

INITIAL REPORT ON
LAND MOBILE INTERFERENCE ANALYSIS
LOW POWER TELEVISION STATION KMMW-LD
STOCKTON, CALIFORNIA
CHANNEL 14 15 KW (MAX-DA) 910.2 M

This report was prepared on behalf of KMMW-LD, Stockton, CA, in regard to its proposed displacement facility on Channel 14. KMMW-LD is licensed for operation on Channel 28 with a maximum directional effective radiated power (ERP) of 15 kW with an antenna height above mean sea level of 910.2 m. KMMW-LD has an application pending for displacement to Channel 14 with similar transmission facilities as now licensed. It is noted that the KMMW-LD transmitter site is located on Bear Mountain approximately 52 km east-northeast of Stockton.

Channel 14 is immediately adjacent to the 460-470 MHz land mobile (LM) band. This band employs frequency division duplex with the upper 5 MHz segment being designated for mobile transmitting/base station receive. This statement provides the results of an interference analysis regarding LM facilities, and the LM base stations in particular, that are authorized for operation in the adjacent LM band. The analysis is based on the FCC's master frequency database.

The LM interference analysis results can be employed to determine the sharp-tuned filter requirements necessary to provide the required protection to LM services in the 460-470 MHz band.

Protection of Land Mobile Facilities

An analysis was conducted of all LM facilities in the 460-470 MHz LM band that could be affected by the proposed Channel 14 facility. All LM facilities within 80 km of the transmitter site and in the band segment from 465-470 MHz were examined. This analysis encompassed over 2,600 LM records. The attached tabulation is

a summary of the interference analysis for those records within 1 km, which encompasses all LM facilities at the Bear Mountain transmission site. If the protection requirements of the Bear Mountain facilities are met, then it is safely assumed that the balance of all facilities within the search distance will meet the protection requirements. The next closest 460-470 MHz LM record from the Bear Mountain site is more than 8 km distant and most records are 10 km or more away.

Since all of the LM records of particular concern are located at the Bear Mountain transmission site, a detailed study was conducted of the Bear Mountain site to determine the likely locations of the LM base station antennas relative to the KMMW-LD proposed transmitting antenna. Fortunately, there was sufficient resolution in a Google Earth image of the Bear Mountain site to evaluate the primary tower structures at the site. An aerial map showing the locations of the tower and the projected locations of the LM base station antennas is attached hereto. This aerial map analysis formed the basis for determining the geometry of the transmission site to do the LM analysis. However, these results are subject to field verification in order to ensure the proper data have been employed in this evaluation.

In order to maximize the protection of the nearby LM facilities at Bear Mountain for the configuration of LM antennas determined by FCC data, it is recommended that a particular transmitting antenna be employed. Specifically, a Micronetixx model SFN-2030-G-8 transmitting antenna is recommended. This antenna employs half-wave spaced slot technology that allows for much higher suppression at the steep downward elevation angles that are relevant to this case for protection of LM facilities. The radiation pattern details for this proposed antenna are attached hereto for reference. In addition it is noted that this study assumes that the proposed transmitting antenna for the Channel 14 station is horizontally-polarized-only.

A sample calculation of the interference analysis with respect to LM facility WQEL631 on 469.7625 MHz is summarized below:

Parameter	Value
Frequency	469.7625 MHz
Ch. 14 Average EIRP (ERPdipole=15 kW)	+73.9 dBm
DTV full service mask filter requirement at frequency [73.622(h)]	47.0 dB
Filter attenuation*	0.0 dB
Transmitting antenna discrimination†	26.0 dB
DTV coupling into LM (12.5 kHz assumed LM bandwidth)‡	16.0 dB
Cross-polarization discrimination§	20.0 dB
Free-space path loss to receive antenna at frequency (40 meters)	58.0 dB
LM antenna gain	11.0 dBi
LM line loss	2.0 dB
Received DTV interference power	-84.1 dBm
Equivalent field strength per Section 73.687(e)(4)(ii)	46.5 dBuV/m
FCC interference criteria per Section 73.687(e)(4)(ii)	17 dBuV/m
Margin to interference per Section 73.687(e)(4)(ii)**	-29.5 dB
Analysis result††	Additional filtering required.

This analysis is based on the 17 dBuV/m interference field strength criteria outlined in Section 73.687(e)(4)(ii) of the FCC Rules. As indicated above, the margin to interference relative to the 17 dBuV/m criteria is -29.5 dB. Therefore, the Channel-14

* No additional filtering above standard FCC mask assumed for this initial study.

† This is an assumed elevation pattern discrimination of 0.05 relative field based on the assumed use of a Micronetixx model SFN-2030-G-8 transmitting antenna.

‡ Most LM facilities in this band will operate with a 12.5 kHz bandwidth or less.

§ The Channel 14 facility is assumed to operate with horizontal-only polarization.

** An additional 10 dB safety margin over this level is recommended for filter design purposes.

†† This result indicates that at least 29.5 dB of additional suppression beyond the required 47.0 dB full service mask limit is necessary at 469.7625 MHz to ensure protection of the WQEL631 base station receiver.

facility would require additional filtering of at least 29.5 dB below the normal FCC full service mask filter to meet the FCC's 17-dBuV/m required field strength protection requirement. See tabulated results for all of the LM facilities within a 1 km search distance. Also attached is graph showing the calculated protection requirements with reference to the normal FCC emission mask requirement for full service DTV stations.

This study also assumes the use of the Micronetixx model SFN-2030-G-8 transmitting antenna previously discussed. In addition to having a much higher suppression in the steep downward elevation angles that are relevant to this case, the antenna is also horizontally polarized.

With respect to the potential for LM receiver desensitization and intermodulation interference, an analysis was prepared considering the closest LM facility to the KMMW-LD transmitter site, which is located approximately 40 m below the transmitting antenna. The desensitization / intermodulation analysis is summarized in a tabulation attached hereto.

Based on the analysis no LM receiver desensitization is anticipated in this case. However, this is based on the FCC engineering database information for the LM facilities. This requires field verification to determine the correct locations of the LM antennas at the Bear Mountain site.

Conclusion

Based on the foregoing, the sharp-tuned filter requirements for protection of LM facilities from the proposed KMMW-LD Channel 14 displacement facility were determined based on initial FCC database information.

It was determined that there is low potential for LM receiver desensitization effects from the KMMW-LD Channel 14 displacement facility.

However, this is premised on field verification of the LM facilities at Bear Mountain and the use of the recommended transmitting antenna for the KMMW-LD Channel 14 facility.



Louis R. du Treil, Jr.

du Treil, Lundin & Rackley, Inc.
3135 Southgate Circle
Sarasota, Florida 34239

November 29, 2018

TV Inquiry

FCC ENGINEERING DATABASE INFORMATION

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



Callsign:	KMMW-LD	Service:	LD	Status:	APP	App. Status:	ACCP	Border Code:		Rec. Type:	C
Channel:	14	Offset:		Zone:	Docket Number:			DTV Type: POSTTRAN			
Fac. ID:	18744	Assoc. ID:		Application File No.: BLANK-0000054670						DT Emission Mask:	T
City:	STOCKTON			State:	CA	Country:	US	CP Expiration Date:			
Party Name: SERESTAR COMMUNICATIONS CORPORATION						Last Change Date: 5/30/2018					

Latitude (NAD 83):	038-07-09.7	Height AGL (m):	75.7	Polarization:	H
Longitude (NAD 83):	120-43-30.9	Overall Height AGL (m):	126.5	Electrical Tilt (°):	2
RCAMSL (m):	910.2	ERP (kW):	15	Mechanical Tilt (°):	
Site Elevation AMSL (m):	834.5	Maximum ERP (kW):		Mechanical Tilt Azimuth (°):	
HAAT (m):		Maximum ERP (dBk):	11.8	Degrees True (°):	
Maximum HAAT (m):		Maximum ERP at any Angle (kW):		Antenna Make:	
				Antenna Model:	

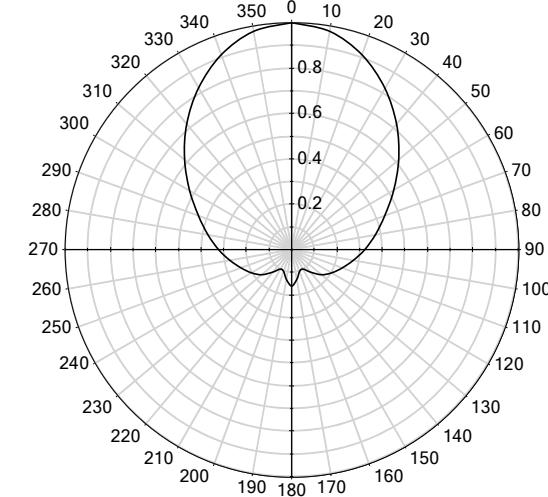
Antenna Type: D **Antenna ID:** 1003744 **Rotation (°):** 226

0°	1.000	90°	0.323	180°	0.161	270°	0.323
10°	0.976	100°	0.276	190°	0.133	280°	0.375
20°	0.912	110°	0.237	200°	0.103	290°	0.438
30°	0.822	120°	0.205	210°	0.099	300°	0.520
40°	0.721	130°	0.172	220°	0.130	310°	0.617
50°	0.617	140°	0.130	230°	0.172	320°	0.721
60°	0.520	150°	0.099	240°	0.205	330°	0.822
70°	0.438	160°	0.103	250°	0.237	340°	0.912
80°	0.375	170°	0.133	260°	0.276	350°	0.976

Standard Pattern:

Antenna Make: PSI

Antenna Model: PSILP8ANR-14

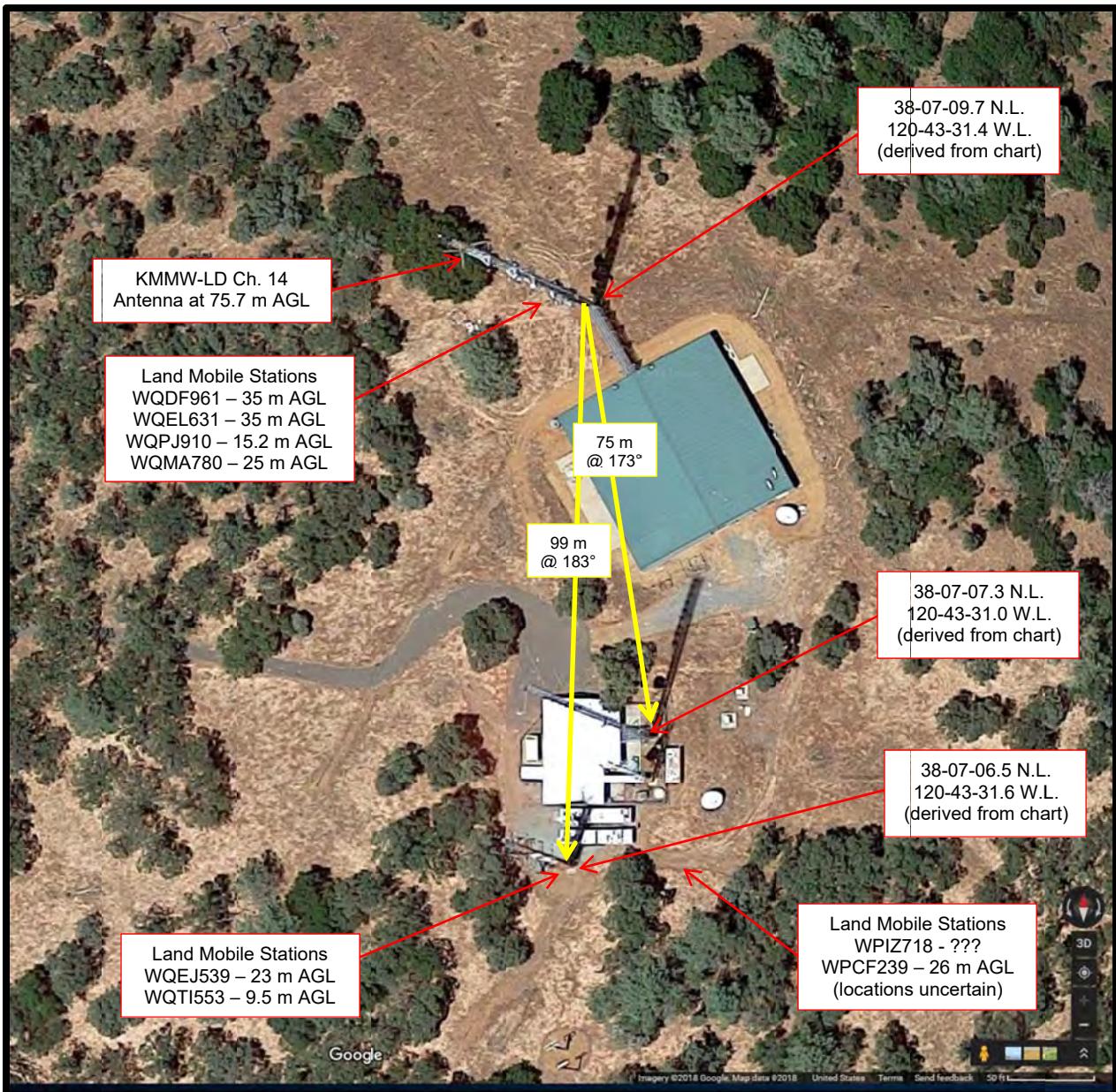


Last Change Date:

Note: Rotation or tilt is not applied to the pattern shown

Type: GTOWER	ASRN: 1050375	FAA Study No.: 2015-AWP-9041-OE	Structure Height (m):	125.0	
Latitude (NAD 27):	038-07-10	Date Received:	10/21/2015	Structure Height (ft):	410.1
Longitude (NAD 27):	120-43-27.1	Date Entered:	10/21/2015	Ground Elevation (m):	834.5
Latitude (NAD 83):	38-07-09.7	Date Issued:	10/21/2015	Ground Elevation (ft):	2737.9
Longitude (NAD 83):	120-43-30.9	Date Constructed:	09/02/1998	Overall Height AGL (m):	126.5
Struct. Address:		Date Dismantled:		Overall Height AGL (ft):	415.0
4660 Riata Way (274586 / BEAR MOUNTAIN T1 CA)				Overall Height AMSL (m):	961.0
Altaville	CA			Overall Height AMSL (ft):	3152.9

Entity Name: American Towers LLC



Estimated locations of land mobile antennas are based on FCC engineering database information. Field verification is necessary.

AERIAL PHOTO OF BEAR MOUNTAIN TRANSMISSION SITE

LOW POWER TELEVISION STATION KMMW-LD

STOCKTON, CALIFORNIA

CHANNEL 14 15 KW (MAX-DA) 910.2 M AMSL

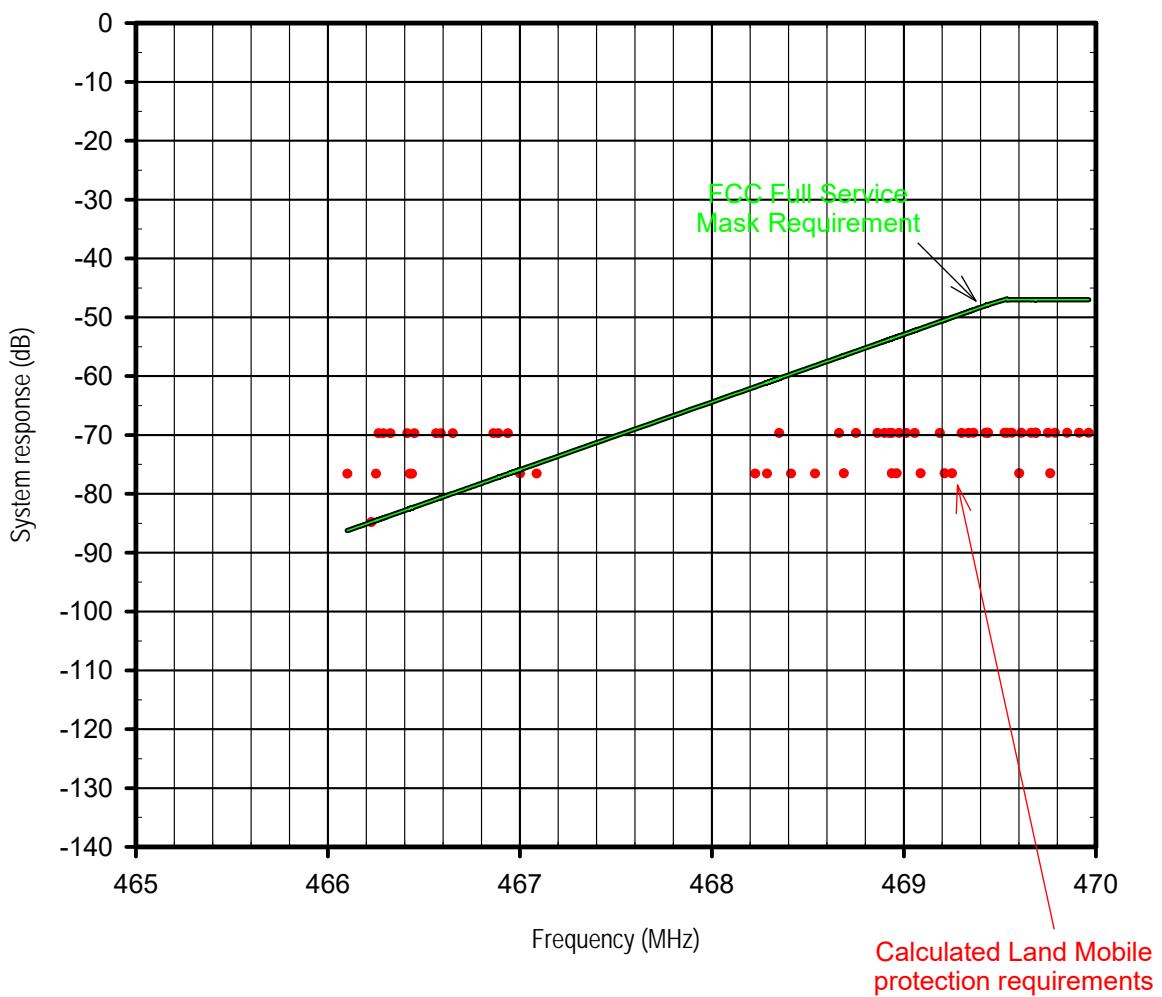
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

TABULATION OF LAND MOBILE LICENSES AND ANALYSIS OF PROTECTION REQUIREMENTS
KMMW-LD, STOCKTON, CALIFORNIA, CHANNEL 14 (MICRONETIXX ANTENNA OPTION)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (K)	Azimuth From Center	Assigned Frequency	Dist_Mi	FCC Mask Requirement	Dist-dB	Loss	IX-dBm-F	Filter	IX-dBm	IX-dBu	Margin
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	469.7625	0.0	47.0	-28.0	-65.0	-84.1	0.0	-84.1	46.5	-29.5
WQMA780	TEN FOUR COMMUNICATIONS	Active	Altaville	CA	CALAVERAS	38	7	9.7	120	43	30.9	0.04	0	469.6	0.0	47.0	-28.0	-65.0	-84.1	0.0	-84.1	46.5	-29.5
WQDF961	Fisher Wireless	Active	SAN ANDREAS	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	469.25	0.0	50.0	-28.0	-65.0	-87.1	0.0	-87.1	43.5	-26.5
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	469.2125	0.0	50.5	-28.0	-65.0	-87.5	0.0	-87.5	43.1	-26.1
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	469.0875	0.0	51.9	-28.0	-65.0	-89.0	0.0	-89.0	41.6	-24.6
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	468.9625	0.0	53.3	-28.0	-65.0	-90.4	0.0	-90.4	40.2	-23.2
WQPJ910	PACIFIC GAS AND ELECTRIC COMPANY	Active	San Andreas	CA	CALAVERAS	38	7	9.7	120	43	30.9	0.04	0	468.9375	0.0	53.6	-28.0	-65.0	-90.7	0.0	-90.7	39.9	-22.9
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	468.6875	0.0	56.5	-28.0	-65.0	-93.6	0.0	-93.6	37.0	-20.0
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	468.5375	0.0	58.2	-28.0	-65.0	-95.3	0.0	-95.3	35.3	-18.3
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	468.4125	0.0	59.7	-28.0	-65.0	-96.7	0.0	-96.7	33.9	-16.9
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	468.2875	0.0	61.1	-28.0	-65.0	-98.1	0.0	-98.1	32.5	-15.5
WQMA780	TEN FOUR COMMUNICATIONS	Active	Altaville	CA	CALAVERAS	38	7	9.7	120	43	30.9	0.04	0	468.225	0.0	61.8	-28.0	-65.0	-98.9	0.0	-98.9	31.7	-14.7
WQMA780	TEN FOUR COMMUNICATIONS	Active	SAN ANDREAS	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	467.0875	0.0	74.9	-28.0	-65.0	-111.9	0.0	-111.9	18.7	-1.7
WQMA780	TEN FOUR COMMUNICATIONS	Active	Altaville	CA	CALAVERAS	38	7	9.7	120	43	30.9	0.04	0	467.0	0.0	75.9	-28.0	-65.0	-112.9	0.0	-112.9	17.7	-0.7
WQEL631	Fisher Wireless Services, Inc.	Active	San Andreas	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	466.4375	0.0	82.4	-28.0	-65.0	-119.4	0.0	-119.4	11.2	5.8
WQMA780	TEN FOUR COMMUNICATIONS	Active	Altaville	CA	CALAVERAS	38	7	9.7	120	43	30.9	0.04	0	466.425	0.0	82.5	-28.0	-65.0	-119.5	0.0	-119.5	11.1	5.9
WQDF961	Fisher Wireless	Active	SAN ANDREAS	CA	CALAVERAS	38	7	10	120	43	31	0.04	0	466.1	0.0	86.2	-28.0	-65.0	-123.3	0.0	-123.3	7.3	9.7
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.9625	0.1	47.0	-20.1	-64.0	-91.0	0.0	-91.0	39.6	-22.6
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.9125	0.1	47.0	-20.1	-64.0	-91.0	0.0	-91.0	39.6	-22.6
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	469.85	0.1	47.0	-20.1	-64.0	-91.0	0.0	-91.0	39.6	-22.6
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.7875	0.1	47.0	-20.1	-64.0	-91.0	0.0	-91.0	39.6	-22.6
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	469.75	0.1	47.0	-20.1	-64.0	-91.0	0.0	-91.0	39.6	-22.6
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.6875	0.1	47.0	-20.1	-64.0	-90.9	0.0	-90.9	39.7	-22.7
WQEJ539	Telepath Corporation	Active	San Andreas	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	469.6875	0.1	47.0	-20.1	-64.0	-90.9	0.0	-90.9	39.7	-22.7
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.6625	0.1	47.0	-20.1	-64.0	-90.9	0.0	-90.9	39.7	-22.7
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.6125	0.1	47.0	-20.1	-64.0	-90.9	0.0	-90.9	39.7	-22.7
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.5625	0.1	47.0	-20.1	-64.0	-90.9	0.0	-90.9	39.7	-22.7
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.5375	0.1	47.0	-20.1	-64.0	-90.9	0.0	-90.9	39.7	-22.7
WQEJ539	Telepath Corporation	Active	San Andreas	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	469.525	0.1	47.0	-20.1	-64.0	-90.9	0.0	-90.9	39.7	-22.7
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.4375	0.1	47.9	-20.1	-64.0	-91.8	0.0	-91.8	38.8	-21.8
WQEJ539	Telepath Corporation	Active	San Andreas	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	469.4375	0.1	47.9	-20.1	-64.0	-91.8	0.0	-91.8	38.8	-21.8
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	469.425	0.1	48.0	-20.1	-64.0	-92.0	0.0	-92.0	38.6	-21.6
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.3625	0.1	48.7	-20.1	-64.0	-92.7	0.0	-92.7	37.9	-20.9
WQEJ539	Telepath Corporation	Active	San Andreas	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	469.3375	0.1	49.0	-20.1	-64.0	-93.0	0.0	-93.0	37.6	-20.6
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	469.3	0.1	49.4	-20.1	-64.0	-93.4	0.0	-93.4	37.2	-20.2
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.1875	0.1	50.7	-20.1	-64.0	-94.7	0.0	-94.7	35.9	-18.9
WTI553	TEN-FOUR COMMUNICATIONS	Active	SAN ANDREAS	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	469.05625	0.1	52.3	-20.1	-64.0	-96.2	0.0	-96.2	34.4	-17.4
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	469.0125	0.1	52.8	-20.1	-64.0	-96.7	0.0	-96.7	33.9	-16.9
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	468.975	0.1	53.2	-20.1	-64.0	-97.1	0.0	-97.1	33.5	-16.5
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	468.9375	0.1	53.6	-20.1	-64.0	-97.6	0.0	-97.6	33.0	-16.0
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	468.925	0.1	53.8	-20.1	-64.0	-97.7	0.0	-97.7	32.9	-15.9
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	468.9	0.1	54.1	-20.1	-64.0	-98.0	0.0	-98.0	32.6	-15.6
WQEJ539	Telepath Corporation	Active	San Andreas	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	468.8625	0.1	54.5	-20.1	-64.0	-98.4	0.0	-98.4	32.2	-15.2
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	468.75	0.1	55.8	-20.1	-64.0	-99.7	0.0	-99.7	30.9	-13.9
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	468.6625	0.1	56.8	-20.1	-64.0	-100.7	0.0	-100.7	29.9	-12.9
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	468.35	0.1	60.4	-20.1	-64.0	-104.3	0.0	-104.3	26.3	-9.3
WPIZ718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	466.9375	0.1	76.6	-20.						

TABULATION OF LAND MOBILE LICENSES AND ANALYSIS OF PROTECTION REQUIREMENTS
KMMW-LD, STOCKTON, CALIFORNIA, CHANNEL 14 (MICRONETIXX ANTENNA OPTION)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (K)	Azimuth From Center	Assigned Frequency	Dist_Mi	FCC Mask Requirement	Dist-dB	Loss	IX-dBm-F	Filter	IX-dBm	IX-dBu	Margin
WP1Z718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	466.5875	0.1	80.6	-20.1	-64.0	-124.5	0.0	-124.5	6.1	10.9
WP1Z718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	466.5625	0.1	80.9	-20.1	-64.0	-124.8	0.0	-124.8	5.8	11.2
WPCF239	Fisher Wireless Services, Inc.	Active	SAN ANDREAS	CA	CALAVERAS	38	7	7.7	120	43	24.8	0.099	115.2	466.45	0.1	82.2	-20.1	-64.0	-126.1	0.0	-126.1	4.5	12.5
WP1Z718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	466.4125	0.1	82.7	-20.1	-64.0	-126.5	0.0	-126.5	4.1	12.9
WQEJ539	Telepath Corporation	Active	San Andreas	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	466.325	0.1	83.7	-20.1	-64.0	-127.5	0.0	-127.5	3.1	13.9
WP1Z718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	466.2875	0.1	84.1	-20.1	-64.0	-128.0	0.0	-128.0	2.6	14.4
WP1Z718	La Rue Jr, Knox	Active		CA	CALAVERAS	38	7	6.7	120	43	26.8	0.099	135	466.2625	0.1	84.4	-20.1	-64.0	-128.3	0.0	-128.3	2.3	14.7
WQEJ539	Telepath Corporation	Active	San Andreas	CA	CALAVERAS	38	7	6.5	120	43	31.5	0.099	186.4	466.225	0.1	84.8	-20.1	-64.0	-128.7	0.0	-128.7	1.9	15.1



System response requirements for KMMW-LD, Stockton, CA, Channel 14

Based on proposed Channel 14 facility:

Channel 14, 15 kW (horizontal only), 75.7 m AGL, 910.2 m AMSL, using a Micronetixx model SFN-2030-G-8 transmitting antenna. An additional 10 dB design margin is recommended. Analysis subject to field verification of land mobile based station antenna locations.

PREDICTED SYSTEM RESPONSE REQUIREMENTS FOR PROTECTION OF 460-470 MHZ LAND MOBILE (LIMITED TO 1000 METERS RADIUS)

LPTV STATION KMMW-LD
STOCKTON, CALIFORNIA
CHANNEL 14 15 kW (MAX-DA) 910.2 m AMSL

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



Antenna System Summary

Customer: KMMW-LD-14

Description: Bear Mtn Opt1

Antenna Model: SFN-2030-G-8

Channel: 14

Azimuth Pattern: G: Skull-Reduced Rear

Rotation: 226°

Number of Bays: 8

Input Power (kW): 7.50 std/ 12.50 custom

Elevation Pattern: 8baySFN_2.0BT

Beamtilt: 0.00°

Transmission System Information:

Line Type: Foam Core Flexible 1-5/8" AVA7-50

Line Length (ft): 325

Loss (dB): -1.47

Line Efficiency (%): 71.36

Loss (dB): -0.46

Mask Filter Efficiency (%): 90

Total System Loss (dB): -1.92

Total System Efficiency (%): 64.22

Transmitter Power Output (kW): 0.730

Transmitter Power Output (dBk): -1.37

Antenna Input Power (kW): 0.47

Antenna Input Power (dBk): -3.28

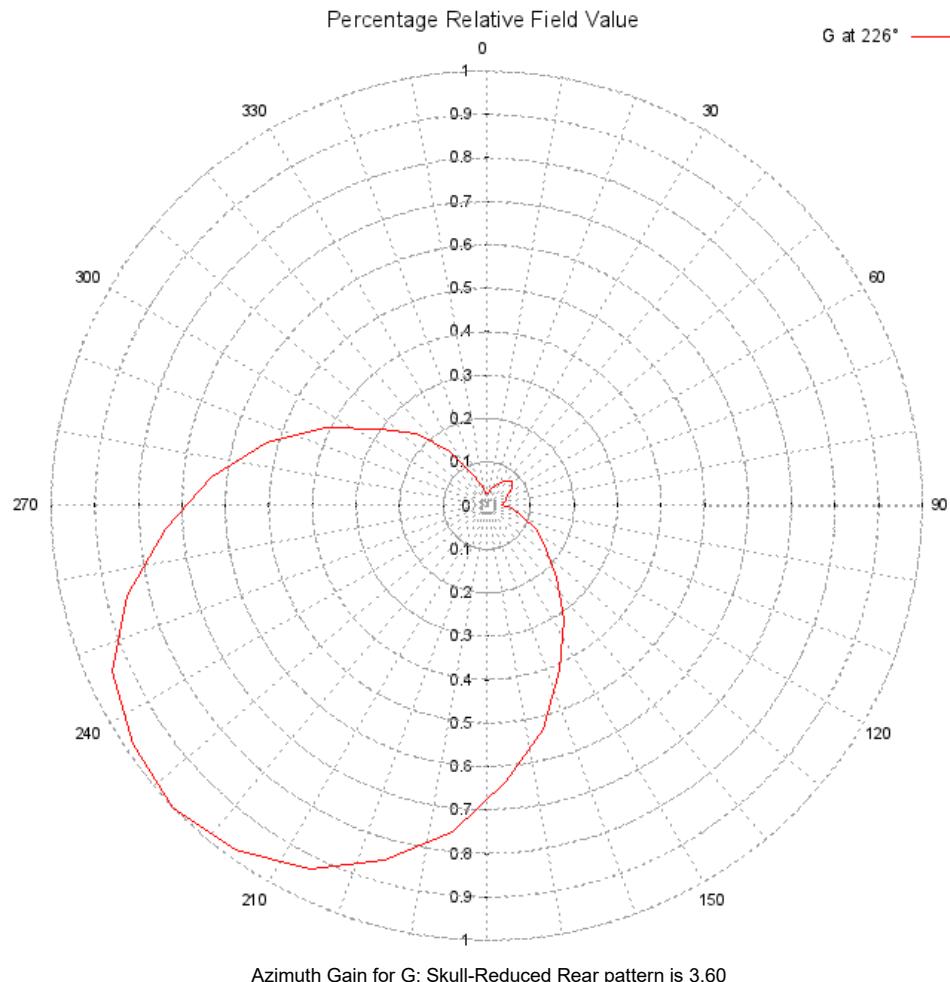
Antenna Gain: 31.86

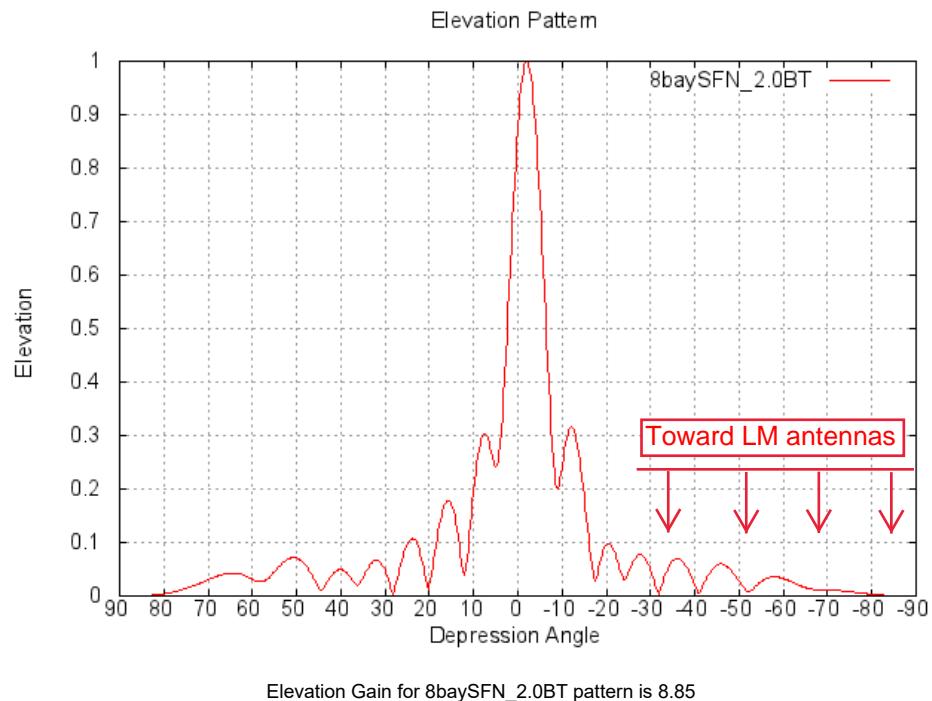
Antenna Gain (dB): 15.03

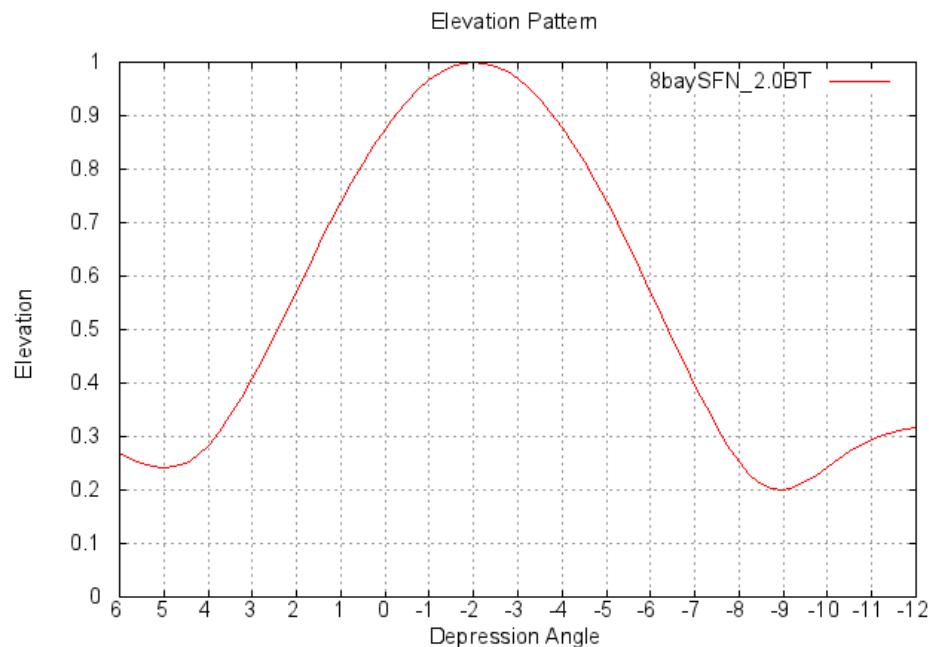
Station ERP (kW): 14.94

Station ERP (dBk): 11.74

Prepared by: LOUIS DUTREUIL; November 28th, 2018

Micronetixx Azimuth Pattern G: Skull-Reduced Rear

Micronetixx Elevation Pattern 8baySFN_2.0BT

Micronetixx Elevation Pattern 8baySFN_2.0BT from 6° above to 12° below horizon

Tabulated Azimuth Data for G: Skull-Reduced Rear**G: Skull-Reduced Rear rotated 226 degrees****Angle Field Angle Field**

0	0.030	180	0.683
10	0.034	190	0.793
20	0.044	200	0.882
30	0.058	210	0.950
40	0.074	220	0.988
50	0.076	230	0.992
60	0.062	240	0.964
70	0.048	250	0.904
80	0.041	260	0.806
90	0.045	270	0.698
100	0.068	280	0.591
110	0.100	290	0.479
120	0.146	300	0.366
130	0.194	310	0.272
140	0.264	320	0.198
150	0.355	330	0.122
160	0.461	340	0.068
170	0.572	350	0.042

Minima

Angle Field
356
6
86

Maxima

Angle Field
226

Tabulated Elevation Data for Micronetixx Pattern 8baySFN_2.0BT

Angle Field											
10.00	0.195	-0.25	0.904	-10.50	0.271	-30.50	0.035	-50.50	0.022	-70.50	0.011
9.75	0.214	-0.50	0.928	-11.00	0.294	-31.00	0.021	-51.00	0.017	-71.00	0.011
9.50	0.231	-0.75	0.950	-11.50	0.310	-31.50	0.008	-51.50	0.012	-71.50	0.011
9.25	0.247	-1.00	0.967	-12.00	0.316	-32.00	0.007	-52.00	0.008	-72.00	0.010
9.00	0.262	-1.25	0.981	-12.50	0.313	-32.50	0.020	-52.50	0.009	-72.50	0.010
8.75	0.274	-1.50	0.992	-13.00	0.300	-33.00	0.032	-53.00	0.012	-73.00	0.010
8.50	0.284	-1.75	0.998	-13.50	0.280	-33.50	0.043	-53.50	0.016	-73.50	0.009
8.25	0.293	-2.00	1.000	-14.00	0.253	-34.00	0.053	-54.00	0.020	-74.00	0.009
8.00	0.298	-2.25	0.998	-14.50	0.221	-34.50	0.060	-54.50	0.024	-74.50	0.009
7.75	0.302	-2.50	0.992	-15.00	0.185	-35.00	0.066	-55.00	0.027	-75.00	0.008
7.50	0.303	-2.75	0.983	-15.50	0.147	-35.50	0.069	-55.50	0.030	-75.50	0.008
7.25	0.302	-3.00	0.969	-16.00	0.109	-36.00	0.070	-56.00	0.032	-76.00	0.007
7.00	0.299	-3.25	0.952	-16.50	0.073	-36.50	0.070	-56.50	0.034	-76.50	0.007
6.75	0.294	-3.50	0.931	-17.00	0.043	-37.00	0.067	-57.00	0.035	-77.00	0.006
6.50	0.286	-3.75	0.906	-17.50	0.029	-37.50	0.062	-57.50	0.036	-77.50	0.005
6.25	0.278	-4.00	0.878	-18.00	0.042	-38.00	0.056	-58.00	0.036	-78.00	0.005
6.00	0.269	-4.25	0.848	-18.50	0.061	-38.50	0.048	-58.50	0.036	-78.50	0.004
5.75	0.260	-4.50	0.814	-19.00	0.078	-39.00	0.039	-59.00	0.035	-79.00	0.004
5.50	0.251	-4.75	0.778	-19.50	0.090	-39.50	0.029	-59.50	0.034	-79.50	0.004
5.25	0.245	-5.00	0.739	-20.00	0.096	-40.00	0.019	-60.00	0.033	-80.00	0.003
5.00	0.242	-5.25	0.699	-20.50	0.098	-40.50	0.010	-60.50	0.031	-80.50	0.003
4.75	0.243	-5.50	0.657	-21.00	0.095	-41.00	0.006	-61.00	0.029	-81.00	0.002
4.50	0.251	-5.75	0.614	-21.50	0.087	-41.50	0.013	-61.50	0.028	-81.50	0.002
4.25	0.264	-6.00	0.570	-22.00	0.077	-42.00	0.023	-62.00	0.026	-82.00	0.002
4.00	0.283	-6.25	0.526	-22.50	0.064	-42.50	0.031	-62.50	0.024	-82.50	0.001
3.75	0.308	-6.50	0.481	-23.00	0.050	-43.00	0.039	-63.00	0.022	-83.00	0.001
3.50	0.338	-6.75	0.438	-23.50	0.038	-43.50	0.045	-63.50	0.020	-83.50	0.001
3.25	0.371	-7.00	0.395	-24.00	0.032	-44.00	0.051	-64.00	0.018	-84.00	0.001
3.00	0.408	-7.25	0.355	-24.50	0.034	-44.50	0.055	-64.50	0.017	-84.50	0.001
2.75	0.447	-7.50	0.317	-25.00	0.043	-45.00	0.058	-65.00	0.016	-85.00	0.000
2.50	0.488	-7.75	0.282	-25.50	0.053	-45.50	0.059	-65.50	0.014	-85.50	0.000
2.25	0.530	-8.00	0.253	-26.00	0.063	-46.00	0.060	-66.00	0.013	-86.00	0.000
2.00	0.573	-8.25	0.229	-26.50	0.070	-46.50	0.059	-66.50	0.013	-86.50	0.000
1.75	0.615	-8.50	0.212	-27.00	0.075	-47.00	0.057	-67.00	0.012	-87.00	0.000
1.50	0.657	-8.75	0.203	-27.50	0.078	-47.50	0.054	-67.50	0.012	-87.50	0.000
1.25	0.698	-9.00	0.201	-28.00	0.077	-48.00	0.050	-68.00	0.012	-88.00	0.000
1.00	0.738	-9.25	0.206	-28.50	0.073	-48.50	0.045	-68.50	0.011	-88.50	0.000
0.75	0.776	-9.50	0.216	-29.00	0.066	-49.00	0.040	-69.00	0.011	-89.00	0.000
0.50	0.812	-9.75	0.229	-29.50	0.058	-49.50	0.034	-69.50	0.011	-89.50	0.000
0.25	0.845	-10.00	0.243	-30.00	0.047	-50.00	0.028	-70.00	0.011	-90.00	0.000
0.00	0.876										

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: FISHER WIRELESS SERVICES, INC.

ATTN: DANA B. FISHER
 FISHER WIRELESS SERVICES, INC.
 14530 S. COMMERCIAL ST.
 BLYTHE, CA 92225

FCC Registration Number (FRN): 0003944527

Call Sign WPCF239	File Number 0005694073
Radio Service YG - Industrial/Business Pool, Trunked	
Regulatory Status PMRS	
Frequency Coordination Number	

Grant Date 03-16-2013	Effective Date 03-16-2013	Expiration Date 05-11-2023	Print Date 03-16-2013
--------------------------	------------------------------	-------------------------------	--------------------------

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation
Loc. 1 Address: BEAR MOUNTAIN

City: SAN ANDREAS **County:** CALAVERAS **State:** CA
Lat (NAD83): 38-07-07.7 N **Long (NAD83):** 120-43-24.8 W **ASR No.:** N/A **Ground Elev:** 835.0

Loc. 2 Area of operation

Operating within a 113.0 km radius around fixed location 1

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000461.45000000	FB6	1		11K2F3E 7K60FXE	110,000	600,000	26.0		\$503.0
1	1	000463.90000000	FB6	1		11K2F3E 7K60FXE	110,000	600,000	26.0		503.0
1	1	000463.92500000	FB6	1		11K2F3E 7K60FXE	110,000	600,000	26.0		503.0
1	1	000463.97500000	FB6	1		11K2F3E 7K60FXE	110,000	600,000	26.0		503.0

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WPCF239

File Number: 0005694073

Print Date: 03-16-2013

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000463.35000000		FB6	1		11K2F3E 7K60FXE	110.000	80.000	26.0	503.0	11-29-2002
1	1	000463.75000000		FB6	1		11K2F3E 7K60FXE	110.000	80.000	26.0	503.0	11-29-2002
1	1	000464.30000000		FB6	1		11K2F3E 7K60FXE	110.000	80.000	26.0	503.0	11-29-2002
1	1	000464.42500000		FB6	1		11K2F3E 7K60FXE	110.000	80.000	26.0	503.0	11-29-2002
1	1	000464.75000000		FB6	1		11K2F3E 7K60FXE	110.000	80.000	26.0	503.0	11-29-2002
1	1	000464.85000000		FB6	1		11K2F3E 7K60FXE	110.000	80.000	26.0	503.0	11-29-2002
2	1	000461.45000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000463.90000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000463.92500000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000463.97500000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000466.45000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000468.90000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000468.92500000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000468.97500000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			
2	1	000463.35000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WPCF239

File Number: 0005694073

Print Date: 03-16-2013

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
2	1	000463.75000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000		s	11-29-2002
2	1	000464.30000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000464.42500000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000464.75000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000464.85000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000468.35000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000468.75000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000469.30000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000469.42500000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000469.75000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002
2	1	000469.85000000		MO6	100		11K2F3E 7K60FXE	35.000	35.000			11-29-2002

Control Points

Control Pt. No. 1

Address: 2771 E FRENCH CAMP RD

City: MANTECA **County:** SAN JOAQUIN **State:** CA **Telephone Number:** (209)982-1993

Associated Call Signs

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WPCF239

File Number: 0005694073

Print Date: 03-16-2013

Waivers/Conditions:

NONE

Reference Copy

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: LA RUE JR, KNOX

LA RUE JR, KNOX
PO BOX 691512
STOCKTON, CA 95269-1512

Call Sign WPIZ718	File Number
Radio Service IK - Industrial/Business Pool - Commercial, Conventional	
Regulatory Status CMRS	
Frequency Coordination Number	

FCC Registration Number (FRN): 0005454293

Grant Date 11-23-2010	Effective Date 11-23-2010	Expiration Date 12-11-2020	Print Date 03-24-2011

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

Loc. 1 Area of operation

Operating within a 80.0 km radius around 38-07-06.7 N, 120-43-26.8 W,
CALAVERAS county, CA

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000461.26250000		MO	500		11K2F3E	2.000				s
1	1	000461.28750000		MO	500		11K2F3E	2.000				
1	1	000461.41250000		MO	500		11K2F3E	2.000				
1	1	000461.56250000		MO	500		11K2F3E	2.000				
1	1	000461.58750000		MO	500		11K2F3E	2.000				
1	1	000461.86250000		MO	500		11K2F3E	2.000				

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: LA RUE JR, KNOX

Call Sign: WPIZ718

File Number:

Print Date: 03-24-2011

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000461.88750000		MO	500		11K2F3E	2.000		s		
1	1	000461.93750000		MO	500		11K2F3E	2.000				
1	1	000463.66250000		MO	500		11K2F3E	2.000				
1	1	000463.93750000		MO	500		11K2F3E	2.000				
1	1	000464.01250000		MO	500		11K2F3E	2.000				
1	1	000464.18750000		MO	500		11K2F3E	2.000				
1	1	000464.36250000		MO	500		11K2F3E	2.000				
1	1	000464.43750000		MO	500		11K2F3E	2.000				
1	1	000464.53750000		MO	500		11K2F3E	2.000				
1	1	000464.56250000		MO	500		11K2F3E	2.000				
1	1	000464.61250000		MO	500		11K2F3E	2.000				
1	1	000464.66250000		MO	500		11K2F3E	2.000				
1	1	000464.68750000		MO	500		11K2F3E	2.000				
1	1	000464.78750000		MO	500		11K2F3E	2.000				
1	1	000464.91250000		MO	500		11K2F3E	2.000				
1	1	000464.96250000		MO	500		11K2F3E	2.000				
1	1	000466.26250000		MO	500		11K2F3E	2.000				
1	1	000466.28750000		MO	500		11K2F3E	2.000				
1	1	000466.41250000		MO	500		11K2F3E	2.000				
1	1	000466.56250000		MO	500		11K2F3E	2.000				

Licensee Name: LA RUE JR, KNOX

Call Sign: WPIZ718

File Number:

Print Date: 03-24-2011

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000466.58750000		MO	500		11K2F3E	2.000		s		
1	1	000466.86250000		MO	500		11K2F3E	2.000				
1	1	000466.88750000		MO	500		11K2F3E	2.000				
1	1	000466.93750000		MO	500		11K2F3E	2.000				
1	1	000468.66250000		MO	500		11K2F3E	2.000				
1	1	000468.93750000		MO	500		11K2F3E	2.000				
1	1	000469.01250000		MO	500		11K2F3E	2.000				
1	1	000469.18750000		MO	500		11K2F3E	2.000				
1	1	000469.36250000		MO	500		11K2F3E	2.000				
1	1	000469.43750000		MO	500		11K2F3E	2.000				
1	1	000469.53750000		MO	500		11K2F3E	2.000				
1	1	000469.56250000		MO	500		11K2F3E	2.000				
1	1	000469.61250000		MO	500		11K2F3E	2.000				
1	1	000469.66250000		MO	500		11K2F3E	2.000				
1	1	000469.68750000		MO	500		11K2F3E	2.000				
1	1	000469.78750000		MO	500		11K2F3E	2.000				
1	1	000469.91250000		MO	500		11K2F3E	2.000				
1	1	000469.96250000		MO	500		11K2F3E	2.000				

Licensee Name: LA RUE JR, KNOX

Call Sign: WPIZ718

File Number:

Print Date: 03-24-2011

Control Points

Control Pt. No. 1

Address: 6771 NORTH PALM

City: FRESNO **County:** **State:** CA **Telephone Number:** (559)431-1414

Associated Call Signs

Waivers/Conditions:

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: FISHER WIRELESS

ATTN: BART FISHER
FISHER WIRELESS
14530 S. COMMERCIAL ST.
BLYTHE, CA 92225

FCC Registration Number (FRN): 0003944527

Call Sign WQDF961	File Number 0006811487
Radio Service YG - Industrial/Business Pool, Trunked	
Regulatory Status PMRS	
Frequency Coordination Number	

Grant Date 05-22-2015	Effective Date 05-22-2015	Expiration Date 08-16-2025	Print Date 05-22-2015

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

Loc. 1 **Address:** BEAR MOUNTAIN, APPX 9 KM SSW
City: SAN ANDREAS **County:** CALAVERAS **State:** CA
Lat (NAD83): 38-07-10.0 N **Long (NAD83):** 120-43-31.0 W **ASR No.:** 1050375 **Ground Elev:** 834.5

Loc. 2 **Area of operation**
 Operating within a 80.0 km radius around fixed location 1

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000451.92500000	FB6	1		11K2F9W 7K60FXE	100.000	75.000	35.0	\$514.9	08-16-2006
1	1	000461.10000000	FB6	1		11K2F9W 7K60FXE	100.000	75.000	35.0	514.9	08-16-2006
1	1	000464.25000000	FB6	1		11K2F9W 7K60FXE	100.000	150.000	35.0	514.9	08-16-2006
2	1	000456.92500000	MO6	100		11K2F9W 7K60FXE	35.000	35.000			08-16-2006

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: FISHER WIRELESS

Call Sign: WQDF961

File Number: 0006811487

Print Date: 05-22-2015

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
2	1	000466.10000000		MO6	100		11K2F9W 7K60FXE	35.000	35.000	s		08-16-2006
2	1	000469.25000000		MO6	100		11K2F9W 7K60FXE	35.000	35.000			08-16-2006

Control Points

Control Pt. No. 1

Address: 14530 S. Commercial St.

City: Blythe **County:** RIVERSIDE **State:** CA **Telephone Number:** (760)922-4150

Associated Call Signs

Waivers/Conditions:

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: TELEPATH CORPORATION

ATTN: JOJO TRAN
 TELEPATH CORPORATION
 48810 KATO ROAD, STE 300 E
 FREMONT, CA 94538

FCC Registration Number (FRN): 0022021737

Call Sign WQEJ539	File Number
Radio Service YG - Industrial/Business Pool, Trunked	
Regulatory Status PMRS	
Frequency Coordination Number	

Grant Date 11-19-2015	Effective Date 08-18-2017	Expiration Date 02-11-2026	Print Date

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

Loc. 1 **Address:** End of Riata Way
City: San Andreas **County:** CALAVERAS **State:** CA
Lat (NAD83): 38-07-06.5 N **Long (NAD83):** 120-43-31.5 W **ASR No.:** N/A **Ground Elev:** 775.7

Loc. 2 **Area of operation**
 Operating within a 32.0 km radius around fixed location 1

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp	Ant. meters	AAT meter	Construct Deadline Date
1	1	000452.86250000	FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	\$465.0		02-11-2007

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: TELEPATH CORPORATION

Call Sign: WQEJ539

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000452.16250000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	465.0	02-11-2007
1	1	000452.31250000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	465.0	02-11-2007
1	1	000452.66250000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	465.0	02-11-2007
1	1	000464.43750000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	36.000	23.0	465.0	06-12-2010
1	1	000464.68750000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	36.000	23.0	465.0	06-12-2010
1	1	000461.32500000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	465.0	12-04-2015

Licensee Name: TELEPATH CORPORATION

Call Sign: WQEJ539

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000461.65000000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	465.0	12-04-2015
1	1	000463.86250000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	465.0	12-04-2015
1	1	000464.33750000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	20.000	20.000	23.0	465.0	12-04-2015
1	1	000461.22500000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	36.000	23.0	465.0	08-18-2018
1	1	000464.52500000		FB6	1		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	36.000	23.0	465.0	08-18-2018
2	1	000457.66250000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	6.000	6.000			02-11-2007

Licensee Name: TELEPATH CORPORATION

Call Sign: WQEJ539

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
2	1	000457.86250000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	6.000	6.000		s	02-11-2007
2	1	000457.16250000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	6.000	6.000			02-11-2007
2	1	000457.31250000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	6.000	6.000			02-11-2007
2	1	000464.43750000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			06-12-2010
2	1	000464.68750000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			06-12-2010
2	1	000469.43750000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			06-12-2010

Licensee Name: TELEPATH CORPORATION

Call Sign: WQEJ539

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
2	1	000469.68750000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000	s		06-12-2010
2	1	000466.32500000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			12-04-2015
2	1	000466.65000000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			12-04-2015
2	1	000468.86250000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			12-04-2015
2	1	000469.33750000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			12-04-2015
2	1	000461.22500000		MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			08-18-2018

Licensee Name: TELEPATH CORPORATION

Call Sign: WQEJ539

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies	Sta.	No.	No.	Emission	Output	ERP	Ant.	Ant.	Construct
No.	No.	(MHz)	Cls.	Units	Pagers	Designator	Power (watts)	(watts)	Ht./Tp meters	AAT meter	Deadline Date
2	1	000464.52500000	MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000	s		08-18-2018
2	1	000466.22500000	MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			08-18-2018
2	1	000469.52500000	MO6	500		11K2F1D 11K2F2E 11K2F3E 4K00F1E 7K60FXD 7K60FXE	50.000	50.000			08-18-2018

Control Points

Control Pt. No. 1

Address: 2298 MARYANN DRIVE

City: TURLOCK **County:** STANISLAUS **State:** CA **Telephone Number:** (209)669-1234

Associated Call Signs

Waivers/Conditions:

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: FISHER WIRELESS SERVICES, INC.

ATTN: DANA BART FISHER
 FISHER WIRELESS SERVICES, INC.
 14530 S. COMMERCIAL ST.
 BLYTHE, CA 92225

FCC Registration Number (FRN): 0003944527

Call Sign WQEL631	File Number 0007056845
Radio Service YG - Industrial/Business Pool, Trunked	
Regulatory Status PMRS	
Frequency Coordination Number	

Grant Date 12-09-2015	Effective Date 12-09-2015	Expiration Date 02-28-2026	Print Date 12-09-2015

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

- Loc. 1** **Address:** Pine Hill
City: Rescue **County:** EL DORADO **State:** CA
Lat (NAD83): 38-43-10.8 N **Long (NAD83):** 120-59-25.9 W **ASR No.:** 1218223 **Ground Elev:** 618.1
- Loc. 2** **Address:** Mount Vaca
City: Vacaville **County:** SOLANO **State:** CA
Lat (NAD83): 38-23-43.0 N **Long (NAD83):** 122-05-56.0 W **ASR No.:** **Ground Elev:** 817.0
- Loc. 3** **Address:** Upper Bear Mountain
City: San Andreas **County:** CALAVERAS **State:** CA
Lat (NAD83): 38-07-10.0 N **Long (NAD83):** 120-43-31.0 W **ASR No.:** 1050375 **Ground Elev:** 834.5
- Loc. 4** **Address:** Mount Oso
City: Westley **County:** STANISLAUS **State:** CA
Lat (NAD83): 37-30-31.0 N **Long (NAD83):** 121-22-30.0 W **ASR No.:** 1053800 **Ground Elev:** 1022.6
- Loc. 5** **Area of operation**
 Operating within a 50.0 km radius around fixed location 1
- Loc. 6** **Area of operation**
 Operating within a 50.0 km radius around fixed location 2
- Loc. 7** **Area of operation**
 Operating within a 50.0 km radius around fixed location 3
- Loc. 8** **Area of operation**
 Operating within a 50.0 km radius around fixed location 4

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Fixed Location Address or Mobile Area of Operation

Loc. 9 Address: 400 BROADWAY

City: SACRAMENTO County: SACRAMENTO State: CA

Lat (NAD83): 38-33-55.0 N Long (NAD83): 121-30-32.0 W ASR No.: 1063864 Ground Elev: 4.6

Loc. **Area of operation**

10 Operating within a 50.0 km radius around fixed location 9

Loc. **Area of operation**

11 Operating within a 80.0 km radius around fixed location 1

Antennas

Loc	Ant	Frequencies	Sta.	No.	No.	Emission	Output	ERP	Ant.	Ant.	Construct
No.	No.	(MHz)	Cls.	Units	Pagers	Designator	Power (watts)	(watts)	Ht./Tp meters	AAT meter	Deadline Date
1	1	000461.46250000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000461.58750000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000461.78750000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000461.91250000	FB6	1		11K0F9W 7K60FXE	150.000	150.000	20.5	319.3	02-28-2007
1	1	000462.16250000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000463.28750000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000463.81250000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000464.01250000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000464.33750000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
1	1	000463.43750000	FB6	1		11K0F9W 7K60FXE	150.000	500.000	20.5	319.3	02-28-2007
2	1	000463.28750000	FB6	1		11K0F9W 7K60FXE	220.000	220.000	46.0	612.5	02-28-2007

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
2	1	000463.61250000		FB6	1		11K0F9W 7K60FXE	220.000	220.000	46.0	612.5	02-28-2007
2	1	000464.28750000		FB6	1		11K0F9W 7K60FXE	220.000	220.000	46.0	612.5	02-28-2007
2	1	000464.38750000		FB6	1		11K0F9W 7K60FXE	220.000	220.000	46.0	612.5	02-28-2007
2	1	000464.88750000		FB6	1		11K0F9W 7K60FXE	220.000	220.000	46.0	612.5	02-28-2007
3	1	000461.43750000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000463.28750000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000463.41250000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000463.53750000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000463.68750000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000463.96250000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000464.08750000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000464.21250000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
3	1	000464.76250000		FB6	1		11K0F9W 7K60FXE	100.000	100.000	35.0	514.9	02-28-2007
4	1	000463.28750000		FB6	1		11K0F9W 7K60FXE	250.000	250.000	20.9	604.1	02-28-2007
4	1	000463.38750000		FB6	1		11K0F9W 7K60FXE	250.000	250.000	20.9	604.1	02-28-2007

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts) (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
4	1	000463.53750000		FB6	1		11K0F9W 7K60FXE	250.000 250.000	250.000	20.9	604.1	02-28-2007
4	1	000463.66250000		FB6	1		11K0F9W 7K60FXE	250.000 250.000	250.000	20.9	604.1	02-28-2007
4	1	000463.96250000		FB6	1		11K0F9W 7K60FXE	250.000 250.000	250.000	20.9	604.1	02-28-2007
4	1	000461.43750000		FB6	1		11K0F9W 7K60FXE	250.000 250.000	250.000	20.9	604.1	02-28-2007
4	1	000464.28750000		FB6	1		11K0F9W 7K60FXE	250.000 250.000	250.000	20.9	604.1	02-28-2007
5	1	000461.91250000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
5	1	000466.91250000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
5	1	000469.33750000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
6	1	000464.28750000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
6	1	000464.38750000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
6	1	000464.88750000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
6	1	000468.28750000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
6	1	000463.28750000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
6	1	000463.61250000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007
6	1	000469.28750000		MO6	100		11K0F9W 7K60FXE	100.000 100.000	100.000			02-28-2007

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies	Sta.	No.	No.	Emission	Output	ERP	Ant.	Ant.	Construct
No.	No.	(MHz)	Cls.	Units	Pagers	Designator	Power	(watts)	Ht./Tp	AAT	Deadline
6	1	000469.38750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000		s	02-28-2007
6	1	000469.88750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
6	1	000468.61250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000468.96250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000469.08750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000469.21250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000469.76250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000463.96250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000464.08750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000464.21250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000464.76250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000466.43750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000468.28750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000468.41250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000468.53750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
7	1	000468.68750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000		s	02-28-2007
7	1	000461.43750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000463.28750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000463.41250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000463.53750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000463.68750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
7	1	000463.81250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000461.43750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000461.61250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000463.28750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000463.38750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000463.53750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000463.66250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000463.81250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000463.96250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies	Sta.	No.	No.	Emission	Output	ERP	Ant.	Ant.	Construct
No.	No.	(MHz)	Cls.	Units	Pagers	Designator	Power	(watts)	Ht./Tp	AAT	Deadline
8	1	000464.13750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000		s	02-28-2007
8	1	000464.28750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000466.43750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000466.61250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000468.28750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000468.38750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000468.53750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000468.66250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000468.81250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000468.96250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000469.13750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
8	1	000469.28750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
9	1	000462.16250000	FB8	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000461.51250000	FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000461.73750000	FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
9	1	000461.96250000		FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000463.31250000		FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000463.63750000		FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000463.88750000		FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000464.23750000		FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000464.46250000		FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
9	1	000464.73750000		FB6	1		11K0F9W 7K60FXE	200.000	200.000	81.0	79.1	02-28-2007
10	1	000469.46250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000469.73750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000461.51250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000461.73750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000461.96250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000463.31250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000463.63750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000463.88750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
10	1	000464.23750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000		s	02-28-2007
10	1	000464.46250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000464.73750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000467.16250000		MO8	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000462.16250000		MO8	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000466.51250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000466.73750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000466.96250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000468.31250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000468.63750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000468.88750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
10	1	000469.23750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			02-28-2007
11	1	000461.46250000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000461.58750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000461.78750000		MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Antennas

Loc	Ant	Frequencies	Sta.	No.	No.	Emission	Output	ERP	Ant.	Ant.	Construct
No.	No.	(MHz)	Cls.	Units	Pagers	Designator	Power	(watts)	Ht./Tp	AAT	Deadline
11	1	000462.16250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000	s		09-29-2015
11	1	000463.28750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000463.43750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000463.81250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000464.01250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000464.33750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000466.46250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000466.58750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000466.78750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000467.16250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000468.28750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000468.43750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000468.81250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000469.01250000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015
11	1	000469.33750000	MO6	100		11K0F9W 7K60FXE	100.000	100.000			09-29-2015

Licensee Name: FISHER WIRELESS SERVICES, INC.

Call Sign: WQEL631

File Number: 0007056845

Print Date: 12-09-2015

Control Points

Control Pt. No. 1

Address: 14530 S. Commercial

City: Blythe **County:** RIVERSIDE **State:** CA **Telephone Number:** (760)922-4150

Associated Call Signs

Waivers/Conditions:

License renewal granted on a conditional basis, subject to the outcome of FCC proceeding WT Docket No. 10-112 (see FCC 10-86, paras. 113 and 126).

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: TEN FOUR COMMUNICATIONS

ATTN: NATHAN HANSEN
TEN FOUR COMMUNICATIONS
1123 5TH STREET
MODESTO, CA 95351

FCC Registration Number (FRN): 0001636299

Call Sign	File Number
WQMA780	
Radio Service	
YK - Industrial/Business Pool - Commercial, Trunked	
Regulatory Status	
CMRS	
Frequency Coordination Number	

Grant Date	Effective Date	Expiration Date	Print Date
06-15-2010	10-23-2013	06-15-2020	

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

- Loc. 1** **Address:** 21 KM NW OF MT OSO
City: PATTERSON **County:** STANISLAUS **State:** CA
Lat (NAD83): 37-30-40.8 N **Long (NAD83):** 121-22-25.8 W **ASR No.:** **Ground Elev:** 898.0
- Loc. 2** **Address:** APPROX 9KM SW OF BEAR MOUNTAIN
City: SAN ANDREAS **County:** CALAVERAS **State:** CA
Lat (NAD83): 38-07-10.0 N **Long (NAD83):** 120-43-31.0 W **ASR No.:** **Ground Elev:** 827.0
- Loc. 3** **Area of operation**
Operating within a 32.0 km radius around fixed location 1
- Loc. 4** **Area of operation**
Operating within a 32.0 km radius around fixed location 2
- Loc. 5** **Address:** APPX 6 MI SW OF WESTLEY ON INGRAM CREEK RD
City: PATTERSON **County:** STANISLAUS **State:** CA
Lat (NAD83): 37-30-40.8 N **Long (NAD83):** 121-22-15.8 W **ASR No.:** **Ground Elev:** 908.0
- Loc. 6** **Area of operation**
Operating within a 40.0 km radius around fixed location 5
- Loc. 7** **Address:** 4660 Riata Way (# 274586)
City: Altaville **County:** CALAVERAS **State:** CA
Lat (NAD83): 38-07-09.7 N **Long (NAD83):** 120-43-30.9 W **ASR No.:** 1050375 **Ground Elev:** 834.5
- Loc. 8** **Address:** HALF WAY ROAD
City: BEAR VALLEY **County:** MARIPOSA **State:** CA
Lat (NAD83): 37-32-19.8 N **Long (NAD83):** 120-03-57.6 W **ASR No.:** **Ground Elev:** 1164.0

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Fixed Location Address or Mobile Area of Operation

Loc. 9 Area of operation

Operating within a 32.0 km radius around fixed location 7

Loc. 10 Area of operation

Operating within a 32.0 km radius around fixed location 8

Loc. 11 Address: 1123 5TH STREET

Loc. 11 City: MODESTO **Loc. 11 County:** STANISLAUS **Loc. 11 State:** CA

Loc. 11 Lat (NAD83): 37-38-11.7 N **Loc. 11 Long (NAD83):** 121-00-30.8 W **Loc. 11 ASR No.:** **Loc. 11 Ground Elev:** 26.0

Loc. 12 Area of operation

Operating within a 40.0 km radius around fixed location 11

Loc. 13 Area of operation

Operating within a 64.0 km radius around 37-30-40.8 N, 121-22-25.8 W,
WESTLEY, STANISLAUS county, CA

Antennas

Loc	Ant	Frequencies	Sta.	No.	No.	Emission	Output	ERP	Ant.	Ant.	Construct
No.	No.	(MHz)	Cls.	Units	Pagers	Designator	Power	(watts)	Ht./Tp	AAT	Deadline
1	1	000451.79375000	FB6C	1		4K00F1E	50.000	33.550	25.0	482.6	06-15-2011
1	1	000462.04375000	FB6C	1		4K00F1E	50.000	33.550	25.0	482.6	06-15-2011
1	1	000464.19375000	FB6C	1		4K00F1E	50.000	33.550	25.0	482.6	06-15-2011
2	1	000462.08750000	FB6C	1		4K00F1E	50.000	32.200	25.0	492.1	06-15-2011
2	1	000452.24375000	FB6C	1		4K00F1E	50.000	32.200	25.0	492.1	06-15-2011
2	1	000451.98750000	FB6C	1		4K00F1E	50.000	32.200	25.0	492.1	06-15-2011
3	1	000456.79375000	MO6C	400		4K00F1E	50.000	50.000			06-15-2011
3	1	000467.04375000	MO6C	400		4K00F1E	50.000	50.000			06-15-2011
3	1	000469.19375000	MO6C	400		4K00F1E	50.000	50.000			06-15-2011
4	1	000456.98750000	MO6C	400		4K00F1E	50.000	50.000			06-15-2011
4	1	000467.08750000	MO6C	400		4K00F1E	50.000	50.000			06-15-2011
4	1	000457.24375000	MO6C	400		4K00F1E	50.000	50.000			06-15-2011

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
5	1	000152.40500000		FB6	1		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	110.000	23.512	35.0	507.3	10-23-2014
5	1	000152.96000000		FB6	1		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	110.000	19.000	35.0	507.3	10-23-2014
5	1	000153.00500000		FB6	1		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	110.000	19.000	35.0	507.3	10-23-2014
5	1	000153.02000000		FB6	1		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	110.000	19.000	35.0	507.3	10-23-2014
5	1	000154.54000000		FB6	1		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	110.000	19.000	35.0	507.3	10-23-2014
5	1	000152.39000000		FB6	1		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	110.000	19.000	35.0	507.3	10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
5	1	000160.14000000		FB6	1		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	110.000	19.000	35.0	S507.3	10-23-2014
6	1	000157.66500000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000152.40500000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000159.60000000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000152.96000000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000159.85500000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
6	1	000153.00500000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000	s		10-23-2014
6	1	000159.87000000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000153.02000000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000160.18500000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000154.54000000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
6	1	000157.65000000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
6	1	000151.68500000		MO6	500		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000		s	10-23-2014
7	1	000463.22500000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	30.000	30.0	497.1	10-23-2014
7	1	000462.00000000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	30.000	30.0	497.1	10-23-2014
7	1	000464.60000000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	30.000	30.0	497.1	10-23-2014
7	1	000461.25000000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	29.000	30.0	497.1	10-23-2014
7	1	000461.42500000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	29.000	30.0	497.1	10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
8	1	000464.20000000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	19.000	21.0	561.1	10-23-2014
8	1	000461.15000000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	19.000	21.0	561.1	10-23-2014
8	1	000462.30000000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	19.000	21.0	561.1	10-23-2014
8	1	000461.07500000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	19.000	21.0	561.1	10-23-2014
8	1	000461.55000000		FB6	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	200.000	19.000	21.0	561.1	10-23-2014
9	1	000468.22500000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
9	1	000463.22500000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000	s		10-23-2014
9	1	000467.00000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
9	1	000462.00000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
9	1	000469.60000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
9	1	000464.60000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
9	1	000461.25000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
9	1	000466.25000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000	s		10-23-2014
9	1	000461.42500000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
9	1	000466.42500000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
10	1	000469.20000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
10	1	000464.20000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
10	1	000466.15000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
10	1	000461.15000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000	s		10-23-2014
10	1	000467.30000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
10	1	000462.30000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
10	1	000461.07500000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
10	1	000466.07500000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014
10	1	000461.55000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000			10-23-2014

Licensee Name: TEN FOUR COMMUNICATIONS

Call Sign: WQMA780

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
10	1	000466.55000000		MO6	300		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	90.000	90.000	s		10-23-2014
11	1	000460.72500000		FB2	1		11K2F1E 11K2F3E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	100.000	170.000	6.0	8.5	10-23-2014
12	1	000465.72500000		MO	300		11K2F1D 11K2F1E 4K00F1D 4K00F1E 8K30F1D 8K30F1E	20.000	20.000			10-23-2014
13	1	000462.11250000		MO	300		11K2F1D 11K2F1E	2.000	2.000			10-23-2014
13	1	000467.11250000		MO	300		11K2F1D 11K2F1E	2.000	2.000			10-23-2014

Control Points

Control Pt. No. 1

Address: 1123 5TH STREET

City: MODESTO County: STANISLAUS State: CA Telephone Number: (209)529-9967

Associated Call Signs

Waivers/Conditions:

The issuance of this system license resulted in the cancellation of call signs WPXR780, WPXR442, WNSB327, and KD36994.

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: PACIFIC GAS AND ELECTRIC COMPANY

ATTN: FCC LICENSE & COMPLIANCE DESK
 PACIFIC GAS AND ELECTRIC COMPANY
 705 P STREET, 2ND FLOOR
 FRESNO, CA 93721-2708

FCC Registration Number (FRN): 0001551555

Call Sign WQPJ910	File Number 0007278302
Radio Service YG - Industrial/Business Pool, Trunked	
Regulatory Status PMRS	
Frequency Coordination Number	

Grant Date 06-08-2012	Effective Date 05-25-2016	Expiration Date 06-08-2022	Print Date 05-25-2016

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

- Loc. 1** **Address:** Bear Mountain Calaveras 6 mi SW of
City: San Andreas **County:** CALAVERAS **State:** CA
Lat (NAD83): 38-07-09.7 N **Long (NAD83):** 120-43-30.9 W **ASR No.:** 1050375 **Ground Elev:** 834.5
- Loc. 2** **Area of operation**
 Operating within a 32.0 km radius around fixed location 1
- Loc. 3** **Area of operation**
 Land Mobile Control Station meeting the 6.1 Meter Rule: CALAVERAS county, CA

Antennas

Loc	Ant	Frequencies No. No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000451.91250000	FB2	1		11K2F2D 11K2F3E	45,000	30,000	15.2	8633.1	06-08-2013
1	1	000463.93750000	FB2	1		11K2F2D 11K2F3E	45,000	30,000	15.2	633.1	06-08-2013
2	1	000456.91250000	MO	2000		11K2F2D 11K2F3E	40,000	40,000			06-08-2013

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: PACIFIC GAS AND ELECTRIC COMPANY

Call Sign: WQPJ910

File Number: 0007278302

Print Date: 05-25-2016

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
2	1	000456.91250000		MO	2000		11K2F2D 11K2F3E	5.000	5.000	s		06-08-2013
2	1	000468.93750000		MO	2000		11K2F2D 11K2F3E	40.000	40.000			06-08-2013
2	1	000468.93750000		MO	2000		11K2F2D 11K2F3E	5.000	5.000			06-08-2013
3	1	000456.91250000		FX1	20		11K2F2D 11K2F3E	40.000	40.000			
3	1	000468.93750000		FX1	20		11K2F2D 11K2F3E	40.000	40.000			

Control Points

Control Pt. No. 1

Address: Fairfield Information and Operation Center, 425 Beck Avenue

City: FAIRFIELD **County:** SOLANO **State:** CA **Telephone Number:** (707)427-6387

Associated Call Signs

Waivers/Conditions:

NONE

REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: TEN-FOUR COMMUNICATIONS

ATTN: NATHAN HANSEN
TEN-FOUR COMMUNICATIONS
1123 5TH STREET
MODESTO, CA 95351

FCC Registration Number (FRN): 0001636299

Call Sign WQTI553	File Number
Radio Service YG - Industrial/Business Pool, Trunked	
Regulatory Status PMRS	
Frequency Coordination Number	

Grant Date 02-11-2014	Effective Date 02-11-2014	Expiration Date 02-11-2024	Print Date

STATION TECHNICAL SPECIFICATIONS

Fixed Location Address or Mobile Area of Operation

Loc. 1 Area of operation

Statewide: CA

Loc. 2 Address: .04 FROM MT. OSO ROAD

City: WESTLEY County: STANISLAUS State: CA

Lat (NAD83): 37-30-31.8 N Long (NAD83): 121-22-27.6 W ASR No.: Ground Elev: 990.0

Loc. 3 Address: RIDGE ROAD

City: SUTTER CREEK County: AMADOR State: CA

Lat (NAD83): 38-22-51.0 N Long (NAD83): 120-47-35.8 W ASR No.: Ground Elev: 493.0

Loc. 4 Address: 5660 RIATA WAY

City: SAN ANDREAS County: CALAVERAS State: CA

Lat (NAD83): 38-07-06.5 N Long (NAD83): 120-43-31.5 W ASR No.: Ground Elev: 828.0

Loc. 5 Address: 1/4 MILE ON N BALD MOUNTAIN ROAD

City: COLUMBIA County: TUOLUMNE State: CA

Lat (NAD83): 38-02-20.5 N Long (NAD83): 120-20-59.1 W ASR No.: Ground Elev: 1033.0

Loc. 6 Area of operation

Operating within a 32.0 km radius around fixed location 2

Loc. 7 Area of operation

Operating within a 32.0 km radius around fixed location 3

Loc. 8 Area of operation

Operating within a 32.0 km radius around fixed location 4

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: TEN-FOUR COMMUNICATIONS

Call Sign: WQT1553

File Number:

Print Date:

Fixed Location Address or Mobile Area of Operation

Loc. 9 Area of operation

Operating within a 32.0 km radius around fixed location 5

Antennas

Loc No.	Ant No.	Frequencies (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
1	1	000469.76875000		MO6I	1000		4K00F1D 4K00F1E	50.000	50.000		s
1	1	000462.94375000		FB6I	1		4K00F1D 4K00F1E	100.000	83.589		
1	1	000463.23125000		FB6I	1		4K00F1D 4K00F1E	100.000	83.589		
1	1	000464.76875000		FB6I	1		4K00F1D 4K00F1E	100.000	83.589		
1	1	000467.94375000		MO6I	1000		4K00F1D 4K00F1E	50.000	50.000		
1	1	000468.23125000		MO6I	1000		4K00F1D 4K00F1E	50.000	50.000		
2	1	000451.15625000		FB8	1		4K00F1D 4K00F1E	100.000	25.890	4.0	549.3 02-11-2015
2	1	000451.01875000		FB6	1		4K00F1D 4K00F1E	100.000	25.890	4.0	549.3 02-11-2015
3	1	000464.83125000		FB6	1		4K00F1D 4K00F1E	100.000	500.000	8.0	117.2 02-11-2015
3	1	000463.63125000		FB6	1		4K00F1D 4K00F1E	100.000	500.000	8.0	117.2 02-11-2015
4	1	000451.09375000		FB6	1		4K00F1D 4K00F1E	100.000	34.000	9.5	476.8 02-11-2015
4	1	000464.05625000		FB6	1		4K00F1D 4K00F1E	100.000	34.000	9.5	476.8 02-11-2015
5	1	000462.15625000		FB6	1		4K00F1D 4K00F1E	100.000	86.000	5.0	301.1 02-11-2015

Licensee Name: TEN-FOUR COMMUNICATIONS

Call Sign: WQT1553

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output Power (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
5	1	000463.64375000		FB6	1		4K00F1D 4K00F1E	100.000	86.000	5.0	S301.1	02-11-2015
6	1	000451.15625000		MO8	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
6	1	000456.15625000		MO8	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
6	1	000451.01875000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
6	1	000456.01875000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
7	1	000463.63125000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
7	1	000468.63125000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
7	1	000464.83125000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
7	1	000469.83125000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
8	1	000464.05625000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
8	1	000469.05625000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
8	1	000451.09375000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
8	1	000456.09375000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
9	1	000463.64375000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015
9	1	000468.64375000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015

Licensee Name: TEN-FOUR COMMUNICATIONS

Call Sign: WQT1553

File Number:

Print Date:

Antennas

Loc	Ant	Frequencies No.	No. (MHz)	Sta. Cls.	No. Units	No. Pagers	Emission Designator	Output (watts)	ERP (watts)	Ant. Ht./Tp meters	Ant. AAT meter	Construct Deadline Date
9	1	000462.15625000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000	s		02-11-2015
9	1	000467.15625000		MO6	1000		4K00F1D 4K00F1E	50.000	50.000			02-11-2015

Control Points

Control Pt. No. 1

Address: 1123 5TH STREET

City: MODESTO **County:** STANISLAUS **State:** CA **Telephone Number:** (209)529-9967

Associated Call Signs

Waivers/Conditions:

Antenna structures for land, base and fixed stations authorized for operation at temporary unspecified locations may be erected without specific prior approval of the Commission where such antenna structures do not exceed a height of 60.96 meters (200 feet) above ground level; provided that the overall height of such antennas more than 6.10 meters (20 feet) above ground, including their supporting structures (whether natural formation or man-made), do not exceed any of the slope ratios set forth in Section 17.7(b). Any antenna to be erected in excess of the foregoing limitations requires prior Commission approval.

Licensees seeking such approval should file application for modification of license. In addition, notification to the Federal Aviation Administration is required whenever the antenna will exceed 60.96 meters (200 feet) above the ground and whenever notification is otherwise required by Section 17.7 of the Commission's Rules. Such notification should be given by filing FAA Form 7460-1, Notice of Proposed Construction or Alteration, in duplicate, with the nearest office of the Federal Aviation Administration, which form is available from that office.