

tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: Billings9d3kwSAM270T, Model: Longley-Rice

Start: 2021.07.28 07:59:59

Study created: 2021.07.28 07:59:59

Study build station data: LMS TV 2021-07-28

Proposal: K49MA-D D9 LD APP Billings, MT

Facility ID: 186046

Station data: User record

Record ID: 118

Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K07WP-D	N7	TX	LIC	ROUNDUP, MT	BLTTTV19960822IA	75.3 km
No	KUSM-TV	D8	DD	LIC	BOZEMAN, MT	BLANK0000116395	196.5
No	K08OW-D	D8	LD	LIC	HYSHAM, MT	BLDTV20090923AEC	92.0
No	K08PP-D	D8	LD	LIC	ROSEBUD, ETC, MT	BLDTV20120821AAQ	151.9
No	K09BG-D	D9	LD	LIC	BASIN, MT	BLDTV20091123AAB	307.4
No	K09VL-D	D9	LD	LIC	BOYES & HAMMOND, MT	BLDTV20101103ACG	270.7
No	K09OY-D	D9	LD	LIC	COLSTRIP, MT	BLDTV20120625AAK	133.0
No	K09BE-D	D9	LD	CP	EKALAKA, MT	BLANK0000013427	293.7
No	K09BE-D	D9	LD	LIC	EKALAKA, MT	BLDTV20120503AFA	293.7
No	K09HY-D	D9	LD	LIC	GLASGOW, MT	BLDTV20120315ADX	296.4
Yes	K09YR-D	D9	LD	LIC	HARLOWTON, MT	BLDTV20120621ABI	121.6
No	K09ZB-D	D9	LD	LIC	HAVRE, MT	BLDTV20140318AAA	316.1
No	KXLH-LD	D9	LD	LIC	HELENA, MT	BLANK0000067234	281.8
No	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTTV1622	195.0
No	K09HI	D9	LD	CP	JORDAN, ETC., MT	BDFCDTV20110922ACM	195.0
No	K09JG-D	D9	LD	LIC	MALTA, MT	BLDTV20111116ATQ	284.3
Yes	K09LW-D	D9	LD	LIC	MARTINSDALE/LENNEP, MT	BLDTV20120619ACV	175.2
No	K09IV-D	D9	LD	LIC	PLEVNA, MT	BLDTV20111229ABX	301.0

No	K09MY-D	D9	LD	LIC	POLARIS, MT	BLDVL20120529ALL	376.1
No	K34QX-D	N9	TX	LIC	ROUNDUP, MT	BLTTTV19970409JB	75.3
No	K09BX-D	D9	LD	LIC	SACO, MT	BLDTV20120514AEY	303.0
No	K09MH-D	D9	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120618ABZ	206.9
No	KDSE	D9	DT	LIC	DICKINSON, ND	BLEDT20090806AAQ	429.1
No	KOPA-CD	D9	DC	CP	GILLETTE, WY	BLANK0000001681	280.5
No	KOPA-CD	D9	DC	LIC	GILLETTE, WY	BLDVL20090807ADG	280.5
No	DK09SF	N9	TX	APP	NORTH FORK, ETC., WY	BLTTTV19830314ID	160.8
Yes	K09XK-D	D9	LD	LIC	SHERIDAN, WY	BLDVL20100907ACE	162.6
Yes	KTVQ	D10	DT	LIC	BILLINGS, MT	BLCDT20060802AYX	10.1
No	K10QZ-D	D10	LD	LIC	ROSEBUD, ETC, MT	BLDTV20120821AAR	151.9
No	KFNE	D10	DT	LIC	RIVERTON, WY	BLCDT20090227AAE	261.4
No	K31PY-D	N11	TX	LIC	ROUNDUP, MT	BLTTTV4858	75.3
No	K35PL-D	N13	TX	LIC	ROUNDUP, MT	BLTTTV4859	75.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D9
Mask: Stringent
Latitude: 45 48 26.00 N (NAD83)
Longitude: 108 20 30.00 W
Height AMSL: 1200.5 m (Adjusted based on actual ground elevation calculation)
HAAT: 0.0 m
Peak ERP: 3.00 kW
Antenna: SAM-SAM-160 (ID 1005900) 270.0 deg
Elev Pattn: Generic

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.003 kW	237.1 m	15.0 km
45.0	0.027	203.0	24.6
90.0	0.059	93.4	20.5
135.0	0.027	110.2	18.4
180.0	0.003	115.8	10.8

225.0	0.677	121.3	38.4
270.0	3.00	206.0	56.7
315.0	0.677	205.7	46.1

Database HAAT does not agree with computed HAAT
 Database HAAT: 0 m Computed HAAT: 162 m

Distance to Canadian border: 354.8 km

Distance to Mexican border: 1553.6 km

Conditions at FCC monitoring station: Grand Island NE
 Bearing: 120.6 degrees Distance: 966.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
 Bearing: 157.2 degrees Distance: 676.7 km

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 BLDTV20120621ABI LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K09YR-D	D9	LD	LIC	HARLOWTON, MT	BLDTV20120621ABI	
Undesireds:	K49MA-D	D9	LD	APP	Billings, MT		121.6 km
	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	229.7
	K09LW-D	D9	LD	LIC	MARTINSDALE/LENNEP, MT	BLDTV20120619ACV	54.9
	Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX

570.8	1,402	542.5	1,398	435.5	895	434.5	895	0.23	0.00
Undesired		Total IX		Unique IX, before		Unique IX, after			
K49MA-D D9 LD APP	1.0	0				1.0		0	
K09LW-D D9 LD LIC	107.0	503		107.0		503		107.0	

Interference to BLDTV20120619ACV LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance	
Desired:	K09LW-D	D9	LD	LIC	MARTINSDALE/LENNEP, MT	BLDTV20120619ACV		
Undesireds:	K49MA-D	D9	LD	APP	Billings, MT		175.2 km	
	K09YR-D	D9	LD	LIC	HARLOWTON, MT	BLDTV20120621ABI	54.9	
	KXLH-LD	D9	LD	LIC	HELENA, MT	BLANK0000067234	106.6	
	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	272.2	
	K09MH-D	D9	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120618ABZ	33.3	
	Service area	Terrain-limited		IX-free, before		IX-free, after		Percent New IX
1130.8	503	1087.3	503	1035.9	502	1033.9	502	0.19 0.00

Undesired		Total IX		Unique IX, before		Unique IX, after	
K49MA-D D9 LD APP	3.0	0				2.0	
K09YR-D D9 LD LIC	49.4	1		49.4		48.4	
KXLH-LD D9 LD LIC	2.0	0		1.0		1.0	
K09MH-D D9 LD LIC	1.0	0		0.0		0.0	

Interference to BLDVL20100907ACE LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K09XK-D	D9	LD	LIC	SHERIDAN, WY	BLDVL20100907ACE	
Undesireds:	K49MA-D	D9	LD	APP	Billings, MT		162.6 km
	K09VL-D	D9	LD	LIC	BOYES & HAMMOND, MT	BLDTV20101103ACG	172.7
	K09BE-D	D9	LD	CP	EKALAKA, MT	BLANK0000013427	245.6
	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	300.8
	KOPA-CD	D9	DC	CP	GILLETTE, WY	BLANK0000001681	132.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
8029.3 30,923	7219.1 29,852	7180.8 29,838	7179.7 29,838	0.01 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K49MA-D D9 LD APP	4.1 0	1.0 0	
K09VL-D D9 LD LIC	25.2 14	12.1 0	
KOPA-CD D9 DC CP	26.2 14	13.1 0	

Interference to BLDVL20100907ACE LIC scenario 2

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: K09XK-D	D9	LD	LIC	SHERIDAN, WY	BLDVL20100907ACE	
Undesireds: K49MA-D	D9	LD	APP	Billings, MT		162.6 km
K09VL-D	D9	LD	LIC	BOYES & HAMMOND, MT	BLDTV20101103ACG	172.7
K09BE-D	D9	LD	CP	EKALAKA, MT	BLANK0000013427	245.6
K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	300.8
KOPA-CD	D9	DC	LIC	GILLETTE, WY	BLDVL20090807ADG	132.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
8029.3 30,923	7219.1 29,852	7170.7 29,826	7169.7 29,826	0.01 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K49MA-D D9 LD APP	4.1 0	1.0 0	
K09VL-D D9 LD LIC	25.2 14	12.1 0	
KOPA-CD D9 DC LIC	36.3 26	23.2 12	

Interference to BLCDT20060802AYX LIC scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KTVQ	D10	DT	LIC	BILLINGS, MT	BLCDT20060802AYX	
Undesireds: K49MA-D	D9	LD	APP	Billings, MT		10.1 km
KFNE	D10	DT	LIC	RIVERTON, WY	BLCDT20090227AAE	257.5
KULR-TV	D11	DT	LIC	BILLINGS, MT	BLCDT20070521AFW	0.8

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
26263.0	179,868	22127.7	173,291	21911.9	173,119	21894.8	173,117	0.08 0.00

Undesired		Total IX		Unique IX, before		Unique IX, after
K49MA-D D9 LD APP	22.2	2		17.2	2	
KFNE D10 DT LIC	204.7	172		203.7	172	
KULR-TV D11 DT LIC	12.1	0		11.1	0	

Interference to proposal scenario 1
6.62% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K49MA-D	D9	LD	APP	Billings, MT		
Undesireds:	K09BE-D	D9	LD	CP	EKALAKA, MT	BLANK00000013427	293.7 km
	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	195.0
	KOPA-CD	D9	DC	CP	GILLETTE, WY	BLANK0000001681	280.5
	K09XK-D	D9	LD	LIC	SHERIDAN, WY	BLDVL20100907ACE	162.6
	KTVQ	D10	DT	LIC	BILLINGS, MT	BLCDT20060802AYX	10.1

Service area		Terrain-limited		IX-free		Percent IX
3340.4	147,364	3233.0	147,262	2972.3	137,515	8.06 6.62

Undesired		Total IX		Unique IX		Prcnt Unique IX
K09XK-D D9 LD LIC	25.0	0		16.0	0	0.49 0.00
KTVQ D10 DT LIC	244.6	9,747		235.6	9,747	7.29 6.62