

June 2022
KAWS(FM) Channel 206C0
Marsing, Idaho
Allocation Study

Background and Contingent Application Group

The instant application is being filed as a part of a two-station contingent group comprised of two minor change applications. The two stations involved, KCNU(FM) and KAWS(FM), are commonly licensed to CSN International ("CSN"). By these applications, it is proposed that the following changes be made:

- 1) The KCNU license is modified from Channel 280C3 Silver City to Channel 260C3 Silver City, with no change in transmitter site;
- 2) In order to accommodate the KCNU modification, KAWS Channel 206C1 Marsing is modified to operate on Channel 206C0 Marsing, from a transmitter site east of the Owyhee Reservoir.

KCNU and KAWS currently operate from a single transmitter site on War Eagle Mountain. Since the proposed KCNU Channel 260C3 operation and the licensed KAWS Channel 206C1 operation are on "IF" or "Intermediate Frequency" channels, the KAWS site change is necessary in order to avoid a short-spacing which would be prohibited by §73.207 of the Commission's Rules.

Since the two stations are licensed to a single entity, it is axiomatic that the station licensees mutually consent to contingent processing of these applications, and no written agreement is necessary. The attached spacing study shows the co-channel and adjacent channel spacing between stations and demonstrates that the proposed operation meets the IF channel spacing requirements as prescribed in §73.207 of the Commission's Rules.

Allocation Study

Individual stations were examined to confirm the lack of prohibited contour overlap as prescribed in §73.509 of the Commission's Rules. The attached allocation study exhibits demonstrate requisite contour protection for the following domestic stations:

Cochannel	CP 0000166875	206A	Stanley
	KAVY	206C3	McCall
	KQDL	206A	Hines
First-adjacent	KOBK	205C3	Baker City
Second-adjacent	KOAY	204C1	Middleton
	KTSY	208C1	Caldwell

TV Channel 6

Section 73.525 of the Commission's Rules specifies a threshold distance of 211 kilometers for FM stations operating on Channel 206. There is no full-power TV Channel 6 station located within this threshold distance.

Nevertheless, continued operation is proposed using vertical polarization only. KAWS is currently licensed for vertical polarization only. At the time KAWS was first authorized, KIVI-TV operated on analog Channel 6 at Boise and it was necessary for the FM station to operate with vertical polarization in order to ensure interference protection to the TV station. While KIVI-TV now operates on digital Channel 24, Commission policy is understood to permit NCE FM stations which are currently authorized for vertical polarization only to continue such operation when they are modified, even if the nearby Channel 6 station has changed channel.

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SEARCH PARAMETERS

FM Database Date: 20220610

Channel: 206C0 89.1 MHz

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Latitude: 43 37 27.6 (NAD83)

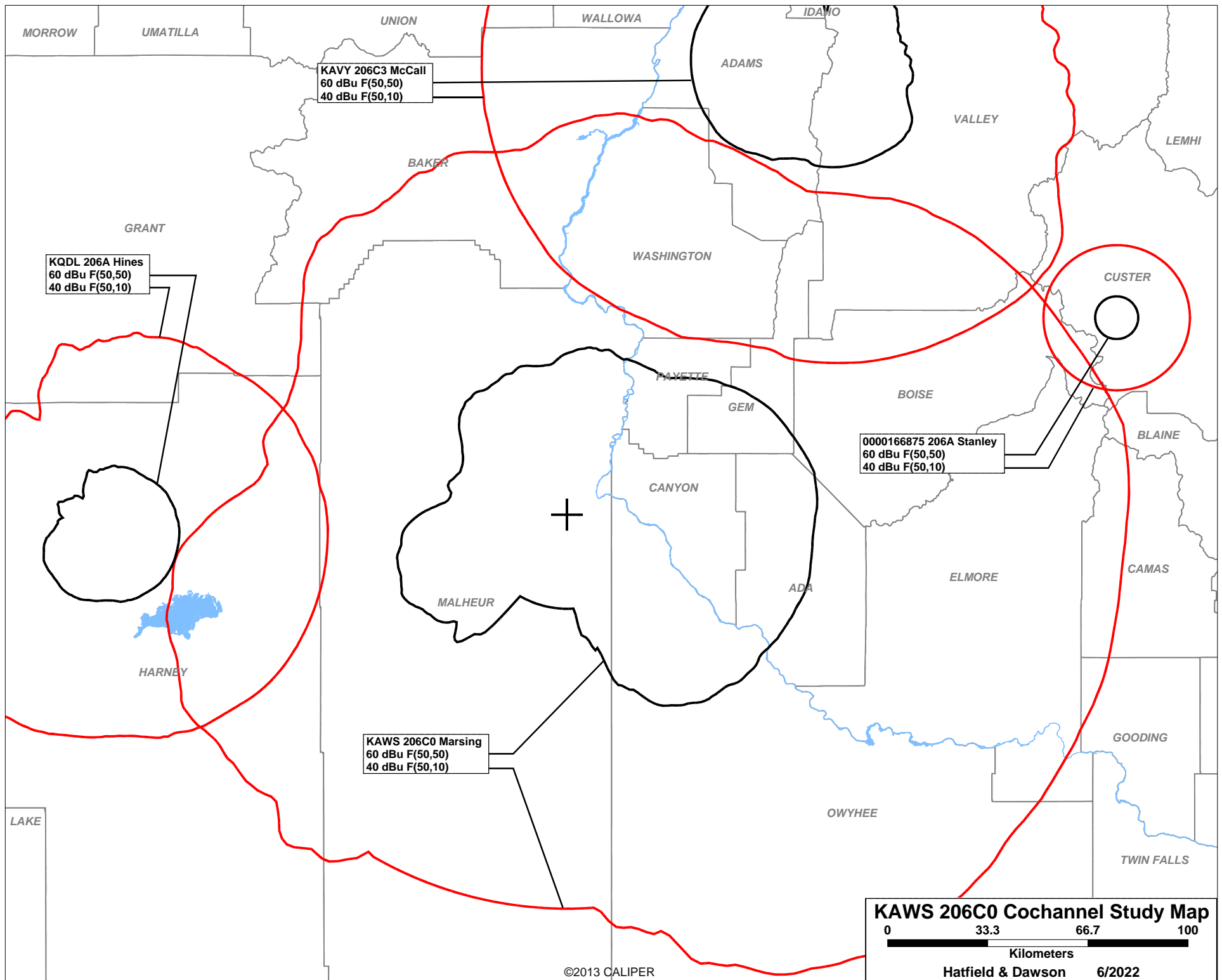
Longitude: 117 12 40.2

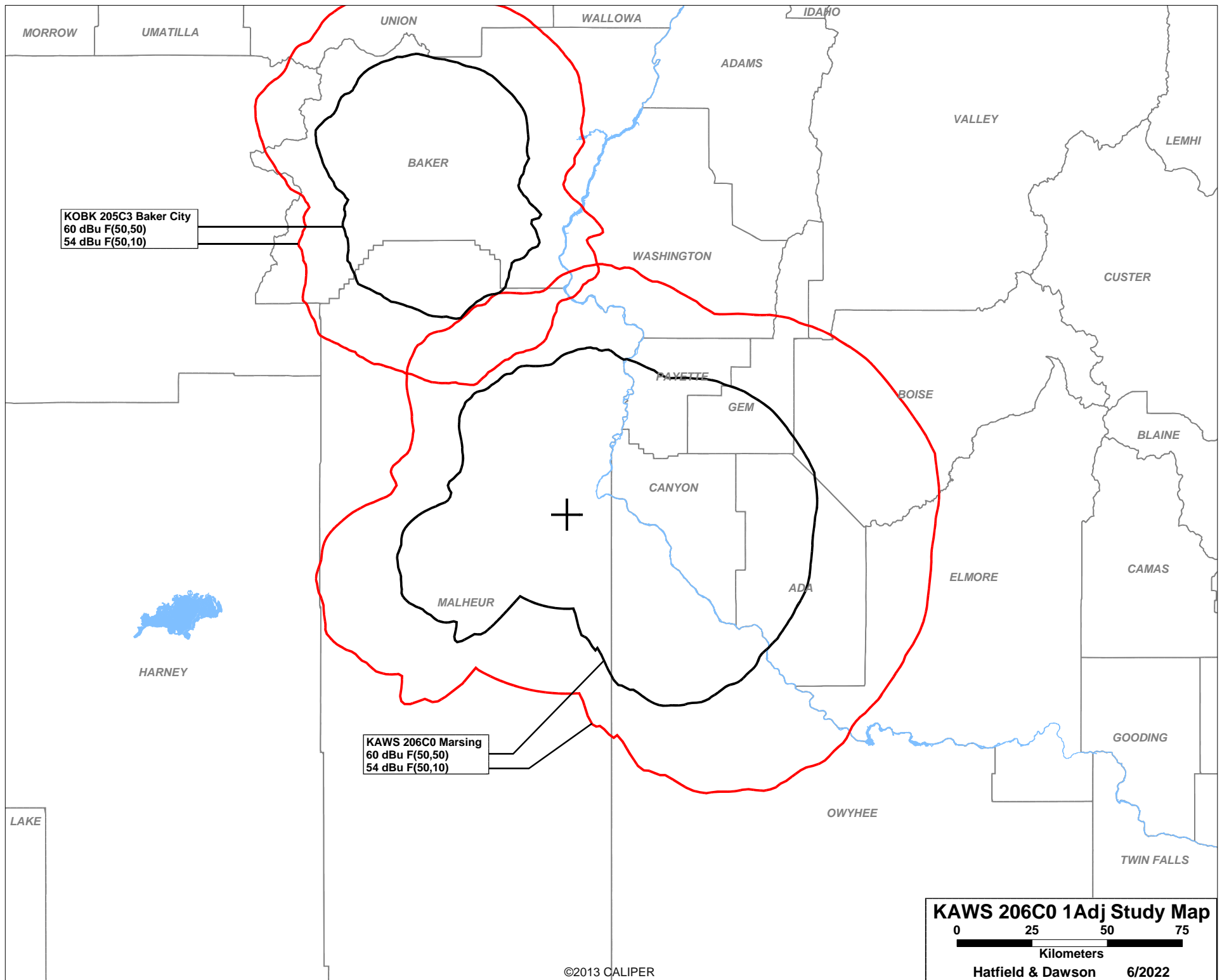
Safety Zone: 50 km

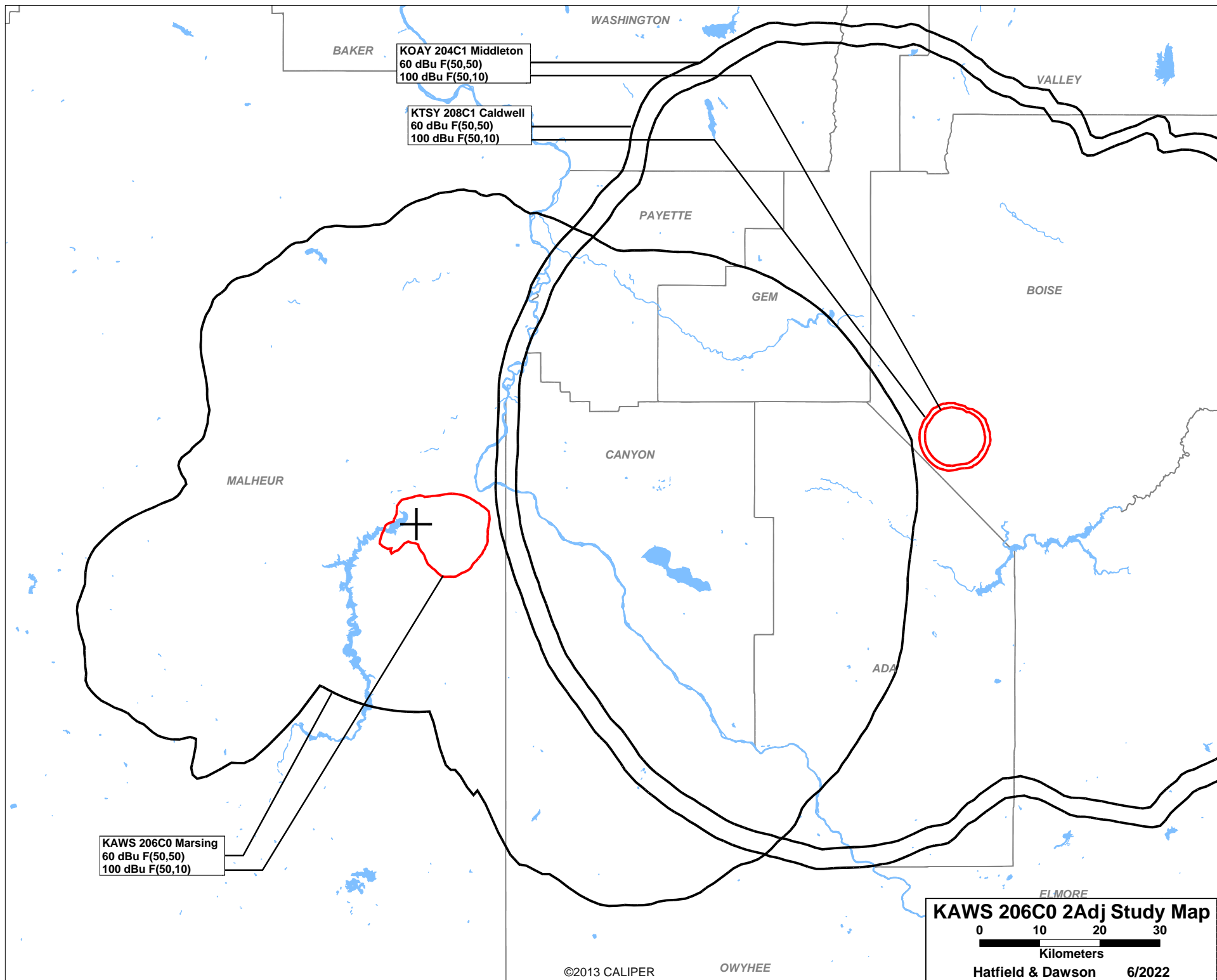
Job Title: KAWS 206C0 MARSING

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KOAY LIC	MIDDLETON ID	204C1 BMLED-20130925AH	6.000 88.7	791.0	43 45 17.6 116 5 55.4	80.4	90.86 -3.14	94 SHORT
K205CJ LIC	PRAIRIE CITY OR	205D BMLFT-20160824AB	0.250 88.9	0.0	DA 44 25 39.5 118 35 35.7	309.4	142.28 0.00	0 TRANS
K205DV LIC	LA GRANDE OR	205D BLFT-20020221ABL	0.115 88.9	0.0	45 17 57.5 118 5 8.8	339.9	198.71 0.00	0 TRANS
KOBK LIC	BAKER CITY OR	205C3 BLED-20070720ABS	0.600 88.9	559.0	44 35 56.5 117 47 1.7	337.3	117.60 -45.40	163 SHORT
KEFX LIC	TWIN FALLS ID	205C0 BLED-20060403AUG	100.000 88.9	302.0	42 43 46.7 114 24 55.1	112.7	248.11 41.11	207 CLEAR
KFAE-FM LIC	RICHLAND WA	206C BLED-20010726AAH	100.000 89.1	350.0	46 5 42.5 119 11 45.0	331.0	316.23 35.23	281 CLEAR
CP	STANLEY ID	206A 0000166875	0.250 89.1	-314.0	44 12 46.6 114 56 20.6	69.4	193.86 -21.14	215 SHORT
KAVY LIC	MCCALL ID	206C3 BMLED-20170817AA	0.320 89.1	590.0	45 0 17.6 116 8 4.4	28.8	175.81 -50.19	226 SHORT
KAWS LIC	MARSING ID	206C1 BMLED-20190904AA	8.750 89.1	668.0	43 0 24.6 116 42 16.4	149.0	79.97 -179.03	259 SHORT
KQDL LIC	HINES OR	206A BMLED-20110124AC	0.300 89.1	266.6	43 34 22.5 119 7 53.7	268.5	155.17 -59.83	215 SHORT
K207EY LIC	ENTERPRISE, ETC. OR	207D BLFT-20130412AAL	0.010 89.3	0.0	DA 45 23 57.5 117 23 19.6	356.0	197.74 0.00	0 TRANS
KTSY LIC	CALDWELL ID	208C1 BMLED-20130925AH	8.300 89.5	791.0	43 45 17.6 116 5 55.4	80.4	90.86 -3.14	94 SHORT

===== END OF FM SPACING STUDY FOR CHANNEL 206 =====







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KAWS(FM) Channel 206C0
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RF Exposure Study

Facilities Proposed

The proposed operation will be on Channel 206C0 (89.1 MHz) with a maximum lobe effective radiated power of 100 kilowatts. Operation is proposed with an 8-element vertically-polarized directional antenna. The directional antenna will be installed on a new tower to be constructed just east of the Owyhee Reservoir.

The proposed antenna support structure will not exceed 60.96 meters (200 feet) above ground and does not require notification to the Federal Aviation Administration. Therefore, this structure does not require an Antenna Structure Registration Number.

DETERMINATION Results	
Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.	
Your Specifications	
NAD83 Coordinates	
Latitude	43-37-27.6 north
Longitude	117-12-40.2 west
Measurements (Meters)	
Overall Structure Height (AGL)	60.7
Support Structure Height (AGL)	60.7
Site Elevation (AMSL)	1250
Structure Type	
LTOWER - Lattice Tower	

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.

$$S(\mu W / cm^2) = \frac{33.40981 \times AdjERP(Watts)}{D^2}$$

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

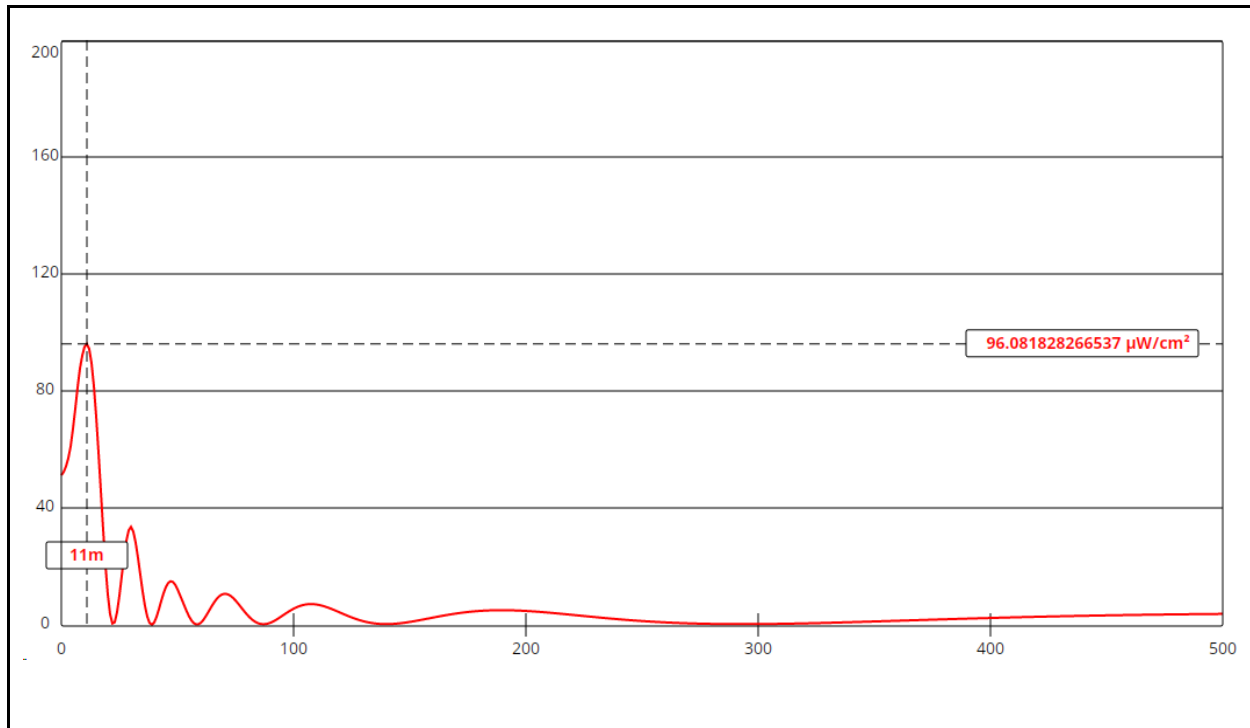
D is the distance in meters from the center of radiation to the calculation point.

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 proposed antenna system assume a Type 1 element pattern, which is the element pattern for the vertically-polarized antenna proposed for use. The highest calculated ground level power density occurs at a distance of 11 meters from the base of the antenna support structure. At this point the power density is calculated to be 96.1 $\mu W/cm^2$, which is 48% of 200 $\mu W/cm^2$ (the FCC standard for uncontrolled environments).

The next-nearest broadcast facilities are located on a tower 400 meters distant from the proposed operation. This is far enough that the stations on the other tower will not contribute significantly to ground-level power density levels around the proposed tower, and vice-versa.

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.



Ground-Level RF Exposure

OET FMModel

KAWS 206C0 Marsing

Antenna Type: Type 1
 No. of Elements: 8
 Element Spacing: 0.85 wavelength

Distance: 500 meters
 Horizontal ERP: zero kW
 Vertical ERP: 100 kW

Antenna Height: 45 meters AGL

Maximum Calculated Power Density is 96.1 $\mu\text{W}/\text{cm}^2$ at 11 meters from the antenna structure.



Hatfield & Dawson Consulting Engineers

