

RADIO FIX AND HOLDING DATA RECORD

NAME: ERAVE

STATE: WA

COUNTRY: US

ICAO REGION CODE: K1

LATITUDE/LONGITUDE: 465435.00N/1232406.00W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

FIX TO FACILITATE TRAFFIC FLOW KSEA TO KLAX/KSFO.

FIX USE:

USE TYPE

DP
EN ROUTE

USE TITLE

HAROB (RNAV)
Q1

FAC

PAT

AIRPORT IDENT

SEA

CITY

SEATTLE

STATE

WA (US)
(US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6

DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

FIX USE: REMOVED DP OZWLD (RNAV) AT SEA.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A431

NAME: ZACHARY KRUEGER

APPROVED BY:

DATE: 09/24/2026

OFFICE: AJV-A422

NAME: RAKE MCGRAW

Digitally signed by

CASEY D HILL

SIGNATURE:

Jul 02, 2026

QUALITY
42
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FEPOT

STATE: WA

COUNTRY: US

ICAO REGION CODE: K1

LATITUDE/LONGITUDE: 470451.00N/1231308.00W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

COORDINATES PROVIDED BY AIR TRAFFIC AND NOT SUPPORTED BY ANY SPECIFIC NAVIGATIONAL FACILITY OR FIX TO FACILITATE TRAFFIC FLOW KSEA TO KLAX/KSFO.

FIX USE:

USE TYPE
DP
EN ROUTE

USE TITLE
HAROB (RNAV)
Q3

FAC

PAT

AIRPORT IDENT
SEA

CITY
SEATTLE

STATE
WA (US)
(US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5

DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

FIX USE: REMOVED DP OZWLD (RNAV) AT SEA.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A431

NAME: ZACHARY KRUEGER

APPROVED BY:

DATE: 09/24/2026

OFFICE: AJV-A422

NAME: RAKE MCGRAW

SIGNATURE:

Digitally signed by

CASEY D HILL

Jul 02, 2026

QUALITY
42
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HOQUIAM VORTAC STATE: WA COUNTRY: US ICAO REGION CODE: K1

LATITUDE/LONGITUDE: 465649.35N/1240857.37W 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	HOQUIAM	HQM	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 TIME	LENGTH DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	SW	HQM	VORTAC	240.00	060.00	R	1		1600	14000	4	10
2	SW	HQM	VORTAC	242.00	062.00	R	1		2500	14000	4	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	465239.00N/1240648.00W	260	4E
2	200	AAO	465239.00N/1240648.00W	260	4E
2	310	AAO	464818.00N/1240412.00W	561	4E

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS BELOW 2500 FT.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
2	VOR RWY 6	HQM	HOQUIAM	WA (US)

REMARKS:

HOQUIAM (HQM) VORTAC 1995/E19.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	PAINE			PAE	EVERETT	WA (US)
DP	YELM			OLM	OLYMPIA	WA (US)
DP	KENT			BFI	SEATTLE	WA (US)
DP	NEEDLE			BFI	SEATTLE	WA (US)
DP	BANGR (RNAV)			SEA	SEATTLE	WA (US)
DP	ELMAA			SEA	SEATTLE	WA (US)
DP	HAROB (RNAV)			SEA	SEATTLE	WA (US)
DP	SEATTLE			SEA	SEATTLE	WA (US)
EN ROUTE	CONTROL 1418					(US)
EN ROUTE	J34					(US)
EN ROUTE	J501					(US)
EN ROUTE	J70					(US)
EN ROUTE	T257					(US)
EN ROUTE	V112					(US)
EN ROUTE	V204					(US)
EN ROUTE	V27					(US)
IAP	ILS OR LOC RWY 24		1	HQM	HOQUIAM	WA (US)
IAP	VOR RWY 6		2	HQM	HOQUIAM	WA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 19 DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

1. FIX USE: REMOVED DP OZWLD (RNAV) AT SEA.

INITIATED BY:	DATE:	ORGANIZATION:	NAME:
OFFICE OF PRIMARY RESPONSIBILITY:		AJV-A431	NAME: ZACHARY KRUEGER
APPROVED BY:	DATE: 09/24/2026	OFFICE: AJV-A422	NAME: RAKE MCGRAW
SIGNATURE:			Digitally signed by CASEY D HILL Jul 02, 2026

QUALITY
42
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SUMMA

STATE: WA

COUNTRY: US

ICAO REGION CODE: K1

LATITUDE/LONGITUDE: 463704.29N/1215917.96W

TYPE: WP, RADAR, 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	SEATTLE	SEA	VORTAC	H	145.84	164.84	50.81	50.81		8000	45000
2	OLYMPIA	OLM	VORTAC	H	100.09	119.09	43.23	43.23		14700	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SEA	VORTAC	R-146	51	8000	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	SEA	VORTAC	145.84	145.84	R	1 1/2		18000	45000	18	31

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.
HOLDING PER ATC REQUEST.

REMARKS:

SEATTLE (FAC 1) USED TO ESTABLISH FIX COORDINATES.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
HOLDING PER ATC REQUEST.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	CBAIN (RNAV)			BFI	SEATTLE	WA (US)
DP	NRVNA (RNAV)			BFI	SEATTLE	WA (US)
DP	SUMMA	1, 2		SEA	SEATTLE	WA (US)
DP	OZWLD			SEA	SEATTLE	WA (US)
DP	MOCAA (RNAV)			TCM	TACOMA	WA (US)
EN ROUTE	J5					(US)
EN ROUTE	J54	1, 2				(US)
EN ROUTE	Q9					(US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 15

DATE OF REVISION: 10/29/2026

REASON FOR REVISION:

1. REMARKS: ADDED " HOLDING PER ATC REQUEST."

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A431

NAME: ZACHARY KRUEGER

APPROVED BY:

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