tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: STJ21d1200wDirIncT, Model: Longley-Rice
Start: 2021.01.28 09:28:50

Study created: 2021.01.28 09:28:49

Study build station data: LMS TV 2021-01-28

    Proposal: K21DG-D D21 LD APP ST. JAMES, MN
 Facility ID: 13838
Station data: User record
   Record ID: 1791
     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	KSMQ-TV	D20	DT	LIC	AUSTIN, MN	BLEDT20081223AAK	173.9 km
No	K20LV-D	D20	LD	CP	BREWSTER, MN	BNPDTL20100510AJH	83.5
No	KMBD-LD	D20	LD	LIC	MINNEAPOLIS, MN	BLANK0000121916	142.7
No	KMBD-LD	D20	LD	CP	MINNEAPOLIS, MN	BLANK0000051629	142.7
No	K20JY-D	D20	LD	LIC	OLIVIA, MN	BLDTT20120213ABM	75.6
No	K20KW-D	D20	LD	CP	SAINT CLOUD, MN	BLANK0000013930	169.3
No	K20LP-D	D20	LD	LIC	ST. JAMES, MN	BLDTL20120625AAR	0.0
No	KABY-LD	D20	LD	LIC	SIOUX FALLS, SD	BLANK0000013894	168.5
No	KGCW	D21	DT	LIC	BURLINGTON, IA	BLANK0000107917	462.7
No	KAJR-LD	D21	LD	LIC	FORT DODGE, IA	BLANK0000072382	278.5
No	KAJR-LD	D21	LD	CP	FORT DODGE, IA	BLANK0000073871	278.5
No	KAJR-LD	D21	LD	LIC	FORT DODGE, IA	BLANK0000106669	278.5
No	KBVK-LP	D21	LD	LIC	SPENCER, IA	BLDTL20130327AAK	99.5
No	K21GN-D	D21	LD	LIC	ALEXANDRIA, MN	BLDTL20120312ACI	213.6
No	K21KZ-D	D21	LD	CP	DULUTH, MN	BNPDTL20090902AAE	328.6
No	K21KR-D	D21	LD	CP	DULUTH, MN	BNPDTL20090825AQR	355.2
Yes	K21KF-D	D21	LD	LIC	FROST, MN	BLDTL20130321ACF	79.0
Yes	K48KJ-D	D21	LD	CP	GENEVA, MN	BLANK0000051972	97.2

No	WUMN-LD	D21	LD	LIC	MINNEAPOLIS, MN	BLANK0000125868	142.6
Yes	K38LC-D	D21	LD	LIC	OLIVIA, MN	BLANK0000063423	75.6
No	K21HX-D	D21	LD	LIC	WALKER, MN	BLDTT20140224ACZ	331.8
No	WDAY-TV	D21	DT	LIC	FARGO, ND	BLCDT20061222ABH	380.6
No	K36QD-D	N21-	TX	LIC	NORFOLK, NE	BLTT20060510AAY	321.6
No	KQMK-LD	D21	LD	LIC	OMAHA, NE	BLANK0000116995	339.0
Yes	KDLT-TV	D21	DT	LIC	SIOUX FALLS, SD	BLANK0000075809	170.7
No	K21LK-D	D21	LD	CP	WENTWORTH, SD	BNPDTL20100505AEK	185.5
No	WEUX	D21	DT	LIC	CHIPPEWA FALLS, WI	BLANK0000078776	250.7
No	W21DC-D	D21	LD	CP	GALESVILLE, WI	BNPDTL20090825CAZ	266.8
No	WIFS	D21	DT	LIC	JANESVILLE, WI	BLANK0000090143	424.1
No	K22LJ-D	D22	LD	CP	MASON CITY, IA	BNPDTL20100723AQR	152.5
No	W22FD-D	D22	LD	CP	DODGE CENTER, MN	BLANK0000071791	141.3
No	K22DO-D	D22	LD	LIC	GRANITE FALLS, MN	BLDTL20110824ACP	109.8
No	K36IV-D	D22	LD	LIC	JACKSON, MN	BLANK0000064091	64.3
No	WUCW	D22	DT	LIC	MINNEAPOLIS, MN	BLCDT20060405AAI	156.8
No	K22KU-D	D22	LD	LIC	REDWOOD FALLS, MN	BLDTT20120604AAW	57.2
No	K22MQ-D	D22	LD	LIC	ST. JAMES, MN	BLANK0000064439	0.0
No	K22LG-D	D22	LD	CP	WELLS, MN	BNPDTL20100510AJO	85.3
No	K44AE-D	D22	LD	LIC	WILLMAR, MN	BLANK0000060754	122.8
No	K22KD-D	D22	LD	CP	SIOUX FALLS, SD	BNPDTL20100111AFI	178.2
No	K22KF-D	D22	LD	CP	WATERTOWN, SD	BNPDTL20100331AFD	212.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

```
    Channel: D21
       Mask: Stringent
   Latitude:  44  6 28.00 N (NAD83)
  Longitude:  94 35 56.00 W
Height AMSL: 495.6 m
       HAAT: 0.0 m
   Peak ERP: 1.20 kW
    Antenna: MCI-955116 (ID 20051) 0.0 deg
Elev Pattrn: Generic
```

49.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.20 kW	185.0 m	37.7 km
45.0	1.04	187.6	37.1
90.0	1.20	184.2	37.6
135.0	1.04	181.6	36.8
180.0	1.20	174.4	37.1
225.0	1.04	169.7	36.1
270.0	1.20	172.7	37.0
315.0	1.04	182.1	36.8

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 180 m

Distance to Canadian border: 488.2 km

Distance to Mexican border: 1702.5 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 222.9 degrees Distance: 473.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 247.0 degrees Distance: 979.0 km

No land mobile station failures found

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 BLDTL20130321ACF LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K21KF-D	D21	LD	LIC	FROST, MN	BLDTL20130321ACF	
Undesireds:	K21DG-D	D21	LD	APP	ST. JAMES, MN		79.0 km
	KAJR-LD	D21	LD	LIC	FORT DODGE, IA	BLANK0000072382	205.1
	K48KJ-D	D21	LD	CP	GENEVA, MN	BLANK0000051972	67.3
	KDLT-TV	D21	DT	LIC	SIOUX FALLS, SD	BLANK0000075809	211.8
	K22LG-D	D22	LD	CP	WELLS, MN	BNPDTL20100510AJO	16.8

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
3546.8	21,065	3546.8	21,065	3489.1	20,890	3450.6	20,810	1.10	0.38

Undesired	Total IX		Unique IX, before		Unique IX, after	
K21DG-D D21 LD APP	38.5	80			38.5	80
K48KJ-D D21 LD CP	22.3	71	22.3	71	22.3	71
KDLT-TV D21 DT LIC	18.1	53	18.1	53	18.1	53
K22LG-D D22 LD CP	17.3	51	17.3	51	17.3	51

Interference to BLANK0000051972 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K48KJ-D	D21	LD	CP	GENEVA, MN	BLANK0000051972	
Undesireds:	K21DG-D	D21	LD	APP	ST. JAMES, MN		97.2 km
	KMBD-LD	D20	LD	LIC	MINNEAPOLIS, MN	BLANK0000121916	103.8
	KAJR-LD	D21	LD	LIC	FORT DODGE, IA	BLANK0000072382	248.0
	K21KF-D	D21	LD	LIC	FROST, MN	BLDTL20130321ACF	67.3
	W22FD-D	D22	LD	CP	DODGE CENTER, MN	BLANK0000071791	45.6

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
4449.0	104,188	4449.0	104,188	4415.6	104,008	4410.6	103,886	0.11	0.12

Undesired	Total IX		Unique IX, before		Unique IX, after	
K21DG-D D21 LD APP	5.0	122			5.0	122
K21KF-D D21 LD LIC	31.4	96	31.4	96	31.4	96

W22FD-D D22 LD CP	2.0	84	2.0	84	2.0	84

Interference to BLANK0000063423 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K38LC-D	D21	LD	LIC	OLIVIA, MN	BLANK0000063423	
Undesireds:	K21DG-D	D21	LD	APP	ST. JAMES, MN		75.6 km
	K22KU-D	D22	LD	LIC	REDWOOD FALLS, MN	BLDTT20120604AAW	24.4

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
1303.7	9,340	1293.7	9,217	1292.7	9,159	1270.7	9,092	1.70	0.73

Undesired	Total IX		Unique IX, before		Unique IX, after	
K21DG-D D21 LD APP	22.0	67			22.0	67
K22KU-D D22 LD LIC	1.0	58	1.0	58	1.0	58

Interference to BLANK0000075809 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KDLT-TV	D21	DT	LIC	SIOUX FALLS, SD	BLANK0000075809	
Undesireds:	K21DG-D	D21	LD	APP	ST. JAMES, MN		170.7 km
	WDAY-TV	D21	DT	LIC	FARGO, ND	BLCDT20061222ABH	392.6

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
44115.1	641,370	43432.7	626,831	43394.7	626,745	42910.1	623,676	1.12	0.49

Undesired	Total IX		Unique IX, before		Unique IX, after	
K21DG-D D21 LD APP	489.5	3,085			484.5	3,069
WDAY-TV D21 DT LIC	38.1	86	38.1	86	33.0	70

Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance

Desired:	K21DG-D	D21	LD	APP	ST. JAMES, MN		
Undesireds:	KAJR-LD	D21	LD	LIC	FORT DODGE, IA	BLANK0000072382	278.5 km
	K48KJ-D	D21	LD	CP	GENEVA, MN	BLANK0000051972	97.2
	K38LC-D	D21	LD	LIC	OLIVIA, MN	BLANK0000063423	75.6
	KDLT-TV	D21	DT	LIC	SIOUX FALLS, SD	BLANK0000075809	170.7

Service area		Terrain-limited		IX-free		Percent IX	
4050.4	48,852	4040.3	48,799	4032.3	48,712	0.20	0.18

Undesired	Total IX		Unique IX		Prcnt Unique IX	
K48KJ-D D21 LD CP	6.0	87	6.0	87	0.15	0.18
K38LC-D D21 LD LIC	1.0	0	1.0	0	0.02	0.00
KDLT-TV D21 DT LIC	1.0	0	1.0	0	0.02	0.00