

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE**

EXPERIMENTAL

(Nature of Service)

WM2XAV

(Call Sign)

XT FX MO

(Class of Station)

0511-EX-CR-2025

(File Number)

NAME _____ Insitu _____

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(c) of the Commission's Rules

Station Locations

- (1) MOBILE: Bingen, WA, within 5 km, centered around NL 45-42-23; WL 121-27-29
- (2) MOBILE: Ground operation, Boardman, OR, within 2 km, centered around NL 45-44-54; WL 119-47-38
- (3) MOBILE: Airborne up to 5,000 Feet Flight level, Boardman, OR, within 50 km, centered around NL 45-44-54; WL 119-47-38
- (4) MOBILE: Ground operation, Tillamook, OR, within 2 km, centered around NL 45-25-09; WL 123-48-52
- (5) MOBILE: Airborne up to 10,000 Feet Flight Level, Tillamook, OR, within 110 km, centered around NL 45-25-09; WL 123-48-52
- (6) MOBILE: Ground operations, Pendleton, OR, within 2 km, centered around NL 45-41-21; WL 118-50-32
- (7) MOBILE: Airborne up to 15,000 Feet Flight Level, Pendleton, OR., within 150 km, centered around NL 45-14-53; WL 118-29-56
- (8) MOBILE: Ground operation, Hood River, OR, within 2 km, centered around NL 45-42-41; WL 121-31-11
- (9) MOBILE: Airborne up to 15,000 Feet Flight Level, Hood River, OR., within 140 km, centered around NL 45-40-18; WL 121-32-24
- (10) Bald Peter, OR - NL 44-39-22; WL 121-41-33
- (11) Long Branch, OR - NL 45-34-31; WL 121-46-12
- (12) Grey Butte, OR - NL 44-25-04; WL 121-05-50
- (13) Jackass Springs, OR - NL 45-31-19; WL 120-46-58
- (14) Dee, OR - NL 45-34-31; WL 121-46-13
- (15) Opal City, OR - NL 45-25-04; WL 121-05-51
- (16) Wasco Butte, OR - NL 45-36-26; WL 121-19-53
- (17) The Dallas, OR - NL 45-31-01; WL 121-24-47

This authorization effective October 01, 2025 and
will expire 3:00 A.M. ET October 01, 2027

**FEDERAL
COMMUNICATIONS
COMMISSION**



Station Locations

(18) MOBILE: Ground operations, Devils Butte, OR, within 50 km, centered around NL 45-22-35; WL 120-23-02

Frequency Information

MOBILE: Bingen, WA, within 5 km, centered around NL 45-42-23; WL 121-27-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	230KF1D 15M2G1D	6040 W (ERP)	
1370-1390 MHz	MO	230KF1D 15M2G1D	4 W (ERP)	
1791.822-1850 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
1791.822-1850 MHz	FX	15M2G1D 2M40G1D 4M79G1D 9M58G1D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D 15M2G1D	4 W (ERP)	
2360-2390 MHz	FX	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	4 W (ERP)	

Frequency Information

MOBILE: Bingen, WA, within 5 km, centered around NL 45-42-23; WL 121-27-29

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

MOBILE: Ground operation, Boardman, OR, within 2 km, centered around NL 45-44-54; WL 119-47-38

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	MO	2M40G1D 4M79G1D 15M2G1D 9M58G1D	4798 W (ERP)	
2360-2390 MHz	MO	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	MO	15M2G1D	37242 W (ERP)	

MOBILE: Airborne up to 5,000 Feet Flight level, Boardman, OR, within 50 km, centered around NL 45-44-54; WL 119-47-38

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	230KF1D 15M2G1D	4 W (ERP)	

Frequency Information

MOBILE: Airborne up to 5,000 Feet Flight level, Boardman, OR, within 50 km, centered around NL 45-44-54; WL 119-47-38

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1780-1850 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
2200-2290 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
2360-2390 MHz	MO	15M2G1D 200KG1D	4 W (ERP)	
4400-4940 MHz	MO	15M2G1D	4 W (ERP)	

MOBILE: Ground operation, Tillamook, OR, within 2 km, centered around NL 45-25-09; WL 123-48-52

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1791.822-1850 MHz	MO	15M2G1D 9M58G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	MO	200KG1D 15M2G1D	17023 W (ERP)	

Frequency Information

MOBILE: Ground operation, Tillamook, OR, within 2 km, centered around NL 45-25-09; WL 123-48-52

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4400-4940 MHz	MO	15M2G1D	37242 W (ERP)	

MOBILE: Airborne up to 10,000 Feet Flight Level, Tillamook, OR, within 110 km, centered around NL 45-25-09; WL 123-48-52

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1780-1850 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
2200-2290 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
2360-2390 MHz	MO	15M2G1D 200KG1D	4 W (ERP)	
4400-4940 MHz	MO	15M2G1D	4 W (ERP)	

MOBILE: Ground operations, Pendleton, OR, within 2 km, centered around NL 45-41-21; WL 118-50-32

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	230KF1D	6040 W (ERP)	

Frequency Information

MOBILE: Ground operations, Pendleton, OR, within 2 km, centered around NL 45-41-21; WL 118-50-32

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	MO	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	MO	15M2G1D	37242 W (ERP)	

MOBILE: Airborne up to 15,000 Feet Flight Level, Pendleton, OR., within 150 km, centered around NL 45-14-53; WL 118-29-56

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M2G1D 200KG1D	4 W (ERP)	
1780-1850 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
2200-2290 MHz	MO	9M58G1D 15M2G1D	4 W (ERP)	

Frequency Information

MOBILE: Airborne up to 15,000 Feet Flight Level, Pendleton, OR., within 150 km, centered around NL 45-14-53; WL 118-29-56

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2200-2290 MHz	MO	4M79G1D 2M40G1D	4 W (ERP)	
2360-2390 MHz	MO	15M2G1D 200KG1D	4 W (ERP)	
4400-4940 MHz	MO	15M2G1D	4 W (ERP)	

MOBILE: Ground operation, Hood River, OR, within 2 km, centered around NL 45-42-41; WL 121-31-11

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	MO	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	MO	15M2G1D	37242 W (ERP)	

Frequency Information

MOBILE: Airborne up to 15,000 Feet Flight Level, Hood River, OR., within 140 km, centered around NL 45-40-18; WL 121-32-24

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M2G1D 200KG1D	4 W (ERP)	
1780-1850 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
2200-2290 MHz	MO	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4 W (ERP)	
2360-2390 MHz	MO	200KG1D 15M2G1D	4 W (ERP)	
4400-4940 MHz	MO	15M2G1D	4 W (ERP)	

Bald Peter, OR - NL 44-39-22; WL 121-41-33

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	FX	15M2G1D	4798 W (ERP)	

Frequency Information

Bald Peter, OR - NL 44-39-22; WL 121-41-33

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1791.822-1850 MHz	FX	230KF1D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

Long Branch, OR - NL 45-34-31; WL 121-46-12

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	FX	15M2G1D 9M58G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

Frequency Information

Grey Butte, OR - NL 44-25-04; WL 121-05-50

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	FX	15M2G1D 9M58G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

Jackass Springs, OR - NL 45-31-19; WL 120-46-58

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	FX	15M2G1D 9M58G1D 4M79G1D 2M40G0D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D	17023 W (ERP)	

Frequency Information

Jackass Springs, OR - NL 45-31-19; WL 120-46-58

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2360-2390 MHz	FX	15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

Dee, OR - NL 45-34-31; WL 121-46-13

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	FX	15M2G1D 9M58G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

Frequency Information

Opal City, OR - NL 45-25-04; WL 121-05-51

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	60400 W (ERP)	
1791.822-1850 MHz	FX	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

Wasco Butte, OR - NL 45-36-26; WL 121-19-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	FX	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	FX	200KG1D	17023 W (ERP)	

Frequency Information

Wasco Butte, OR - NL 45-36-26; WL 121-19-53

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
2360-2390 MHz	FX	15M2G1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

The Dallas, OR - NL 45-31-01; WL 121-24-47

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	FX	230KF1D 15M2G1D	6040 W (ERP)	
1791.822-1850 MHz	FX	9M58G1D 15M2G1D 4M79G1D 2M40G1D	4798 W (ERP)	
2360-2390 MHz	FX	15M2G1D 200KG1D	17023 W (ERP)	
4400-4940 MHz	FX	15M2G1D	37242 W (ERP)	

Frequency Information

MOBILE: Ground operations, Devils Butte, OR, within 50 km, centered around NL 45-22-35; WL 120-23-02

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M2G1D 230KF1D	6040 W (ERP)	
1791.822-1850 MHz	MO	15M2G1D 2M40G1D 4M79G1D 9M58G1D	4798 W (ERP)	
2200-2290 MHz	MO	9M58G1D 4M79G1D 2M40G1D 15M2G1D	17023 W (ERP)	
2360-2390 MHz	MO	9M58G1D 4M79G1D 2M40G1D 15M2G1D	17023 W (ERP)	
4400-4940 MHz	MO	15M2G1D	37242 W (ERP)	

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) The station identification requirements of Section 5.115 of the Commission's Rules are waived.
- (3) One or more frequency assignments were coordinated prior to authorization with FAA Headquarters, 800 Independence Avenue, S.W., Washington, DC 20591; Telephone: 202-267-8699.

Special Conditions:

- (4) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by the U.S. Government. The use of this radio station in any other manner or for any other purpose will constitute a violation of the privileges herein authorized. Except as subsequently authorized by the Commission, this radio station shall not be operated after the expiration date of the contract designated in the related application and enumerated above.
- (5) Notification shall be provided to the NASA GSFC Spectrum Management Office at NASA-DL-GSFC-SPECTRUMMANAGEMENT@MAIL.NASA.GOV, at least 3 days prior to operation.
- (6) Since 4430-4900 MHz is shared with other fixed and mobile users, the proponent and any third-party Federal agency sponsor must coordinate with other Federal agencies and non-Federal experimental licensees to deconflict proper discrete frequency channels for usage at this location. FAA concurrence with this frequency band is for experimental purposes only and is not an endorsement of further development of this band for aeronautical usage. The operation of Unmanned Aircraft Systems must comply with all applicable parts of 14 CFR, including but not limited to Parts 21, 45, 47, 61, and 91.
- (7) Operations in Wasco Butte and The Dalles, OR within 1780-1791.822 MHz and 2210-2282.4 MHz bands are not permitted due to possibility of interference to the federal activities.
- (8) Stop buzzer is Insitu Operations Action Center at (509) 493-4691.
- (9) For the location Opal City, OR, the frequency band 2200-2290 MHz shall be notched out due to Harmful Interference Anticipated (HIA) to NASA space operations.
- (10) Applicant shall coordinate with the Fixed Microwave Service licensees in the proposed venue in accordance with 47 C.F.R, Part 101.103(d) prior to operation in the requested bands.
- (11) Use of frequency assignment(s) in the band 2360-2390 MHz is subject to further coordination with AFMO CONUS, FT. SAM HOUSTON, TEXAS, as necessary to ensure compatibility with existing uses.
- (12) Use of frequency assignment(s) in the band 2360-2390 MHz is subject to further coordination with the WAFC, as necessary to ensure compatibility with existing uses.
- (13) Insitu must comply with OOB limits of ITU Resolution 750.
- (14) Prior to activation, applicant must coordinate with NASA BRDMN, OR(455117N1193755W)
- (15) The 4940 to 4990 MHz band is exclusive public safety.
- (16) Operations are on a non-interference basis to Flight Test telemetry and Air Force Spectrum Dependent System.
- (17) During transmission, aircraft shall not exceed the altitude of 15000 ft AGL.
- (18) Stop buzzer: Corey Skiles (509-637-4691)
- (19) Operation the frequency band 1370-1390 MHz in Tillamook, OR is not authorized because of server interference with multiple FAA radars in the vicinity.
- (20) Prior to submitting the renewal for this assignment, please ensure pre-coordinate with the FAA and AFTRCC.