

RADIO FIX AND HOLDING DATA RECORD

NAME: HUCUM

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 444942.55N/0931336.68W

TYPE: WP, RADAR, DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-BMA	LOC/DME		169.53	169.53	3.77	3.78		1500	5300

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

I-BMA DME COORDINATES 445324.62N/0931438.04W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS Z OR LOC RWY 35	1		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 01/05/2017

REASON FOR REVISION:

UPDATED FIX TYPE, REMOVED 'INT' AND ADDED 'RADAR'.
 REMOVED FLYING CLOUD VOR/DME FROM FIX MAKE-UP FACILITIES.
 REMOVED REMARK 'MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES'.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

DEVELOPED BY:

DATE: 09/08/2016

OFFICE: AJV-5422

NAME: JULIE MORGAN (LUCAS MCCLOUD)

APPROVED BY:

DATE: 11/22/2016

OFFICE: AJV-5420

NAME: TONY LAWSON

SIGNATURE:

DISTRIBUTION:

NFDC
 FPO: CEN
 ARTCC: ZMP
 ATC FACILITY: MSP APP CON, MSP TOWER
 OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: JAMEZ **STATE:** MN **COUNTRY:** US **ICAO REGION CODE:** K3
LATITUDE/LONGITUDE: 443224.23N/0930908.72W **TYPE:** WP, RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	MINNEAPOLIS	I-BMA	LOC/DME		169.53	169.53	21.37	21.38	3000	7000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-BMA	LOC/DME	R-170	22	3000	7000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:

I-BMA DME COORDINATES 445324.62N/0931438.04W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS V RWY 35 (CONVERGING)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (CATII/III)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (SA CAT I)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 35			KMSP	MINNEAPOLIS	MN (US)
STAR	BLUEN (RNAV)			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 03/05/2015

REASON FOR REVISION:

UPDATE FIX COORDINATES, FIX MOVED 4258 FEET S.
 FAC 1: CHANGED DME FROM 20.67 TO 21.37 AND DIST FROM FAC 20.68 TO 21.38.
 UPDATE ESV DME FROM 21 TO 22.
 UPDATED FIX USE.
 ADD STAR TO REQUIRED CHARTING.

11/10/2014: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 08/18/2014.
 IN REASON FOR REVISION CHANGED DISTANCE AND DIRECTION FIX MOVED FROM 4756 FEET SE TO 4258 FEET S.

12/03/2014: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 08/18/2014.
 1. CHANGED ESV FROM BEARING TO RADIAL.
 2. IN REASON FOR REVISION, CHANGED REASON FROM "FAC 1: CHANGED DME FROM 20.67 TO 21.37 TO, DIST FROM FAC 20.68 TO 21.38" TO "FAC 1: CHANGED DME FROM 20.67 TO 21.37 AND DIST FROM FAC 20.68 TO 21.38".
 3. IN REASON FOR REVISION, CHANGED "ADDED FIX USE" TO "UPDATED FIX USE".

INITIATED BY:	DATE:	ORGANIZATION:	NAME:
DEVELOPED BY:	DATE: 08/18/2014	OFFICE: AJV-353	NAME: THOMAS KIRKPATRICK
APPROVED BY:	DATE: 02/27/2015	OFFICE: AJV-353	NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION: NFDC
 FPO: CEN
 ARTCC: ZMP
 ATC FACILITY: MSP APP CON, MSP TOWER
 OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: LORAH

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 444527.03N/0931230.46W

TYPE: WP, RADAR, DME

AIRSPACE DOCKET:
FIX TYPE OF ACTION: MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-BMA	LOC/DME		169.53	169.53	8.10	8.11	49299	3000	5300

HOLDING:
HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

I-BMA DME COORDINATES 445324.62N/0931438.04W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS V RWY 35 (CONVERGING)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (CAT II/III)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (SA CAT I)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 35			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: IAP, EN ROUTE HIGH, CONTROLLER HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8

DATE OF REVISION: 03/19/2026

REASON FOR REVISION:

1. FIX MOVED 0.53 FT NORTHWEST.
2. REMOVED REMARK: LOCATION IAW 8260.54A FORMULA 2-16B.
3. UPDATED REQUIRED CHARTING: FROM CONTROLLER TO CONTROLLER HIGH.

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

AJV-A432

NAME: BARBARA GORMAN

APPROVED BY:
DATE: 02/12/2026

OFFICE: AJV-A430

NAME: CASIMIR TABAKA

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: LYDIA

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 443629.40N/0932844.19W

TYPE: WP, INT, DME

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	GOPHER	GEP	VORTAC	VH	182.00	188.00	32.57	32.57		3000	17500
2	FARMINGTON	FGT	VORTAC	VH	257.97	263.97	12.80	12.80		3000	17500

HOLDING:

HOLDING TYPE OF ACTION: MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG TIME	LENGTH DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	S	GEP	VORTAC	182.00	002.00	R	1		3000	14000	6	12
2	W	FGT	VORTAC	257.97	077.97	R	1		3000	14000	4	10
3	W	WP	WP	257.97	077.97	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-000106)	443146.00N/0932428.00W	1461	4D
2	200	TOWER (27-001470)	443253.33N/0933210.99W	1419	1A
3	200	TOWER (27-001470)	443253.33N/0933210.99W	1419	1A

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN(S)

REMARKS:

GOPHER (FAC 1) AND FARMINGTON (FAC 2) USED TO ESTABLISH FIX COORDINATES.
 PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE (US)
EN ROUTE	V26					(US)
EN ROUTE	V505	1, 2				(US)
IAP	RNAV (GPS) RWY 31			KGYL	GLENCOE	MN (US)
IAP	ILS OR LOC RWY 30 (ALT MA)	1, 2	1	KLVN	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (CAT II)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (CAT II) (ALT MA)	2	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (CAT III)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (CAT III) (ALT MA)	2	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (SA CAT I)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (SA CAT I) (ALT MA)	2	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS V RWY 35 (CONVERGING)	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS V RWY 35 (CONVERGING) (ALT MA)	2	2	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35 (ALT MA)	2	2	KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 22	1, 2	1	KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 4	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 4			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 35		3	KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: IAP, AREA, EN ROUTE LOW, CONTROLLER LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 13

DATE OF REVISION: 03/19/2026

REASON FOR REVISION:

1. UPDATED HOLDING PATTERN 2 AND 3 CONTROLLING OBSTRUCTION FROM 1461 TOWER (27-000106) TO 1419 TOWER (27-001470).

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: BARBARA GORMAN

APPROVED BY:

DATE: 02/12/2026

OFFICE: AJV-A430

NAME: CASIMIR TABAKA

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: NNEWW

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 443203.98N/0931509.71W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:						
USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS V RWY 35 (CONVERGING)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (CAT II/III)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (SA CAT I)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILZ Z OR LOC RWY 35			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 35			KMSP	MINNEAPOLIS	MN (US)
STAR	NITZR (RNAV)			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 DATE OF REVISION: 01/05/2017

REASON FOR REVISION:
 ADDED FIX USE, KMSP: RNAV AND ILS RWY 35 APPROACHES

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

DEVELOPED BY:

DATE: 09/08/2016

OFFICE: AJV-5422

NAME: JULIE MORGAN (LUCAS MCCLOUD)

APPROVED BY:

DATE: 11/22/2016

OFFICE: AJV-5420

NAME: TONY LAWSON

SIGNATURE:

DISTRIBUTION:

NFDC
 FPO: CEN
 ARTCC: ZMP
 ATC FACILITY: MSP APP CON, MSP TOWER
 OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: OBERR

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 443550.17N/0931001.66W

TYPE: WP, RADAR, DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-BMA	LOC/DME		169.53	169.53	17.88	17.89		3000	6000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-BMA	LOC/DME	R-170	17	3000	6000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

I-BMA DME COORDINATES 445324.62N/0931438.04W
 ESV FOR BMA GLIDESLOPE.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS V RWY 35 (CONVERGING)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (CAT II/III)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (SA CAT I)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 35			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3

DATE OF REVISION: 04/30/2015

REASON FOR REVISION:

FIX MOVED 0.35 NM (2129 FT) SOUTH.
 FAC 1 CHANGED DME DIST FROM 17.53 TO 17.88
 FAC 1 CHANGED DIST FROM FAC FROM 17.54 TO 17.89
 REMOVED FAC 2.
 REMOVED REMARK: MINNEAPOLIS (FAC 1) AND FLYING CLOUD (FAC 2) USED TO ESTABLISH FIX COORDINATES.
 UPDATED FIX USE.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

DEVELOPED BY:

DATE: 09/11/2014

OFFICE: AJV-353

NAME: BRIAN BICKETT

APPROVED BY:

DATE: 03/09/2015

OFFICE: AJV-353

NAME: GEORGE GONZALEZ

SIGNATURE:

DISTRIBUTION:

NFDC
 FPO: CEN
 ARTCC: ZMP
 ATC FACILITY: MSP APP CON, MSP TOWER
 OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: ROZEE STATE: MN COUNTRY: US ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 444221.76N/0931142.54W TYPE: WP, RADAR, DME

AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	MINNEAPOLIS	I-BMA	LOC/DME		169.53	169.53	11.24	11.25		3000	5300

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

I-BMA DME COORDINATES 445324.62N/0931438.04W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS V RWY 35 (CONVERGING)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (CAT II/III)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (SA CAT I)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 35			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 DATE OF REVISION: 01/05/2017

REASON FOR REVISION:

UPDATED FIX TYPE, REMOVED 'INT'.
REMOVED FLYING CLOUD VOR/DME FROM FIX MAKE-UP FACILITIES.
REMOVED REMARK 'MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES'.

INITIATED BY:	DATE:	ORGANIZATION:	NAME:
DEVELOPED BY:	DATE: 09/08/2016	OFFICE: AJV-5422	NAME: JULIE MORGAN (LUCAS MCCLOUD)
APPROVED BY:	DATE: 11/22/2016	OFFICE: AJV-5420	NAME: TONY LAWSON

SIGNATURE:

DISTRIBUTION: NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP TOWER
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: SSTAR STATE: MN COUNTRY: US ICAO REGION CODE: K3
 LATITUDE/LONGITUDE: 443916.51N/0931054.72W TYPE: WP, RADAR, DME

AIRSPACE DOCKET: FIX TYPE OF ACTION: MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-BMA	LOC/DME		169.53	169.53	14.38	14.39		3000	5300

HOLDING: HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

I-BMA DME COORDINATES 445324.62N/0931438.04W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS V RWY 35 (CONVERGING)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (CAT II/III)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z RWY 35 (SA CAT I)	1		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 35			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 35			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 DATE OF REVISION: 01/05/2017

REASON FOR REVISION:

UPDATED FIX TYPE, REMOVED 'INT'.
 REMOVED FLYING CLOUD VOR/DME FROM FIX MAKE-UP FACILITIES.
 REMOVED ESV.
 REMOVED REMARK 'MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES'.

INITIATED BY:	DATE:	ORGANIZATION:	NAME:
DEVELOPED BY:	DATE: 09/08/2016	OFFICE: AJV-5422	NAME: JULIE MORGAN (LUCAS MCCLOUD)
APPROVED BY:	DATE: 11/22/2016	OFFICE: AJV-5420	NAME: TONY LAWSON

SIGNATURE:

DISTRIBUTION: NFDC
 FPO: CEN
 ARTCC: ZMP
 ATC FACILITY: MSP APP CON, MSP TOWER
 OTHER: