tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: Redwood35dP, Model: Longley-Rice
Start: 2018.05.03 09:37:33

Study created: 2018.05.03 09:14:08

Study build station data: LMS TV 2018-05-01

    Proposal: K50KF-D D35 LD APP REDWOOD FALLS, MN
 Facility ID: 55449
Station data: User record
   Record ID: 605
     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	K34AF-D	D34	LD	LIC	ALEXANDRIA, MN	BLDTL20120313ABQ	158.3 km
No	K34MP-D	D34	LD	CP	OAKLAND, MN	BNPDTL20100510AJY	179.7
Yes	K34JX-D	D34	LD	LIC	ST. JAMES, MN	BLDTL20091204ADL	57.4
No	KTCA-TV	D34	DT	LIC	ST. PAUL, MN	BLEDT20060802AAO	155.9
No	K34HO-D	D34	LD	LIC	WILLMAR, MN	BLDTL20100122ABL	68.8
No	KUSD-TV	D34	DT	LIC	VERMILLION, SD	BLEDT20100310ABZ	221.4
No	KHIN	D35	DT	LIC	RED OAK, IA	BLANK0000030114	357.1
No	KRIN	D35	DT	LIC	WATERLOO, IA	BLEDT20050218ABQ	352.9
No	K35LK-D	D35	LD	CP	ASHBY, MN	BNPDTL20100505AKT	182.5
No	K35JN-D	D35	LD	LIC	DULUTH, MN	BLDTL20140220ACK	332.6
No	K35JN-D	D35	LD	CP	DULUTH, MN	BPDTL20140626ABA	332.6
No	K35IU-D	D35	LD	LIC	FROST, MN	BLDTT20090730ADE	135.4
Yes	K35DK-D	D35	LD	LIC	GRANITE FALLS, MN	BLDTL20110824ACZ	56.2
No	K35IZ-D	D35	LD	LIC	JACKSON, MN	BLDTT20090811AAV	105.2
Yes	K35KI-D	D35	LD	LIC	ST. JAMES, MN	BLDTL20120625AAV	57.2
Yes	KSTP-TV	D35	DT	APP	ST. PAUL, MN	BLANK0000036053	155.0
No	KSTP-TV	D35	DT	LIC	ST. PAUL, MN	BLCDT20090622ABR	155.0
No	K35KH-D	D35	LD	LIC	WALKER, MN	BLDTT20130719BZI	284.3

No	K48AH-D	D35	LD	APP	WILLMAR, MN	BLANK0000053652	68.8
No	K35KD	N35z	TX	LIC	FARGO, ND	BLTT20070907AEX	276.7
No	K35KD	D35	LD	CP	FARGO, ND	BDFCDTL20120416AAQ	276.7
No	KNEN-LD	D35	LD	LIC	NORFOLK, NE	BLANK0000004598	339.7
No	K35GR-D	D35+	LD	LIC	BADGER, SD	BLANK0000022021	180.2
No	K35GR-D	N35+	TX	LIC	BADGER, SD	BLTT20030610AAT	180.2
No	K35KT-D	D35	LD	CP	ELK POINT, SD	BNPDTL20100505AEU	244.0
No	K35LZ-D	D35	LD	CP	HUMBOLDT, SD	BNPDTL20100510AIK	200.2
No	K35MB-D	D35	LD	CP	KIMBALL, SD	BNPDTL20100510AJA	341.9
No	NEW	D35	LD	APP	SIOUX FALLS, SD	BNPDTL20090825AVQ	221.4
No	K35KS-D	D35	LD	CP	SUMMIT, SD	BNPDTL20100505ADY	187.4
No	WEZY-LP	D35	LD	CP	TOMAH, WI	BDISDTL20120511AEI	356.6
No	K36MF-D	D36	LD	CP	ALBANY, MN	BNPDTL20100505AKK	124.1
No	K36KH-D	D36	LD	LIC	ALEXANDRIA, MN	BLDTT20100819ABB	158.3
No	KAAL	D36	DT	LIC	AUSTIN, MN	BLCDT20091110AAF	219.3
No	K36IV-D	D36	LD	LIC	JACKSON, MN	BLDTL20080505ABE	105.2
No	KMQV-LD	D36	LD	APP	Minneapolis, MN	BLANK0000051663	141.9
Yes	K36KW-D	D36	LD	LIC	REDWOOD FALLS, MN	BLDTT20120604AAT	0.0
No	K50HZ-D	D36	LD	APP	WILLMAR, MN	BLANK0000053380	68.8
No	KWSD	D36	DT	LIC	SIOUX FALLS, SD	BLCDT20100201AFD	173.0
No	KWSD	D36	DT	APP	SIOUX FALLS, SD	BLANK0000035767	173.0
No	K42FI-D	N42+	TX	LIC	WATERTOWN, SD	BLTT20040604ABI	173.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

```
    Channel: D35
       Mask: Stringent
   Latitude:  44 32 58.90 N (NAD83)
  Longitude:  94 58  1.00 W
Height AMSL: 406.3 m
       HAAT: 0.0 m
   Peak ERP: 0.500 kW
    Antenna: Omnidirectional
Elev Pattrn: Generic
```

50.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.500 kW	86.8 m	24.1 km
45.0	0.500	85.0	23.9
90.0	0.500	93.8	25.0
135.0	0.500	124.1	27.8
180.0	0.500	94.4	25.0
225.0	0.500	92.2	24.8
270.0	0.500	121.6	27.6
315.0	0.500	93.5	24.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 99 m

Distance to Canadian border: 449.9 km

Distance to Mexican border: 1735.5 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 216.2 degrees Distance: 492.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 243.4 degrees Distance: 973.0 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 BLDTL20091204ADL LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K34JX-D	D34	LD	LIC	ST. JAMES, MN	BLDTL20091204ADL	
Undesireds:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		57.4 km
	KMZM-LD	D34	LD	LIC	Cedar Rapids, IA	BLANK0000004392	254.7
	KTCA-TV	D34	DT	LIC	ST. PAUL, MN	BLEDT20060802AAO	157.3
	K35KI-D	D35	LD	LIC	ST. JAMES, MN	BLDTL20120625AAV	0.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
6336.7	68,551	6328.6	68,276	6322.6	68,032	6320.6	68,032	0.03	0.00

Undesired	Total IX	Unique IX, before		Unique IX, after	
K50KF-D D35 LD APP	2.0	0		2.0	0
KTCA-TV D34 DT LIC	3.0	167	3.0	167	3.0	167
K35KI-D D35 LD LIC	3.0	77	3.0	77	3.0	77

Interference to BLDTL20110824ACZ LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K35DK-D	D35	LD	LIC	GRANITE FALLS, MN	BLDTL20110824ACZ	
Undesireds:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		56.2 km
	KSTP-TV	D35	DT	APP	ST. PAUL, MN	BLANK0000036053	194.2
	K48AH-D	D35	LD	APP	WILLMAR, MN	BLANK0000053652	58.3
	K35KD	N35z	TX	LIC	FARGO, ND	BLTT20070907AEX	231.4
	K35GR-D	D35+	LD	LIC	BADGER, SD	BLANK0000022021	135.8

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
3077.7	23,909	3074.7	23,909	2874.9	23,421	2798.9	22,972	2.64	1.92

Undesired	Total IX	Unique IX, before		Unique IX, after	
K50KF-D D35 LD APP	75.9	449		75.9	449
K48AH-D D35 LD APP	199.8	488	199.8	488	199.8	488

Interference to BLDTL20120625AAV LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K35KI-D	D35	LD	LIC	ST. JAMES, MN	BLDTL20120625AAV	
Undesireds:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		57.2 km
	K34JX-D	D34	LD	LIC	ST. JAMES, MN	BLDTL20091204ADL	0.3
	K35IZ-D	D35	LD	LIC	JACKSON, MN	BLDTT20090811AAV	64.3
	KSTP-TV	D35	DT	APP	ST. PAUL, MN	BLANK0000036053	156.9
	K35KD	N35z	TX	LIC	FARGO, ND	BLTT20070907AEX	333.8
	K35GR-D	D35+	LD	LIC	BADGER, SD	BLANK0000022021	214.2

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
4171.3	49,178	4165.3	49,150	4093.6	46,729	4042.4	46,553	1.25	0.38

Undesired	Total IX		Unique IX, before		Unique IX, after	
K50KF-D D35 LD APP	54.2	181			51.2	176
K34JX-D D34 LD LIC	17.1	2,216	17.1	2,216	15.1	2,215
K35IZ-D D35 LD LIC	49.6	152	49.6	152	48.6	148
KSTP-TV D35 DT APP	5.0	53	5.0	53	5.0	53

Interference to BLDTL20120625AAV LIC scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K35KI-D	D35	LD	LIC	ST. JAMES, MN	BLDTL20120625AAV	
Undesireds:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		57.2 km
	K34JX-D	D34	LD	LIC	ST. JAMES, MN	BLDTL20091204ADL	0.3
	K35IZ-D	D35	LD	LIC	JACKSON, MN	BLDTT20090811AAV	64.3
	KSTP-TV	D35	DT	LIC	ST. PAUL, MN	BLCDT20090622ABR	156.8
	K35KD	N35z	TX	LIC	FARGO, ND	BLTT20070907AEX	333.8
	K35GR-D	D35+	LD	LIC	BADGER, SD	BLANK0000022021	214.2

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
4171.3	49,178	4165.3	49,150	4093.6	46,729	4042.4	46,553	1.25	0.38

Undesired	Total IX		Unique IX, before		Unique IX, after	
K50KF-D D35 LD APP	54.2	181			51.2	176
K34JX-D D34 LD LIC	17.1	2,216	17.1	2,216	15.1	2,215

K35IZ-D D35 LD LIC	49.6	152	49.6	152	48.6	148
KSTP-TV D35 DT LIC	5.0	53	5.0	53	5.0	53

Interference to BLANK0000036053 APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KSTP-TV	D35	DT	APP	ST. PAUL, MN	BLANK0000036053	
Undesireds:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		155.0 km
	KTCA-TV	D34	DT	LIC	ST. PAUL, MN	BLEDT20060802AAO	1.3
	KRIN	D35	DT	LIC	WATERLOO, IA	BLEDT20050218ABQ	322.1
	KAAL	D36	DT	LIC	AUSTIN, MN	BLCDT20091110AAF	165.1

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
39230.1	3,857,945	38636.2	3,847,596	38504.4	3,845,884	38499.4	3,845,835	0.01	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after	
K50KF-D D35 LD APP	5.0	49			5.0	49
KTCA-TV D34 DT LIC	18.1	185	18.1	185	18.1	185
KRIN D35 DT LIC	50.2	667	41.2	608	41.2	608
KAAL D36 DT LIC	72.5	919	63.4	860	63.4	860

Interference to BLDTT20120604AAT LIC scenario 1
**IX: 2.70% interference caused

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K36KW-D	D36	LD	LIC	REDWOOD FALLS, MN	BLDTT20120604AAT	
Undesireds:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		0.0 km
	KAAL	D36	DT	LIC	AUSTIN, MN	BLCDT20091110AAF	219.3
	KWSD	D36	DT	LIC	SIOUX FALLS, SD	BLCDT20100201AFD	173.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
501.0	7,915	500.0	7,915	499.0	7,915	395.2	7,701	20.82	2.70

Undesired	Total IX	Unique IX, before	Unique IX, after

K50KF-D D35 LD APP	104.9	214				103.9	214		
KAAL D36 DT LIC	1.0	0	1.0	0		0.0	0		

Interference to BLDTT20120604AAT LIC scenario 2
**IX: 2.70% interference caused

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K36KW-D	D36	LD	LIC	REDWOOD FALLS, MN	BLDTT20120604AAT	
Undesireds:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		0.0 km
	KAAL	D36	DT	LIC	AUSTIN, MN	BLCDT20091110AAF	219.3
	KWSD	D36	DT	APP	SIOUX FALLS, SD	BLANK0000035767	173.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
501.0	7,915	500.0	7,915	496.0	7,915	395.2	7,701	20.34	2.70

Undesired	Total IX		Unique IX, before		Unique IX, after	
K50KF-D D35 LD APP	104.9	214			100.9	214
KAAL D36 DT LIC	1.0	0	1.0	0	0.0	0
KWSD D36 DT APP	3.0	0	3.0	0	0.0	0

Interference to proposal scenario 1
**MX: 5.57% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		
Undesireds:	K35DK-D	D35	LD	LIC	GRANITE FALLS, MN	BLDTL20110824ACZ	56.2 km
	K35KI-D	D35	LD	LIC	ST. JAMES, MN	BLDTL20120625AAV	57.2
	KSTP-TV	D35	DT	APP	ST. PAUL, MN	BLANK0000036053	155.0
	K35KD	N35z	TX	LIC	FARGO, ND	BLTT20070907AEX	276.7
	K35GR-D	D35+	LD	LIC	BADGER, SD	BLANK0000022021	180.2

Service area		Terrain-limited		IX-free		Percent IX	
2022.6	13,802	2018.6	13,800	1734.1	13,032	14.09	5.57

Undesired		Total IX		Unique IX	Prcnt Unique IX	
K35DK-D D35 LD LIC	68.9	149	60.9	146	3.02	1.06
K35KI-D D35 LD LIC	207.6	592	204.6	592	10.13	4.29
KSTP-TV D35 DT APP	16.0	30	11.0	27	0.55	0.20

Interference to proposal scenario 2
5.37% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K50KF-D	D35	LD	APP	REDWOOD FALLS, MN		
Undesireds:	K35DK-D	D35	LD	LIC	GRANITE FALLS, MN	BLDTL20110824ACZ	56.2 km
	K35KI-D	D35	LD	LIC	ST. JAMES, MN	BLDTL20120625AAV	57.2
	KSTP-TV	D35	DT	LIC	ST. PAUL, MN	BLCDT20090622ABR	155.0
	K35KD	N35z	TX	LIC	FARGO, ND	BLTT20070907AEX	276.7
	K35GR-D	D35+	LD	LIC	BADGER, SD	BLANK0000022021	180.2

Service area		Terrain-limited		IX-free		Percent IX	
2022.6	13,802	2018.6	13,800	1743.1	13,059	13.65	5.37

Undesired		Total IX		Unique IX	Prcnt Unique IX	
K35DK-D D35 LD LIC	68.9	149	62.9	149	3.12	1.08
K35KI-D D35 LD LIC	207.6	592	204.6	592	10.13	4.29
KSTP-TV D35 DT LIC	5.0	0	2.0	0	0.10	0.00