tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: KFMS_MX52_0d1km_Post, Model: Longley-Rice

Start: 2018.12.14 10:17:07

Study created: 2018.12.14 10:17:06

Study build station data: LMS TV 2018-12-13

Proposal: KFMS-LD D31 LD APP *P KEYES, CA

File number: BLANK0000051634

Facility ID: 182091

Station data: LMS TV 2018-12-13

Record ID: 25076ff364af62fe0164b34a13ee02d0

Country: U.S.

Build options:

Protect baseline records from LPTV

Search options:

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KXVU-LP	N17-	TX	LIC	CHICO, CA	BLTTL20060303AAJ	147.4 km
No	KKTF-LD	D30	LD	LIC	CHICO, CA	BLDTL20100716AAP	147.5
No	KFSN-TV	D30	DT	APP	FRESNO, CA	BPCDT20121206AAP	250.3
No	KFSN-TV	D30	DT	LIC	FRESNO, CA	BLCDT20110914ABW	250.3
No	K29KS-D	D30	LD	CP	GUSTINE, CA	BNPDTL20100910ABU	160.1

No	KAHC-LD	D30	LD	CP	SACRAMENTO, CA	BLANK0000059635	0.0
No	KQED	D30	DT	LIC	SAN FRANCISCO, CA	BLANK0000040845	130.7
No	K30HY-D	D30	LD	LIC	VERDI/MOGUL, NV	BLDTT20081006AFE	168.1
Yes	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825BPI	145.8
Yes	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825APB	140.0
No	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	314.6
No	KEUV-LP	N31z	TX	LIC	EUREKA, CA	BLTTL20050729AMX	314.6
No	KTFF-LD	D31	LD	APP	FRESNO, CA	BLANK0000054900	250.8
No	KVHF-LD	D31	LD	APP	FRESNO, CA	BLANK0000054276	250.7
No	K31MN-D	D31	LD	CP	MODESTO, CA	BDCCDTT20120726ABW	117.8
Yes	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	130.7
Yes	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	111.5
No	K50GP-D	D31+	LD	CP	REDDING, CA	BLANK0000051619	230.1
No	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825ATG	231.5
Yes	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825BPH	240.2
No	K38JP-D	D31	LD	CP	SALINAS, CA	BLANK0000051906	234.9
Yes	KBCW	D31	LD	APP	SAN FRANCISCO, CA	BDRTCDT20090630AEG	61.0
No	K31KE-D	D31	LD	LIC	SAN LUIS OBISPO,ETC., CA	BLDTT20121220AAO	372.6
No	K31IE-D	D31	LD	LIC	SUSANVILLE, ETC, CA	BLDTT20101207AFO	221.8
No	K31GK-D	D31	LD	LIC	UKIAH, CA	BLDTL20120509AFQ	149.2
No	K39KM-D	D31	LD	CP	WEED, CA	BLANK0000054654	319.5
No	K39KM-D	D31	LD	LIC	WEED, CA	BLANK0000063770	319.5
No	NEW	D31	LD	APP	AUSTIN, NV	BNPDTT20091124ADN	360.6
No	K31LJ-D	D31	LD	CP	CARSON CITY, NV	BNPDTL20090825BND	160.1
No	K31BM-D	D31	LD	LIC	SILVER SPRINGS, NV	BLDTT20100621ABA	208.3
No	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	135.1
No	K31KH-D	D31	LD	LIC	STATELINE, NV	BLDTL20110418ABC	137.7
No	KFKK-LD	D32	LD	LIC	Modesto, CA	BLANK0000008127	130.9
No	KFKK-LD	D32	LD	CP	Modesto, CA	BLANK0000008174	117.8

No	KION-TV	D32	DT APP	MONTEREY, CA	BLANK0000035685	235.2
No	KION-TV	D32	DT LIC	MONTEREY, CA	BLCDT20030604ACO	235.2
No	K32LM-D	D32	LD CP	REDDING, CA	BLANK0000004699	186.5
No	KSTV-LP	D32-	LD CP	SACRAMENTO, CA	BLANK0000036383	33.0
Yes	KSTV-LP	N32-	TX LIC	SACRAMENTO, CA	BLTTL20070716ADI	33.0
No	KCNS	D32	DT CP	SAN FRANCISCO, CA	BLANK0000034679	130.7
No	K32GW-D	D32	LD LIC	CARSON CITY, NV	BLDTT20070529ADO	167.6
No	K38FW	N38+	TX LIC	STATELINE, NV	BLTTL20030205AAP	137.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D31
Mask: Full Service
Latitude: 38 38 53.00 N (NAD83)
Longitude: 121 28 41.40 W
Height AMSL: 107.3 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: DIE-TUA-C2 (ID 1003953) 30.0 deg
Elev Pattrn: Generic

50.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	11.0 kW	94.8 m	41.3 km
45.0	6.96	81.8	37.3

90.0	12.9	78.9	39.9
135.0	0.624	93.0	26.5
180.0	0.009	99.4	9.7
225.0	0.004	102.3	8.1
270.0	0.054	100.9	15.3
315.0	7.38	100.3	39.9

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 94 m

Distance to Canadian border: 1077.3 km

Distance to Mexican border: 764.6 km

Conditions at FCC monitoring station: Livermore CA

Bearing: 193.3 degrees Distance: 105.4 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 78.2 degrees Distance: 1401.4 km

Study cell size: 1.00 km

Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

Interference to BNPDTL20090825BPI APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825BPI	
Undesireds:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	145.8 km
	KKTF-LD	D30	LD	LIC	CHICO, CA	BLDTL20100716AAP	2.0
	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825APB	22.2
	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	209.6
	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	251.6
	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	39.6
	K50GP-D	D31+	LD	CP	REDDING, CA	BLANK0000051619	89.0
	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825ATG	92.7
	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825BPH	103.8
	K39KM-D	D31	LD	CP	WEED, CA	BLANK0000054654	175.0
	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	187.3
	K31GP-D	D31-	LD	LIC	BROOKINGS, ETC., OR	BLANK0000021714	317.6
	K32LM-D	D32	LD	CP	REDDING, CA	BLANK0000004699	46.7

Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
4871.6	210,538	4464.1	202,587	1715.2	24,414	1715.2	24,414	0.00	0.00

Undesired	Total IX	Unique IX, before		Unique IX, after	
KFMS-LD D31 LD APP	28.2	183		0.0	0
KKTF-LD D30 LD LIC	603.2	45,041	47.3	1,379	43.2	1,326
NEW D31 LD APP	1663.8	126,629	110.8	13,152	110.8	13,152
KTVU D31 DT CP	13.1	138	1.0	0	1.0	0

K42HL-D D31 LD APP	2206.1	147,481	62.3	264	61.3	264
K50GP-D D31+ LD CP	4.0	0	0.0	0	0.0	0
NEW D31 LD APP	4.0	0	0.0	0	0.0	0
NEW D31 LD APP	1672.5	66,425	260.1	13,922	260.1	13,922
K32LM-D D32 LD CP	21.1	11	0.0	0	0.0	0

Interference to BNPDTL20090825APB APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825APB	
Undesireds:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	140.0 km
	KKTF-LD	D30	LD	LIC	CHICO, CA	BLDTL20100716AAP	23.9
	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825BPI	22.2
	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	197.1
	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	47.4
	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825BPH	101.3
	K39KM-D	D31	LD	CP	WEED, CA	BLANK0000054654	179.9
	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	198.1

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
1139.7	121,677	1139.7	121,677	307.3	10,148	307.3	10,148	0.00	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
KFMS-LD D31 LD APP	1.0	0	0.0	0		
KKTF-LD D30 LD LIC	107.7	1,873	0.0	0	0.0	0
NEW D31 LD APP	714.3	24,023	181.5	4,198	181.5	4,198
K42HL-D D31 LD APP	538.9	38,135	3.0	1,460	3.0	1,460

NEW D31 LD APP 557.1 105,104 84.7 69,139 84.7 69,139

Interference to BLANK0000059954 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	
Undesireds:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	130.7 km
	KION-TV	D32	DT	APP	MONTEREY, CA	BLANK0000035685	154.4

Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX	
37377.5	8,298,887	32210.8	7,213,470	32022.0	7,210,267	31715.1	7,184,507	0.96	0.36

Undesired	Total IX	Unique IX, before		Unique IX, after	
KFMS-LD D31 LD APP	307.0	25,760		307.0	25,760
KION-TV D32 DT APP	188.7	3,203	188.7	3,203	188.7	3,203

Interference to BLANK0000059954 CP scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	
Undesireds:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	130.7 km
	KION-TV	D32	DT	LIC	MONTEREY, CA	BLCDT20030604ACO	154.4

Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX	
37377.5	8,298,887	32210.8	7,213,470	32078.0	7,212,987	31771.0	7,187,227	0.96	0.36

Undesired	Total IX	Unique IX, before		Unique IX, after	
KFMS-LD D31 LD APP	307.0	25,760		307.0	25,760
KION-TV D32 DT LIC	132.8	483	132.8	483	132.8	483

Interference to BLANK0000030068 APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	
Undesireds:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	111.5 km
	KKTF-LD	D30	LD	LIC	CHICO, CA	BLDTL20100716AAP	40.6
	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825BPI	39.6
	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825APB	47.4
	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	244.5
	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	227.5
	K50GP-D	D31+	LD	CP	REDDING, CA	BLANK0000051619	128.5
	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825ATG	132.2
	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825BPH	143.2
	KBCW	D31	LD	APP	SAN FRANCISCO, CA	BDRTCDT20090630AEG	149.8
	K39KM-D	D31	LD	CP	WEED, CA	BLANK0000054654	213.4
	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	150.7
	KSTV-LP	D32-	LD	CP	SACRAMENTO, CA	BLANK0000036383	115.8

Service area	Terrain-limited	IX-free, before		IX-free, after		Percent New IX	
7646.8	257,005	6976.8	249,010	5420.3	137,302	5328.9	136,635	1.69	0.49

Undesired	Total IX	Unique IX, before		Unique IX, after	

KFMS-LD D31 LD APP	154.5	1,320		91.4	667	
KKTF-LD D30 LD LIC	81.2	2,753	4.0	336	4.0	336
NEW D31 LD APP	1429.2	81,896	731.2	6,543	719.2	6,501
NEW D31 LD APP	721.9	104,640	99.3	29,429	98.3	29,429
KTVU D31 DT CP	21.0	0	8.0	0	2.0	0
K50GP-D D31+ LD CP	1.0	0	0.0	0	0.0	0
NEW D31 LD APP	1.0	0	0.0	0	0.0	0
NEW D31 LD APP	491.5	27,300	3.0	0	1.0	0
KBCW D31 LD APP	3.0	2	1.0	2	0.0	0

Interference to BNPDTL20090825BPH APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825BPH	
Undesireds:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	240.2 km
	KKTF-LD	D30	LD	LIC	CHICO, CA	BLDTL20100716AAP	103.0
	K30MI-D	D30	LD	LIC	REDDING, CA	BLDTL20121205ADS	0.1
	K30JS-D	D30	LD	LIC	YREKA, CA	BLDTT20150211AAX	106.5
	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825BPI	103.8
	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	122.8
	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	143.2
	K50GP-D	D31+	LD	CP	REDDING, CA	BLANK0000051619	20.5
	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825ATG	12.7
	K39KM-D	D31	LD	CP	WEED, CA	BLANK0000054654	87.4
	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	289.2
	K31GP-D	D31-	LD	LIC	BROOKINGS, ETC., OR	BLANK0000021714	213.8
	K32LM-D	D32	LD	CP	REDDING, CA	BLANK0000004699	57.1

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
11243.2	216,871	10489.9	214,761	8806.5	92,318	8805.5	92,318	0.01	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
KFMS-LD D31 LD APP	1.0	0	1.0	0		
KKTF-LD D30 LD LIC	19.0	236	1.0	8	1.0	8
K30MI-D D30 LD LIC	4.0	25	4.0	25	4.0	25
NEW D31 LD APP	92.1	2,805	46.1	2,355	46.1	2,355
K42HL-D D31 LD APP	26.1	22	2.0	0	2.0	0
K50GP-D D31+ LD CP	1162.4	39,586	121.7	4,434	121.7	4,434
NEW D31 LD APP	1456.5	115,368	422.8	80,219	422.8	80,219
K32LM-D D32 LD CP	26.0	19	15.0	6	15.0	6

Interference to BDRTCDT20090630AEG APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KBCW	D31	LD	APP	SAN FRANCISCO, CA	BDRTCDT20090630AEG	
Undesireds:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	61.0 km
	KQED	D30	DT	LIC	SAN FRANCISCO, CA	BLANK0000040845	77.7
	NEW	D31	LD	APP	CHICO, CA	BNPDTL20090825BPI	175.1
	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	304.4
	K31MN-D	D31	LD	CP	MODESTO, CA	BDCCDTT20120726ABW	125.9
	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	77.7
	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	149.8
	NEW	D31	LD	APP	REDDING, CA	BNPDTL20090825BPH	253.3
	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	195.2

KSTV-LP D32- LD CP SACRAMENTO, CA BLANK0000036383 91.7

KCNS D32 DT CP SAN FRANCISCO, CA BLANK0000034679 77.7

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
3522.8	580,609	2664.5	341,282	2290.9	300,630	2290.9	300,630	0.00	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
KFMS-LD D31 LD APP	3.0	16	0.0	0		
KQED D30 DT LIC	22.2	967	0.0	0	0.0	0
NEW D31 LD APP	5.0	16	0.0	0	0.0	0
K31MN-D D31 LD CP	9.0	70	2.0	54	2.0	54
KTVU D31 DT CP	364.6	40,582	332.3	39,615	332.3	39,615
K42HL-D D31 LD APP	7.0	0	2.0	0	2.0	0
NEW D31 LD APP	1.0	0	0.0	0	0.0	0
KCNS D32 DT CP	29.2	967	0.0	0	0.0	0

Interference to BLTTL20070716ADI LIC scenario 1

Call Chan Svc Status City, State File Number Distance

Desired: KSTV-LP N32- TX LIC SACRAMENTO, CA BLTTL20070716ADI

Undesireds: KFMS-LD D31 LD APP KEYES, CA BLANK0000051634 33.0 km

K31KH-D D31 LD CP STATELINE, NV BDFCDTL20090824ABT 103.5

KFKK-LD D32 LD LIC Modesto, CA BLANK0000008127 120.8

KION-TV D32 DT APP MONTEREY, CA BLANK0000035685 239.4

K32LM-D D32 LD CP REDDING, CA BLANK0000004699 198.2

KCNS D32 DT CP SAN FRANCISCO, CA BLANK0000034679 154.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX	
1997.4	1,307,480	1983.4	1,303,708	1968.4	1,297,683	1967.4	1,297,573	0.05	0.01

Undesired	Total IX	Unique IX, before		Unique IX, after	
KFMS-LD D31 LD APP	1.0	110		1.0	110
K32LM-D D32 LD CP	3.0	2,311	2.0	1,434	2.0	1,434
KCNS D32 DT CP	13.0	4,591	12.0	3,714	12.0	3,714

Interference to proposal scenario 1

**MX: 9.70% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	
Undesireds:	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	314.6 km
	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	130.7
	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	111.5
	KBCW	D31	LD	APP	SAN FRANCISCO, CA	BDRTCDT20090630AEG	61.0
	K39KM-D	D31	LD	CP	WEED, CA	BLANK0000054654	319.5
	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	135.1
	KSTV-LP	D32-	LD	CP	SACRAMENTO, CA	BLANK0000036383	33.0

Service area	Terrain-limited	IX-free	Percent IX	
2949.3	1,192,035	2931.3	1,187,521	2495.5	1,072,303	14.87	9.70

Undesired	Total IX	Unique IX	Prcnt Unique IX	
KTVU D31 DT CP	31.0	4,821	25.0	4,283	0.85	0.36
K42HL-D D31 LD APP	406.9	107,910	403.9	107,814	13.78	9.08

KBCW D31 LD APP	3.0	497	0.0	0	0.00	0.00
KSTV-LP D32- LD CP	3.0	2,670	1.0	2,583	0.03	0.22

Interference to proposal scenario 2

**MX: 9.48% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KFMS-LD	D31	LD	APP	KEYES, CA	BLANK0000051634	
Undesireds:	KEUV-LP	D31	LD	CP	EUREKA, CA	BLANK0000010638	314.6 km
	KTVU	D31	DT	CP	OAKLAND, CA	BLANK0000059954	130.7
	K42HL-D	D31	LD	APP	OROVILLE, CA	BLANK0000030068	111.5
	KBCW	D31	LD	APP	SAN FRANCISCO, CA	BDRTCDT20090630AEG	61.0
	K39KM-D	D31	LD	CP	WEED, CA	BLANK0000054654	319.5
	K31KH-D	D31	LD	CP	STATELINE, NV	BDFCDTL20090824ABT	135.1

Service area		Terrain-limited		IX-free		Percent IX	
2949.3	1,192,035	2931.3	1,187,521	2496.5	1,074,886	14.83	9.48

Undesired	Total IX		Unique IX		Prcnt Unique IX	
KTVU D31 DT CP	31.0	4,821	26.0	4,283	0.89	0.36
K42HL-D D31 LD APP	406.9	107,910	403.9	107,814	13.78	9.08
KBCW D31 LD APP	3.0	497	0.0	0	0.00	0.00