

**Goldman Engineering Management  
Auburn, CA**

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**Minor Modification Application**

**KNHT (FM), Channel 273C2, Upgrade to 273C1**

**PURPOSE OF FILING**

This Technical Statement and attached exhibits has been prepared on behalf of Southern Oregon University (“SOU”), Licensee of station KNHT (FM) facility number 17412, Rio Dell, CA in support of a construction permit to make a one-step upgrade from 273C2 to 273C1 at the same site as currently licensed.

**PROPOSED SPECIFICATIONS**

Reference Coordinates (NAD27)	40° 26’ 21” N Latitude, 124° 18’ 53” W Longitude
Location (NAD27) (Same site)	40° 30’ 03” N Latitude, 124° 17’ 10” W Longitude
Channel (PROP)	273C1 (102.5 MHz)
Tower Overall AGL Height-	55m
Tower ASR	N/A- Existing tower under 200ft
Proposed Antenna	ERI LPX-4E
Antenna AGL Height-	20m
Site AMSL Height-	695m
COR AMSL Height	715m
HAAT	509m
ERP	4.5kW

## ALLOCATION

The reference coordinates for KNHT (FM) will be located 7.3km South of the transmitter location at 40° 26' 21" N Latitude, 124° 18' 53" W Longitude. At the proposed reference coordinates, the Rio Dell allotment on 273C1 is fully spaced to all other stations under 73.207 as indicated in the reference coordinate allocation study below:

**73.207 ALLOCATION STUDY, REFERENCE COORDINATES, 273C1, Rio Dell, CA**  
ComStudy 2.2 search of channel 273 (102.5 MHz Class C1) at 40-26-21.0 N, 124-18-53.0 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE
KNHT	RIO DELL	CA	273	C2	7.26	224.00	19.4	-216.7 Existing 273C2
KCNA	CAVE JUNCTION	OR	274	C	209.32	209.00	14.9	0.3
KYOE	POINT ARENA	CA	272	B1	183.74	161.00	158.7	22.7
KSIZ	WEED	CA	272	C1	200.74	177.00	58.9	23.7
KKRO	RED BLUFF	CA	274	C2	190.17	158.00	95.4	32.2
KSFM	WOODLAND	CA	273	B	302.98	270.00	132.0	33.0

The proposed KNHT operating facility will be fully spaced under 73.207 to all stations except for KCNA (FM), 274C, Cave Junction, OR. KNHT will operate pursuant to 73.215 with respect to KCNA. A map demonstrating compliance under 73.215 is shown in Exhibit A. The allocation study for KNHT on 273C1 at the transmitter site coordinates is shown below:

**73.207 ALLOCATION STUDY, TRANSMITTER COORDINATES, 273C1, Rio Dell, CA**  
ComStudy 2.2 search of channel 273 (102.5 MHz Class C1) at 40-30-03.0 N, 124-17-10.0 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE
KNHT	RIO DELL	CA	273	C2	0.00	224.00	90.0	-224.0 Existing C2
KCNA	CAVE JUNCTION	OR	274	C	202.08	209.00	14.7	-6.9 73.215 Exhibit A
KSIZ	WEED	CA	272	C1	195.18	177.00	60.2	18.2
KYOE	POINT ARENA	CA	272	B1	189.29	161.00	160.2	28.3
KKRO	RED BLUFF	CA	274	C2	188.52	158.00	97.5	30.5
KSFM	WOODLAND	CA	273	B	305.82	270.00	133.2	35.8

## COMMUNITY OF LICENSE COVERAGE

70dBu community coverage to Rio Dell is demonstrated in Exhibit B from both the reference coordinates and the site coordinates.

## ENVIRONMENTAL CONSIDERATIONS

The proposed KNHT facility will utilize the existing four-element, FCC Type 3 antenna located at 20m AGL and operating at 4.5kW ERP. Based upon the FCC "FM Model for

Windows”<sup>1</sup>, as demonstrated in Exhibit C, the proposed KNHT operation will produce 81.2  $\mu\text{W}/\text{cm}^2$  at 7m from the base of the tower. The RF at 2m AGL from KNHT will, therefore be 40.6% of the Maximum Public Exposure Level (MPE).

There are no other non-excluded RF sources on the KNHT tower.

Based upon the above analysis, it is believed that the impact of the proposed operation should not be a factor as defined under §1.1307(b)(3) of the FCC rules and should be excluded from further environmental review under §1.1306 of the FCC rules and regulations.

#### CERTIFICATION

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direct supervision, and that they are true and correct to the best of his knowledge and belief.



Bertram S. Goldman  
Goldman Engineering Management

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<sup>1</sup> <https://www.fcc.gov/general/fm-model>

EXHIBIT A- 73.215 Contour Protection KNHT(273C1) to/ From KCNA (274C)

KNHT Proposed 73.215 Contour Protection

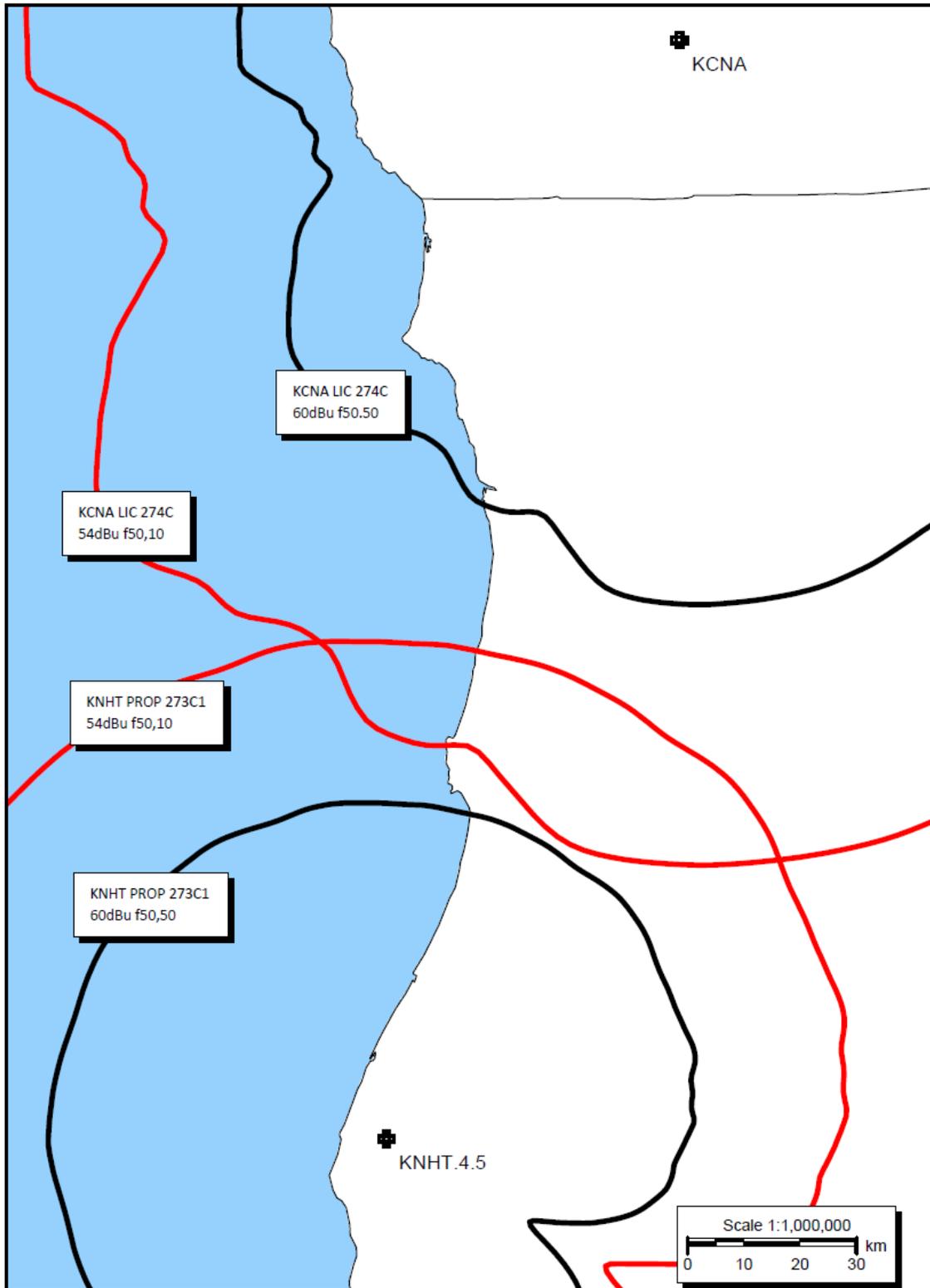
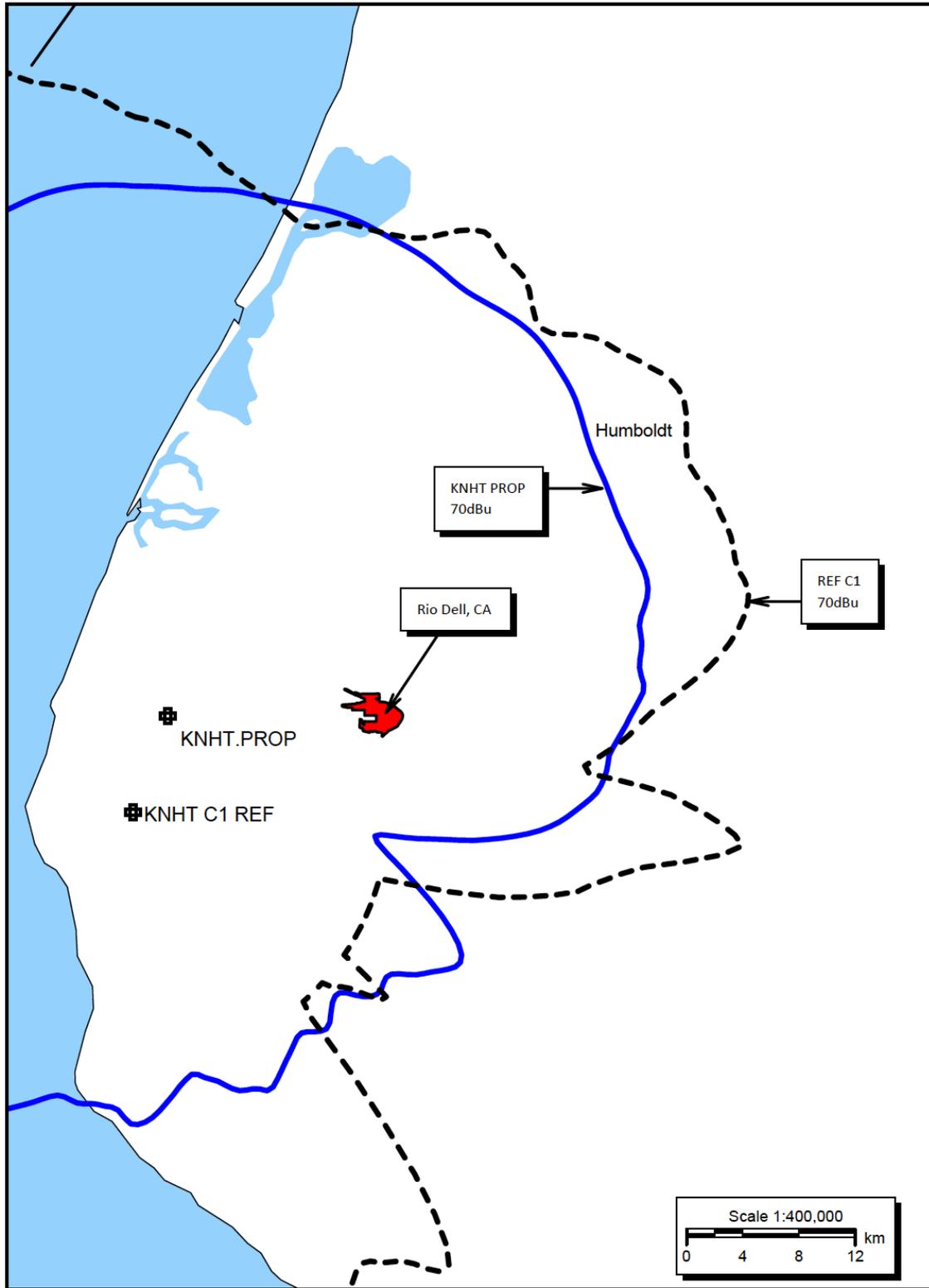
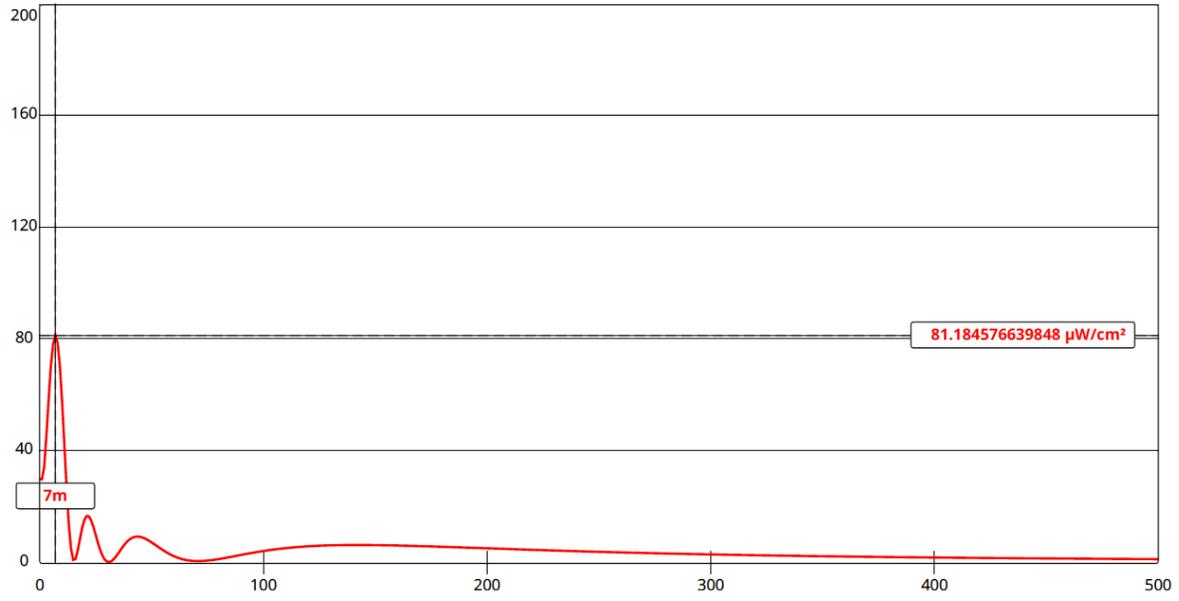


EXHIBIT B- Community Coverage, Rio Dell, CA.

KNHT Community Coverage, PROP Reference Coordinates & Operating Site



# EXHIBIT C



[View Tabular Results +](#)

Channel Selection	Channel 273 (102.5 MHz) ▾		
<a href="#">Antenna Type +</a>	EPA Type 3: Opposed U Dipole ▾		
Height (m)	<input type="text" value="20"/>	Distance (m)	<input type="text" value="500"/>
ERP-H (W)	<input type="text" value="4500"/>	ERP-V (W)	<input type="text" value="4500"/>
Num of Elements	<input type="text" value="4"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	Apply	