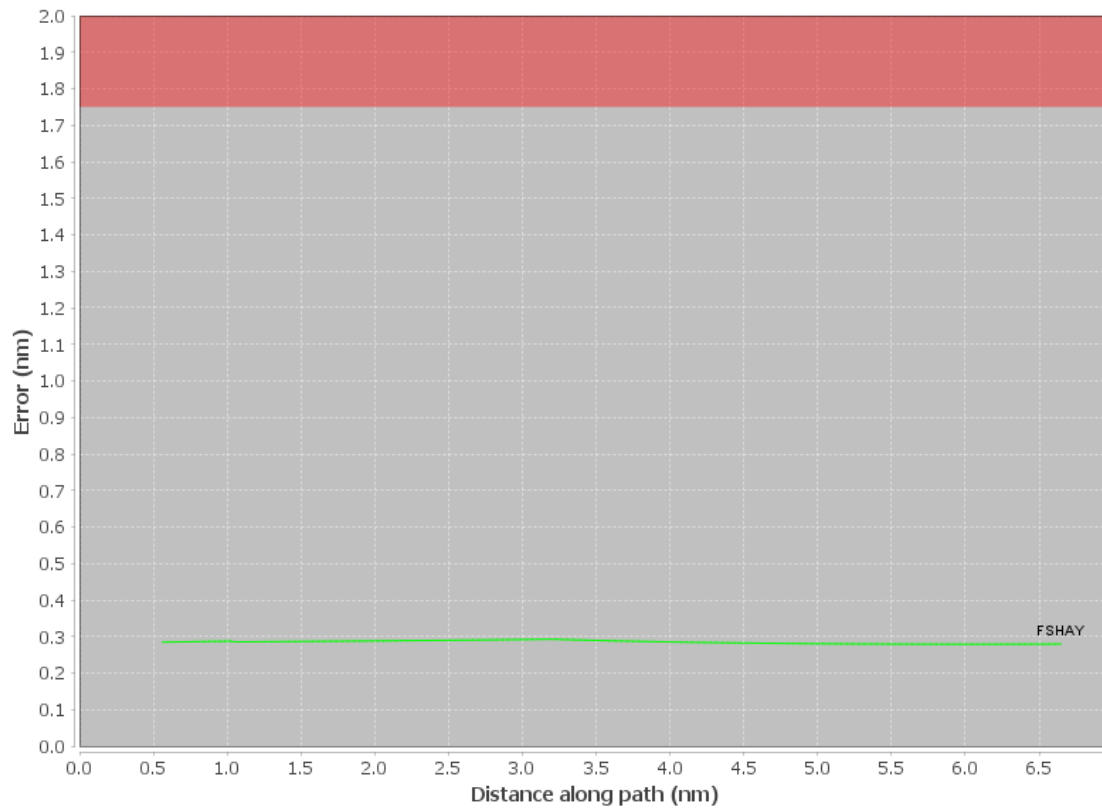
Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KMSP:RW12R:DER	FSHAY	FNX, FCM, FGT, GEP, MSP	

DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

User Data Files								
#	File Name							
None								
User DMEs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		

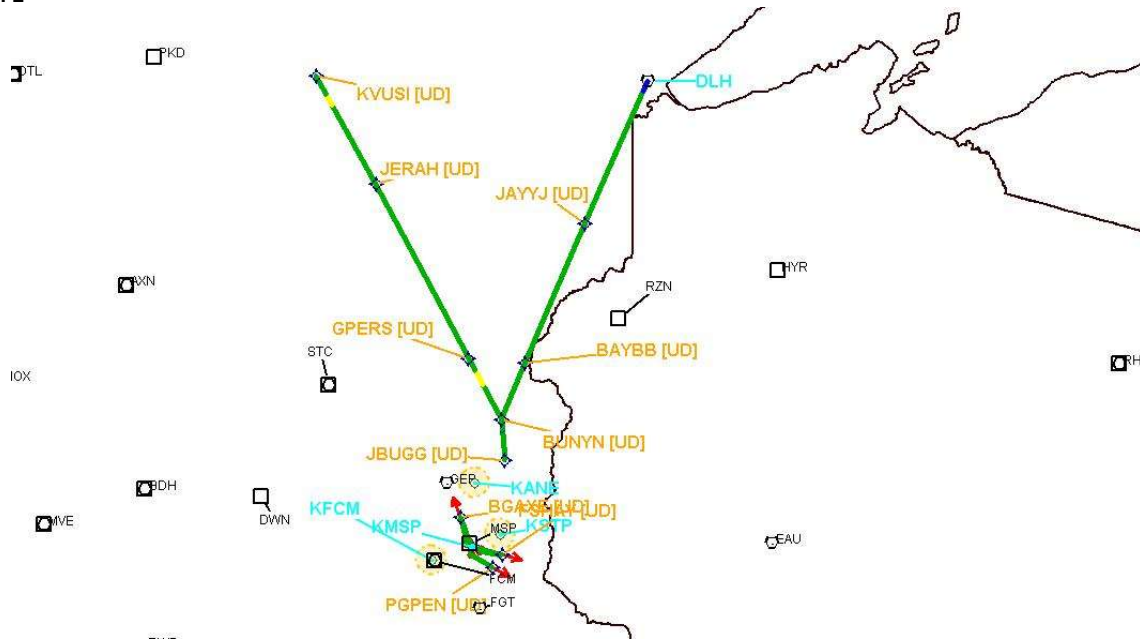
DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

DME Error



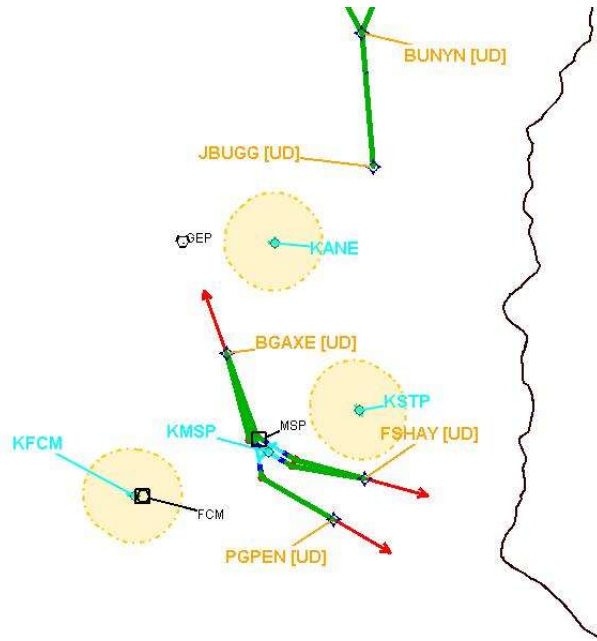
DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

Graphic Depiction 1



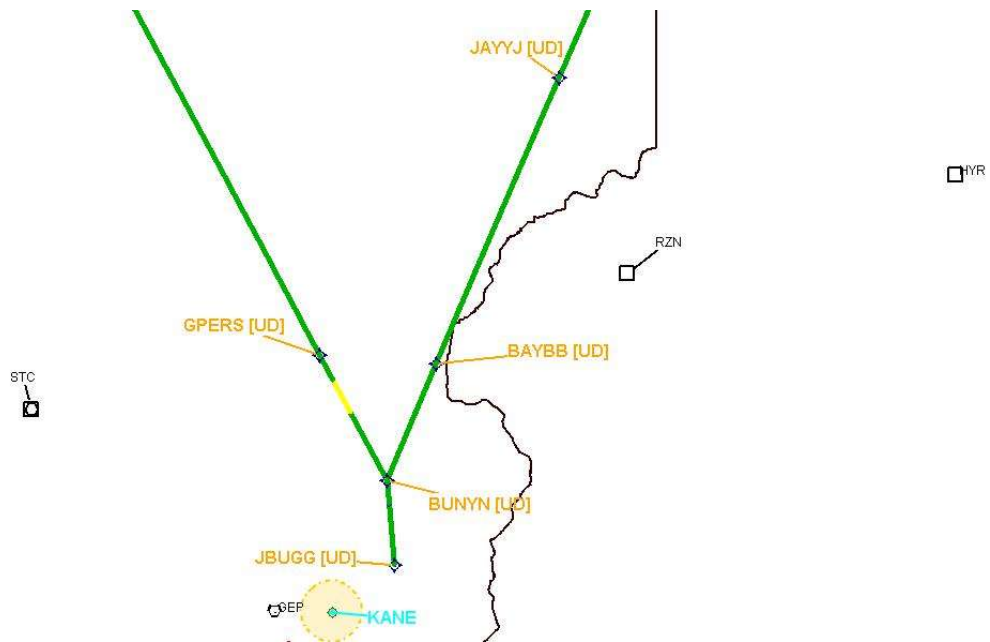
DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

Graphic Depiction 2



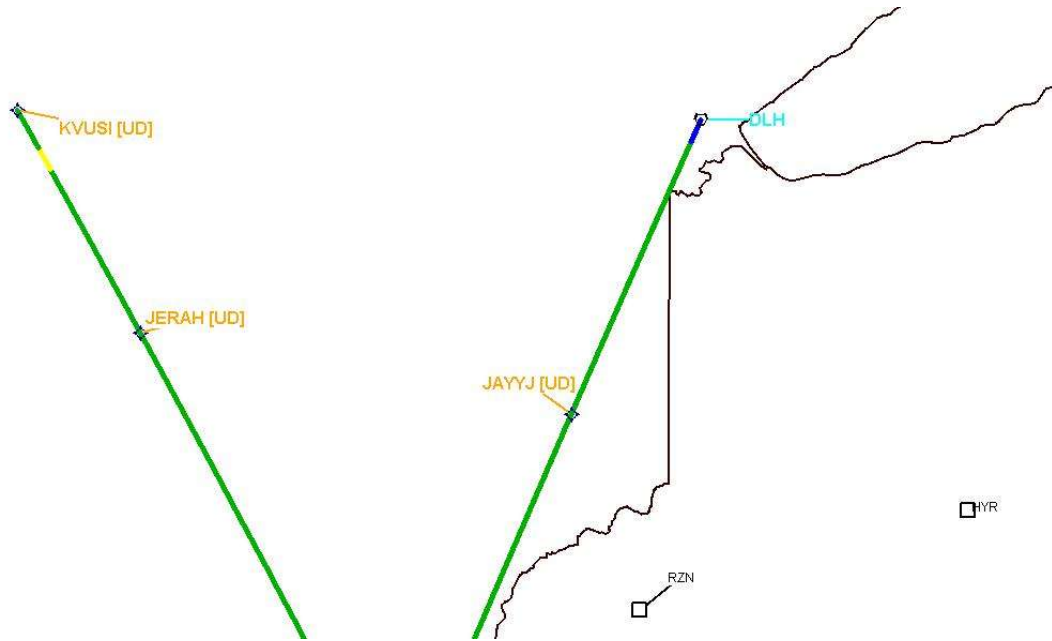
DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

Graphic Depiction 3



DME DME Assessment Results for BUNYN1 path KMSP:RW12R:DER_FSHAY

Graphic Depiction 4



DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\KMSP-RW17-DER_PGPEN\KMSP BUNYN1 SID RW17 PGPEN 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KMSP:RW17:DER	WP	N44° 51' 58.2366", W093° 14' 11.9205"	833.3	VNAV	130	FLY_OVER	TF
PGPEN	WP	N44° 47' 50.4776", W093° 06' 20.2449"	3500	VNAV	200	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM							

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	FCM	N44° 49' 31.2603", W093° 26' 33.6793"	1.0 E	40	L		NO	Enabled	91.6 %	92.7 %
2	FNX	N43° 38' 15.9267", W094° 24' 47.5134"	0.0 E	130	DH		NO	Enabled	2.1 %	1.9 %
3	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	82.5 %	84.3 %
4	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	91.6 %	92.7 %
5	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	1.3 %	1.7 %
6	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
0.5	FCM	GEP				
0.6	FCM	GEP	FNX			
0.7	FCM	GEP				
0.7	FCM	GEP	FNX			
0.8	FCM	GEP				
1.1	FCM	FGT	GEP			
7.1	FCM	FGT	MSP	GEP		

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N44° 51' 56.1670", W093° 14' 11.3827"	N44° 51' 27.1919", W093° 14' 03.8546"	0.4911

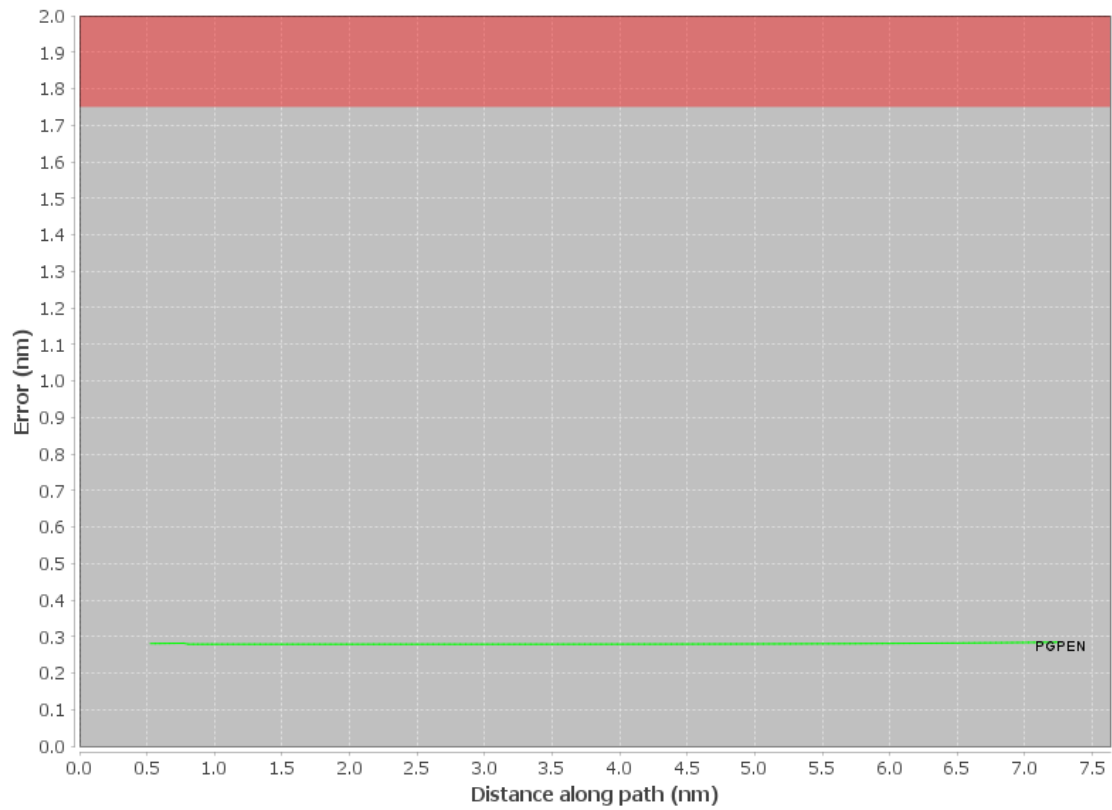
Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KMSP:RW17:DER	PGPEN	FCM, FNX, FGT, GEP, MSP	

DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

User Data Files								
#	File Name							
None								
User DMEs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		

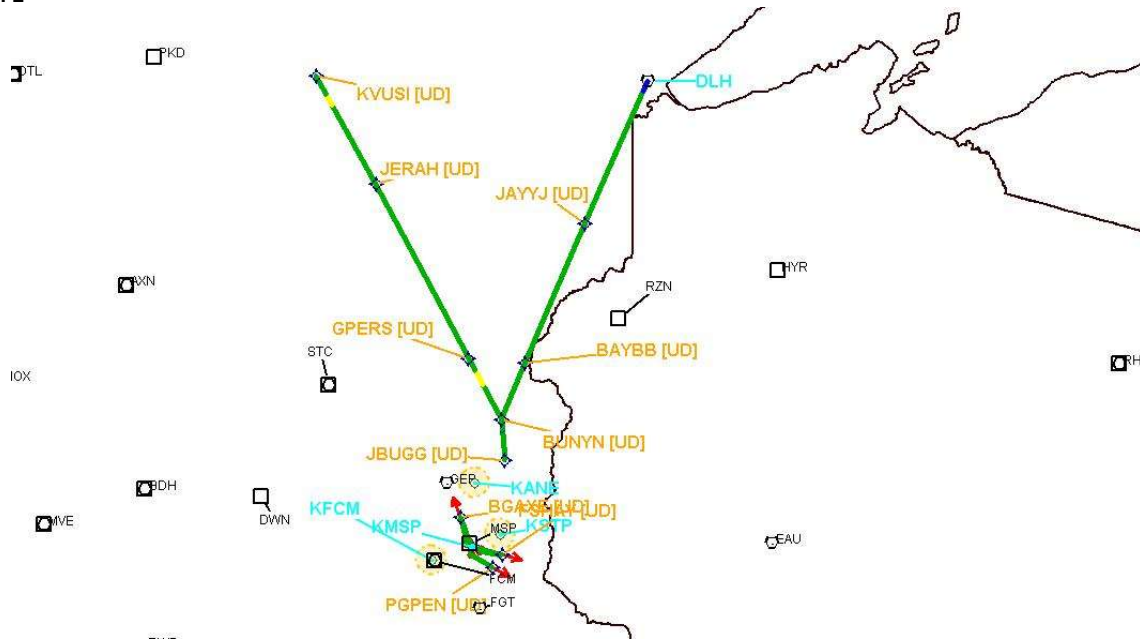
DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

DME Error



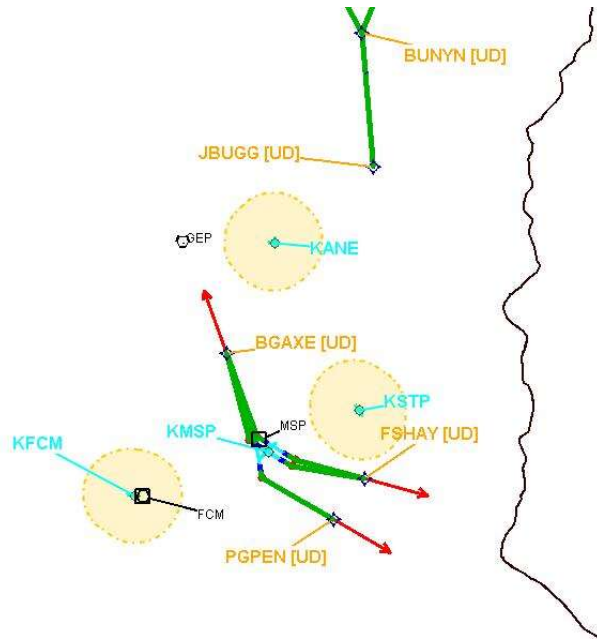
DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

Graphic Depiction 1



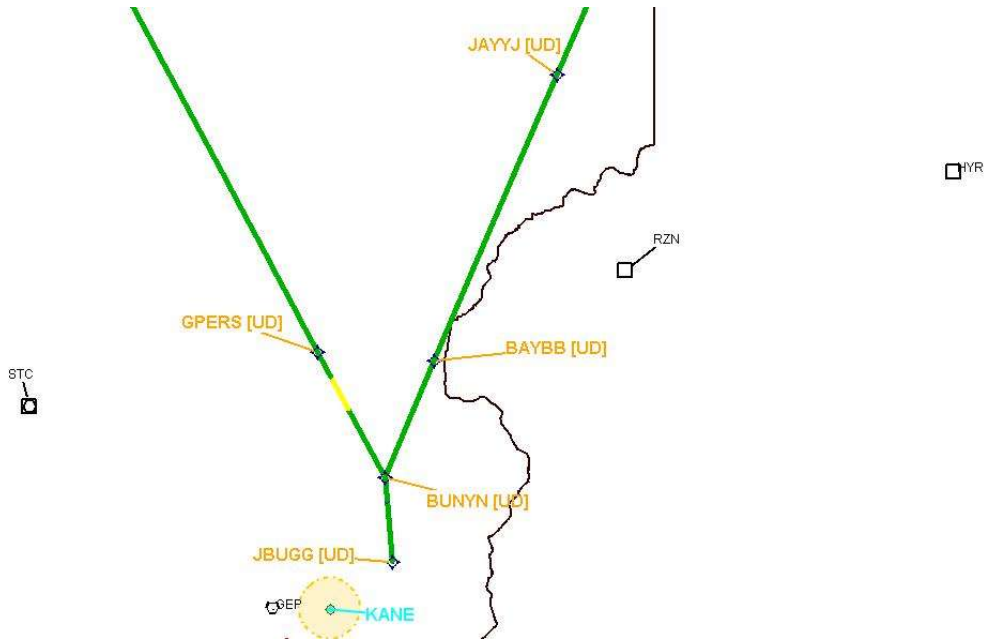
DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

Graphic Depiction 2



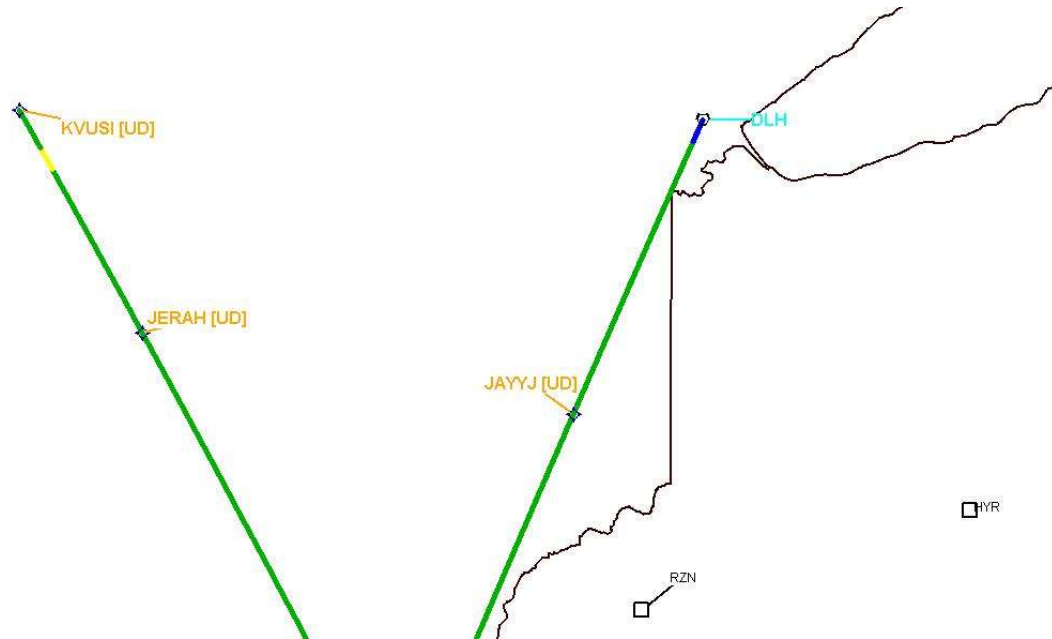
DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

Graphic Depiction 3



DME DME Assessment Results for BUNYN1 path KMSP:RW17:DER_PGPEN

Graphic Depiction 4



DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\KMSP-RW30L-DER_BGAXE\KMSP BUNYN1 SID RW30L BGAXE 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KMSP:RW30L:DER	WP	N44° 53' 16.0438", W093° 14' 02.8731"	841.8	VNAV	130	FLY_OVER	TF
BGAXE	WP	N45° 00' 20.1161", W093° 17' 41.0383"	4000	VNAV	200	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM							

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	FNX	N43° 38' 15.9267", W094° 24' 47.5134"	0.0 E	130	DH		NO	Enabled	4.1 %	3.7 %
2	FCM	N44° 49' 31.2603", W093° 26' 33.6793"	1.0 E	40	L		NO	Enabled	91 %	92.2 %
3	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	74.2 %	76.3 %
4	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	49 %	46.6 %
5	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	4.4 %	5.7 %
6	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
0.5	FNX	GEP				
0.6	FCM	GEP	FNX			
0.8	FCM	GEP				
1.8	FCM	GEP	FGT			
4.1	FCM	FGT				
7.3	FCM	MSP	FGT			

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N44° 53' 17.1585", W093° 14' 05.4485"	N44° 53' 30.5331", W093° 14' 36.3550"	0.4287

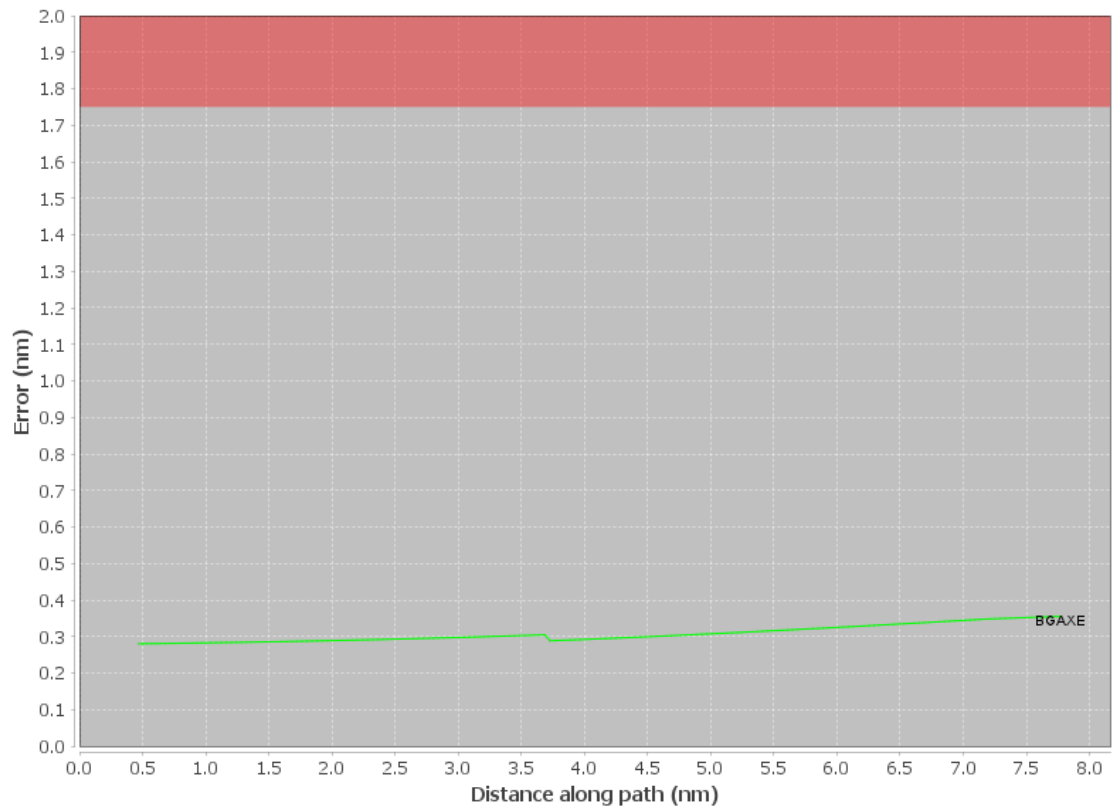
Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KMSP:RW30L:DER	BGAXE	FNX, FCM, FGT, GEP, MSP	

DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

User Data Files								
#	File Name							
None								
User DMEs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		

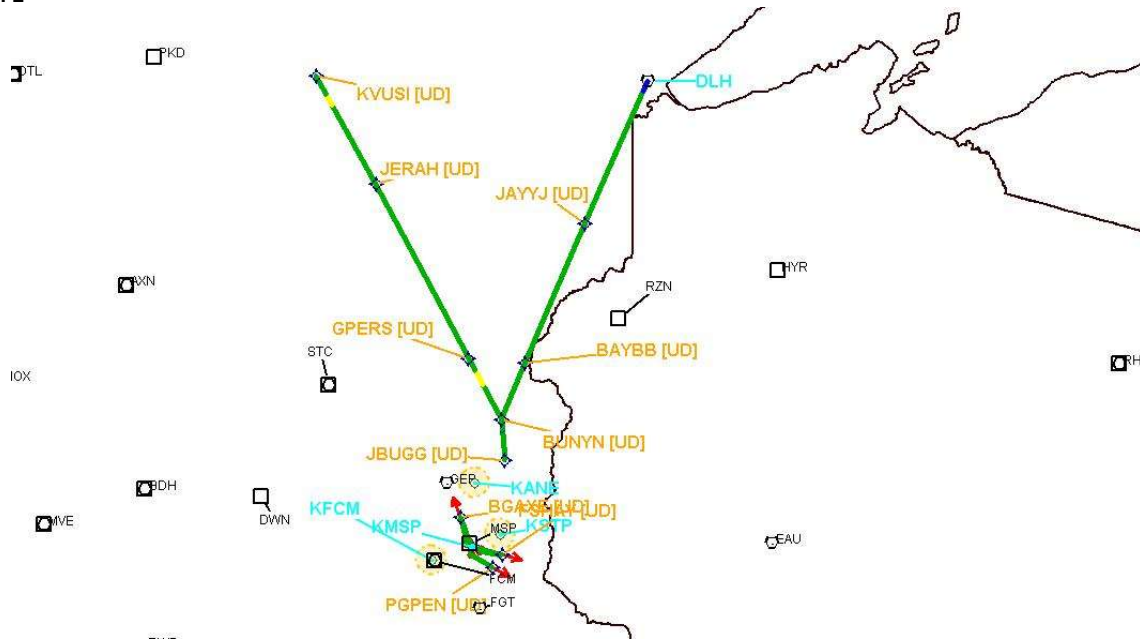
DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

DME Error



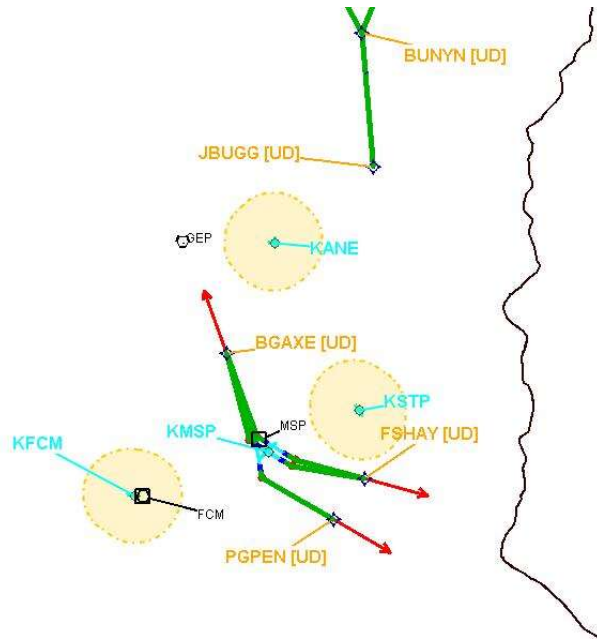
DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

Graphic Depiction 1



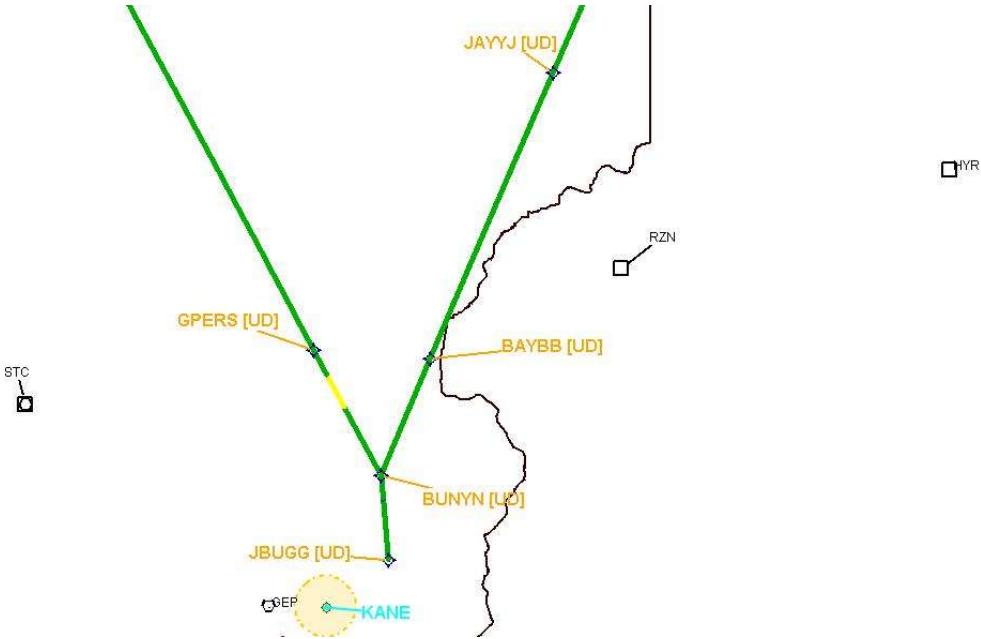
DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

Graphic Depiction 2



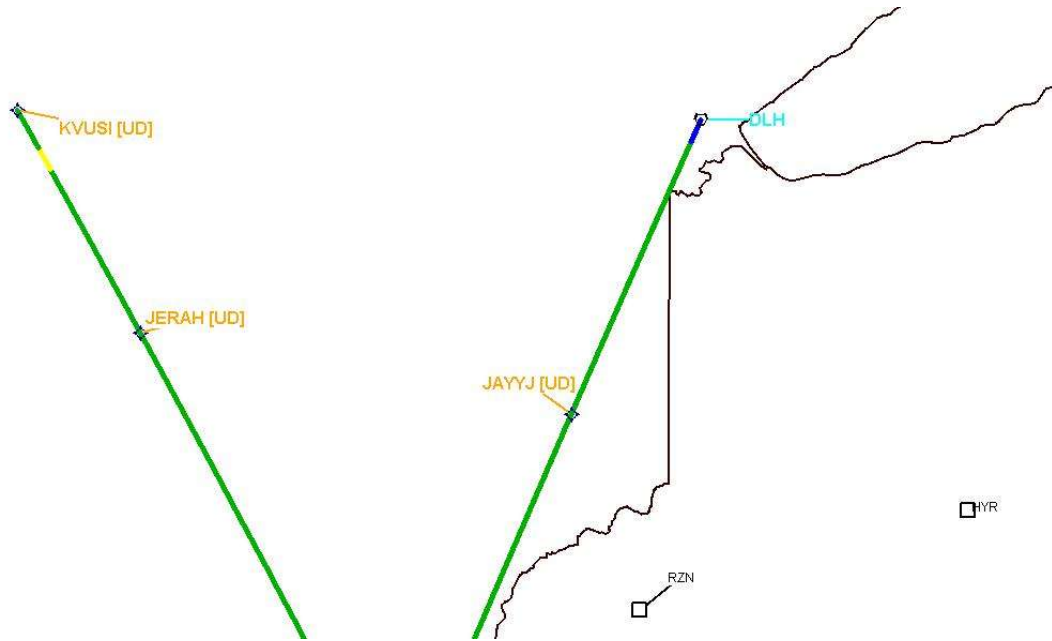
DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

Graphic Depiction 3



DME DME Assessment Results for BUNYN1 path KMSP:RW30L:DER_BGAXE

Graphic Depiction 4



DME DME Assessment Results for BUNYN1 path KMSP:RW30R:DER_BGAXE

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\KMSP-RW30R-DER_BGAXE\KMSP BUNYN1 SID RW30R BGAXE 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KMSP:RW30R:DER	WP	N44° 53' 34.6287", W093° 13' 15.5666"	838.6	VNAV	130	FLY_OVER	TF
BGAXE	WP	N45° 00' 20.1161", W093° 17' 41.0383"	4000	VNAV	200	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM							

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path KMSP:RW30R:DER_BGAXE

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	FNX	N43° 38' 15.9267", W094° 24' 47.5134"	0.0 E	130	DH		NO	Enabled	4.7 %	4.2 %
2	FCM	N44° 49' 31.2603", W093° 26' 33.6793"	1.0 E	40	L		NO	Enabled	90.8 %	92 %
3	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	78.6 %	80.5 %
4	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	60 %	57 %
5	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	4.5 %	5.8 %
6	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
0.4	FNX	GEP				
0.6	FCM	GEP	FNX			
0.8	FCM	GEP				
1.5	FCM	GEP	FGT			
4.8	FCM	FGT				
7.2	FCM	MSP	FGT			

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N44° 53' 35.7504", W093° 13' 18.1587"	N44° 53' 48.0883", W093° 13' 46.6739"	0.3955

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KMSP:RW30R:DER	BGAXE	FNX, FCM, FGT, GEP, MSP	

DME DME Assessment Results for BUNYN1 path KMSP:RW30R:DER_BGAXE

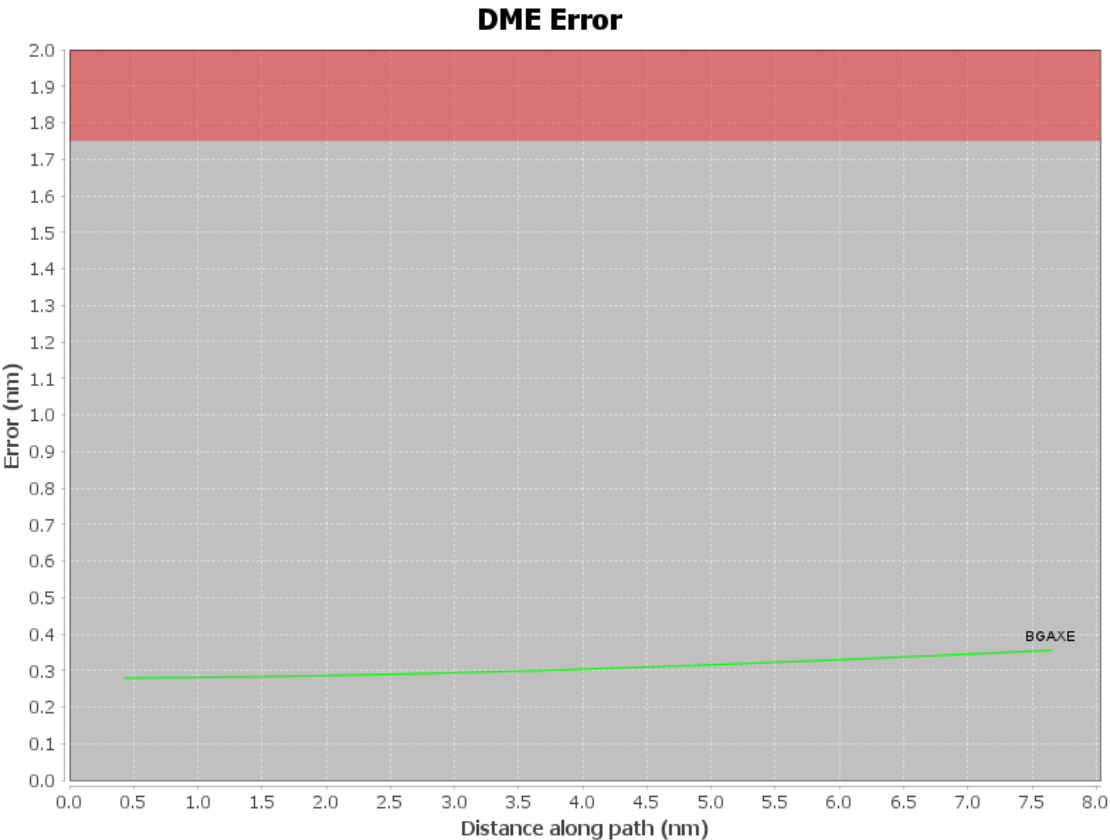
User Data Files

File Name

None

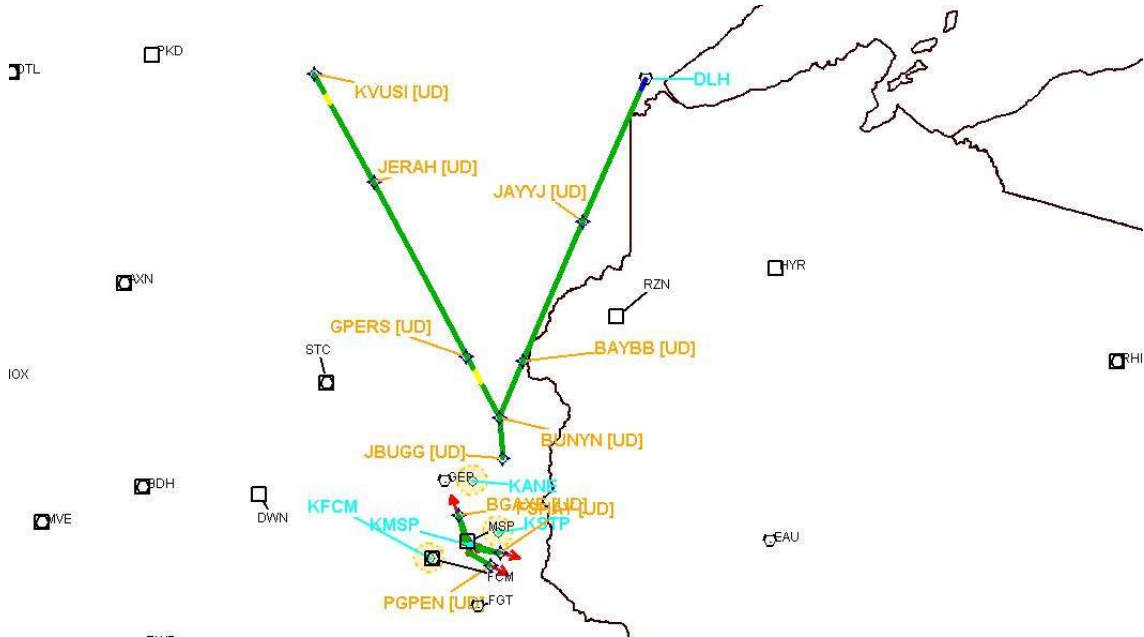
User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		



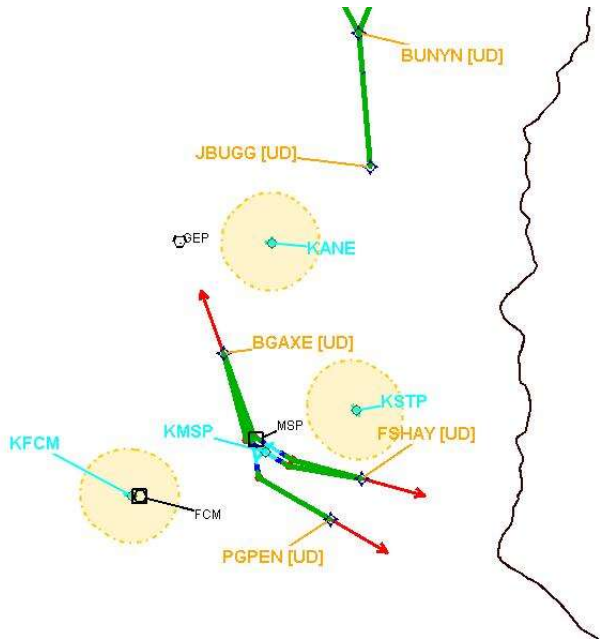
DME DME Assessment Results for BUNYN1 path KMSP:RW30R:DER_BGAXE

Graphic Depiction 1



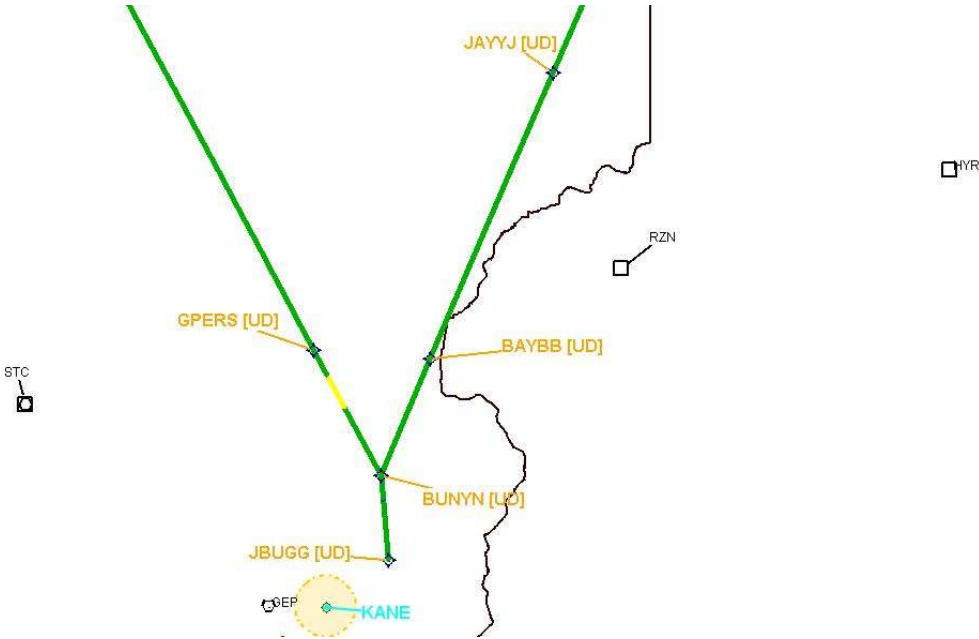
DME DME Assessment Results for BUNYN1 path KMSP:RW30R:DER_BGAXE

Graphic Depiction 2

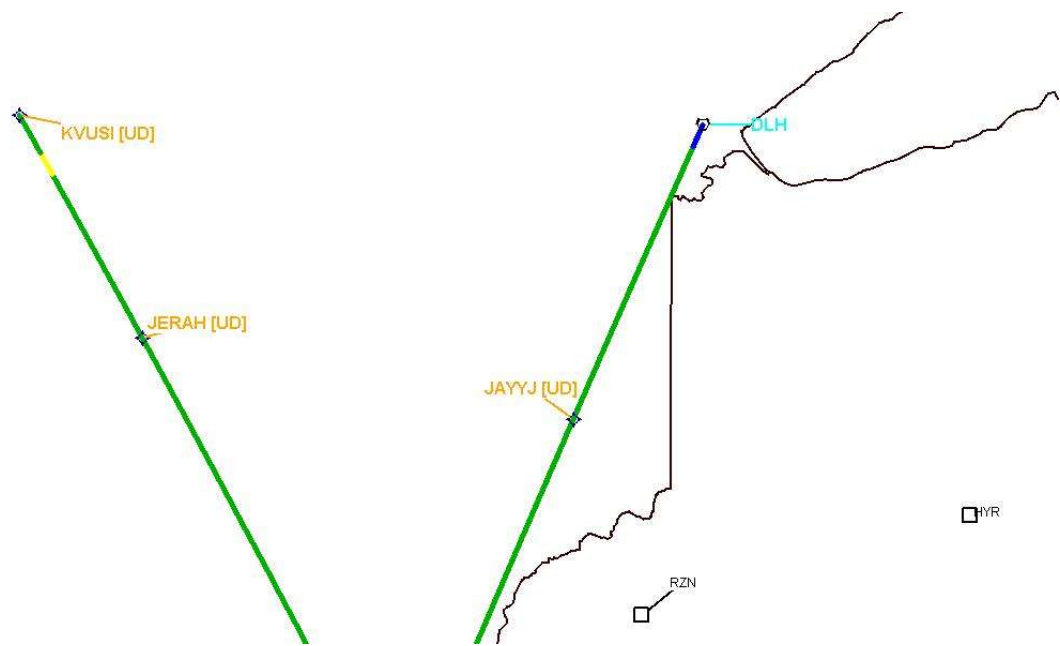


DME DME Assessment Results for BUNYN1 path KMSP:RW30R:DER_BGAXE

Graphic Depiction 3



Graphic Depiction 4



DME DME Assessment Results for BUNYN1 path KMSP:RW35:DER_BGAXE

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Lisa A-CTR Thrysoe
Project File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\KMSP SID BUNYN ONE DME 20241230lu.tgs
Output File:	C:\Users\Lisa A-CTR Thrysoe\OneDrive - Federal Aviation Administration\Desktop\DME DME Screening\KMSP\SIDS\KMSP BUNYN SID\+4500\KMSP [IFPA] BUNYN1 20250522_0729 EDT\KMSP-RW35-DER_BGAXE\KMSP BUNYN1 SID RW35 BGAXE 20250522_0729 EDT.pdf
Procedure Name:	BUNYN1
Software: DmeDmePlugin:	7.5.0
Date/Time:	05/22/2025 07:29 EDT
Databases:	MITRE 3DEP 3 arcsec

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KMSP:RW35:DER	WP	N44° 53' 15.9127", W093° 14' 32.1137"	840.4	VNAV	130	FLY_OVER	TF
BGAXE	WP	N45° 00' 20.1161", W093° 17' 41.0383"	4000	VNAV	200	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM							

Flyability

Flight Type:	SID
Selected Airport:	KMSP [IFPA]
Climb Gradient:	500.0 ft/NM up to 1342.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for BUNYN1 path KMSP:RW35:DER_BGAXE

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC, TACAN
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	RST

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	FNX	N43° 38' 15.9267", W094° 24' 47.5134"	0.0 E	130	DH		NO	Enabled	5.4 %	4.8 %
2	FCM	N44° 49' 31.2603", W093° 26' 33.6793"	1.0 E	40	L		NO	Enabled	92.7 %	93.7 %
3	FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	H		NO	Enabled	78 %	80 %
4	GEP	N45° 08' 44.4656", W093° 22' 23.4514"	6.0 E	130	H		NO	Enabled	56 %	53.1 %
5	MSP	N44° 53' 47.0000", W093° 14' 12.0000"	0.0 E	130	DH		NO	Enabled	4.2 %	5.4 %
6	RST	N43° 46' 58.4501", W092° 35' 49.0560"	5.0 E	130	DH	IFPA	NO	Disabled		

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
0.4	FNX	GEP				
0.5	FCM	GEP	FNX			
0.8	FCM	GEP				
1.5	FCM	GEP	FGT			
4.4	FCM	FGT				
7.0	FCM	MSP	FGT			

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N44° 53' 18.0263", W093° 14' 32.6634"	N44° 53' 39.1623", W093° 14' 38.1606"	0.3583

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KMSP:RW35:DER	BGAXE	FNX, FCM, FGT, GEP, MSP	

DME DME Assessment Results for BUNYN1 path KMSP:RW35:DER_BGAXE

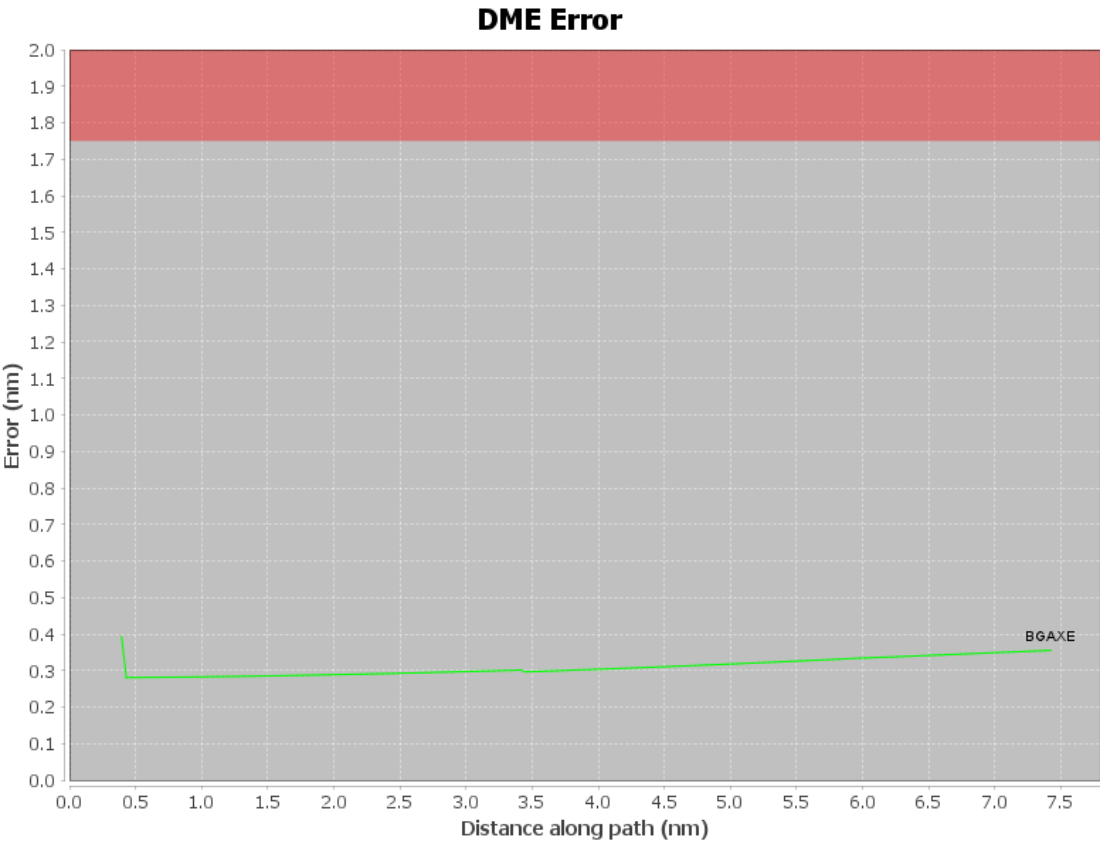
User Data Files

File Name

None

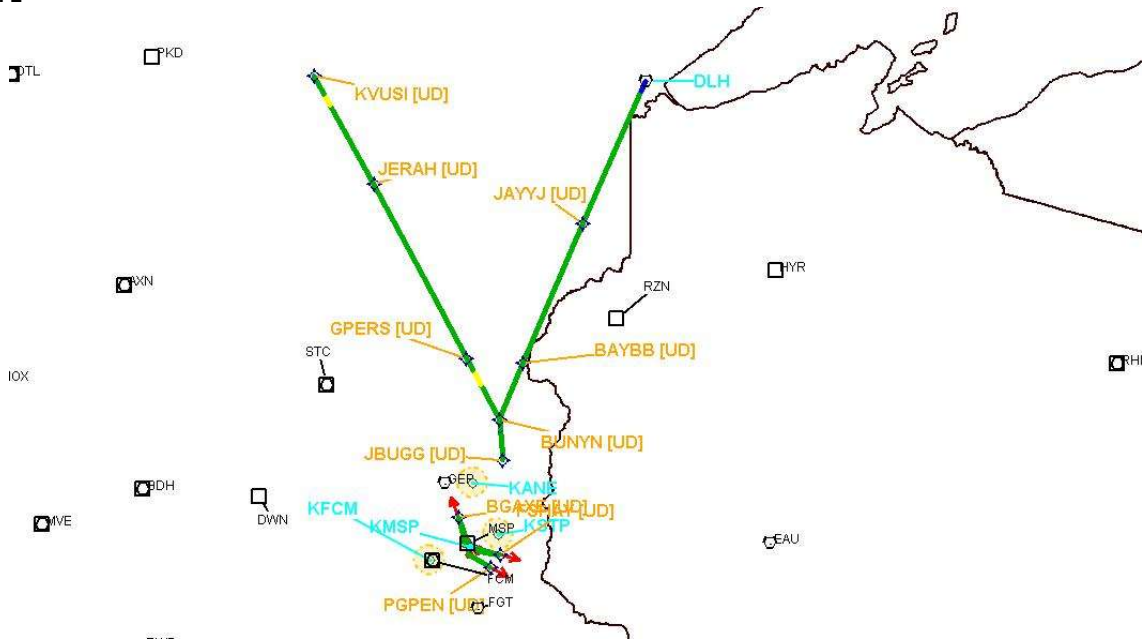
User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	ESV FGT [IFPA] FGT	N44° 37' 51.4303", W093° 10' 55.3911"	6.0 E	130	926.4	115.7	ESV FGT [IFPA]	
ESV:		Bearing [True]: 2.0° to 24.0° Bearing [Mag]: 356.0° to 18.0°				Arc Distance: Out to 84.0 NM Altitude: 7000.0 to 15000.0 ft		
2	ESV DWN [IFPA] DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	ESV DWN [IFPA]	
ESV:		Bearing [True]: 39.0° to 77.0° Bearing [Mag]: 39.0° to 77.0°				Arc Distance: Out to 85.0 NM Altitude: 7000.0 to 15000.0 ft		
3	ESV PKD [IFPA] PKD	N46° 53' 53.1091", W095° 04' 15.6354"	0.0 E	40	1471.6	110.6	ESV PKD [IFPA]	
ESV:		Bearing [True]: 96.0° to 100.0° Bearing [Mag]: 96.0° to 100.0°				Arc Distance: Out to 119.0 NM Altitude: 11100.0 to 19500.0 ft		
4	GPZ FAA 795355-4 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-4	
ESV:		Bearing [True]: 114.0° to 183.0° Bearing [Mag]: 108.0° to 177.0°				Arc Distance: Out to 65.0 NM Altitude: 6400.0 to 24100.0 ft		
5	DWN FAA 703966-21 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-21	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 89.0 NM Altitude: 8200.0 to 20000.0 ft		
6	GPZ FAA 795355-8 GPZ	N47° 09' 48.3971", W093° 29' 20.1570"	6.0 E	40	1359	111.4	GPZ FAA 795355-8	
ESV:		Bearing [True]: 113.0° to 180.0° Bearing [Mag]: 107.0° to 174.0°				Arc Distance: Out to 72.0 NM Altitude: 6000.0 to 11000.0 ft		
7	DWN FAA 703966-20 DWN	N45° 05' 14.8650", W094° 27' 13.8590"	0.0 E	40	1130	109.0	DWN FAA 703966-20	
ESV:		Bearing [True]: 319.0° to 82.0° Bearing [Mag]: 319.0° to 82.0°				Arc Distance: Out to 65.0 NM Altitude: 4200.0 to 20000.0 ft		



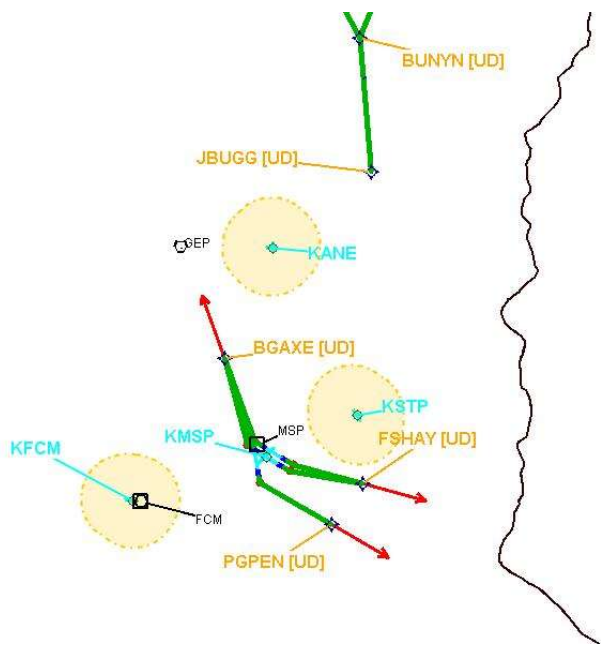
DME DME Assessment Results for BUNYN1 path KMSP:RW35:DER_BGAXE

Graphic Depiction 1



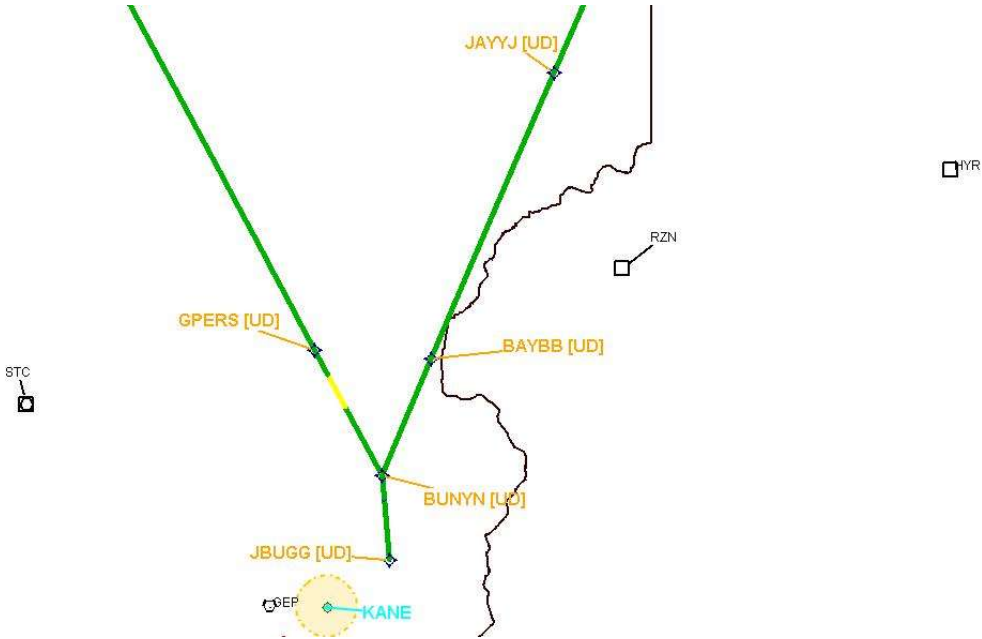
DME DME Assessment Results for BUNYN1 path KMSP:RW35:DER_BGAXE

Graphic Depiction 2



DME DME Assessment Results for BUNYN1 path KMSP:RW35:DER_BGAXE

Graphic Depiction 3



Graphic Depiction 4

