

# RADIO FIX AND HOLDING DATA RECORD

**NAME:** DULUTH VORTAC      **STATE:** MN      **COUNTRY:** US      **ICAO REGION CODE:** K3  
**LATITUDE/LONGITUDE:** 464807.79N/0921210.33W      **TYPE:**  
**AIRSPACE DOCKET:** 19-AGL-7      **FIX TYPE OF ACTION:** NO CHANGE

**FIX MAKE-UP FACILITIES:**

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	DULUTH	DLH	VORTAC	H							45000

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

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	230	TOWER (27-000283)	464715.00N/0920722.00W	2049	4D

**HOLDING RESTRICTIONS:**

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3100.

**REMARKS:**

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
 DLH VORTAC MAG VAR 5E (1965).

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	MEADOW LAKE			KMSP	MINNEAPOLIS	MN (US)
DP	MINNEAPOLIS			KMSP	MINNEAPOLIS	MN (US)
EN ROUTE	J140					(US)
EN ROUTE	J21					(US)
EN ROUTE	J32					(US)
EN ROUTE	J533					(US)
EN ROUTE	J538					(US)
EN ROUTE	J89					(US)
EN ROUTE	V129					(US)
EN ROUTE	V13					(US)
EN ROUTE	V191					(US)
EN ROUTE	V217					(US)
EN ROUTE	V430					(US)
EN ROUTE	V505					(US)
IAP	RNAV (GPS) RWY 18			KCOQ	CLOQUET	MN (US)
IAP	RNAV (GPS) RWY 36			KCOQ	CLOQUET	MN (US)
IAP	ILS OR LOC RWY 27			KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9			KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (CAT II)			KDLH	DULUTH	MN (US)
IAP	ILS RWY 9 (SA CAT I)			KDLH	DULUTH	MN (US)
IAP	VOR OR TACAN RWY 3			KDLH	DULUTH	MN (US)
IAP	VOR/DME OR TACAN RWY 21			KDLH	DULUTH	MN (US)
IAP	RNAV (GPS) RWY 13			KASX	ASHLAND	WI (US)
IAP	ILS OR LOC RWY 21			KHYR	HAYWARD	WI (US)
IAP	RNAV (GPS) RWY 22			KSUW	SUPERIOR	WI (US)
IAP	RNAV (GPS) RWY 32			KSUW	SUPERIOR	WI (US)
IAP	RNAV (GPS) RWY 4			KSUW	SUPERIOR	WI (US)
SPECIAL IAP	COPTER RNAV (GPS) 193			KMN33	DULUTH	MN (US)
STAR	GOPHER			KANE	MINNEAPOLIS	MN (US)
STAR	GOPHER			KFCM	MINNEAPOLIS	MN (US)
STAR	GOPHER			KLVN	MINNEAPOLIS	MN (US)
STAR	GOPHER			KMIC	MINNEAPOLIS	MN (US)
STAR	GOPHER			KMSP	MINNEAPOLIS	MN (US)
STAR	GOPHER			KSTP	ST PAUL	MN (US)

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

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 20      **DATE OF REVISION:** 03/26/2020

**REASON FOR REVISION:**

AIRSPACE DOCKET: ADDED 19-AGL-7.  
 FIX USE: DELETED V177. ADDED KHYR ILS OR LOC RWY 21.  
 UPDATED FIX USE FOR KCOQ FROM RNAV (GPS) RWY 17 TO RNAV (GPS) RWY 18.  
 UPDATED FIX USE FOR KCOQ FROM RNAV (GPS) RWY 35 TO RNAV (GPS) RWY 36.

**INITIATED BY:**      **DATE:**      **ORGANIZATION:**      **NAME:**

**OFFICE OF PRIMARY RESPONSIBILITY:**

AJV-A422

**NAME:** BARRY SMITH**APPROVED BY:****DATE:****OFFICE:** AJV-A420**NAME:** MARLON ROBINSON**SIGNATURE:****DISTRIBUTION:****NFDC****FPO:** CEN**ARTCC:** ZMP**ATC FACILITY:** DLH ATCT**OTHER:**

# RADIO FIX AND HOLDING DATA RECORD

**NAME:** FOSUP **STATE:** MN **COUNTRY:** US **ICAO REGION CODE:** K3

**LATITUDE/LONGITUDE:** 470241.23N/0920655.97W **TYPE:** WP, DME

**AIRSPACE DOCKET:** 19AGL-7 **FIX TYPE OF ACTION:** NO CHANGE

**FIX MAKE-UP FACILITIES:**

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	DULUTH	DLH	VORTAC	H	008.82	013.82	15.00	15.00		3600	17500

**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	N		WP	008.82	188.82	R	4	3600 6000	5 6

**CONTROLLING OBSTRUCTIONS:**

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	470939.00N/0921036.00W	1946	4E

**HOLDING RESTRICTIONS:**

HOLDING LIMITED TO ESTABLISHED PATTERN.

**REMARKS:**

PRECIPITIOUS TERRAIN EVALUATION COMPLETED.

**FIX USE:**

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 18			KCOQ	CLOQUET	MN (US)
IAP	ILS OR LOC RWY 27	1		KDLH	DULUTH	MN (US)
IAP	RNAV (GPS) RWY 27			KEVM	EVELETH	MN (US)
IAP	RNAV (GPS) RWY 24		1	KTWM	TWO HARBORS	MN (US)
IAP	RNAV (GPS) RWY 6			KTWM	TWO HARBORS	MN (US)
IAP	RNAV (GPS) RWY 14			KSUW	SUPERIOR	WI (US)

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

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 4 **DATE OF REVISION:** 03/26/2020

**REASON FOR REVISION:**

AIRSPACE DOCKET: ADDED 19-AGL-7.  
FIX USE: REMOVED V177.  
UPDATED FIX USE FOR KCOQ FROM RNAV (GPS) RWY 17 TO RNAV (GPS) RWY 18.

**INITIATED BY:** **DATE:** **ORGANIZATION:** **NAME:**

**OFFICE OF PRIMARY RESPONSIBILITY:** AJV-A422 **NAME:** BARRY SMITH

**APPROVED BY:** **DATE:** **OFFICE:** AJV-A420 **NAME:** MARLON ROBINSON

**SIGNATURE:**

**DISTRIBUTION:** NFDC  
FPO: CEN  
ARTCC: ZMP  
ATC FACILITY: DLH APP CON  
OTHER: