

RADIO FIX AND HOLDING DATA RECORD

NAME: GREEN BAY VORTAC STATE: WI COUNTRY: US ICAO REGION CODE: K5

LATITUDE/LONGITUDE: 443318.58N/0881141.49W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM FEET	MRA	MAA
1	GREEN BAY	GRB	VORTAC	VH						45000

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	NW	GRB	VORTAC	325.00	145.00	L	1	2500 6000	4 5
2	S	GRB	VORTAC	200.00	020.00	R	1	2900 6000	4 5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (55-000465)	443837.60N/0880811.50W	1257	4D
2	200	AAO	443345.00N/0881639.00W	1040	5E

REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN(S)

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
FACILITY MAGVAR E1/1965.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	J101					(US)
EN ROUTE	T765					(US)
EN ROUTE	V217					(US)
EN ROUTE	V341					(US)
EN ROUTE	V420					(US)
EN ROUTE	V9					(US)
IAP	ILS OR LOC RWY 3			MNM	MENOMINEE	MI (US)
IAP	ILS OR LOC RWY 3		1	ATW	APPLETON	WI (US)
IAP	ILS OR LOC RWY 30		2	ATW	APPLETON	WI (US)
IAP	RNAV (GPS) RWY 12			ATW	APPLETON	WI (US)
IAP	RNAV (GPS) RWY 30			ATW	APPLETON	WI (US)
IAP	RNAV (GPS) RWY 22			CLI	CLINTONVILLE	WI (US)
IAP	RNAV (GPS) RWY 32			CLI	CLINTONVILLE	WI (US)
IAP	ILS OR LOC RWY 36		1	GRB	GREEN BAY	WI (US)
IAP	ILS OR LOC RWY 6		1	GRB	GREEN BAY	WI (US)
IAP	LOC BC RWY 24		1	GRB	GREEN BAY	WI (US)
IAP	RNAV (GPS) RWY 36			GRB	GREEN BAY	WI (US)
IAP	RNAV (GPS) RWY 6			GRB	GREEN BAY	WI (US)
IAP	ILS OR LOC RWY 17			MTW	MANITOWOC	WI (US)
IAP	RNAV (GPS) RWY 17			MTW	MANITOWOC	WI (US)
IAP	ILS OR LOC RWY 36			OSH	OSHKOSH	WI (US)
IAP	LOC/DME BC RWY 18			OSH	OSHKOSH	WI (US)
IAP	VOR RWY 18			OSH	OSHKOSH	WI (US)
IAP	VOR RWY 27			OSH	OSHKOSH	WI (US)
IAP	VOR RWY 36			OSH	OSHKOSH	WI (US)
IAP	VOR RWY 9			OSH	OSHKOSH	WI (US)
IAP	ILS OR LOC RWY 22			SBM	SHEBOYGAN	WI (US)

REQUIRED CHARTING: MILITARY IAP, IAP, EN ROUTE LOW, EN ROUTE HIGH, CONTROLLER LOW, CONTROLLER HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 33 DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

- FIX USE: REMOVED DP MEADOW LAKE AND MINNEAPOLIS AT KMSP.
- FIX USE: REMOVED DP WLSTN AT KANE, KFCM, KMSP AND KSTP.
- REQUIRED CHARTING: REMOVED DP.

INITIATED BY: DATE: ORGANIZATION: NAME:
OFFICE OF PRIMARY RESPONSIBILITY: AJV-A431 NAME: EMMANUEL GONZALES



APPROVED BY:

DATE: 09/24/2026

OFFICE: AJV-A422

NAME: RAKE MCGRAW

SIGNATURE:

*Digitally signed by***RAKE MCGRAW**

Jun 18, 2026

QUALITY
23
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HUSHH

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 445018.20N/0931345.93W

TYPE: DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: CANCEL

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	MINNEAPOLIS	MSP	VOR/DME	L	173.03	175.03	3.50			1300	10000

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP				MSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 10/27/2005

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

DEVELOPED BY:

DATE: 05/05/2005

OFFICE: AVN-120

NAME: JOSEPH ZEDER

APPROVED BY:

DATE: 09/24/2026

OFFICE: AJV-A422

NAME: RAKE MCGRAW

SIGNATURE:

Digitally signed by

RAKE MCGRAW

Jun 18, 2026

DISTRIBUTION:

NFDC

FPO: CHI

ARTCC: ZMP

ATC FACILITY: MSP APP CON

OTHER:

QUALITY
23
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RADIO FIX AND HOLDING DATA RECORD

NAME: RAPID CITY VORTAC **STATE:** SD **COUNTRY:** US **ICAO REGION CODE:** K3

LATITUDE/LONGITUDE: 435833.74N/1030044.38W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	RAPID CITY	RAP	VORTAC	VH							45000

FIX RESTRICTIONS:

MCA V536 6500 WESTBOUND
MCA V26 11300 SOUTHWEST BOUND

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	SE	RAP	VORTAC	142.00	322.00	R	1		5500	16000	5	12
2	SE	RAP	VORTAC	141.00	321.00	R	1		5600	16000	5	12

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	435551.00N/1030409.00W	3681	4E
2	200	AAO	435551.00N/1030409.00W	3681	4E
2	310	AAO	435736.00N/1031018.00W	3836	4E

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN(S)

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
2	VOR OR TACAN RWY 14	KRAP	RAPID CITY	SD (US)

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
FACILITY MAG VAR: 13E/1965.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	YELLOWSTONE			BKF	AURORA	CO (US)
DP	YELLOWSTONE			APA	DENVER	CO (US)
DP	YELLOWSTONE			BJC	DENVER	CO (US)
DP	YELLOWSTONE			CFO	DENVER	CO (US)
DP	YELLOWSTONE			DEN	DENVER	CO (US)
DP	YELLOWSTONE			FNL	FORT COLLINS/LOVELAND	CO (US)
DP	YELLOWSTONE			GXY	GREELEY	CO (US)
DP	BILLINGS			BIL	BILLINGS	MT (US)
DP	BILLINGS			6S8	LAUREL	MT (US)
DP	HOT SPRINGS			HSR	HOT SPRINGS	SD (US)
DP	TAKEOFF MINIMUMS			49B	STURGIS	SD (US)
DP	CASPER			CPR	CASPER	WY (US)
EN ROUTE	J151					(US)
EN ROUTE	J157					(US)
EN ROUTE	J158					(US)
EN ROUTE	J17					(US)
EN ROUTE	J82					(US)
EN ROUTE	T286					(US)
EN ROUTE	T288					(US)
EN ROUTE	T322					(US)
EN ROUTE	V169					(US)
EN ROUTE	V26					(US)
EN ROUTE	V491					(US)
EN ROUTE	V536					(US)
EN ROUTE	V86					(US)
IAP	VOR OR TACAN RWY 14		2	RAP	RAPID CITY	SD (US)
IAP	VOR OR TACAN RWY 32		1	RAP	RAPID CITY	SD (US)
IAP	TACAN-A			RCA	RAPID CITY	SD (US)
IAP	RNAV (GPS) RWY 31			SPF	SPEARFISH	SD (US)
IAP	RNAV (GPS) RWY 11			49B	STURGIS	SD (US)
IAP	RNAV (GPS) RWY 29			49B	STURGIS	SD (US)

REQUIRED CHARTING: DP, MILITARY IAP, IAP, EN ROUTE LOW, EN ROUTE HIGH, CONTROLLER LOW, CONTROLLER HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 18

DATE OF REVISION: 10/29/2026



REASON FOR REVISION:

1. REMOVED AIRSPACE DOCKET: 20-AGL-34.
2. FIX USE: REMOVED DP MEADOW LAKE AND MINNEAPOLIS AT KMSP.

INITIATED BY:**DATE:****ORGANIZATION:****NAME:****OFFICE OF PRIMARY RESPONSIBILITY:**

AJV-A431

NAME: EMMANUEL GONZALES**APPROVED BY:****DATE:** 09/24/2026**OFFICE:** AJV-A422**NAME:** RAKE MCGRAW**SIGNATURE:***Digitally signed by***RAKE MCGRAW**

Jun 18, 2026

QUALITY
23
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ST JOSEPH VORTAC STATE: MO COUNTRY: US ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 395738.08N/0945530.79W TYPE:

AIRSPACE DOCKET: FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM FEET	MRA	MAA
1	ST JOSEPH	STJ	VORTAC	H						45000

HOLDING: HOLDING TYPE OF ACTION: MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	N	STJ	VORTAC	347.41	167.41	R	1	2700 6000	6 7
2	S	STJ	VORTAC	175.00	355.00	R	1	3000 17500	6 16
3	S		WP	175.00	355.00	R		6000 10000	8 10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (29-002003)	400404.94N/0945205.10W	1524	1A
2	230	TOWER (29-001514)	395834.00N/0945838.00W	1520	5D
2	265	TOWER (29-000024)	394612.00N/0944755.00W	1792	4D
3	230	TOWER (29-001514)	395834.00N/0945838.00W	1520	5D

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
230K/265K PATTERNS USED FOR MILITARY REQUIREMENTS.
ASSIGNED FACILITY MAG VAR: 8E 1965.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	CHIEF			FLV	FORT LEAVENWORTH	KS (US)
DP	ROYAL			FLV	FORT LEAVENWORTH	KS (US)
DP	WILDCAT			FLV	FORT LEAVENWORTH	KS (US)
DP	CHIEF			IXD	OLATHE	KS (US)
DP	ROYAL			IXD	OLATHE	KS (US)
DP	WILDCAT			IXD	OLATHE	KS (US)
DP	CHIEF			OJC	OLATHE	KS (US)
DP	ROYAL			OJC	OLATHE	KS (US)
DP	WILDCAT			OJC	OLATHE	KS (US)
DP	CHIEF			MCI	KANSAS CITY	MO (US)
DP	ROYAL			MCI	KANSAS CITY	MO (US)
DP	WILDCAT			MCI	KANSAS CITY	MO (US)
DP	CHIEF			MKC	KANSAS CITY	MO (US)
DP	ROYAL			MKC	KANSAS CITY	MO (US)
DP	WILDCAT			MKC	KANSAS CITY	MO (US)
DP	CHIEF			LXT	LEE'S SUMMIT	MO (US)
DP	ROYAL			LXT	LEE'S SUMMIT	MO (US)
DP	WILDCAT			LXT	LEE'S SUMMIT	MO (US)
DP	CHIEF			GPH	MOSBY	MO (US)
DP	ROYAL			GPH	MOSBY	MO (US)
DP	WILDCAT			GPH	MOSBY	MO (US)
DP	CHIEF			STJ	ST JOSEPH	MO (US)
DP	ROYAL			STJ	ST JOSEPH	MO (US)
DP	WILDCAT			STJ	ST JOSEPH	MO (US)
EN ROUTE	J18					(US)
EN ROUTE	V159					(US)
EN ROUTE	V50					(US)
EN ROUTE	V77					(US)
IAP	VOR-A			FLV	FORT LEAVENWORTH	KS (US)
IAP	ILS OR LOC RWY 19R		2	MCI	KANSAS CITY	MO (US)
IAP	ILS OR LOC RWY 1L		2	MCI	KANSAS CITY	MO (US)
IAP	ILS OR LOC RWY 27		2	MCI	KANSAS CITY	MO (US)
IAP	ILS RWY 19R (CAT II-III) (ALT MA)		2	MCI	KANSAS CITY	MO (US)
IAP	ILS RWY 19R (SA CAT I) (ALT MA)		2	MCI	KANSAS CITY	MO (US)
IAP	RNAV (GPS) RWY 14			EVU	MARYVILLE	MO (US)
IAP	RNAV (GPS) RWY 32			EVU	MARYVILLE	MO (US)
IAP	ILS OR LOC RWY 35			STJ	ST JOSEPH	MO (US)
IAP	LOC BC RWY 17		1	STJ	ST JOSEPH	MO (US)
IAP	RADAR 1		2	STJ	ST JOSEPH	MO (US)
IAP	VOR OR TACAN RWY 17		1	STJ	ST JOSEPH	MO (US)
IAP	VOR OR TACAN RWY 35			STJ	ST JOSEPH	MO (US)
STAR	JSONN (RNAV)		3	MCI	KANSAS CITY	MO (US)
STAR	MARWI			OFF	OMAHA	NE (US)
STAR	MARWI			OMA	OMAHA	NE (US)

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REQUIRED CHARTING: DP, STAR, MILITARY IAP, IAP, EN ROUTE LOW, EN ROUTE HIGH, CONTROLLER LOW, CONTROLLER HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 23

DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

1. CONTROLLING OBSTRUCTIONS: PAT 1 REMOVED AIRSPEED 265 TOWER (29-002003) AND DATA.
2. FIX USE: REMOVED DP MEADOW LAKE AND MINNEAPOLIS AT KMSP.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A431

NAME: EMMANUEL GONZALES

APPROVED BY:

DATE: 09/24/2026

OFFICE: AJV-A422

NAME: RAKE MCGRAW

SIGNATURE:

Digitally signed by

RAKE MCGRAW

Jun 18, 2026

QUALITY
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