

August 2023
FM Translator K283BU
Walla Walla, Washington Channel 282D
Allocation Study

Allocation Study

The instant application proposes to modify FM translator K283BU to operate on its first-adjacent channel, on a new structure.

The attached spacing study shows the spacing between the proposed translator site and the location of cochannel and adjacent channel stations and proposals. This study was made with the Commission's Class A spacing requirements, and individual situations were examined to determine the lack of prohibited contour overlap per the requirements of §74.1204 of the Rules. The attached allocation study maps demonstrate compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204.

The attached spacing study demonstrates compliance with §73.207 of the Commission's Rules regarding spacing restrictions to stations which are 53 or 54 channels removed from the proposed operation.

=====

SEARCH PARAMETERS

FM Database Date: 20230811

Channel: 282A 104.3 MHz

Page 1

Latitude: 46 4 0.6 (NAD83)

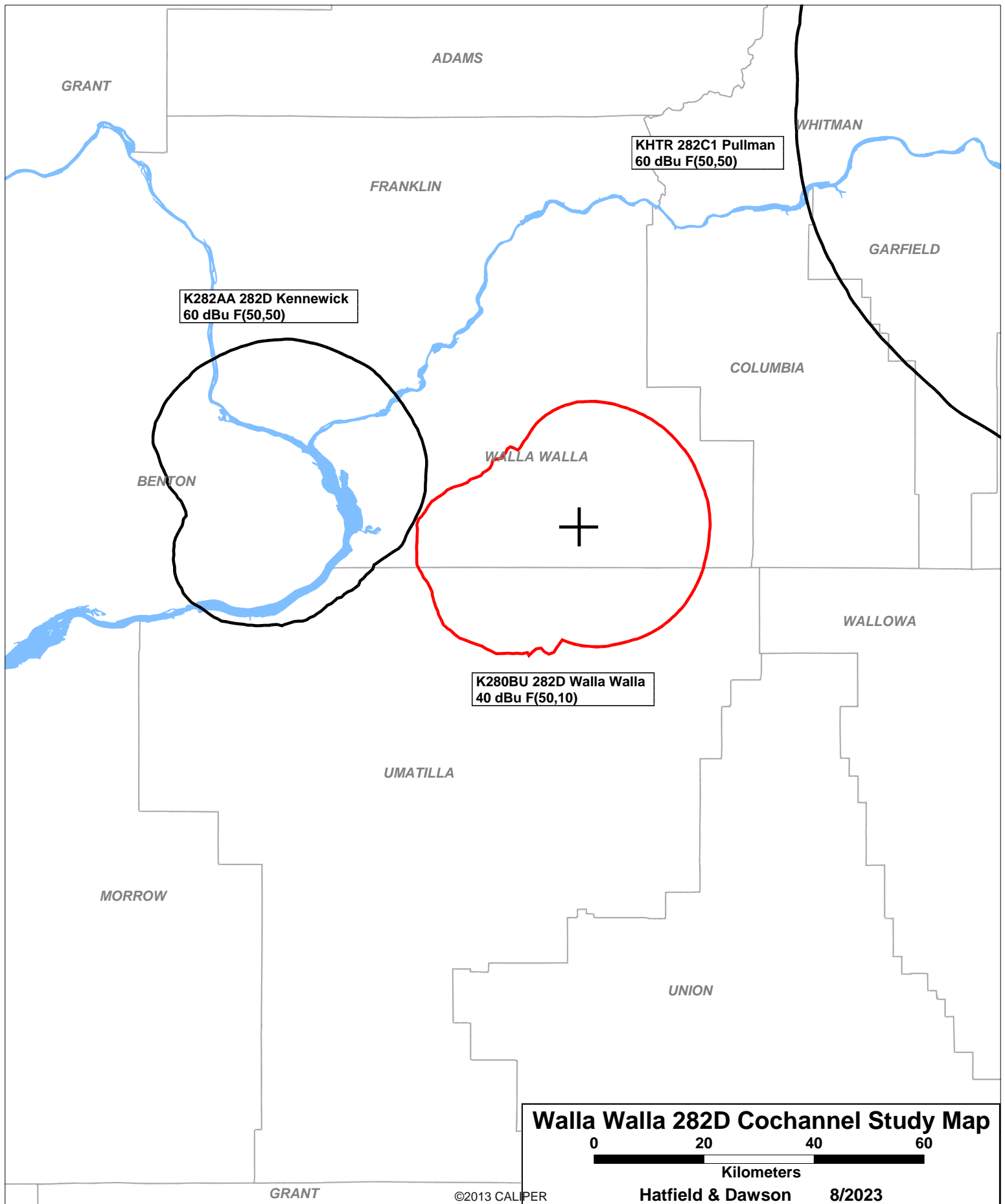
Longitude: 118 24 9.1

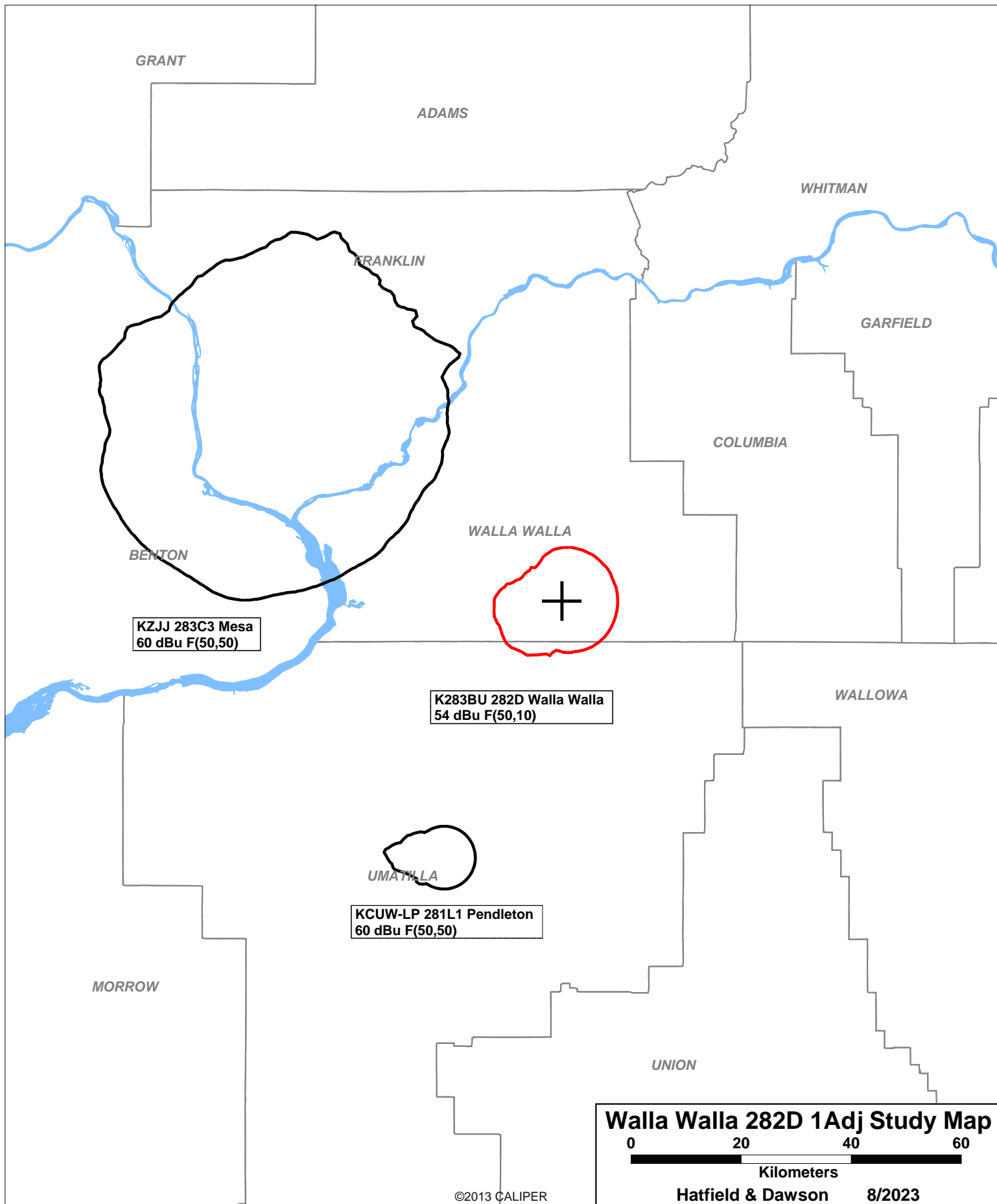
Safety Zone: 50 km

Job Title: WALLA WALLA 282

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
K280GI LIC	RICHLAND WA	BLFT-20150918ACM	280D 103.9	0.015 0.0	46 14 3.5 119 19 17.1	285.1	73.39 0.00	0 TRANS
KSVL-LP LIC	WALLA WALLA WA	BLL-20150508ABM	280L1 103.9	0.100 4.0	46 1 24.5 118 21 21.0	143.2	6.02 0.00	0 LPFM
KCUW-LP LIC	PENDLETON OR	0000170409	281L1 104.1	0.100 -57.0	45 38 53.0 118 40 46.0	204.8	51.27 0.00	0 LPFM
KXDD LIC	YAKIMA WA	BLH-20020305AAX	281C1 104.1	100.000 245.0	DA 46 30 47.5 120 24 9.2	288.6 SS	161.91 28.91	133 CLEAR
KHTR LIC	PULLMAN WA	BLH-19870112KB	282C1 104.3	24.000 509.0	46 48 39.6 116 54 58.5	53.5	141.03 -58.97	200 SHORT
K282AA LIC	KENNEWICK, PASCO* & WA	BLFT-19801027ID	282D 104.3	0.274 0.0	46 6 14.5 119 7 50.0	274.5	56.46 0.00	0 TRANS
K283BU LIC	WALLA WALLA WA	BLFT-20130701ACR	283D 104.5	0.250 0.0	46 4 1.5 118 24 8.9	8.8	0.03 0.00	0 TRANS
KZJJ LIC	MESA WA	0000197043	283C3 104.5	14.000 83.0	46 25 24.8 119 4 56.0	307.4	65.73 -23.27	89 SHORT
KCMB LIC	BAKER OR	BLH-19880719KB	284C 104.7	100.000 532.0	45 7 25.5 117 46 51.7	155.0	115.49 20.49	95 CLEAR
K285FN LIC	KENNEWICK WA	BLFT-20160201ANG	285D 104.9	0.250 0.0	46 6 14.4 119 7 52.0	274.5	56.50 0.00	0 TRANS

===== END OF FM SPACING STUDY FOR CHANNEL 282 =====





**August 2023
FM Translator K283BU
Walla Walla, Washington Channel 282D
RF Exposure Study**

Facilities Proposed

The proposed operation will be on Channel 282D (104.3 MHz) with a maximum lobe effective radiated power of 250 watts. Operation is proposed with a directional antenna which will be installed on a new tower to be constructed in Walla Walla.

The Environmental question on the application form has been answered "Yes" at this time because the Section 106 review process has not been completed. The application will be updated/amended at such time as that process is complete.

RF Exposure Calculations

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(\mu W / cm^2) = \frac{33.4 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

D is the distance in meters from the center of radiation to the calculation point.

Ground level power densities have been calculated for locations extending from the base of the tower to a distance of 500 meters. Values past this point are increasingly negligible.

Calculations of the power density produced by the Walla Walla 282D antenna system have been made assuming that the antenna will radiate 100% power straight down to a point 2 meters above ground at the base of the tower (27 meters below the antenna). Under this worst-case assumption,

the highest calculated ground level power density from Walla Walla 282D occurs at the base of the antenna support structure. At this point the power density is calculated to be $22.9 \mu\text{W}/\text{cm}^2$, which is 11.5% of $200 \mu\text{W}/\text{cm}^2$ (the FCC standard for uncontrolled environments).

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.

