# INTERFERENCE ANALYSIS FOR PROPOSED KQFX-LD, COLUMBIA, MO (CHANNEL 22)
## (CELL SIZE = 0.5 KM / PROFILE POINT SPACING = 0.1 KM)

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tvstudy v2.2.5 (4uoc83)
Database: localhost,  Study: kqfx_p24b,  Model: Longley-Rice

Study build station data: LMS TV 2019-11-11

    Proposal: KQFX_P24B D22 LD APP COLUMBIA, MO
 File number: kqfx_p24b
 Facility ID: 56176
Station data: User record
   Record ID: 4183
     Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

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   WMEC      D21        DT  LIC     MACOMB, IL               BLEDT20031031ADO       238.7 km
No   WPXS      D21        DT  LIC     MOUNT VERNON, IL         BLCDT20081103AAG       260.0
Yes  KTAJ-TV   D21        DT  LIC     ST. JOSEPH, MO           BLCDT20060703AAK       171.5
No   K22HS-D   D22        LD  LIC     EUREKA SPRINGS, AR       BLDTL20110517ADA       288.2
No   K22OC-D   D22        LD  CP      FORT SMITH, AR           BLANK0000071940        392.9
No   KJNE-LD   D22z       LD  LIC     JONESBORO, AR            BLANK0000055090        361.2
No   KATV      D22        DT  LIC     LITTLE ROCK, AR          BLCDT20090225AAV       442.3
No   KPXR-TV   D22        DT  LIC     CEDAR RAPIDS, IA         BLANK0000063428        395.3
No   WBUI      D22        DT  LIC     DECATUR, IL              BLCDT20091119ACF       345.2
Yes  WVDM-LD   D22        LD  LIC     QUINCY, IL               BLANK0000083846        142.4
No   WTVW      D22        DT  LIC     EVANSVILLE, IN           BLANK0000087257        460.1
No   K22KX-D   D22        LD  CP      EMPORIA, KS              BNPDTL20100930ARN      312.6
No   KMJC-LD   D22        LD  LIC     Kansas City, KS          BLANK0000016622        180.3
No   K40IJ-D   D22        LD  CP      TOPEKA, KS               BLANK0000030155        279.2
No   K22OF-D   D22        LD  CP      CAPE GIRARDEAU, MO       BLANK0000071880        281.1
No   KBSI      D22        DT  LIC     CAPE GIRARDEAU, MO       BLCDT20110608ABZ       302.9
Yes  KRBK      D22        DT  LIC     OSAGE BEACH, MO          BLANK0000063419        176.4
No   WOWT      D22        DT  LIC     OMAHA, NE                BLCDT20110509AAN       408.1
No   KOKI-TV   D22        DT  LIC     TULSA, OK                BLCDT20021127AGL       411.5
Yes  K23MK-D   D23        LD  CP      COLUMBIA, MO             BNPDTL20100423ACE       31.7
No   KODE-TV   D23        DT  LIC     JOPLIN, MO               BLANK0000071606        257.6
No   KCDN-LD   D23        LD  CP      KANSAS CITY, MO          BLANK0000051767        171.5
Yes  K23PC-D   D23        LD  CP      ROLLA, MO                BLANK0000071816        112.5
Yes  K23LE-D   D23        LD  CP      SEDALIA, MO              BNPDTL20100319AEZ       65.8
Yes  KOZK      D23        DT  LIC     SPRINGFIELD, MO          BLEDT20030911AAS       181.7
No   KETC      D23        DT  LIC     ST. LOUIS, MO            BLANK0000055432        190.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

    Channel: D22
       Mask: Simple
   Latitude:  38 46 32.10 N (NAD83)
  Longitude:  92 33 24.90 W
Height AMSL: 575.6 m
       HAAT: 352.0 m
   Peak ERP: 10.0 kW
    Antenna: RFS-RD24OM488548L3S 0.0 deg
Elev Pattrn: Generic
  Elec Tilt: 0.75

49.6 dBu contour:
Azimuth      ERP       HAAT   Distance
  0.0 deg   5.87 kW   356.6 m   55.1 km
 45.0       9.27      357.6     57.6
 90.0       9.45      360.5     57.8
135.0       6.35      381.2     56.6
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180.0       3.67      351.5     52.3
225.0       4.56      345.1     53.2
270.0       4.73      321.7     52.2
315.0       3.65      341.4     51.8

Distance to Canadian border: 873.6 km

Distance to Mexican border: 1287.6 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 297.3 degrees   Distance: 554.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 281.8 degrees   Distance: 1096.6 km


Study cell size: 0.50 km (Higher resolution cell size requested.)
Profile point spacing: 0.10 km (Higher resolution terrain profile point spacing requested.)

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


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Interference to BLCDT20060703AAK LIC scenario 1

             Call      Chan  Svc Status  City, State              File Number             Distance
Desired:     KTAJ-TV   D21   DT  LIC     ST. JOSEPH, MO           BLCDT20060703AAK

Undesireds:  KQFX_P24B D22   LD  APP     COLUMBIA, MO             kqfx_p24b               171.5 km
             KTMJ-CD   D20   DC  CP      TOPEKA, KS               BLANK0000072852         121.2

        Service area       Terrain-limited       IX-free, before        IX-free, after    Percent New IX
 27316.3   2,343,571   27092.0   2,340,861   27062.4   2,339,979   27062.2   2,339,979     0.00      0.00

Undesired                        Total IX     Unique IX, before      Unique IX, after
KQFX_P24B D22 LD APP       0.2           0                            0.2           0
KTMJ-CD D20 DC CP         29.6         882      29.6         882      29.6         882

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Interference to BLANK0000083846 LIC scenario 1

             Call      Chan  Svc Status  City, State              File Number             Distance
Desired:     WVDM-LD   D22   LD  LIC     QUINCY, IL               BLANK0000083846

Undesireds:  KQFX_P24B D22   LD  APP     COLUMBIA, MO             kqfx_p24b               142.4 km
             WBUI      D22   DT  LIC     DECATUR, IL              BLCDT20091119ACF        202.8
             KRBK      D22   DT  LIC     OSAGE BEACH, MO          BLANK0000063419         282.3
             KETC      D23   DT  LIC     ST. LOUIS, MO            BLANK0000055432         102.9

        Service area       Terrain-limited       IX-free, before        IX-free, after    Percent New IX
  5862.6      86,477    5556.4      84,868    5533.8      83,753    5532.8      83,751     0.02      0.00

Undesired                        Total IX     Unique IX, before      Unique IX, after
KQFX_P24B D22 LD APP       1.0           2                            1.0           2
WBUI D22 DT LIC           16.8         579      14.8         579      14.8         579
KRBK D22 DT LIC            7.2         536       5.0         284       5.0         284
KETC D23 DT LIC            2.0         252       0.2           0       0.2           0

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Interference to BLANK0000063419 LIC scenario 1

             Call      Chan  Svc Status  City, State              File Number             Distance
Desired:     KRBK      D22   DT  LIC     OSAGE BEACH, MO          BLANK0000063419

Undesireds:  KQFX_P24B D22   LD  APP     COLUMBIA, MO             kqfx_p24b               176.4 km
             KATV      D22   DT  LIC     LITTLE ROCK, AR          BLCDT20090225AAV        272.4
             KOKI-TV   D22   DT  LIC     TULSA, OK                BLCDT20021127AGL        277.2
             KODE-TV   D23   DT  LIC     JOPLIN, MO               BLANK0000071606         143.1
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## (CELL SIZE = 0.5 KM / PROFILE POINT SPACING = 0.1 KM)

| Service area | | Terrain-limited | | IX-free, before | | IX-free, after | | Percent New IX |
|---|---|---|---|---|---|---|---|---|
| 41520.6 | 983,570 | 40926.5 | 966,942 | 40297.5 | 947,197 | 40021.1 | 942,574 | 0.69 | 0.49 |

| Undesired | | Total IX | | Unique IX, before | | Unique IX, after | |
|---|---|---|---|---|---|---|---|
| KQFX_P24B D22 LD APP | 276.6 | 4,625 | | | | 276.4 | 4,623 |
| KATV D22 DT LIC | 230.3 | 7,785 | | 215.4 | 6,190 | 215.4 | 6,190 |
| KOKI-TV D22 DT LIC | 253.5 | 11,664 | | 67.3 | 1,734 | 67.3 | 1,734 |
| KODE-TV D23 DT LIC | 338.5 | 11,087 | | 159.9 | 1,891 | 159.9 | 1,891 |

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Interference to BNPDTL20100423ACE CP scenario 1

| | Call | Chan | Svc | Status | City, State | File Number | Distance |
|---|---|---|---|---|---|---|---|
| Desired: | K23MK-D | D23 | LD | CP | COLUMBIA, MO | BNPDTL20100423ACE | |
| Undesireds: | KQFX_P24B | D22 | LD | APP | COLUMBIA, MO | kqfx_p24b | 31.7 km |
| | WQPT-TV | D23 | DT | CP | MOLINE, IL | BLANK0000035678 | 307.4 |
| | KODE-TV | D23 | DT | LIC | JOPLIN, MO | BLANK0000071606 | 289.1 |
| | K23MS-D | D23 | LD | LIC | Kansas city, MO | BLANK0000058560 | 330.2 |
| | K23PC-D | D23 | LD | CP | ROLLA, MO | BLANK0000071816 | 118.0 |
| | KETC | D23 | DT | LIC | ST. LOUIS, MO | BLANK0000055432 | 170.8 |
| | K24JY-D | D24 | LD | CP | COLUMBIA, MO | BLANK0000001277 | 18.4 |

| Service area | | Terrain-limited | | IX-free, before | | IX-free, after | | Percent New IX |
|---|---|---|---|---|---|---|---|---|
| 3117.2 | 173,236 | 3046.8 | 173,039 | 2958.5 | 172,083 | 2672.4 | 169,495 | 9.67 | 1.50 |

| Undesired | | Total IX | | Unique IX, before | | Unique IX, after | |
|---|---|---|---|---|---|---|---|
| KQFX_P24B D22 LD APP | 346.7 | 2,883 | | | | 286.1 | 2,588 |
| KODE-TV D23 DT LIC | 0.2 | 0 | | 0.0 | 0 | 0.0 | 0 |
| K23PC-D D23 LD CP | 1.0 | 16 | | 0.2 | 0 | 0.2 | 0 |
| KETC D23 DT LIC | 57.5 | 55 | | 56.7 | 55 | 19.2 | 15 |
| K24JY-D D24 LD CP | 31.0 | 901 | | 30.0 | 885 | 8.0 | 646 |

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Interference to BLANK0000071816 CP scenario 1

| | Call | Chan | Svc | Status | City, State | File Number | Distance |
|---|---|---|---|---|---|---|---|
| Desired: | K23PC-D | D23 | LD | CP | ROLLA, MO | BLANK0000071816 | |
| Undesireds: | KQFX_P24B | D22 | LD | APP | COLUMBIA, MO | kqfx_p24b | 112.5 km |
| | K23MK-D | D23 | LD | CP | COLUMBIA, MO | BNPDTL20100423ACE | 118.0 |
| | KODE-TV | D23 | DT | LIC | JOPLIN, MO | BLANK0000071606 | 263.5 |
| | KETC | D23 | DT | LIC | ST. LOUIS, MO | BLANK0000055432 | 134.0 |

| Service area | | Terrain-limited | | IX-free, before | | IX-free, after | | Percent New IX |
|---|---|---|---|---|---|---|---|---|
| 6717.9 | 133,315 | 6544.7 | 132,142 | 6341.8 | 129,480 | 6341.0 | 129,480 | 0.01 | 0.00 |

| Undesired | | Total IX | | Unique IX, before | | Unique IX, after | |
|---|---|---|---|---|---|---|---|
| KQFX_P24B D22 LD APP | 1.5 | 2 | | | | 0.8 | 0 |
| K23MK-D D23 LD CP | 0.8 | 0 | | 0.5 | 0 | 0.5 | 0 |
| KODE-TV D23 DT LIC | 8.8 | 11 | | 3.0 | 6 | 3.0 | 6 |
| KETC D23 DT LIC | 199.1 | 2,656 | | 193.6 | 2,651 | 193.1 | 2,651 |

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Interference to BNPDTL20100319AEZ CP scenario 1

| | Call | Chan | Svc | Status | City, State | File Number | Distance |
|---|---|---|---|---|---|---|---|
| Desired: | K23LE-D | D23 | LD | CP | SEDALIA, MO | BNPDTL20100319AEZ | |
| Undesireds: | KQFX_P24B | D22 | LD | APP | COLUMBIA, MO | kqfx_p24b | 65.8 km |
| | K23MK-D | D23 | LD | CP | COLUMBIA, MO | BNPDTL20100423ACE | 96.1 |
| | KODE-TV | D23 | DT | LIC | JOPLIN, MO | BLANK0000071606 | 202.0 |
| | KCDN-LD | D23 | LD | CP | KANSAS CITY, MO | BLANK0000051767 | 117.6 |
| | K23MS-D | D23 | LD | LIC | Kansas city, MO | BLANK0000058560 | 253.9 |

| Service area | | Terrain-limited | | IX-free, before | | IX-free, after | | Percent New IX |
|---|---|---|---|---|---|---|---|---|
| 3306.9 | 64,020 | 3265.5 | 63,809 | 3218.5 | 63,171 | 3216.3 | 63,154 | 0.07 | 0.03 |

| Undesired | | Total IX | | Unique IX, before | | Unique IX, after | |
|---|---|---|---|---|---|---|---|
| KQFX_P24B D22 LD APP | 2.5 | 133 | | | | 2.2 | 17 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| K23MK-D D23 LD CP | 0.2 | 0 | 0.0 | 0 | 0.0 | 0 |
| KODE-TV D23 DT LIC | 30.0 | 300 | 24.5 | 243 | 24.2 | 127 |
| KCDN-LD D23 LD CP | 22.2 | 395 | 17.0 | 338 | 17.0 | 338 |

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Interference to BLEDT20030911AAS LIC scenario 1

| | Call | Chan | Svc | Status | City, State | File Number | Distance |
|---|---|---|---|---|---|---|---|
| Desired: | KOZK | D23 | DT | LIC | SPRINGFIELD, MO | BLEDT20030911AAS | |
| Undesireds: | KQFX_P24B | D22 | LD | APP | COLUMBIA, MO | kqfx_p24b | 181.7 km |
| | KRBK | D22 | DT | LIC | OSAGE BEACH, MO | BLANK0000063419 | 5.5 |
| | KODE-TV | D23 | DT | LIC | JOPLIN, MO | BLANK0000071606 | 143.3 |
| | KETC | D23 | DT | LIC | ST. LOUIS, MO | BLANK0000055432 | 266.7 |
| | WTWV | D23 | DT | LIC | MEMPHIS, TN | BLANK0000048888 | 355.0 |

| Service area | | Terrain-limited | | IX-free, before | | IX-free, after | | Percent New IX |
|---|---|---|---|---|---|---|---|---|
| 33533.0 | 835,755 | 33230.1 | 831,395 | 29976.5 | 771,557 | 29976.5 | 771,557 | 0.00 |

| Undesired | Total IX | | Unique IX, before | | Unique IX, after | |
|---|---|---|---|---|---|---|
| KQFX_P24B D22 LD APP | 0.3 | 5 | | | 0.0 | 0 |
| KRBK D22 DT LIC | 207.8 | 3,731 | 171.9 | 3,281 | 171.9 | 3,281 |
| KODE-TV D23 DT LIC | 3029.5 | 56,016 | 2901.6 | 53,641 | 2901.6 | 53,641 |
| KETC D23 DT LIC | 122.1 | 2,192 | 41.6 | 332 | 41.6 | 332 |
| WTWV D23 DT LIC | 29.3 | 302 | 8.8 | 209 | 8.8 | 209 |

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Interference to proposal scenario 1
3.19% interference received

| | Call | Chan | Svc | Status | City, State | File Number | Distance |
|---|---|---|---|---|---|---|---|
| Desired: | KQFX_P24B | D22 | LD | APP | COLUMBIA, MO | kqfx_p24b | |
| Undesireds: | WVDM-LD | D22 | LD | LIC | QUINCY, IL | BLANK0000083846 | 142.4 km |
| | KRBK | D22 | DT | LIC | OSAGE BEACH, MO | BLANK0000063419 | 176.4 |
| | K23MK-D | D23 | LD | CP | COLUMBIA, MO | BNPDTL20100423ACE | 31.7 |
| | K23LE-D | D23 | LD | CP | SEDALIA, MO | BNPDTL20100319AEZ | 65.8 |

| Service area | | Terrain-limited | | IX-free | | Percent IX | |
|---|---|---|---|---|---|---|---|
| 9364.6 | 338,894 | 9286.7 | 337,942 | 9058.1 | 327,175 | 2.46 | 3.19 |

| Undesired | Total IX | | Unique IX | | Prcnt Unique IX | |
|---|---|---|---|---|---|---|
| WVDM-LD D22 LD LIC | 0.2 | 0 | 0.2 | 0 | 0.00 | 0.00 |
| KRBK D22 DT LIC | 219.9 | 7,044 | 219.4 | 7,039 | 2.36 | 2.08 |
| K23MK-D D23 LD CP | 5.7 | 3,658 | 5.7 | 3,658 | 0.06 | 1.08 |
| K23LE-D D23 LD CP | 3.3 | 70 | 2.8 | 65 | 0.03 | 0.02 |

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