

tvstudy v2.2.3 (Dxtpx3)
Database: localhost, Study: KQDK-CD 2 KW-DA, Model: Longley-Rice
Start: 2017.10.18 10:21:08

Study created: 2017.10.18 10:20:35

Study build station data: LMS TV 2017-10-18 (37)

Proposal: KQDK-CD D16 DC CP DENVER, CO
File number: KQDK-CD 2 KW-DA
Facility ID: 29455
Station data: User record
Record ID: 1114
Country: U.S.

Build options:
Protect records not on baseline channel
Protect LPTV records from Class A

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
KTFD-DT	D15	DT	LIC	BOULDER, CO	BLCDT20110812AAS	29.6 km
KETD	D15	DT	CP	CASTLE ROCK, CO	BLANK0000028552	29.6
KETD	D15	DT	BL	CASTLE ROCK, CO	DTVBL37101	29.6
KHDT-LD	D16	LD	LIC	DENVER, CO	BLDTL20111128FOX**	31.6
KBRO-LD	D16	LD	LIC	CHEYENNE, WY	BLANK0000004680	100.7
KKTQ-LD	D16	LD	LIC	CHEYENNE, WY	BLDTL20110602ACH	163.9
KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000026606	47.2
KPJR-TV	D17	DT	BL	GREELEY, CO	DTVBL166510	47.2

****The KHDT-LD D16 operation (BLDTL-20111128FOX) is considered to be displaced by the KQDK-CD digital Channel 16 assignment at Denver - see Technical Summary**

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16
Mask: Full Service
Latitude: 39 40 31.20 N (NAD83)
Longitude: 104 52 24.10 W
Height AMSL: 1769.0 m
HAAT: 0.0 m
Peak ERP: 2.00 kW
Antenna: ERI-ALP4L1-HSOC-16 (ID 1001531) 2.0 deg
Elev Pattn: Generic

48.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.93 kW	148.3 m	38.6 km
45.0	1.83	103.2	34.9
90.0	1.13	48.3	24.4
135.0	0.730	10.4	17.5
180.0	0.881	6.8	18.4
225.0	0.833	84.2	28.6
270.0	0.759	123.8	32.1
315.0	1.31	147.6	36.5

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 84 m

**Proposal service area extends beyond baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 1036.3 km

Distance to Mexican border: 889.7 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 73.7 degrees Distance: 563.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 326.7 degrees Distance: 58.9 km
ERP: 1.51 kW Field strength: 44.6 dBu, 0.2 mV/m

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to BLCDT20110812AAS LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KTFD-DT	D15	DT	LIC	BOULDER, CO	BLCDT20110812AAS	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	29.5 km
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	29.6
	KETD	D15	DT	CP	CASTLE ROCK, CO	BLANK0000028552	0.0
	KFQX	D15	DT	LIC	GRAND JUNCTION, CO	BLCDT20061020ACO	310.5
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
31091.3	3,880,926	28891.8	3,660,647	6960.6	268,034	6960.6 268,034	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KQDK-CD D16 DC BL		0.0	0	0.0	0		
KQDK-CD D16 DC CP		16.1	148			0.0 0	
KETD D15 DT CP		21931.3	3,392,613	21930.3	3,392,613	21914.2 3,392,465	
KFQX D15 DT LIC		1.0	0	0.0	0	0.0 0	

Interference to BLANK0000028552 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KETD	D15	DT	CP	CASTLE ROCK, CO	BLANK0000028552	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	29.5 km
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	29.6
	KCEC	D14	DT	BL	DENVER, CO	DTVBL24514	7.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
17468.3	3,111,695	16189.4	3,085,485	16039.7	3,076,568	16005.6 3,076,136	0.21 0.01
Undesired		Total IX		Unique IX, before		Unique IX, after	
KQDK-CD D16 DC BL		0.0	0	0.0	0		
KQDK-CD D16 DC CP		36.1	432			34.1 432	
KCEC D14 DT BL		149.7	8,917	149.7	8,917	147.7 8,917	

Interference to DTVBL37101 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KETD	D15	DT	BL	CASTLE ROCK, CO	DTVBL37101	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	29.5 km
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	29.6
	KCEC	D14	DT	BL	DENVER, CO	DTVBL24514	7.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
17264.7	3,101,886	15995.7	3,076,074	15846.0	3,068,009	15811.9 3,067,565	0.22 0.01
Undesired		Total IX		Unique IX, before		Unique IX, after	
KQDK-CD D16 DC BL		0.0	0	0.0	0		
KQDK-CD D16 DC CP		36.1	444			34.1 444	
KCEC D14 DT BL		149.7	8,065	149.7	8,065	147.7 8,065	

Interference to BLDLTL20111128FOX LIC, scenario 1

**IX: 11.65% interference

[KHDT-LD digital channel 16 operation (BLDTL-20111128FOX) is considered to be displaced by the KQDK-CD digital channel 16 assignment at Denver - see Technical Summary]

Desired:	Call KHDT-LD	Chan D16	Svc LD	Status LIC	City, State DENVER, CO	File Number BLDTL20111128FOX	Distance		
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	31.6 km		
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	31.6		
	KETD	D15	DT	CP	CASTLE ROCK, CO	BLANK0000028552	6.6		
	K16DR-D	D16	LD	CP	JACK'S CABIN, CO	BPDTT20150123AHD	176.4		
	KBRO-LD	D16	LD	LIC	CHEYENNE, WY	BLANK0000004680	90.9		
	KZCO-LD	D17	LD	LIC	DENVER, CO	BLDTL20110706ABH	0.4		
	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000026606	50.1		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
6744.3	2,799,521	6483.9	2,773,553	5306.5	2,106,412	4865.4	1,861,036	8.31	11.65
Undesired				Total IX	Unique IX, before	Unique IX, after			
KQDK-CD	D16	DC	BL	772.8	579,657	618.4	552,860		
KQDK-CD	D16	DC	CP	1275.0	831,788			1059.5	798,236
KETD	D15	DT	CP	84.5	15,295	13.9	2,818	11.9	2,380
KBRO-LD	D16	LD	LIC	142.2	2,927	27.1	87	21.0	74
KZCO-LD	D17	LD	LIC	263.8	49,114	109.1	30,236	93.1	25,181
KPJR-TV	D17	DT	CP	304.2	62,160	159.4	48,512	156.4	48,325

Interference to BLANK0000004680 LIC, scenario 1

Desired:	Call KBRO-LD	Chan D16	Svc LD	Status LIC	City, State CHEYENNE, WY	File Number BLANK0000004680	Distance				
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	100.7 km				
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	100.7				
	KHDT-LD	D16	LD	LIC	DENVER, CO	BLDTL20111128FOX	90.9				
	K16DR-D	D16	LD	CP	JACK'S CABIN, CO	BPDTT20150123AHD	246.1				
	KZCO-LD	D17	LD	LIC	DENVER, CO	BLDTL20110706ABH	90.7				
	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000026606	55.7				
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX			
5224.9	464,271	5175.0		461,855		3584.8	416,449	3579.9	416,425	0.14	0.01
Undesired				Total IX		Unique IX, before		Unique IX, after			
KQDK-CD	D16	DC	BL	31.9		315		9.0		30	
KQDK-CD	D16	DC	CP	57.9		1,122		14.0		54	
KHDT-LD	D16	LD	LIC	1547.3		44,822		1467.4		42,112	
KZCO-LD	D17	LD	LIC	10.0		1,926		0.0		0	
KPJR-TV	D17	DT	CP	106.8		3,072		25.9		535	
								14.9		249	

Interference to BLDLTL20110602ACH LIC, scenario 1

Desired:	Call KKTQ-LD	Chan D16	Svc LD	Status LIC	City, State CHEYENNE, WY	File Number BLDTL20110602ACH	Distance			
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	163.9 km			
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	163.9			
	KHDT-LD	D16	LD	LIC	DENVER, CO	BLDTL20111128FOX	159.5			
	KBRO-LD	D16	LD	LIC	CHEYENNE, WY	BLANK0000004680	70.0			
	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000026606	116.7			
	KWYM-LP	D17z	LD	CP	LARAMIE, WY	BLANK0000001722	6.8			
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
1393.4	84,476	1343.6	84,468	1191.0	83,970	1191.0	83,970	0.00	0.00	
Undesired				Total IX	Unique IX, before		Unique IX, after			
KQDK-CD	D16	DC	BL	9.9	0	0.0	0			
KQDK-CD	D16	DC	CP	13.9	0			0.0	0	
KHDT-LD	D16	LD	LIC	78.1	32	9.0	0	9.0	0	
KBRO-LD	D16	LD	LIC	91.1	49	26.0	30	26.0	30	
KPJR-TV	D17	DT	CP	1.0	0	0.0	0	0.0	0	
KWYM-LP	D17z	LD	CP	83.5	468	43.4	436	43.4	436	

Interference to BLANK0000026606 CP, scenario 1

Desired:	Call KPJR-TV	Chan D17	Svc DT	Status CP	City, State GREELEY, CO	File Number BLANK0000026606	Distance		
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	47.2 km		
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	47.2		
	KLBY	D17	DT	LIC	COLBY, KS	BLCDT20081215ABD	317.8		
	KPXC-TV	D18	DT	APP	DENVER, CO	BLANK0000027023	0.0		
Service area		Terrain-limited			IX-free, before		IX-free, after	Percent New IX	
29632.4	3,402,358	27385.2	3,374,431		27131.1	3,374,302	27128.2	3,374,302	0.01 0.00
Undesired				Total IX	Unique IX, before		Unique IX, after		
KQDK-CD	D16	DC	BL	0.0	0	0.0	0		
KQDK-CD	D16	DC	CP	3.0	0		3.0	0	
KLBY	D17	DT	LIC	254.1	129	254.1	129	254.1	129

Interference to DTVBL166510 BL, scenario 1

Desired:	Call KPJR-TV	Chan D17	Svc DT	Status BL	City, State GREELEY, CO	File Number DTVBL166510	Distance		
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	47.2 km		
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	47.2		
	KLBY	D17	DT	LIC	COLBY, KS	BLCDT20081215ABD	317.8		
	KPXC-TV	D18	DT	APP	DENVER, CO	BLANK0000027023	0.0		
Service area		Terrain-limited			IX-free, before		IX-free, after		Percent New IX
29609.5	3,402,346	27369.3	3,374,292	27113.2	3,374,163	27110.2	3,374,163	0.01	0.00
Undesired				Total IX	Unique IX, before		Unique IX, after		
KQDK-CD	D16	DC	BL	0.0	0	0.0	0		
KQDK-CD	D16	DC	CP	3.0	0		3.0	0	
KLBY	D17	DT	LIC	255.1	129	255.1	129	255.1	129
KPXC-TV	D18	DT	APP	1.0	0	1.0	0	1.0	0

Interference to DTVBL166510 BL, scenario 2

Desired:	Call KPJR-TV	Chan D17	Svc DT	Status BL	City, State GREELEY, CO	File Number DTVBL166510	Distance			
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	47.2 km			
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	47.2			
	KLBY	D17	DT	LIC	COLBY, KS	BLCDT20081215ABD	317.8			
Service area		Terrain-limited			IX-free, before		IX-free, after	Percent New IX		
29609.5	3,402,346	27369.3	3,374,292		27114.2	3,374,163	27111.2	3,374,163	0.01	0.00
Undesired				Total IX	Unique IX, before		Unique IX, after			
KQDK-CD	D16	DC	BL	0.0	0	0.0	0			
KQDK-CD	D16	DC	CP	3.0	0		3.0	0		
KLBY	D17	DT	LIC	255.1	129	255.1	129	255.1	129	

Interference to proposal, scenario 1
3.96% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	
Undesireds:	KETD	D15	DT	CP	CASTLE ROCK, CO	BLANK0000028552	29.6 km
	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000026606	47.2
Service area		Terrain-limited		IX-free		Percent IX	
2814.8 2,283,170		2734.6 2,245,234		2322.2 2,156,284		15.08 3.96	
Undesired		Total IX		Unique IX		Prct Unique IX	
KETD D15 DT CP		148.9		5,254		1.32 0.04	
KPJR-TV D17 DT CP		376.2		88,100		9.63 3.73	

Interference to proposal, scenario 2
4.01% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	

Undesireds:	KETD	D15	DT	BL	CASTLE ROCK, CO	DTVBL37101	29.6 km
	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000026606	47.2

Service area		Terrain-limited		IX-free	Percent IX
2814.8	2,283,170	2734.6	2,245,234	2325.2	2,155,114
					14.97
					4.01

Undesired		Total IX		Unique IX	Prcnt Unique IX
KETD D15 DT BL	140.9	6,362	33.2	2,020	1.21
KPJR-TV D17 DT CP	376.2	88,100	268.5	83,758	9.82
					3.73

Interference to proposal, scenario 3
3.96% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	

Undesireds:	KETD	D15	DT	CP	CASTLE ROCK, CO	BLANK0000028552	29.6 km
	KPJR-TV	D17	DT	BL	GREELEY, CO	DTVBL166510	47.2

Service area		Terrain-limited		IX-free	Percent IX
2814.8	2,283,170	2734.6	2,245,234	2322.2	2,156,284
					15.08
					3.96

Undesired		Total IX		Unique IX	Prcnt Unique IX
KETD D15 DT CP	148.9	5,254	37.2	866	1.36
KPJR-TV D17 DT BL	375.2	88,084	263.4	83,696	9.63
					3.73

Interference to proposal, scenario 4
4.01% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KQDK-CD	D16	DC	CP	DENVER, CO	KQDK-CD 2 KW-DA	

Undesireds:	KETD	D15	DT	BL	CASTLE ROCK, CO	DTVBL37101	29.6 km
	KPJR-TV	D17	DT	BL	GREELEY, CO	DTVBL166510	47.2

Service area		Terrain-limited		IX-free	Percent IX
2814.8	2,283,170	2734.6	2,245,234	2325.2	2,155,114
					14.97
					4.01

Undesired		Total IX		Unique IX	Prcnt Unique IX
KETD D15 DT BL	140.9	6,362	34.2	2,036	1.25
KPJR-TV D17 DT BL	375.2	88,084	268.5	83,758	9.82
					3.73