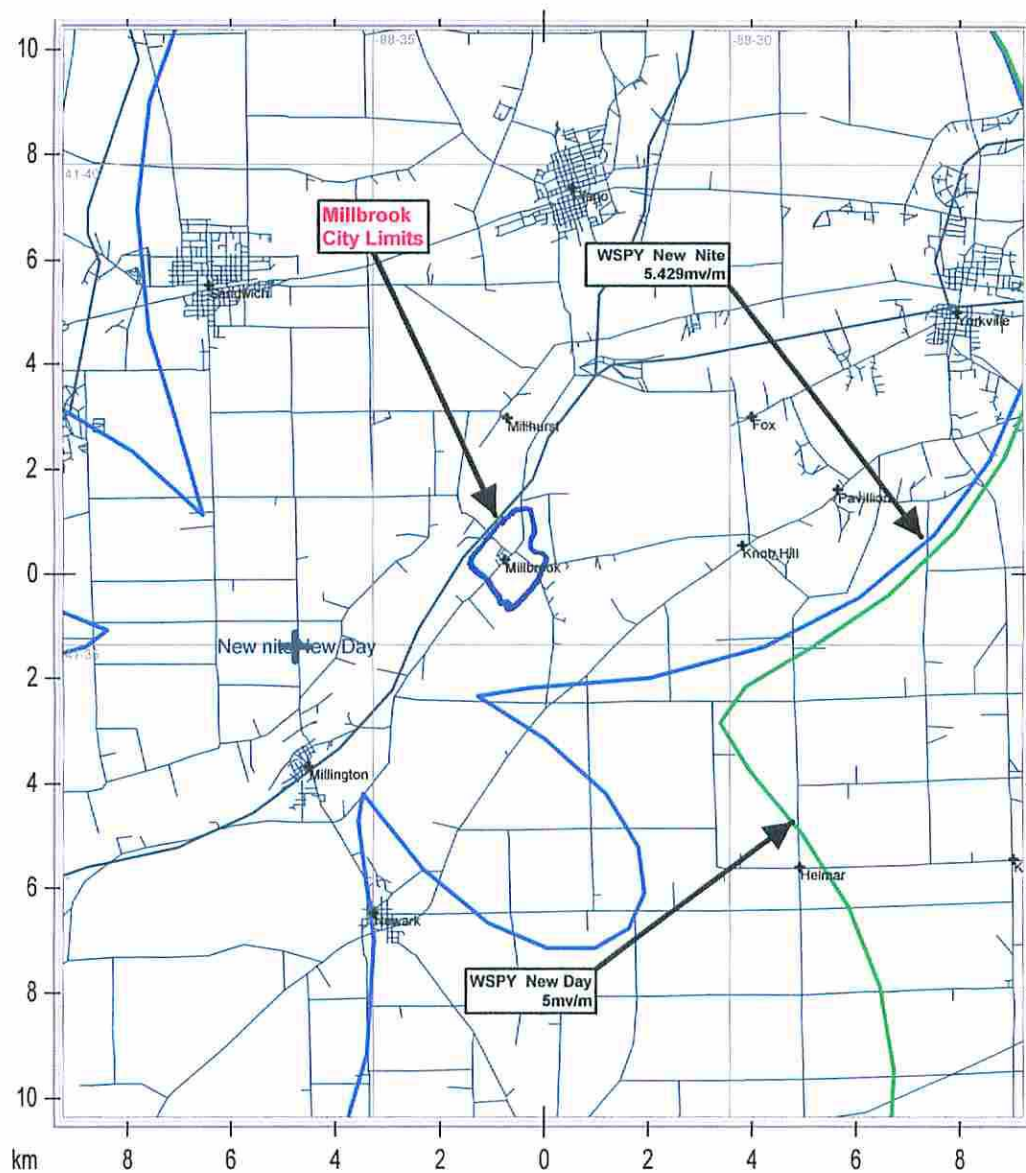
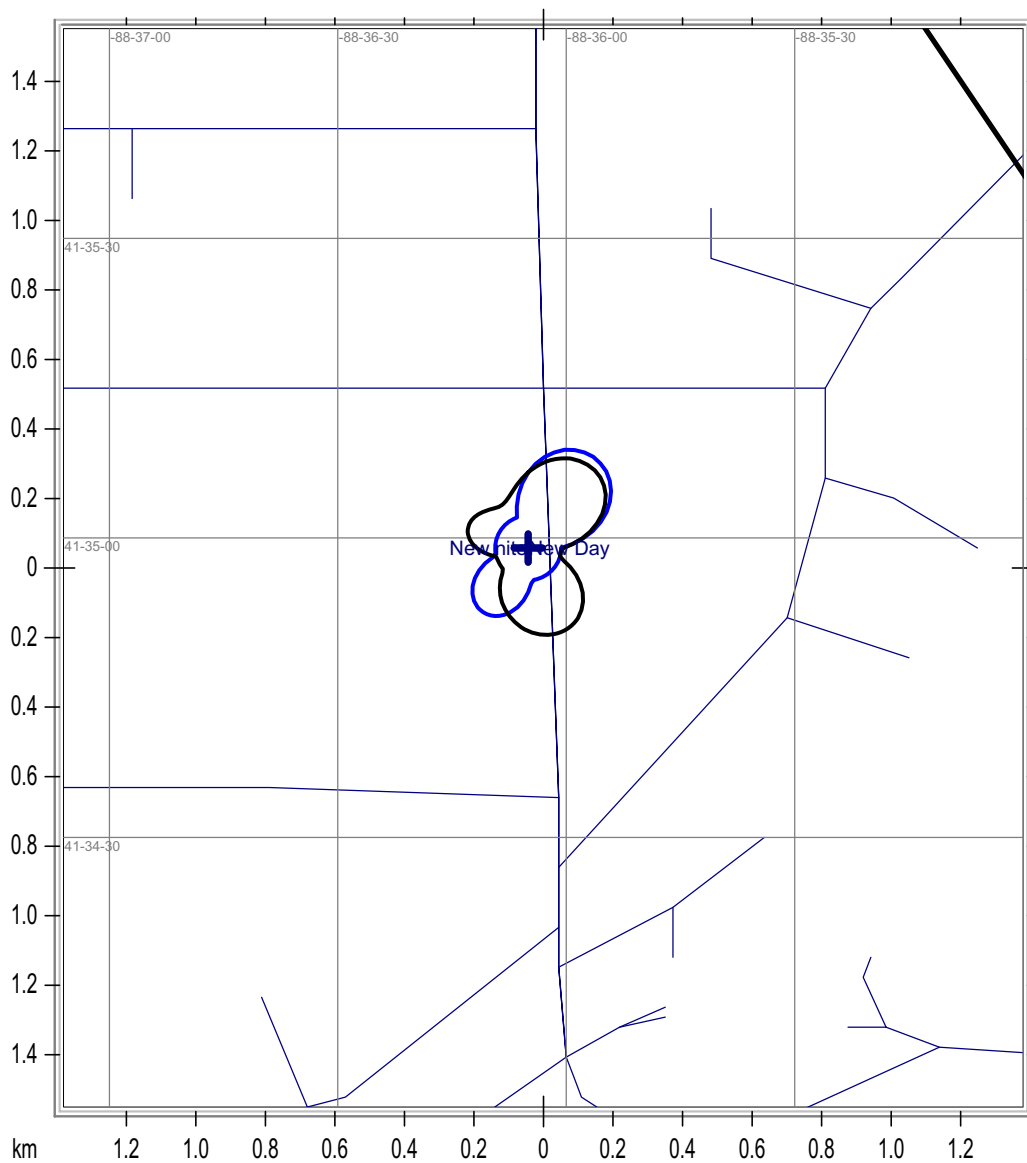


## Millbrook, IL City Grade Coverage Map



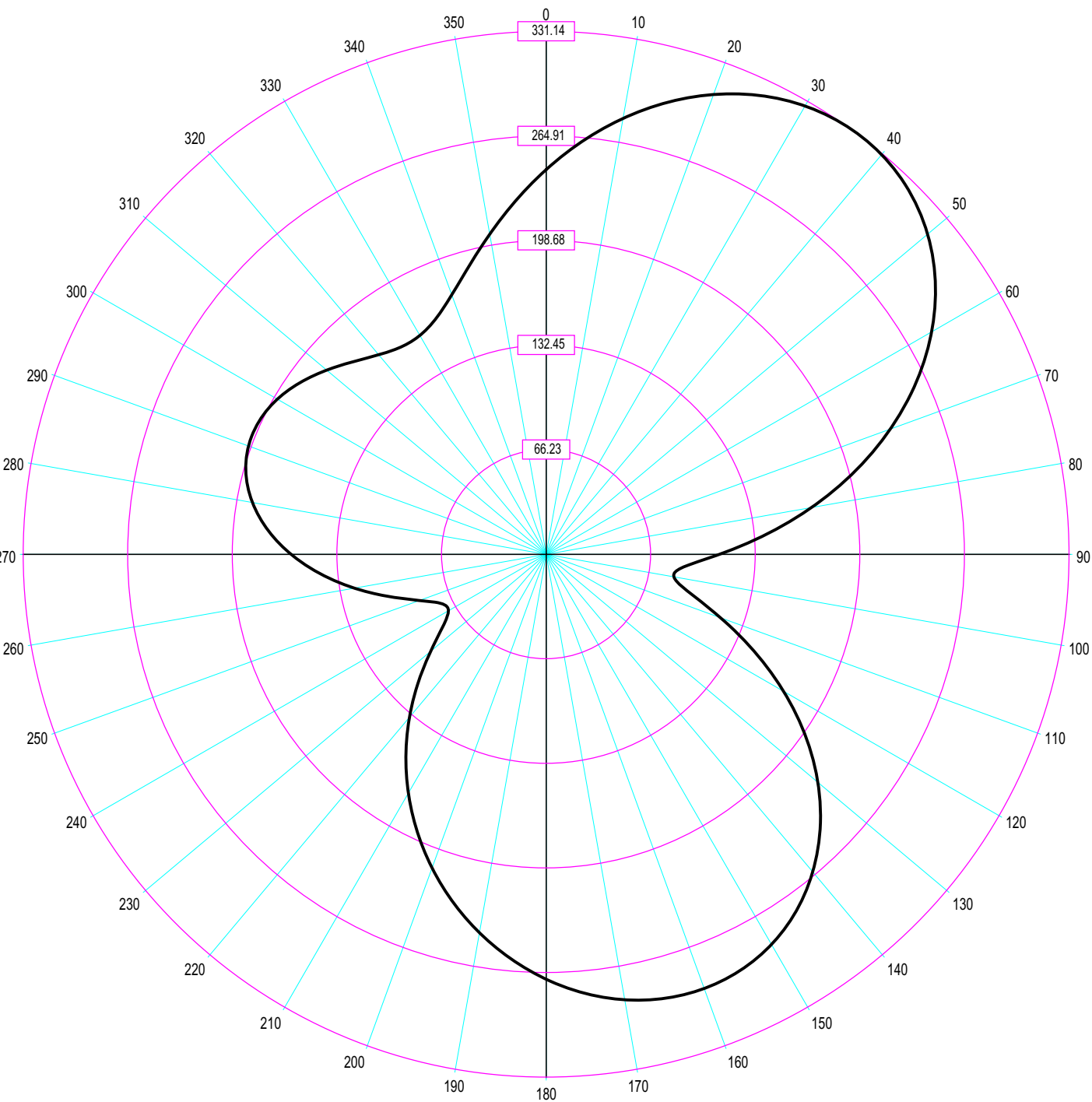
State Borders    Water Features    Streets    Lat/Lon Grid

## Millbrook, IL 1 v/M Coverage Map



Black = Day , Blue = Nite

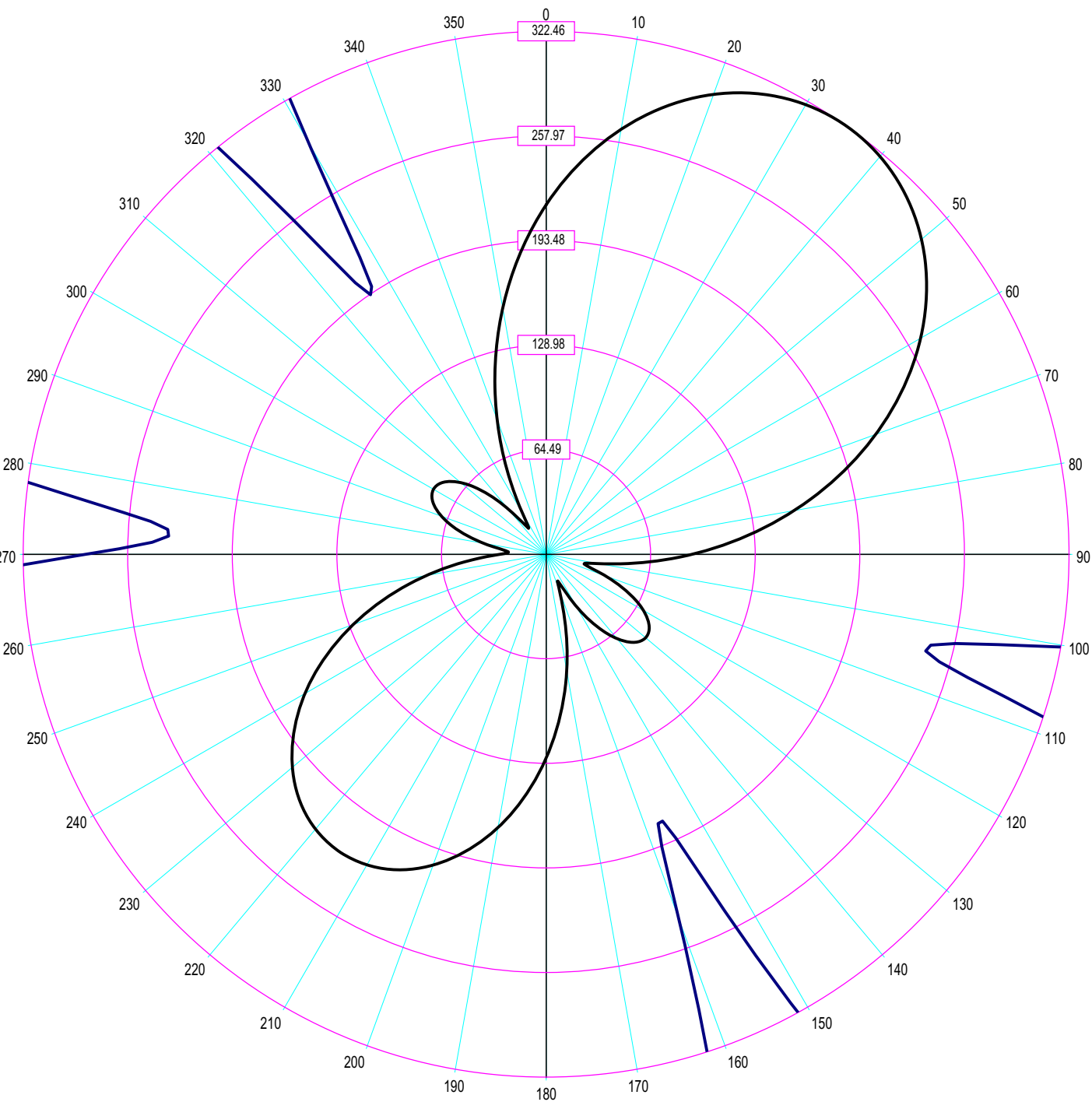
State Borders Highways Streets Lat/Lon Grid



Callsign	: New Day	T#	Field	Phase	Spacing	Orientation	Height	Top Load	Tower Ref
Frequency	: 1480 kHz	1	1.000	0.0	0.0	0.0	75.8	0.0	0
Power	: 0.400 kw	2	0.533	226.9	74.5	37.1	70.4	0.0	0
ERSS	: 219.4 mV/m/km	3	1.309	98.6	150.4	35.0	86.7	0.0	0
Theoret. Pattern RMS	: 206.9 mV/m/km	4	1.055	249.3	118.3	105.1	86.7	0.0	0
Standard Pattern RMS	: 217.5 mV/m/km								
Modified Pattern RMS	:								
Latitude	: 41-34-59.0 N								
Longitude	: 88-36-05.0 W								
Number Augmentations	: 0								

Azim	Field [mV/m]
0.0	243.595
5.0	262.468
10.0	280.232
15.0	296.211
20.0	309.807
25.0	320.476
30.0	327.728
35.0	331.135
40.0	330.344
45.0	325.091
50.0	315.230
55.0	300.748
60.0	281.783
65.0	258.649
70.0	231.853
75.0	202.138
80.0	170.578
85.0	138.807
90.0	109.615
95.0	88.174
100.0	82.071
105.0	94.014
110.0	117.430
115.0	145.248
120.0	173.556
125.0	200.350
130.0	224.510
135.0	245.372
140.0	262.547
145.0	275.840
150.0	285.209
155.0	290.734
160.0	292.593
165.0	291.039
170.0	286.376
175.0	278.937
180.0	269.063
185.0	257.081
190.0	243.290
195.0	227.944
200.0	211.256

Azim	Field [mV/m]
205.0	193.393
210.0	174.510
215.0	154.792
220.0	134.543
225.0	114.349
230.0	95.372
235.0	79.858
240.0	71.471
245.0	73.559
250.0	85.456
255.0	103.253
260.0	123.325
265.0	143.265
270.0	161.495
275.0	176.931
280.0	188.833
285.0	196.754
290.0	200.533
295.0	200.298
300.0	196.479
305.0	189.817
310.0	181.373
315.0	172.526
320.0	164.911
325.0	160.248
330.0	159.987
335.0	164.885
340.0	174.794
345.0	188.830
350.0	205.772
355.0	224.390



Callsign	: New nite	T#	Field	Phase	Spacing	Orientation	Height	Top Load	Tower Ref
Frequency	: 1480 kHz	1	1.000	0.0	0.0	0.0	75.8	0.0	0
Power	: 0.300 kw	2	1.638	186.2	74.5	37.1	70.4	0.0	0
ERSS	: 488.1 mV/m/km	3	0.958	12.6	150.4	35.0	86.7	0.0	0
Theoret. Pattern RMS	: 159.0 mV/m/km	4	0.000	0.0	0.0	0.0	90.0	0.0	0
Standard Pattern RMS	: 167.4 mV/m/km								
Modified Pattern RMS	:								
Latitude	: 41-34-59.0 N								
Longitude	: 88-36-05.0 W								
Number Augmentations	: 0								

Azim	Field [mV/m]
0.0	215.526
5.0	242.469
10.0	266.099
15.0	285.967
20.0	301.738
25.0	313.170
30.0	320.107
35.0	322.459
40.0	320.197
45.0	313.351
50.0	302.011
55.0	286.337
60.0	266.570
65.0	243.050
70.0	216.230
75.0	186.695
80.0	155.175
85.0	122.563
90.0	89.978
95.0	59.004
100.0	33.119
105.0	24.730
110.0	38.675
115.0	55.729
120.0	69.226
125.0	77.525
130.0	80.060
135.0	76.749
140.0	67.871
145.0	54.084
150.0	36.698
155.0	20.134
160.0	23.874
165.0	46.518
170.0	72.907
175.0	99.713
180.0	125.586
185.0	149.597
190.0	171.017
195.0	189.269
200.0	203.906

Azim	Field [mV/m]
205.0	214.600
210.0	221.125
215.0	223.351
220.0	221.234
225.0	214.821
230.0	204.244
235.0	189.734
240.0	171.625
245.0	150.375
250.0	126.580
255.0	101.005
260.0	74.665
265.0	49.147
270.0	28.384
275.0	24.862
280.0	39.120
285.0	55.448
290.0	68.681
295.0	77.195
300.0	80.212
305.0	77.385
310.0	68.733
315.0	54.697
320.0	36.570
325.0	20.291
330.0	29.320
335.0	56.680
340.0	88.331
345.0	121.290
350.0	154.147
355.0	185.848

# Millbrook day & nite pattern data Jan 08

Callsign : New nite  
 Coordinates : 41-34-59.0 N, 88-36-05.0 W  
 Comments :  
 Frequency (KHz): 1480  
 Power (w): 300.000  
 Pattern : AD  
 Efficiency : 159.000 mV/M  
 Desc : DA2  
 City/State : Millbrook, IL  
 ARN :  
 Licensee : NELSON MULTIMEDIA, INC.

Tower	Field	Phase	Spcng	Ornt	Hght	TopLd
1	1.000	0.0	0.0	0.0	75.8	0.0
2	1.638	186.2	74.5	37.1	70.4	0.0
3	0.958	12.6	150.4	35.0	86.7	0.0
4	0.000	0.0	0.0	0.0	90.0	0.0

Brng	Span	mV/M
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## Field

Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m
0	215.526	75	186.695	150	36.698	225	214.821	300	80.212
5	242.469	80	155.175	155	20.134	230	204.244	305	77.385
10	266.099	85	122.563	160	23.874	235	189.734	310	68.733
15	285.967	90	89.978	165	46.518	240	171.625	315	54.697
20	301.738	95	59.004	170	72.907	245	150.375	320	36.570
25	313.170	100	33.119	175	99.713	250	126.580	325	20.291
30	320.107	105	24.730	180	125.586	255	101.005	330	29.320
35	322.459	110	38.675	185	149.597	260	74.665	335	56.680
40	320.197	115	55.729	190	171.017	265	49.147	340	88.331
45	313.351	120	69.226	195	189.269	270	28.384	345	121.290
50	302.011	125	77.525	200	203.906	275	24.862	350	154.147
55	286.337	130	80.060	205	214.600	280	39.120	355	185.848
60	266.570	135	76.749	210	221.125	285	55.448		
65	243.050	140	67.871	215	223.351	290	68.681		
70	216.230	145	54.084	220	221.234	295	77.195		

0.0 ohm K	: 290.806	1.0 ohm K	: 227.554
RMSS	: 167.441	RMSt	: 159.000
RSS	: 488.092		

Contour type : Ground Wave  
 Signal strength : 5.429 mV/m  
 Area covered : 378.100 sq. km  
 Population covered: 29712 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	215.53	5.429	14.11
5	242.47	5.429	15.03
10	266.10	5.429	15.78
15	285.97	5.429	16.38
20	301.74	5.429	16.84
25	313.17	5.429	17.17
30	320.11	5.429	17.36
35	322.46	5.429	17.42
40	320.20	5.429	17.36
45	313.35	5.429	17.17
50	302.01	5.429	16.85

Millbrook day & nite pattern data Jan 08

55	286.34	5.429	16.39
60	266.57	5.429	15.80
65	243.05	5.429	15.05
70	216.23	5.429	14.13
75	186.70	5.429	13.03
80	155.17	5.429	11.73
85	122.56	5.429	10.21
90	89.98	5.429	8.43
95	59.00	5.429	6.36
100	33.12	5.429	4.18
105	24.73	5.429	3.33
110	38.67	5.429	4.70
115	55.73	5.429	6.11
120	69.23	5.429	7.09
125	77.52	5.429	7.65
130	80.06	5.429	7.82
135	76.75	5.429	7.60
140	67.87	5.429	7.00
145	54.08	5.429	5.99
150	36.70	5.429	4.52
155	20.13	5.429	2.82
160	23.87	5.429	3.24
165	46.52	5.429	5.38
170	72.91	5.429	7.35
175	99.71	5.429	8.99
180	125.59	5.429	10.36
185	149.60	5.429	11.49
190	171.02	5.429	12.40
195	189.27	5.429	13.13
200	203.91	5.429	13.69
205	214.60	5.429	14.07
210	221.13	5.429	14.30
215	223.35	5.429	14.38
220	221.23	5.429	14.30
225	214.82	5.429	14.08
230	204.24	5.429	13.70
235	189.73	5.429	13.15
240	171.63	5.429	12.43
245	150.38	5.429	11.52
250	126.58	5.429	10.41
255	101.00	5.429	9.07
260	74.67	5.429	7.46
265	49.15	5.429	5.59
270	28.38	5.429	3.71
275	24.86	5.429	3.34
280	39.12	5.429	4.74
285	55.45	5.429	6.09
290	68.68	5.429	7.06
295	77.19	5.429	7.63
300	80.21	5.429	7.83
305	77.39	5.429	7.64
310	68.73	5.429	7.06
315	54.70	5.429	6.04
320	36.57	5.429	4.51
325	20.29	5.429	2.84
330	29.32	5.429	3.81
335	56.68	5.429	6.19
340	88.33	5.429	8.33
345	121.29	5.429	10.15
350	154.15	5.429	11.69
355	185.85	5.429	13.00



# Millbrook day & nite pattern data Jan 08

Callsign : New Day  
 Coordinates : 41-34-59.0 N, 88-36-05.0 W  
 Comments :  
 Frequency (KHz): 1480  
 Power (w): 400.000  
 Pattern : AD  
 Efficiency : 206.936 mV/M  
 Desc : DA2  
 City/State : Millbrook, IL  
 ARN :  
 Licensee : NELSON MULTIMEDIA, INC.

Tower	Field	Phase	Spcng	Ornt	Hght	TopLd
1	1.000	0.0	0.0	0.0	75.8	0.0
2	0.533	226.9	74.5	37.1	70.4	0.0
3	1.309	98.6	150.4	35.0	86.7	0.0
4	1.055	249.3	118.3	105.1	86.7	0.0

Brng	Span	mV/M
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## Field

Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m
0	243.595	75	202.138	150	285.209	225	114.349	300	196.479
5	262.468	80	170.578	155	290.734	230	95.372	305	189.817
10	280.232	85	138.807	160	292.593	235	79.858	310	181.373
15	296.211	90	109.615	165	291.039	240	71.471	315	172.526
20	309.807	95	88.174	170	286.376	245	73.559	320	164.911
25	320.476	100	82.071	175	278.937	250	85.456	325	160.248
30	327.728	105	94.014	180	269.063	255	103.253	330	159.987
35	331.135	110	117.430	185	257.081	260	123.325	335	164.885
40	330.344	115	145.248	190	243.290	265	143.265	340	174.794
45	325.091	120	173.556	195	227.944	270	161.495	345	188.830
50	315.230	125	200.350	200	211.256	275	176.931	350	205.772
55	300.748	130	224.510	205	193.393	280	188.833	355	224.390
60	281.783	135	245.372	210	174.510	285	196.754		
65	258.649	140	262.547	215	154.792	290	200.533		
70	231.853	145	275.840	220	134.543	295	200.298		

0.0 ohm K	: 110.703	1.0 ohm K	: 108.243
RMSS	: 217.536	RMSt	: 206.936
RSS	: 219.409		

Contour type : Ground Wave  
 Signal strength : 0.500 mV/m  
 Area covered : 5778.300 sq. km  
 Population covered: 712546 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	243.60	0.500	44.79
5	262.47	0.500	46.20
10	280.23	0.500	47.51
15	296.21	0.500	48.61
20	309.81	0.500	49.52
25	320.48	0.500	50.25
30	327.73	0.500	50.72
35	331.14	0.500	50.95
40	330.34	0.500	50.89
45	325.09	0.500	50.55
50	315.23	0.500	49.89

Millbrook day & nite pattern data Jan 08

55	300.75	0.500	48.91
60	281.78	0.500	47.62
65	258.65	0.500	45.91
70	231.85	0.500	43.88
75	202.14	0.500	41.41
80	170.58	0.500	38.55
85	138.81	0.500	35.33
90	109.62	0.500	31.91
95	88.17	0.500	29.03
100	82.07	0.500	28.12
105	94.01	0.500	31.02
110	117.43	0.500	35.53
115	145.25	0.500	40.70
120	173.56	0.500	44.90
125	200.35	0.500	48.19
130	224.51	0.500	51.24
135	245.37	0.500	53.44
140	262.55	0.500	54.79
145	275.84	0.500	56.04
150	285.21	0.500	56.53
155	290.73	0.500	56.16
160	292.59	0.500	55.92
165	291.04	0.500	54.43
170	286.38	0.500	53.36
175	278.94	0.500	51.20
180	269.06	0.500	48.00
185	257.08	0.500	45.79
190	243.29	0.500	44.77
195	227.94	0.500	43.57
200	211.26	0.500	42.16
205	193.39	0.500	40.65
210	174.51	0.500	38.92
215	154.79	0.500	36.98
220	134.54	0.500	34.85
225	114.35	0.500	32.51
230	95.37	0.500	30.04
235	79.86	0.500	27.78
240	71.47	0.500	26.45
245	73.56	0.500	26.79
250	85.46	0.500	28.63
255	103.25	0.500	31.10
260	123.32	0.500	33.58
265	143.26	0.500	35.80
270	161.49	0.500	37.67
275	176.93	0.500	39.14
280	188.83	0.500	40.23
285	196.75	0.500	40.94
290	200.53	0.500	41.27
295	200.30	0.500	41.25
300	196.48	0.500	40.92
305	189.82	0.500	40.33
310	181.37	0.500	39.54
315	172.53	0.500	38.73
320	164.91	0.500	38.00
325	160.25	0.500	37.54
330	159.99	0.500	37.51
335	164.88	0.500	38.00
340	174.79	0.500	38.95
345	188.83	0.500	40.23
350	205.77	0.500	41.71
355	224.39	0.500	43.28

Contour type : Ground wave

Millbrook day & nite pattern data Jan 08  
 Signal strength : 5.000 mV/m  
 Area covered : 640.500 sq. km  
 Population covered: 38542 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	243.60	5.000	15.73
5	262.47	5.000	16.36
10	280.23	5.000	16.91
15	296.21	5.000	17.40
20	309.81	5.000	17.79
25	320.48	5.000	18.10
30	327.73	5.000	18.31
35	331.14	5.000	18.40
40	330.34	5.000	18.38
45	325.09	5.000	18.23
50	315.23	5.000	17.95
55	300.75	5.000	17.53
60	281.78	5.000	16.96
65	258.65	5.000	16.23
70	231.85	5.000	15.33
75	202.14	5.000	14.24
80	170.58	5.000	12.98
85	138.81	5.000	11.54
90	109.62	5.000	10.03
95	88.17	5.000	8.76
100	82.07	5.000	8.38
105	94.01	5.000	9.13
110	117.43	5.000	10.46
115	145.25	5.000	11.85
120	173.56	5.000	13.10
125	200.35	5.000	14.18
130	224.51	5.000	15.07
135	245.37	5.000	15.79
140	262.55	5.000	16.36
145	275.84	5.000	16.77
150	285.21	5.000	17.07
155	290.73	5.000	17.24
160	292.59	5.000	17.29
165	291.04	5.000	17.25
170	286.38	5.000	17.10
175	278.94	5.000	16.87
180	269.06	5.000	16.56
185	257.08	5.000	16.18
190	243.29	5.000	15.72
195	227.94	5.000	15.19
200	211.26	5.000	14.59
205	193.39	5.000	13.91
210	174.51	5.000	13.14
215	154.79	5.000	12.29
220	134.54	5.000	11.33
225	114.35	5.000	10.29
230	95.37	5.000	9.21
235	79.86	5.000	8.23
240	71.47	5.000	7.66
245	73.56	5.000	7.80
250	85.46	5.000	8.59
255	103.25	5.000	9.67
260	123.32	5.000	10.76
265	143.26	5.000	11.75
270	161.49	5.000	12.58
275	176.93	5.000	13.24
280	188.83	5.000	13.73

# Millbrook day & nite pattern data Jan 08

285	196.75	5.000	14.04
290	200.53	5.000	14.18
295	200.30	5.000	14.18
300	196.48	5.000	14.03
305	189.82	5.000	13.77
310	181.37	5.000	13.42
315	172.53	5.000	13.06
320	164.91	5.000	12.73
325	160.25	5.000	12.53
330	159.99	5.000	12.51
335	164.88	5.000	12.73
340	174.79	5.000	13.15
345	188.83	5.000	13.73
350	205.77	5.000	14.38
355	224.39	5.000	15.07

Contour type : Ground wave  
Signal strength : 2.000 mV/m  
Area covered : 1594.100 sq. km  
Population covered: 84951 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	243.60	2.000	24.60
5	262.47	2.000	25.44
10	280.23	2.000	26.21
15	296.21	2.000	26.87
20	309.81	2.000	27.41
25	320.48	2.000	27.82
30	327.73	2.000	28.10
35	331.14	2.000	28.23
40	330.34	2.000	28.20
45	325.09	2.000	28.00
50	315.23	2.000	27.61
55	300.75	2.000	27.05
60	281.78	2.000	26.27
65	258.65	2.000	25.27
70	231.85	2.000	24.04
75	202.14	2.000	22.56
80	170.58	2.000	20.81
85	138.81	2.000	18.84
90	109.62	2.000	16.72
95	88.17	2.000	14.93
100	82.07	2.000	14.36
105	94.01	2.000	15.44
110	117.43	2.000	17.32
115	145.25	2.000	19.25
120	173.56	2.000	20.99
125	200.35	2.000	22.46
130	224.51	2.000	23.68
135	245.37	2.000	24.68
140	262.55	2.000	25.44
145	275.84	2.000	26.02
150	285.21	2.000	26.42
155	290.73	2.000	26.65
160	292.59	2.000	26.72
165	291.04	2.000	26.66
170	286.38	2.000	26.46
175	278.94	2.000	26.15
180	269.06	2.000	25.72
185	257.08	2.000	25.20
190	243.29	2.000	24.58
195	227.94	2.000	23.85

# Millbrook day & nite pattern data Jan 08

200	211.26	2.000	23.03
205	193.39	2.000	22.09
210	174.51	2.000	21.05
215	154.79	2.000	19.87
220	134.54	2.000	18.55
225	114.35	2.000	17.09
230	95.37	2.000	15.55
235	79.86	2.000	14.15
240	71.47	2.000	13.31
245	73.56	2.000	13.53
250	85.46	2.000	14.68
255	103.25	2.000	16.21
260	123.32	2.000	17.75
265	143.26	2.000	19.13
270	161.49	2.000	20.28
275	176.93	2.000	21.19
280	188.83	2.000	21.85
285	196.75	2.000	22.27
290	200.53	2.000	22.47
295	200.30	2.000	22.46
300	196.48	2.000	22.25
305	189.82	2.000	21.90
310	181.37	2.000	21.44
315	172.53	2.000	20.93
320	164.91	2.000	20.48
325	160.25	2.000	20.20
330	159.99	2.000	20.19
335	164.88	2.000	20.48
340	174.79	2.000	21.06
345	188.83	2.000	21.85
350	205.77	2.000	22.75
355	224.39	2.000	23.67

Contour type : Ground Wave  
Signal strength : 0.025 mV/m  
Area covered : 68752.300 sq. km  
Population covered: 11401781 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	243.60	0.025	151.70
5	262.47	0.025	155.83
10	280.23	0.025	159.61
15	296.21	0.025	164.47
20	309.81	0.025	175.82
25	320.48	0.025	178.18
30	327.73	0.025	176.67
35	331.14	0.025	174.33
40	330.34	0.025	169.78
45	325.09	0.025	168.23
50	315.23	0.025	166.40
55	300.75	0.025	163.68
60	281.78	0.025	159.92
65	258.65	0.025	155.01
70	231.85	0.025	148.98
75	202.14	0.025	146.12
80	170.58	0.025	143.13
85	138.81	0.025	135.16
90	109.62	0.025	123.71
95	88.17	0.025	114.48
100	82.07	0.025	111.81
105	94.01	0.025	117.66
110	117.43	0.025	127.18

# Millbrook day & nite pattern data Jan 08

115	145.25	0.025	137.64
120	173.56	0.025	146.78
125	200.35	0.025	154.69
130	224.51	0.025	161.63
135	245.37	0.025	167.01
140	262.55	0.025	171.26
145	275.84	0.025	175.23
150	285.21	0.025	177.96
155	290.73	0.025	179.88
160	292.59	0.025	181.85
165	291.04	0.025	182.68
170	286.38	0.025	184.40
175	278.94	0.025	187.12
180	269.06	0.025	185.47
185	257.08	0.025	180.23
190	243.29	0.025	174.57
195	227.94	0.025	168.07
200	211.26	0.025	160.42
205	193.39	0.025	150.67
210	174.51	0.025	138.71
215	154.79	0.025	127.88
220	134.54	0.025	121.10
225	114.35	0.025	113.57
230	95.37	0.025	105.62
235	79.86	0.025	98.25
240	71.47	0.025	93.86
245	73.56	0.025	95.00
250	85.46	0.025	101.00
255	103.25	0.025	109.00
260	123.32	0.025	116.98
265	143.26	0.025	124.07
270	161.49	0.025	129.99
275	176.93	0.025	134.59
280	188.83	0.025	138.00
285	196.75	0.025	140.15
290	200.53	0.025	141.15
295	200.30	0.025	141.09
300	196.48	0.025	140.08
305	189.82	0.025	138.27
310	181.37	0.025	135.89
315	172.53	0.025	133.27
320	164.91	0.025	131.03
325	160.25	0.025	129.60
330	159.99	0.025	129.52
335	164.88	0.025	131.02
340	174.79	0.025	133.95
345	188.83	0.025	138.00
350	205.77	0.025	142.50
355	224.39	0.025	147.17

Contour type : Ground wave  
Signal strength : 0.250 mV/m  
Area covered : 10764.400 sq. km  
Population covered: 2024314 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	243.60	0.250	59.90
5	262.47	0.250	61.80
10	280.23	0.250	63.55
15	296.21	0.250	65.02
20	309.81	0.250	66.25
25	320.48	0.250	67.22

Millbrook day & nite pattern data Jan 08

30	327.73	0.250	67.86
35	331.14	0.250	68.16
40	330.34	0.250	68.09
45	325.09	0.250	67.63
50	315.23	0.250	66.75
55	300.75	0.250	65.42
60	281.78	0.250	63.69
65	258.65	0.250	61.41
70	231.85	0.250	58.69
75	202.14	0.250	57.01
80	170.58	0.250	54.62
85	138.81	0.250	51.53
90	109.62	0.250	46.32
95	88.17	0.250	42.52
100	82.07	0.250	42.03
105	94.01	0.250	45.99
110	117.43	0.250	51.58
115	145.25	0.250	57.89
120	173.56	0.250	63.12
125	200.35	0.250	67.32
130	224.51	0.250	71.11
135	245.37	0.250	73.95
140	262.55	0.250	75.77
145	275.84	0.250	77.38
150	285.21	0.250	78.14
155	290.73	0.250	77.92
160	292.59	0.250	77.73
165	291.04	0.250	76.20
170	286.38	0.250	75.00
175	278.94	0.250	72.63
180	269.06	0.250	69.15
185	257.08	0.250	65.35
190	243.29	0.250	61.47
195	227.94	0.250	58.27
200	211.26	0.250	56.40
205	193.39	0.250	54.37
210	174.51	0.250	52.07
215	154.79	0.250	49.51
220	134.54	0.250	46.70
225	114.35	0.250	43.63
230	95.37	0.250	40.41
235	79.86	0.250	37.49
240	71.47	0.250	35.77
245	73.56	0.250	36.21
250	85.46	0.250	38.58
255	103.25	0.250	41.77
260	123.32	0.250	45.02
265	143.26	0.250	47.95
270	161.49	0.250	50.41
275	176.93	0.250	52.36
280	188.83	0.250	53.83
285	196.75	0.250	54.77
290	200.53	0.250	55.20
295	200.30	0.250	55.17
300	196.48	0.250	54.73
305	189.82	0.250	53.95
310	181.37	0.250	52.91
315	172.53	0.250	51.82
320	164.91	0.250	50.86
325	160.25	0.250	50.25
330	159.99	0.250	50.21
335	164.88	0.250	50.86
340	174.79	0.250	52.10

Millbrook day & nite pattern data Jan 08

345	188.83	0.250	53.83
350	205.77	0.250	55.79
355	224.39	0.250	57.88

Contour type : Ground Wave  
 Signal strength : 25.000 mV/m  
 Area covered : 87.300 sq. km  
 Population covered: 2573 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	243.60	25.000	5.90
5	262.47	25.000	6.21
10	280.23	25.000	6.50
15	296.21	25.000	6.75
20	309.81	25.000	6.96
25	320.48	25.000	7.12
30	327.73	25.000	7.23
35	331.14	25.000	7.28
40	330.34	25.000	7.27
45	325.09	25.000	7.19
50	315.23	25.000	7.04
55	300.75	25.000	6.82
60	281.78	25.000	6.52
65	258.65	25.000	6.15
70	231.85	25.000	5.69
75	202.14	25.000	5.16
80	170.58	25.000	4.55
85	138.81	25.000	3.89
90	109.62	25.000	3.23
95	88.17	25.000	2.71
100	82.07	25.000	2.55
105	94.01	25.000	2.85
110	117.43	25.000	3.41
115	145.25	25.000	4.03
120	173.56	25.000	4.61
125	200.35	25.000	5.12
130	224.51	25.000	5.56
135	245.37	25.000	5.93
140	262.55	25.000	6.21
145	275.84	25.000	6.43
150	285.21	25.000	6.58
155	290.73	25.000	6.67
160	292.59	25.000	6.70
165	291.04	25.000	6.67
170	286.38	25.000	6.60
175	278.94	25.000	6.48
180	269.06	25.000	6.32
185	257.08	25.000	6.12
190	243.29	25.000	5.89
195	227.94	25.000	5.62
200	211.26	25.000	5.33
205	193.39	25.000	4.99
210	174.51	25.000	4.63
215	154.79	25.000	4.23
220	134.54	25.000	3.80
225	114.35	25.000	3.34
230	95.37	25.000	2.89
235	79.86	25.000	2.49
240	71.47	25.000	2.27
245	73.56	25.000	2.33
250	85.46	25.000	2.64
255	103.25	25.000	3.08



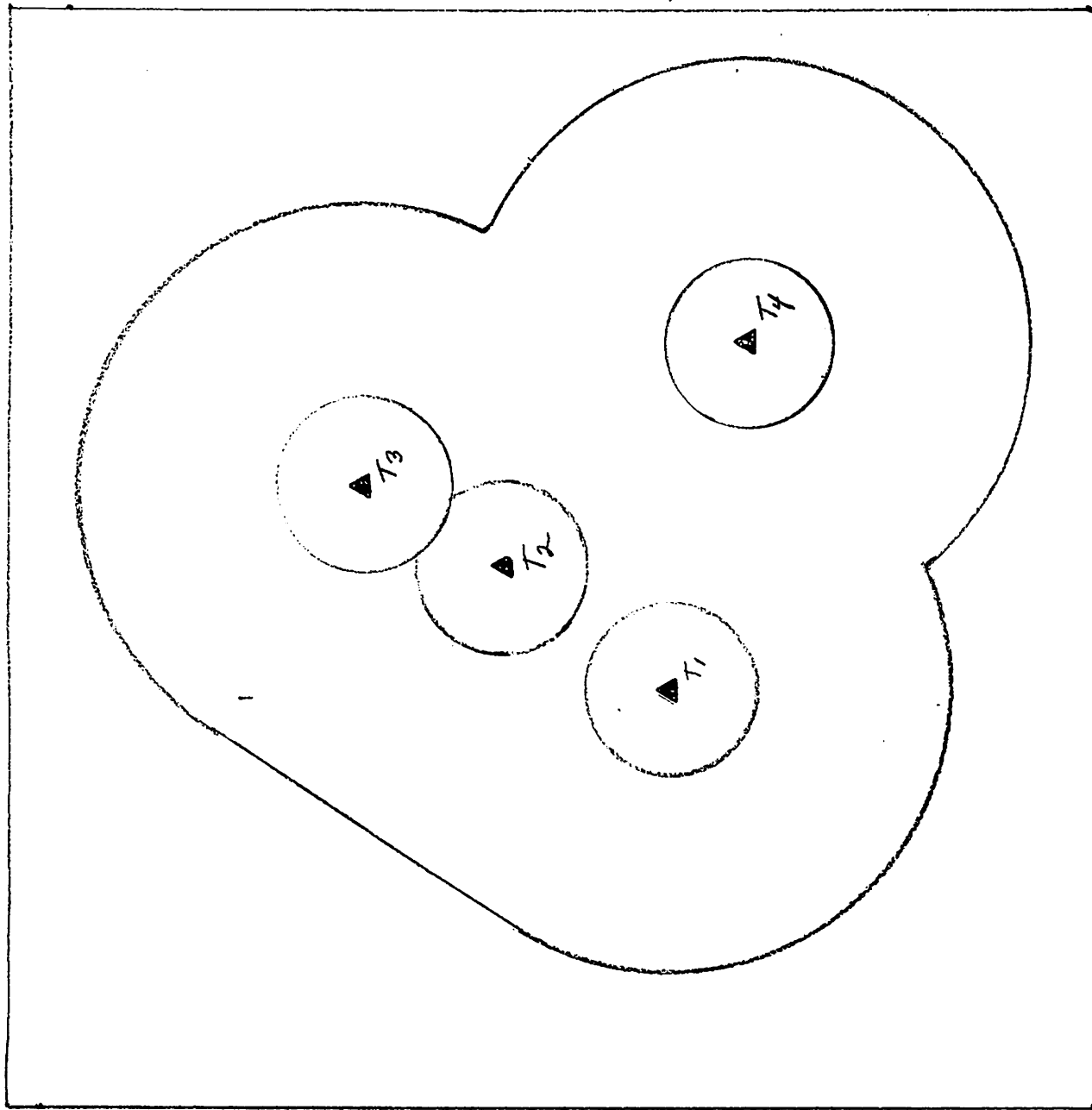
Millbrook day & nite pattern data Jan 08

260	123.32	25.000	3.55
265	143.26	25.000	3.98
270	161.49	25.000	4.37
275	176.93	25.000	4.68
280	188.83	25.000	4.91
285	196.75	25.000	5.06
290	200.53	25.000	5.13
295	200.30	25.000	5.12
300	196.48	25.000	5.05
305	189.82	25.000	4.92
310	181.37	25.000	4.76
315	172.53	25.000	4.59
320	164.91	25.000	4.44
325	160.25	25.000	4.34
330	159.99	25.000	4.34
335	164.88	25.000	4.44
340	174.79	25.000	4.63
345	188.83	25.000	4.91
350	205.77	25.000	5.22
355	224.39	25.000	5.56

□

N

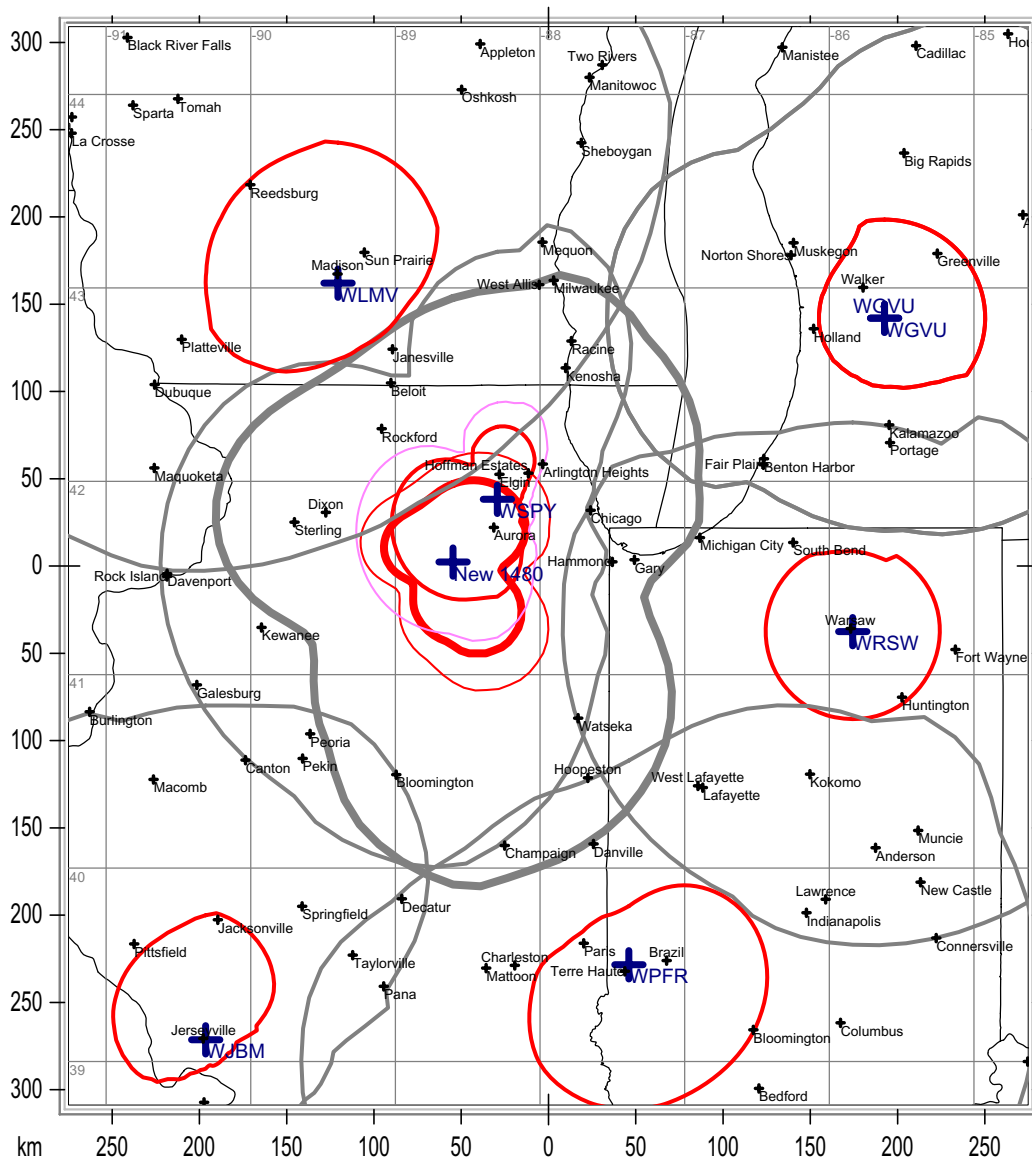
++ 099



660 ft

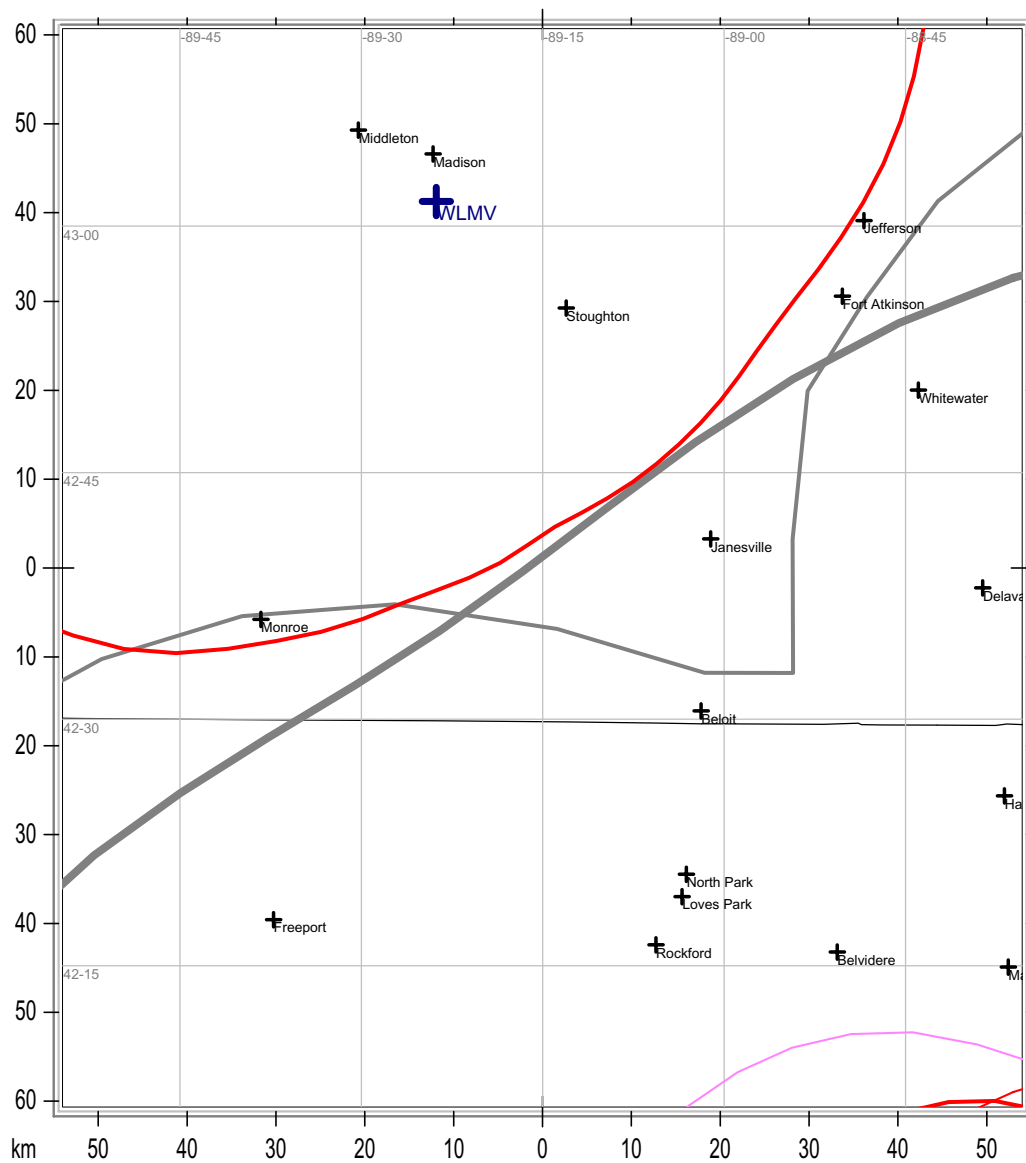
WSPY Tower Site

## 1480Khz Allocation--- Co Channel



State Borders Lat/Lon Grid

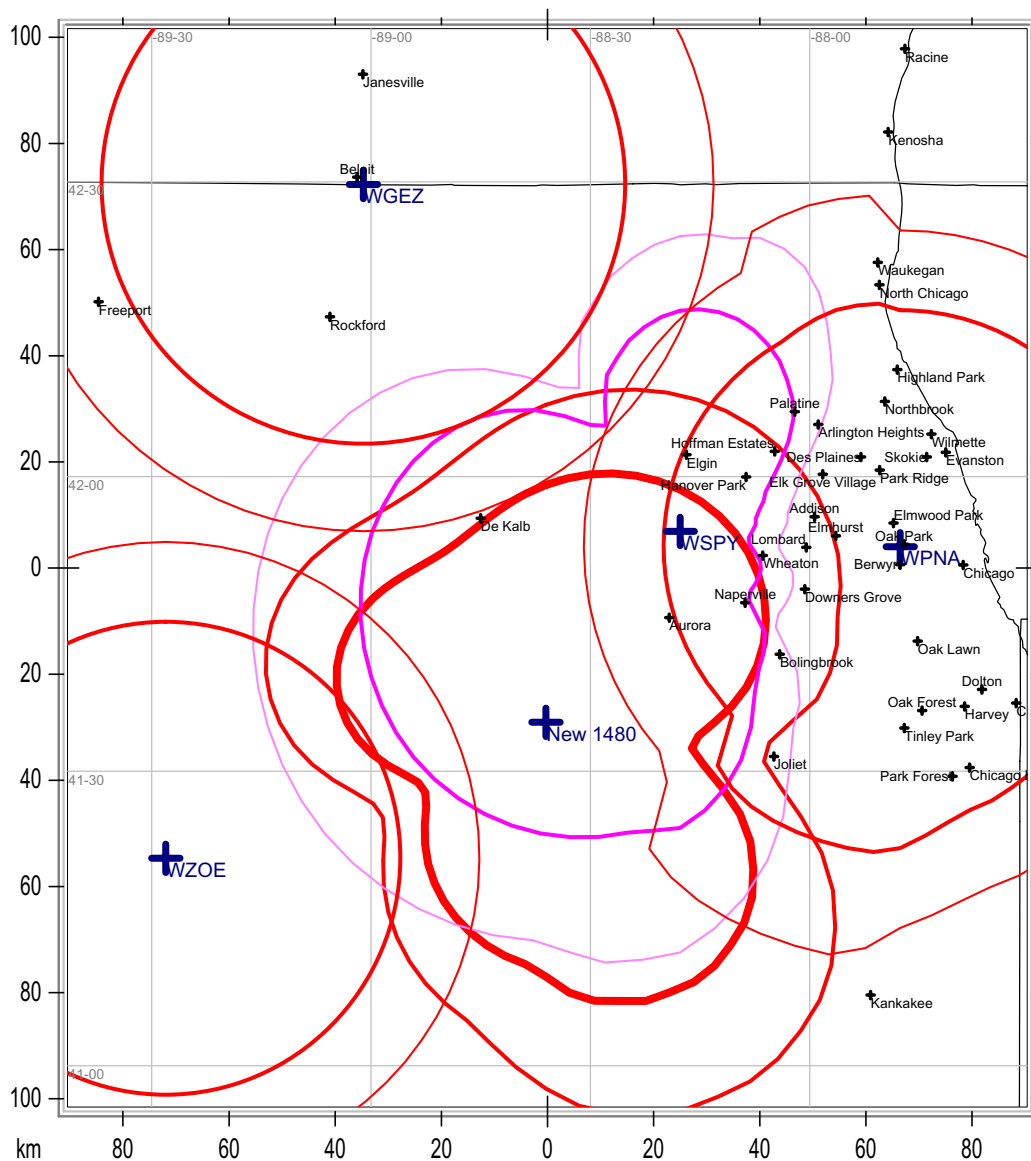
## 1480Khz Allocation--- Co Channel Close In



Gray = .025mv/m Red = .5mv/m

State Borders Lat/Lon Grid

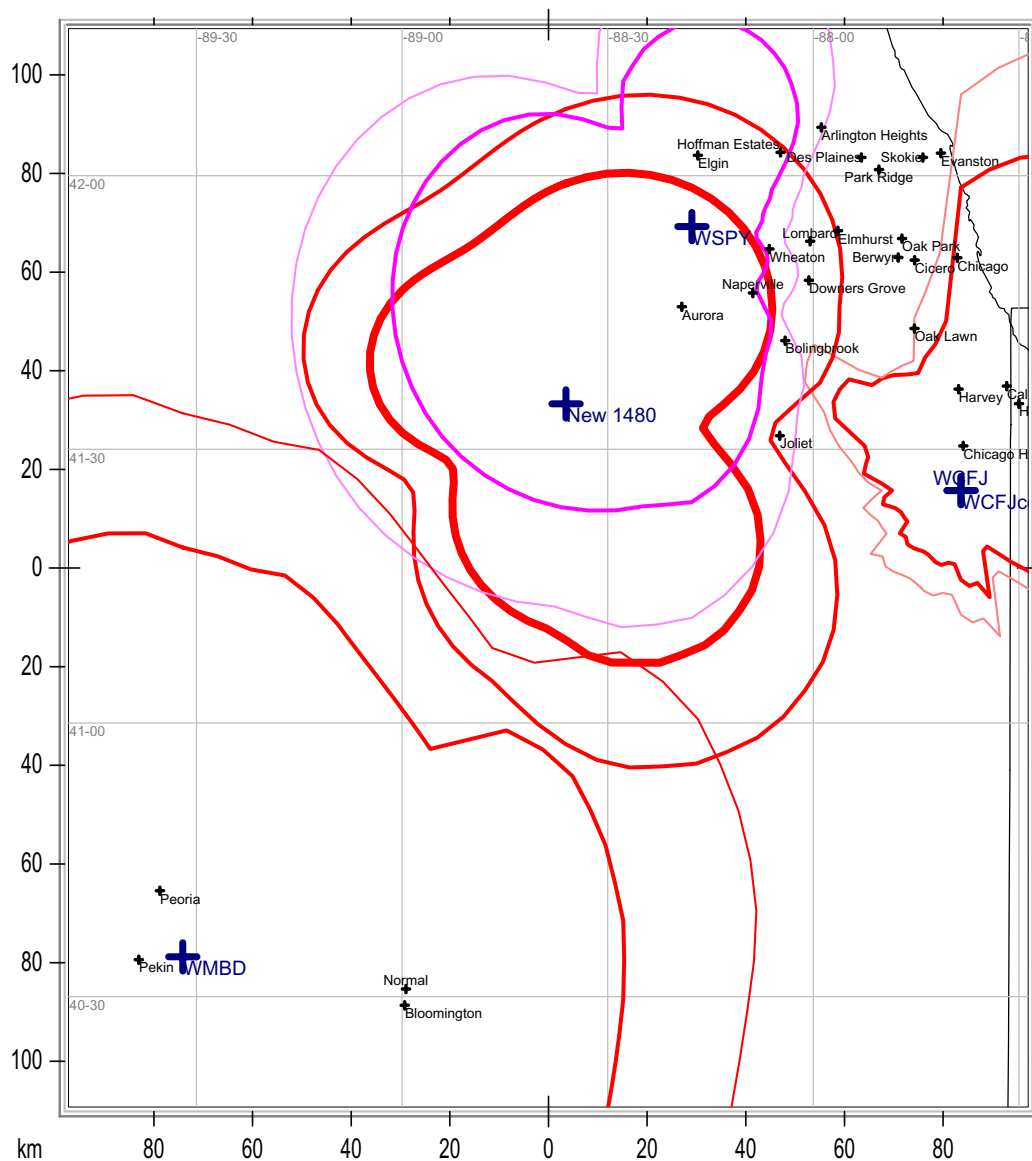
## 1480Khz Allocation-----1490Khz



Interference Reduction Red= .5mv/m & .25mv/m, Pink=.5 & .25mv/m WSPY Lic.

State Borders Lat/Lon Grid

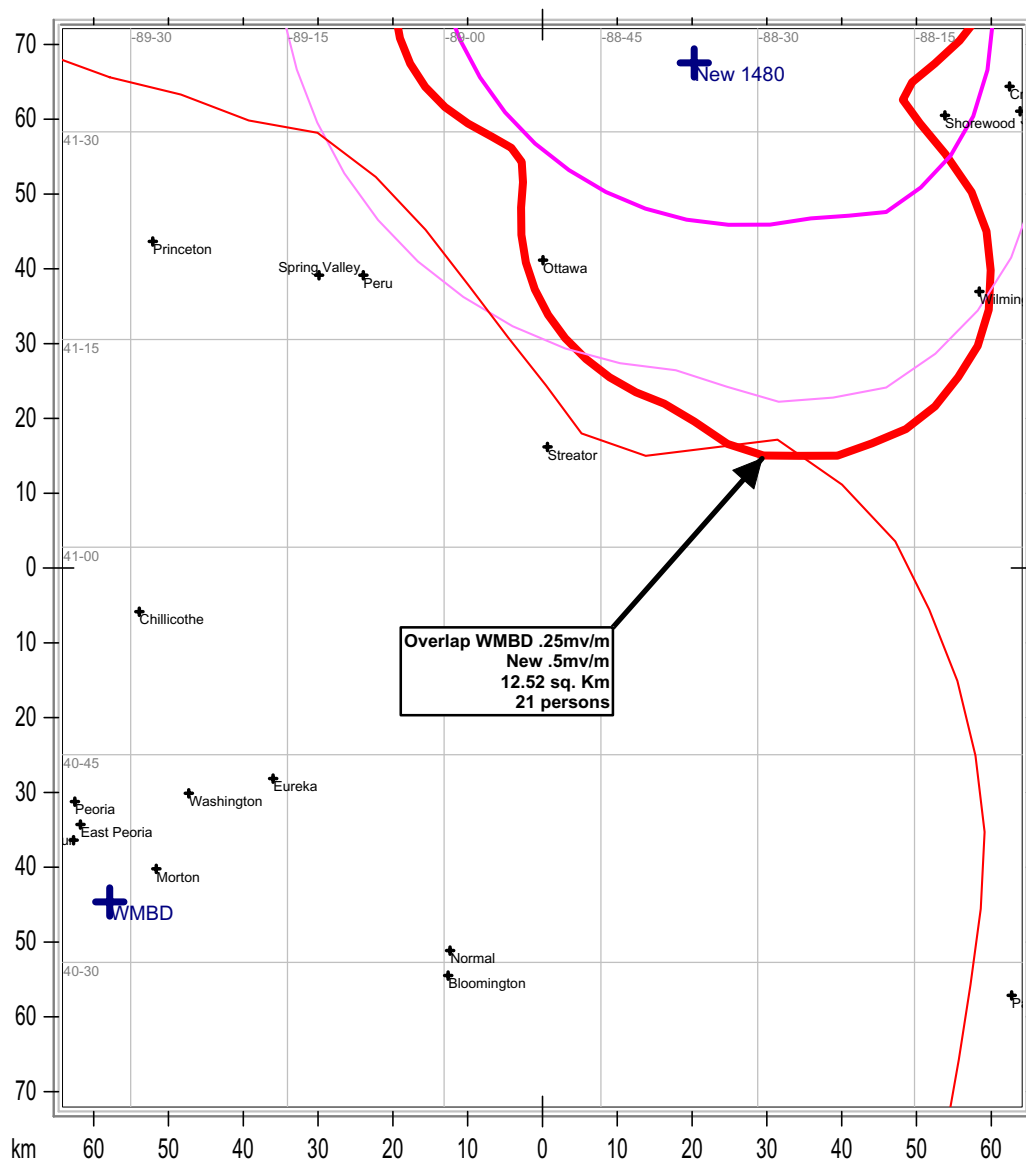
## 1480Khz Allocation-----1470Khz



New Interference Reduction Red= .5mv/m & .25mv/m, Pink=.5 & .25mv/m WSPY Lic.

State Borders Lat/Lon Grid

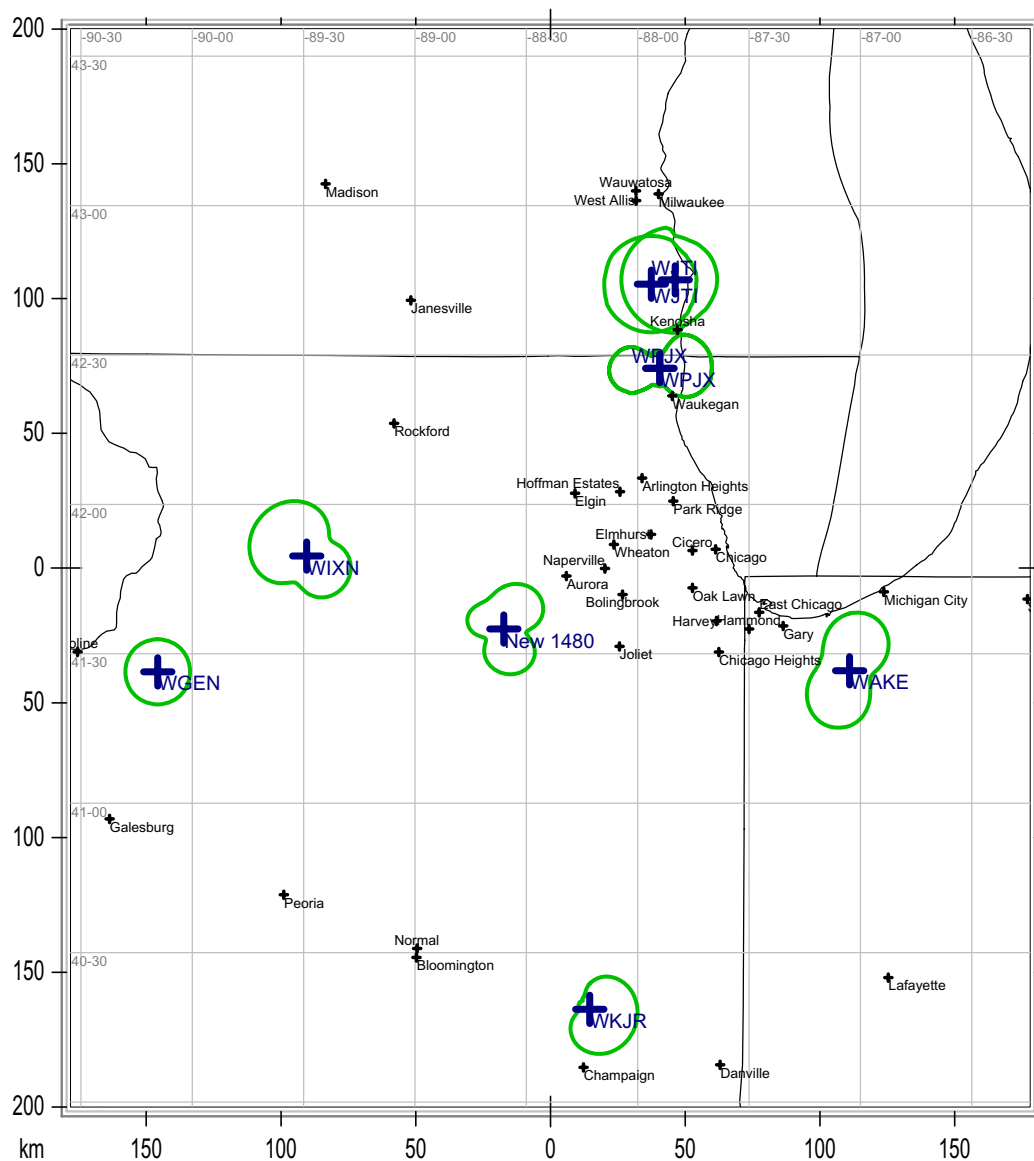
# 1480Khz Allocation-----1470Khz WMBD Close In



New Interference Reduction Red= .5mv/m & .25mv/m, Pink=.5 & .25mv/m WSPY Lic.

State Borders Lat/Lon Grid

## 1480Khz Allocation-----1460Khz &amp; 1500Khz



Green = 5mv/m.

State Borders      Lat/Lon Grid



Orange = 25mv/m

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Larry & Doug Nelson Jan. 2008

## **FIELD INTENSITY MEASUREMENTS**

Field intensity readings for WCFJ attached hereto were taken by Larry Nelson and Doug Nelson using a FIM-41 #2134 and FIM-41 #1328 (certificates of calibration attached).

Larry Nelson received his First Class Radio Telephone license from the Federal Communications Commission in 1969. Now General Radio Telephone Certificate #PG18-9128. Nelson was employed in an engineering capacity at:

WLS AM Radio, Chicago, Illinois, 1969

WIND Radio, Chicago, Illinois, 1970 – 1974

Owned:

WSPY Radio, Plano, Illinois, 1974 – Present

WSPY-AM, Geneva, Illinois, 2001 - Present

WCCQ Radio, Crest Hill, Illinois, 1977 – 1984

WPOK-AM/FM, Pontiac, Illinois, 1981 – 1986

WBYG Radio, Sandwich, Illinois, 1985 – 1997

WCSJ-AM/FM, WJDK, Morris/Seneca, Illinois, 1997 – Present

WSQR, Sycamore, Illinois, 1995 – Present

KGYY-AM, Green Valley, AZ, 1998 – Aug 2007

Larry Nelson has taken field readings, prepared Proofs of Performance, and other similar material in relation to stations he has owned. Nelson has also taken field intensity readings that have been accepted and used in hearing with the Federal Communications Commission.

Doug Nelson, son of Larry Nelson, took many of the readings with Larry Nelson present and verifying each reading in a mentoring process. Doug Nelson and Larry Nelson worked together in the tabulation, plotting and analysis of the field readings taken. Doug Nelson has worked at the family-owned radio stations in the past and recently graduated from University of Illinois, Champaign, with a degree in Physics; and worked at Fermi National Accelerator Laboratory as a Physicist-Operator, Department of Energy. Doug Nelson is now learning about AM Engineering while working at Nelson Multimedia, Inc.

All readings attached hereto were taken with calibrated field intensity meters. The meters were operated in accordance with the manufacturers' directions for field calibration and were in good working order.

Under penalty of perjury, I believe the above and readings contained in this report are true and correct to the best of my knowledge.

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Larry Nelson  
President  
Nelson Multimedia, Inc.

January 2008

WCFJ - 1470  
Reading Summary

<u>Measured Radial</u>	<u>Conductivity - Distance</u>
250	30-6, 8-12, 5-30, M-3
270	15-9, 10-14, 7-16.1, 5-21, M-3
290	6-10, 8-20, 4-35, M-3
310	15-12, 10-25, 8-28, 6-32, 5-45, M-3
330	10-4, 5-22, 4-28, 2-43, M-3
350	8-10, 5-28, 4-43, M-3

EXHIBIT NO.

Tabulation of Field Intensity Measurements  
Taken on Radio Station WCFJ  
Radial 250 TRUE

<u>Point No.</u>	<u>Distance (km)</u>	<u>Field (MV/M)</u>	<u>Time</u>	<u>Date Taken</u>
1	1.81	13.1	1:46 PM	08/13/06
2	3.49	9.7	2:51 PM	08/13/06
3	4.00	7.2	2:49 PM	08/13/06
4	6.9	4.3	3:03 PM	09/03/06
5	8.6	2.4	3:07 PM	09/03/06
6	9.5	1.7	3:10 PM	09/03/06
7	10.4	.74	3:13 PM	09/03/06
8	12.9	.37	3:21 PM	09/03/06
9	13.46	Not Useable		
10	14.7	.38	3:25 PM	09/03/06
11	16.3	.16	3:29 PM	09/03/06
12	18.4	.21	3:33 PM	09/03/06
13	23.32	.18	3:57 PM	08/13/06
14	28.36	.14	4:03 PM	08/13/06
14				

EXHIBIT NO.

Tabulation of Field Intensity Measurements  
Taken on Radio Station WCFJ  
By Larry Nelson and Doug Nelson  
Radial 270 TRUE

<u>Point No.</u>	<u>Distance (km)</u>	<u>Field (MV/M)</u>	<u>Time</u>	<u>Date Taken</u>
1	1.81	18.5	1:48 PM	08/13/06
2	2.46	7.9	3:00 PM	08/13/06
3	3.23	Not Useable		08/13/06
4	6.12	2.4	2:41 PM	08/13/06
5	8.99	1.6	3:21 PM	08/13/06
6	12.10	1.2	3:26 PM	08/13/06
7	13.8	.75	4:03 PM	09/03/06
8	14.9	.46	4:00 PM	09/03/06
9	15.4	.47	3:58 PM	09/03/06
10	16.1	.40	3:55 PM	09/03/06
11	17.1	.34	3:53 PM	09/03/06
12	18.61	.13	3:33 PM	08/13/06
13	20.26	.15	3:47 PM	09/03/06

EXHIBIT NO.

Tabulation of Field Intensity Measurements  
Taken on Radio Station WCFJ  
Radial 290 TRUE

<u>Point No.</u>	<u>Distance (km)</u>	<u>Field (MV/M)</u>	<u>Time</u>	<u>Date Taken</u>
1	1.84	31.0	1:50 PM	08/13/06
2	2.62	21.5	3:03 PM	08/13/06
3	3.56	15.0	3:07 PM	08/13/06
4	5.73	8.40	2:38 PM	08/13/06
5	9.9	2.1	4:38 PM	09/02/06
6	16.7	1.8	4:41 PM	09/02/06
7	19.5	1.2	4:48 PM	09/02/06
8	22.8	.85	4:52 PM	09/02/06
9	25.3	.70	4:59 PM	09/02/06
10	29.11	.38	5:11 PM	09/02/06
11	31.5	.18	5:18 PM	09/02/06
12	33.41	.17	5:24 PM	09/02/06
13	34.5	.16	5:27 PM	09/02/06

EXHIBIT NO.

Tabulation of Field Intensity Measurements  
Taken on Radio Station WCFJ  
Radial 310 TRUE

<u>Point No.</u>	<u>Distance (km)</u>	<u>Field (MV/M)</u>	<u>Time</u>	<u>Date Taken</u>
1	2.22	71.0	1:54 PM	08/13/06
2	2.93	57.0	2:28 PM	08/13/06
3	3.59	50.5	2:30 PM	08/13/06
4	4.49	31.0	2:33 PM	08/13/06
5	7.45	7.1	1:26 PM	08/13/06
6	14.04	3.6	1:13 PM	08/13/06
7	24.17	2.5	12:57 PM	08/13/06
8	26.82	1.2	12:51 PM	08/13/06
9	27.8	.81	12:06 PM	09/03/06
10	30.4	.52	12:00 PM	09/03/06
11	33.6	.50	11:50 AM	09/03/06
12	35.3	.35	11:46 AM	09/03/06
13	40.3	.22	11:36 AM	09/03/06
14	44.1	.19	11:18 AM	09/03/06

EXHIBIT NO.

Tabulation of Field Intensity Measurements  
Taken on Radio Station WCFJ  
Radial 330 TRUE

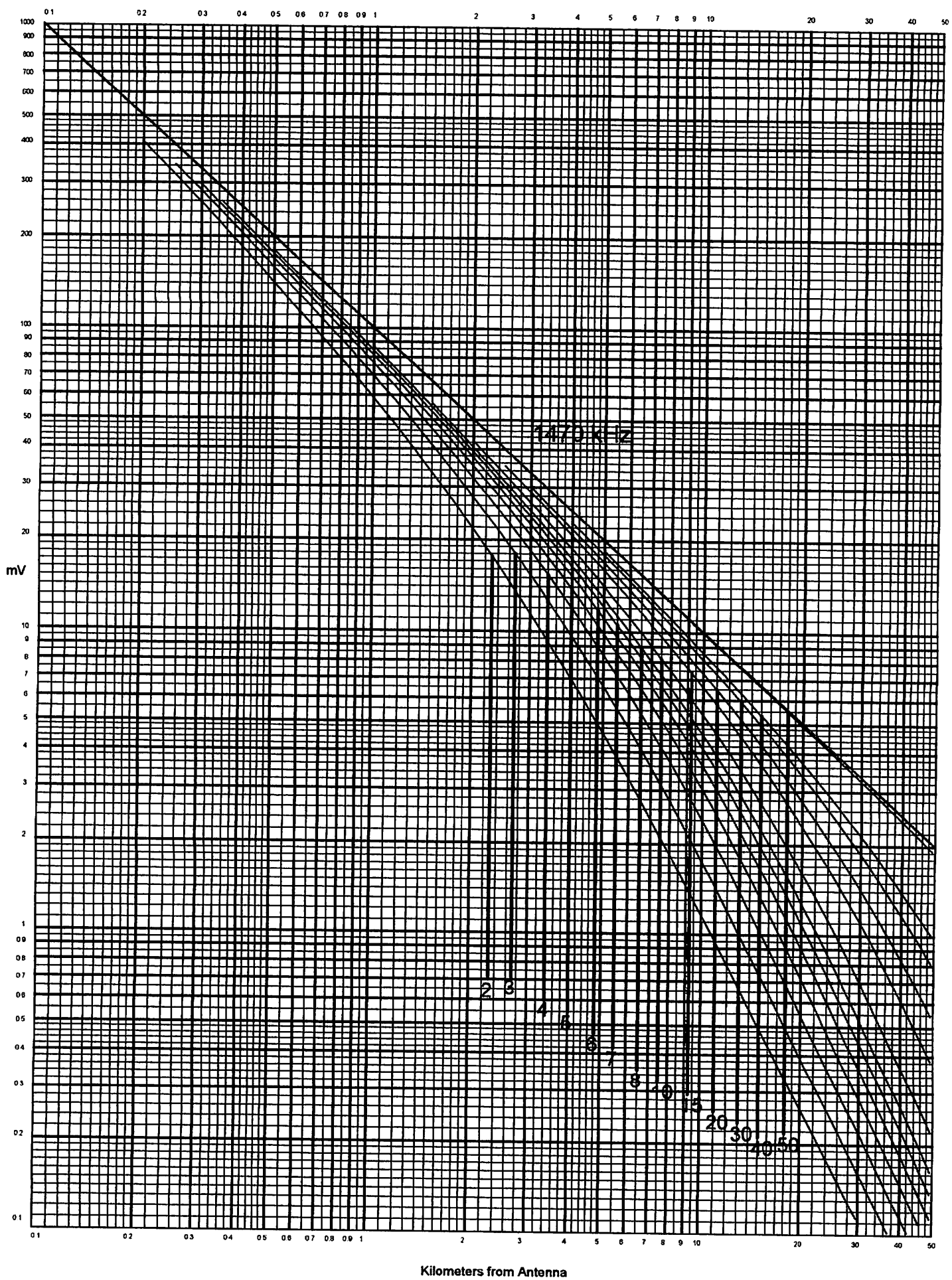
<u>Point No.</u>	<u>Distance (km)</u>	<u>Field (MV/M)</u>	<u>Time</u>	<u>Date Taken</u>
1	2.47	59.0	1:57 PM	08/13/06
2	3.07	62.0	2:03 PM	08/13/06
3	4.09	25.5	2:20 PM	08/13/06
4	5.00	17.5	2:17 PM	08/13/06
5	10.44	4.4	3:53 PM	09/02/06
6	15.3	2.3	3:43 PM	09/02/06
7	22.8	.82	3:31 PM	09/02/06
8	25.6	.62	3:22 PM	09/02/06
9	26.7	.48	3:18 PM	09/02/06
10	31.6	.17	3:05 PM	09/02/06
11	33.3	.13	3:00 PM	09/02/06
12	37.5	.14	2:49 PM	09/02/06
13	42.6	.08	2:40 PM	09/02/06

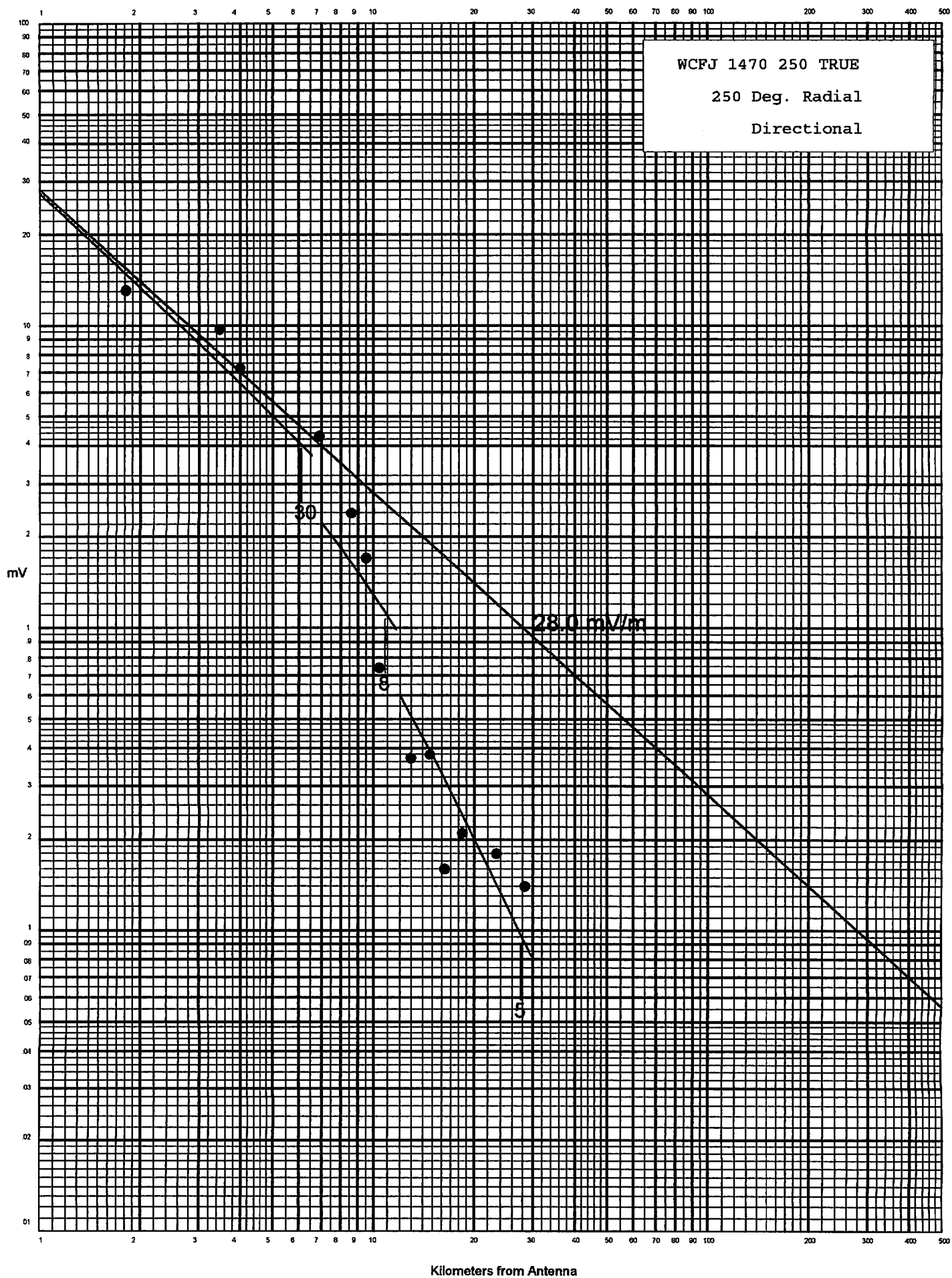


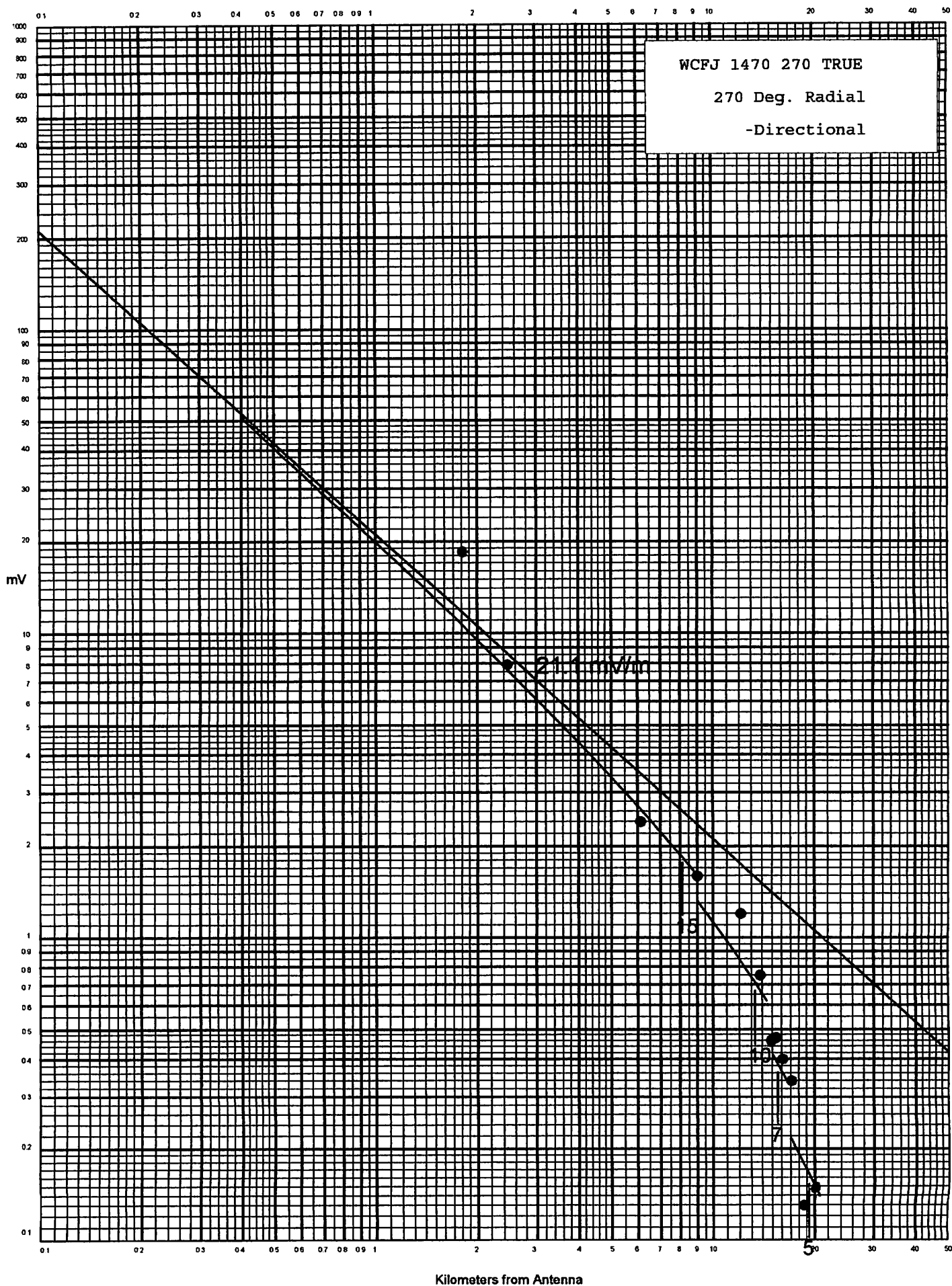
EXHIBIT NO.

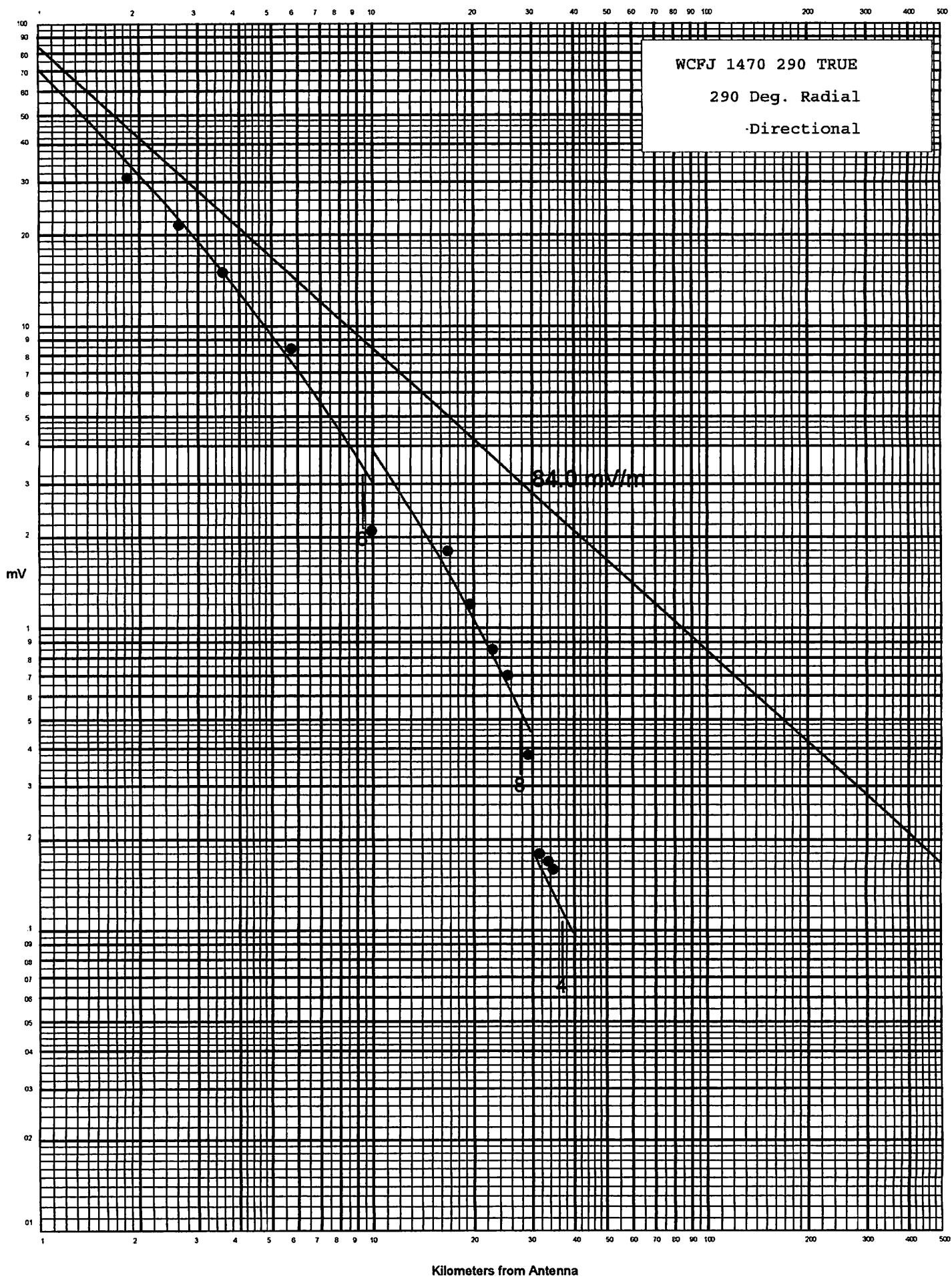
Tabulation of Field Intensity Measurements  
Taken on Radio Station WCFJ  
Radial 350 TRUE

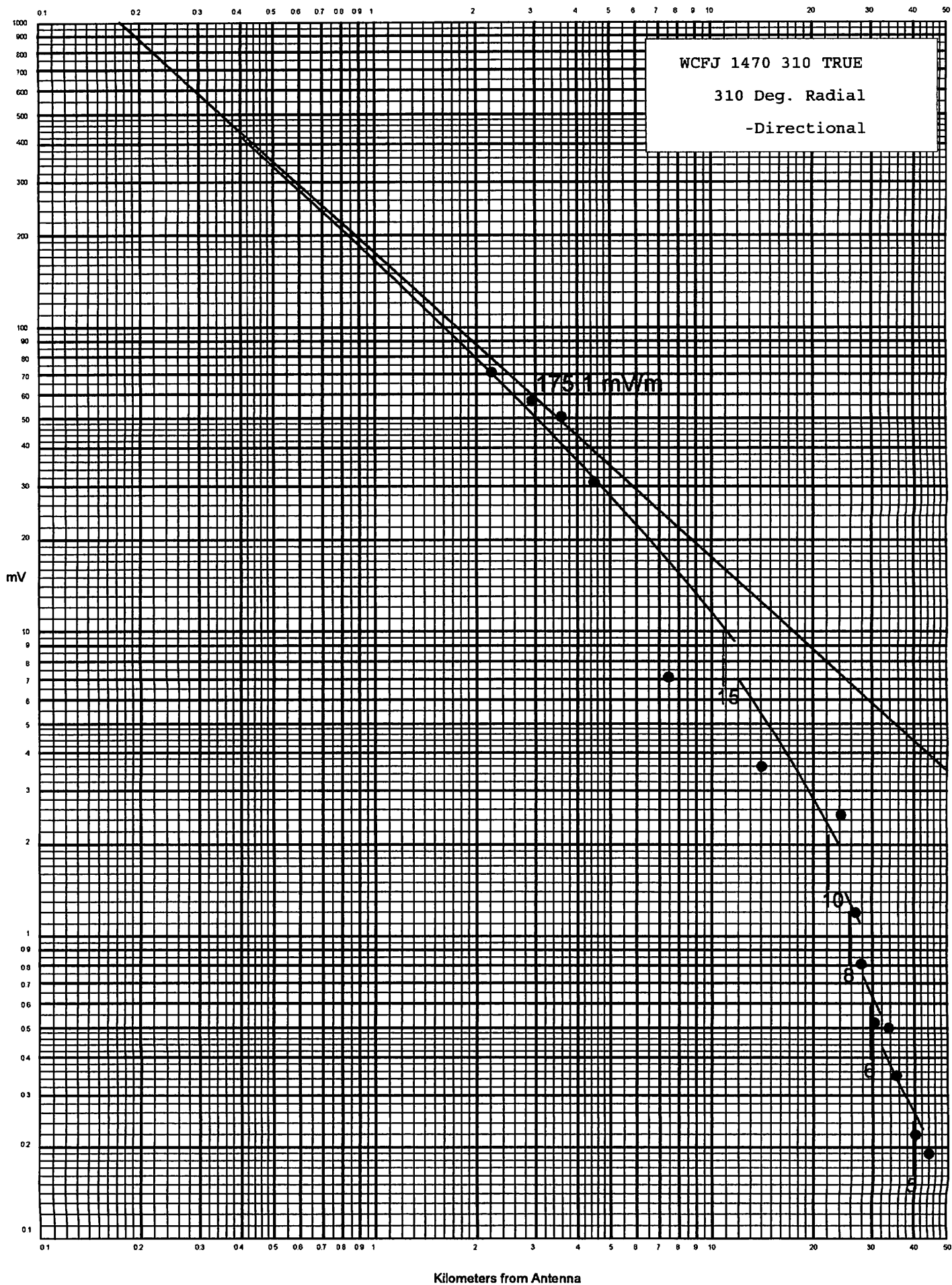
<u>Point No.</u>	<u>Distance (km)</u>	<u>Field (MV/M)</u>	<u>Time</u>	<u>Date Taken</u>
1	2.07	105.0	2:00 PM	08/13/06
2	3.06	46.5	2:06 PM	08/13/06
3	4.39	37.5	2:10 PM	08/13/06
4	5.09	28.0	2:13 PM	08/13/06
5	9.2	11.0	2:56 PM	09/03/06
6	11.7	5.1	2:18 PM	09/03/06
7	22.7	.94	1:54 PM	09/03/06
8	28.5	.42	1:41 PM	09/03/06
9	32.01	.51	1:34 PM	09/03/06
10	34.0	.43	1:24 PM	09/03/06
11	36.9	.53	1:13 PM	09/03/06
12	39.3	.40	1:02 PM	09/03/06
13	40.8	.38	12:59 PM	09/03/06
14	41.6	.32	12:56 PM	09/03/06
15	43.2	.21	12:51 PM	09/03/06

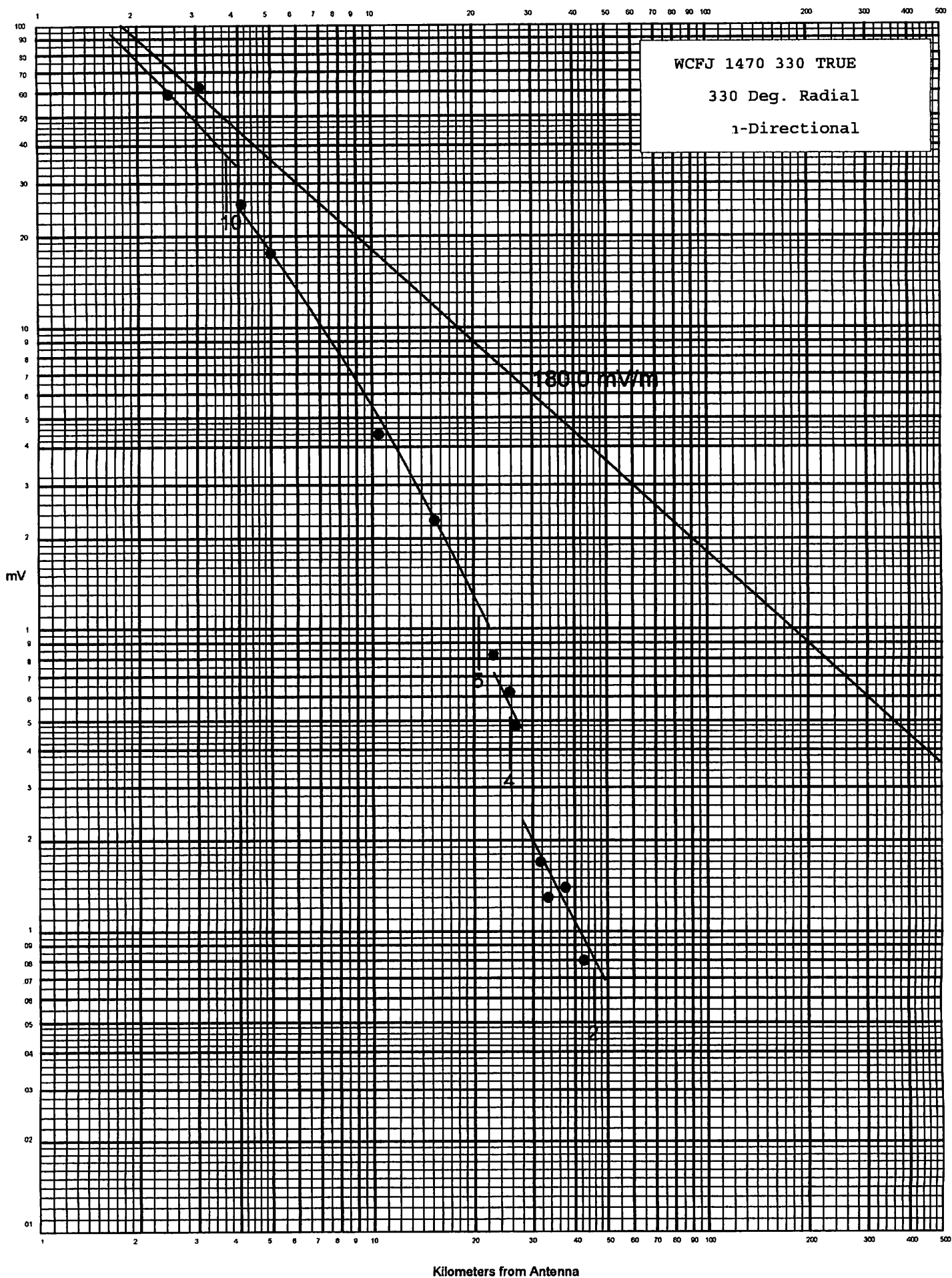




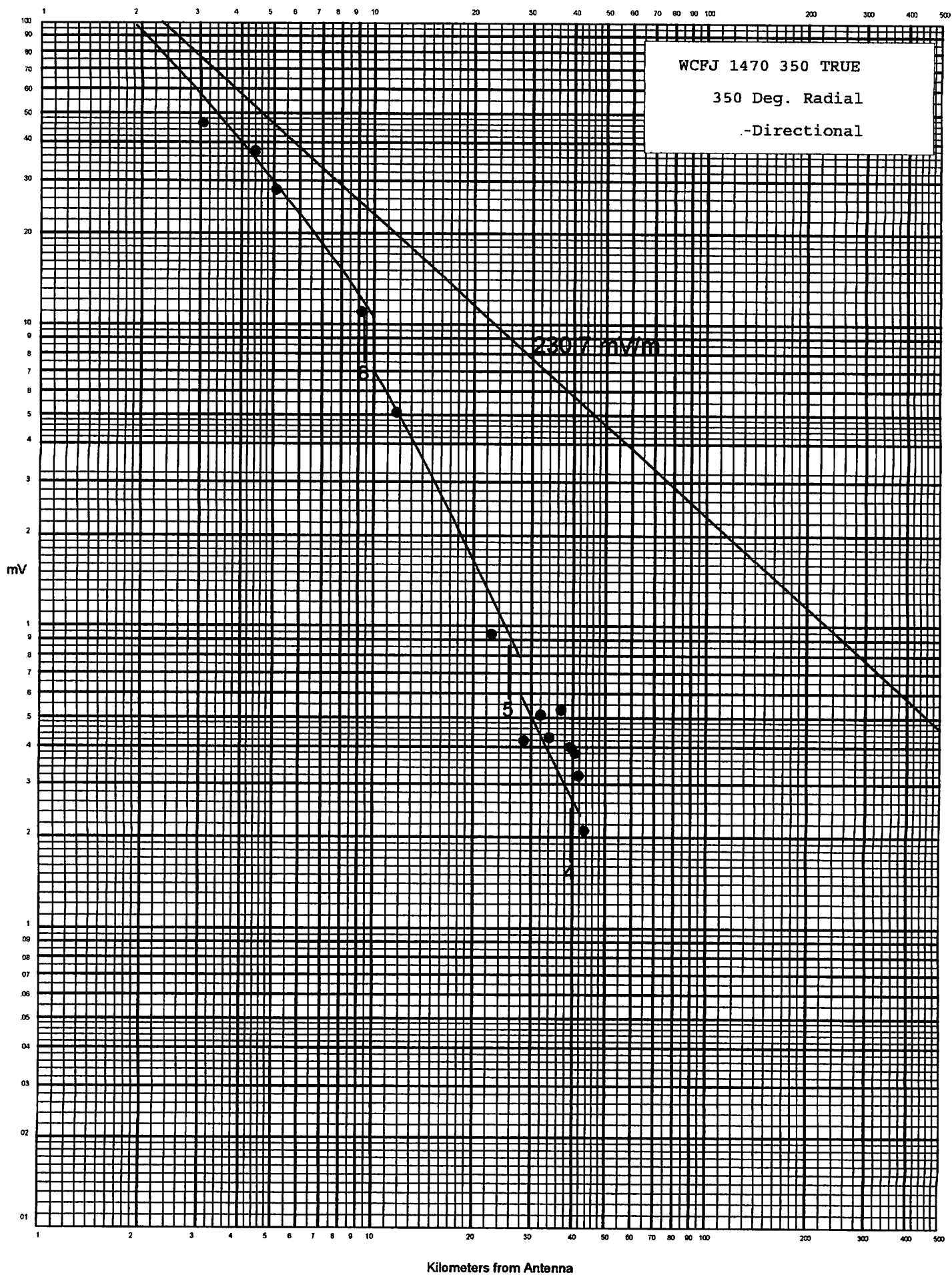






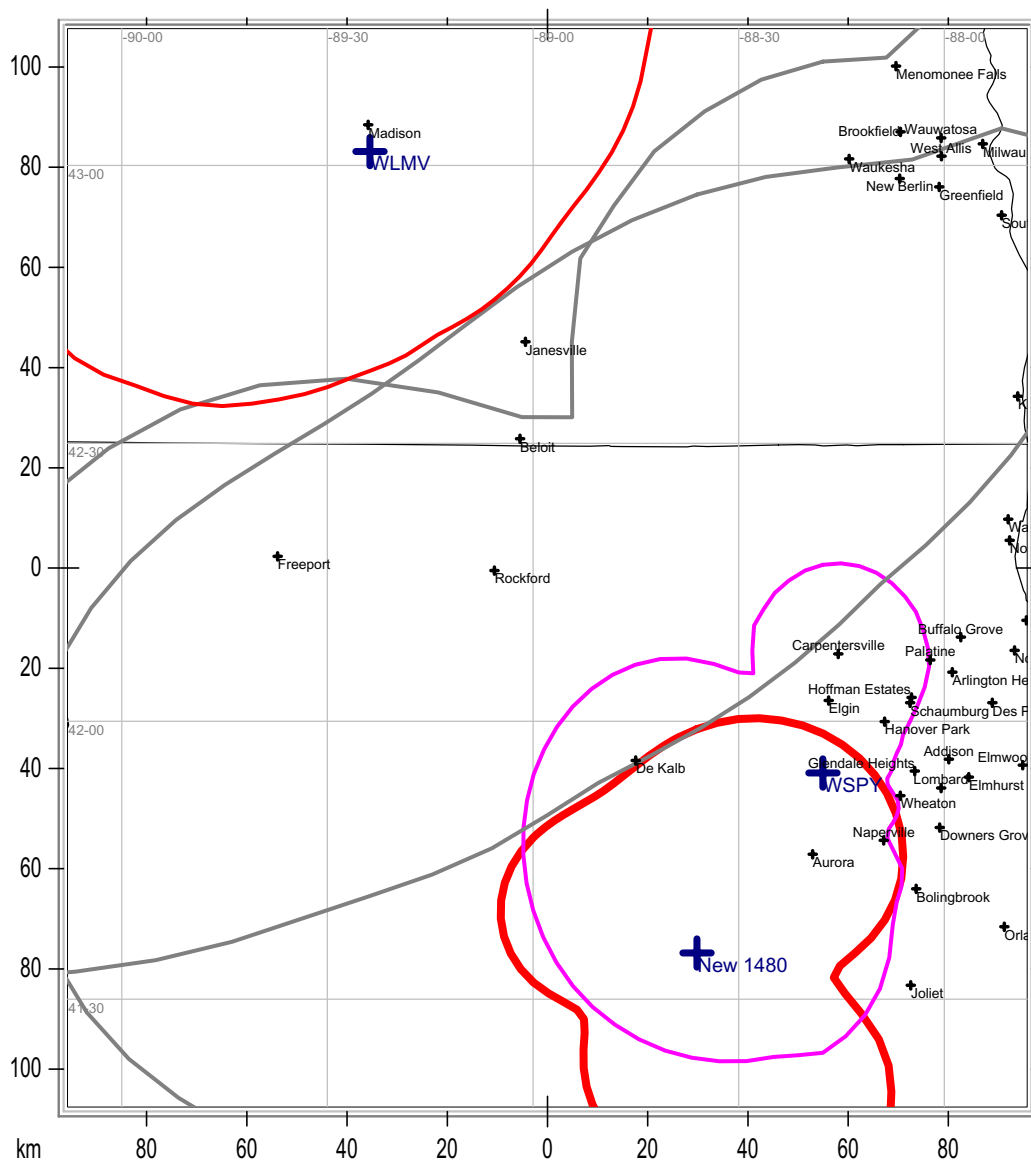






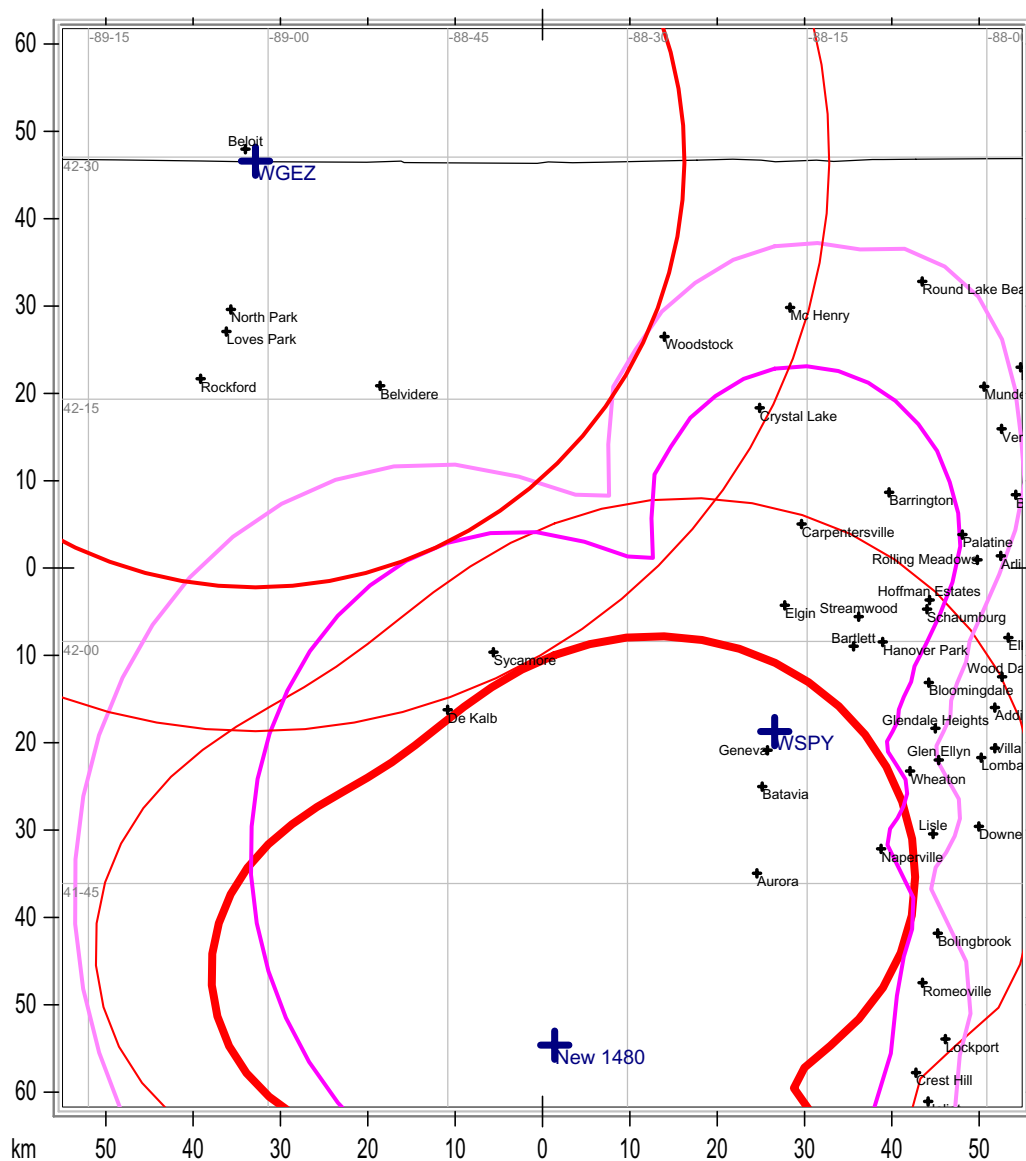


## 1480Khz Interference Reduction-----1480Khz WLMV



Interference Reduction Red=.5mv/m, Pink=.5 mv/m WSPY Lic., Gray=.025mv/m

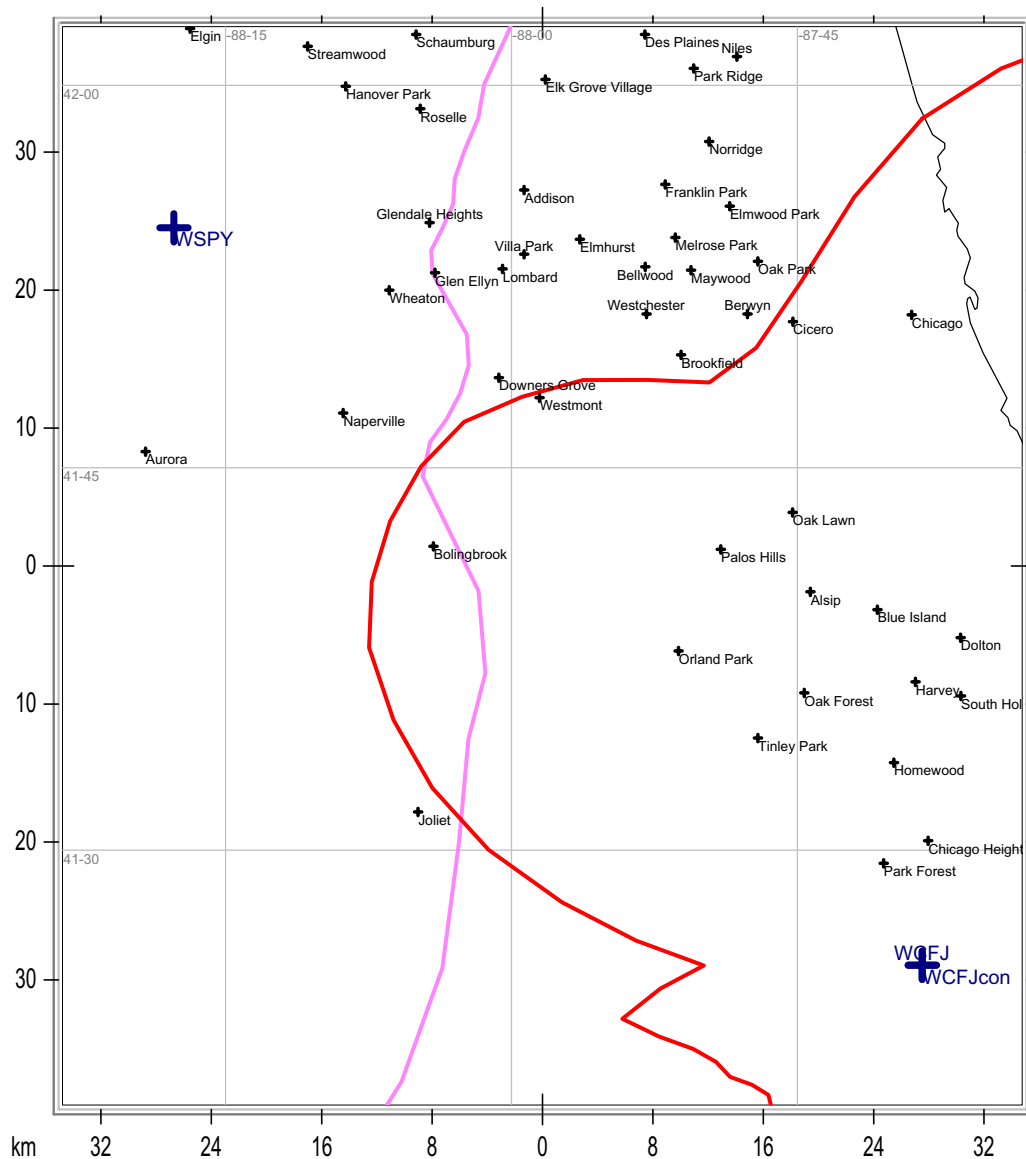
## 1480Khz Interference Reduction-----1490Khz WGEZ



Interference Reduction Red= .5mv/m & .25mv/m, Pink=.5 & .25mv/m WSPY Lic.

State Borders      Lat/Lon Grid

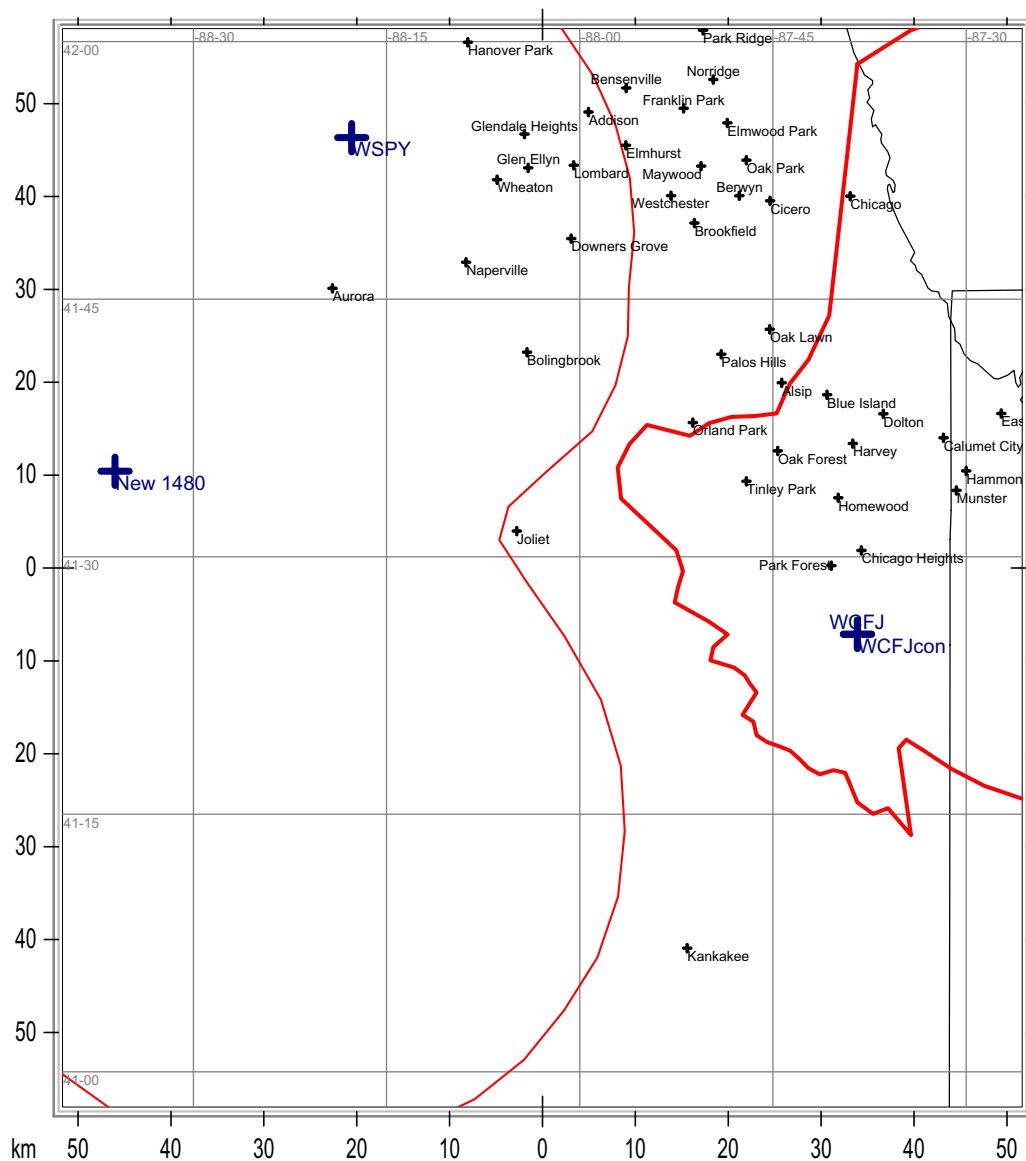
# 1480Khz Interference Reduction-----1470Khz WCFJ



New Interference Reduction Red= .5mv/m WCFJ Lic , Pink= .25mv/m WSPY Lic.

State Borders Lat/Lon Grid

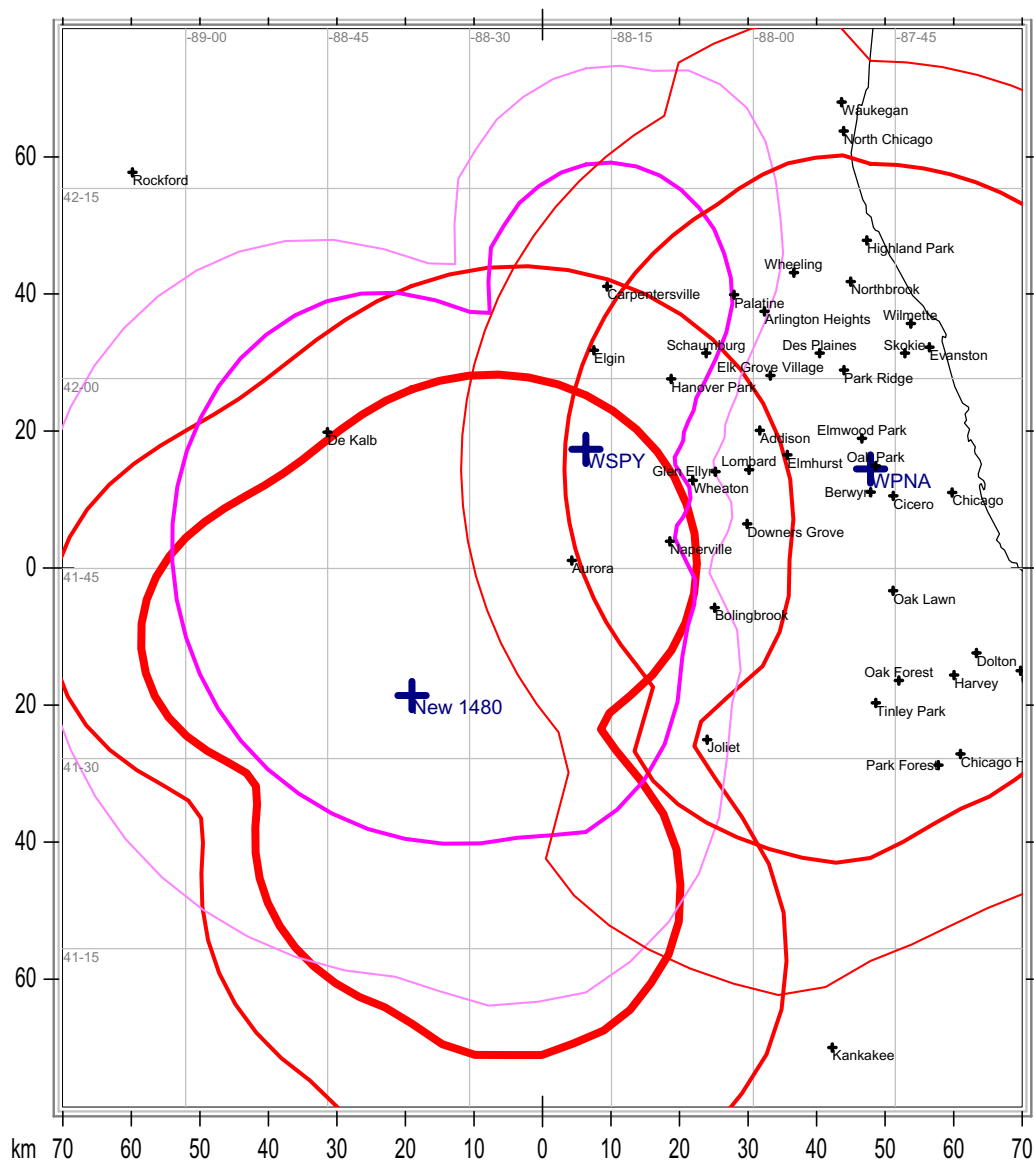
## 1480Khz Interference Reduction-----1470Khz WCFJ



Interference Reduction Red= .5mv/m WCFJ & .25mv/m New

State Borders      Lat/Lon Grid

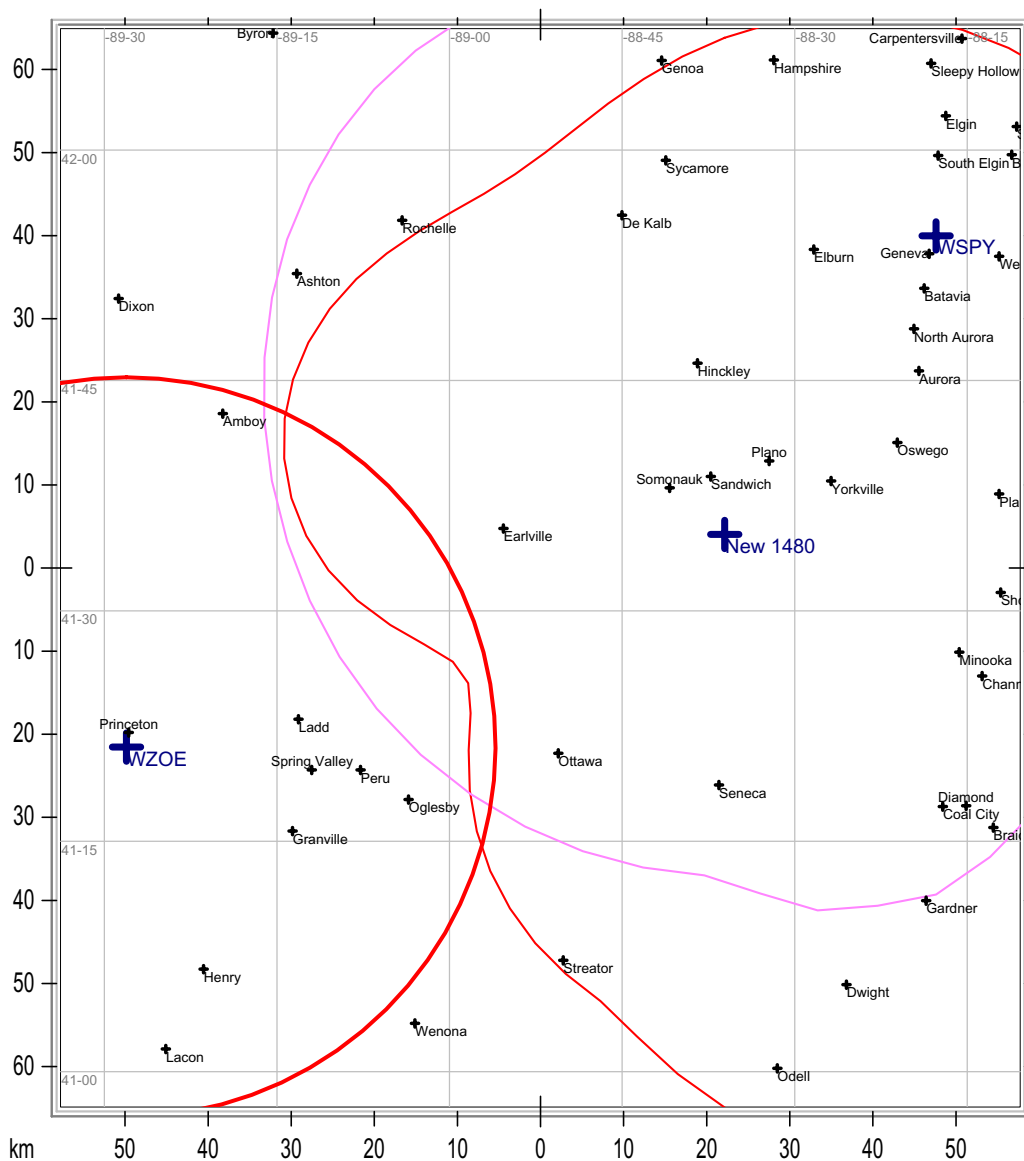
## 1480Khz Interference Reduction-----1490Khz WPNA



Interference Reduction Red= .5mv/m & .25mv/m, Pink=.5 & .25mv/m WSPY Lic.

State Borders Lat/Lon Grid

## 1480Khz Interference Reduction-----1490Khz WZOE



Interference Reduction Red= .5mv/m & .25mv/m, Pink=.5 & .25mv/m WSPY Lic.

State Borders      Lat/Lon Grid

**Dataworld  
Bethesda, MD**

Dataworld AM Night Permissible Radiation Study

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from use of the said information.

**Job Title: Millbrook IL 1480 kHz**

The metric system of units will be used.

Station: WSPY  
Frequency: 1480 kHz  
Coordinates: N 41° 34' 59.0" W 88° 36' 05.0"

The following codes apply to the permissible radiation values:

- S skywave contour protection
- s truncated skywave protection
- G groundwave contour protection
- g truncated groundwave protection
- = limited to present radiation value
- 10% radiation reduction calculated
- F foreign (protect 1/2 of 50% RSS or smallest contributor)

State abbreviations with the second letter in lowercase are actually FIPS 10-4 country codes  
eg Ca = Canada, Mx = Mexico

Note: Assumed antenna parameters used for NEW App STANFIELD, AZ 1460 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Reference switch assumed  
as 0; Tower #2 B assumed as 0; Tower #2 C assumed as 0; Tower #2 D assumed as 0; Tower #2 Reference switch assumed as 0; Tower #3 B assumed  
as 0; Tower #3 C assumed as 0; Tower #3 D assumed as 0; Tower #3 Reference switch assumed as 0; Tower #4 B assumed as 0; Tower #4 C assumed  
as 0; Tower #4 D assumed as 0; Tower #4 Reference switch assumed as 0;  
Note: Assumed antenna parameters used for NEW App WINTERSBURG, AZ 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Database value of 1.82 for Q used in place of calculated value 10 for KRRS Lic SANTA ROSA, CA 1460 kHz  
Note: Assumed antenna parameters used for KCLR Lic SHASTA, CA 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for WZEP Lic DEFUNIAK SPRINGS, FL 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App GOLDEN GATE, FL 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App GOLDEN GATE, FL 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;  
Note: Assumed antenna parameters used for WDOG App BARNWELL, GA 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Database value of 1.8 for Q used in place of calculated value 10 for WIXN Prm DIXON, IL 1460 kHz  
Note: Database value of 3.61 for Q used in place of calculated value 10 for WJCI Lic RANTOUL, IL 1460 kHz  
Note: Assumed antenna parameters used for WRVK CP MOUNT VERNON, KY 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for XERTE TEMASCALCINGO, ME 1460 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;  
Note: Assumed antenna parameters used for NEW App HOUGHTON, MI 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WPON CP WALLED LAKE, MI 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for KDWA App HASTINGS, MN 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for KHOJ App ST. CHARLES, MO 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for KHOJ App ST. CHARLES, MO 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for KHOJ App ST. CHARLES, MO 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for WRKB Lic KANNAPOLIS, NC 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App ELKO, NV 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App ELKO, NV 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WTKT App HARRISBURG, PA 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for WTKT CP HARRISBURG, PA 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;  
Note: Assumed antenna parameters used for CKRB VILLE ST. GEORGES DE, QC 1460 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #2 B assumed as 0; Tower #2 C assumed as 0; Tower #2 D assumed as 0; Tower #3 B assumed as 0; Tower #3 C assumed as 0; Tower #3 D assumed as 0;  
Note: Assumed antenna parameters used for WDOG App BARNWELL, SC 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for XEHX CD OREGON, SO 1460 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;



Note: Assumed antenna parameters used for KTFW Lic BURLESON, TX 1460 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Assumed antenna parameters used for KBZO Lic LUBBOCK, TX 1460 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App ANCHORAGE, AK 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App SOLDOTNA, AK 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for KNXN Lic SIERRA VISTA, AZ 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Database value of 24.14 for Q used in place of calculated value 70.71068 for CJVB VANCOUVER, BC 1470 kHz

Note: Assumed antenna parameters used for XERCN TIJUANA, BN 1470 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for NEW App COALINGA, CA 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App COALINGA, CA 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App COALINGA, CA 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App HURON, CA 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Assumed antenna parameters used for XESM GRANJAS ESMERALDA, DF 1470 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for WLVU Lic DUNEDIN, FL 1470 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for NEW App GAINSEVILLE, FL 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0; Tower #5 Type assumed as 0; Tower #6 Type assumed as 0;

Note: Database value of 2.47 for Q used in place of calculated value 10 for KWAY Lic WAVERLY, IA 1470 kHz

Note: Assumed antenna parameters used for WCFJ App DOLTON, IL 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Assumed antenna parameters used for KYUU Lic LIBERAL, KS 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for WAZN App WATERTOWN, MA 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Assumed antenna parameters used for WAZN CP WATERTOWN, MA 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Database value of 2.07 for Q used in place of calculated value 10 for WJDY Lic SALISBURY, MD 1470 kHz

Note: Database value of 2 for Q used in place of calculated value 10 for KFMZ Lic BROOKFIELD, MO 1470 kHz

Note: Assumed antenna parameters used for WCHJ Lic BROOKHAVEN, MS 1470 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for WNAU CP NEW ALBANY, MS 1470 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App LOS LUNAS, NM 1470 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App TAOS, NM 1470 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for WLQR App WALBRIDGE, OH 1470 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0; Tower #1 Reference switch assumed as 0; Tower #2 B assumed as 0; Tower #2 C assumed as 0; Tower #2 D assumed as 0; Tower #2 Type assumed as 0; Tower #2 Reference switch assumed as 0; Tower #3 B assumed as 0; Tower #3 C assumed as 0; Tower #3 D assumed as 0; Tower #3 Type assumed as 0; Tower #3 Reference switch assumed as 0; Tower #4 B assumed as 0; Tower #4 C assumed as 0; Tower #4 D assumed as 0; Tower #4 Type assumed as 0; Tower #4 Reference switch assumed as 0;

Note: Assumed antenna parameters used for KVLH Lic PAULS VALLEY, OK 1470 kHz

Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Assumed antenna parameters used for WQXL CP COLUMBIA, SC 1470 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for XEUK CABORCA, SO 1470 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for XEHI CD.MIGUEL ALEMAN, TA 1470 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for XEHI CD.MIGUEL ALEMAN, TA 1470 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for WBCR Lic ALCOA, TN 1470 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for KYYW CP ABILENE, TX 1470 kHz

Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Database value of 5.46 for Q used in place of calculated value 10 for KDHN Lic DIMMITT, TX 1470 kHz

Note: Assumed antenna parameters used for KUOL App SAN MARCOS, TX 1470 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0; Tower #1 Reference switch assumed as 0; Tower #2 B assumed as 0; Tower #2 C assumed as 0; Tower #2 D assumed as 0; Tower #2 Type assumed as 0; Tower #2 Reference switch assumed as 0;

Note: Assumed antenna parameters used for KNFL App TREMONTON, UT 1470 kHz

Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Assumed antenna parameters used for KNFL App TREMONTON, UT 1470 kHz

Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Assumed antenna parameters used for KNFL CP TREMONTON, UT 1470 kHz

Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;

Note: Assumed antenna parameters used for WEMM Lic HUNTINGTON, WV 1470 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for XEQS FRESNILLO, ZA 1470 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for NEW App JULESBURG, CO 1480 kHz

Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;

Note: Database value of 3.27 for Q used in place of calculated value 10 for KAVA Lic PUEBLO, CO 1480 kHz

Note: Database value of 1.67 for Q used in place of calculated value 10 for WNEZ Prm WINDSOR, CT 1480 kHz

Note: Assumed antenna parameters used for KRXR Lic GOODING, ID 1480 kHz

Assumed parameters: Tower #1 Type assumed as 0;

**Note: Parameters for WSPY GENEVA, IL LIC will be used for existing interference**

Note: Database value of 2.53 for Q used in place of calculated value 10 for WJBM Lic JERSEYVILLE, IL 1480 kHz

Note: Assumed antenna parameters used for WSPY App MILLBROOK, IL 1480 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0; Tower #1 Reference switch assumed as 0; Tower #2 B assumed as 0; Tower #2 C assumed as 0; Tower #2 D assumed as 0; Tower #2 Type assumed as 0; Tower #2 Reference switch assumed as 0; Tower #3 B assumed as 0; Tower #3 C assumed as 0; Tower #3 D assumed as 0; Tower #3 Type assumed as 0; Tower #3 Reference switch assumed as 0;

Note: Assumed antenna parameters used for KIOU Lic SHREVEPORT, LA 1480 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for WSDS App PLYMOUTH, MI 1480 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;  
Note: Database value of 3.3 for Q used in place of calculated value 10 for WIOS Prm TAWAS CITY-EAST TAWA, MI 1480 kHz  
Note: Assumed antenna parameters used for KKCQ App FOSSTON, MN 1480 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WGFY Lic CHARLOTTE, NC 1480 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0; Tower #2 C assumed as 0; Tower #2 D assumed as 0; Tower #3 B assumed as 0; Tower #3 C assumed as 0; Tower #3 D assumed as 0; Tower #3 Type assumed as 0; Tower #4 B assumed as 0; Tower #4 C assumed as 0; Tower #4 D assumed as 0; Tower #4 Type assumed as 0;  
Note: Assumed antenna parameters used for WCIN CP CINCINNATI, OH 1480 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;  
Note: Database value of 22.53 for Q used in place of calculated value 31.62278 for CKAN NEWMARKET, ON 1480 kHz  
Note: Database value of 22.53 for Q used in place of calculated value 31.62278 for CKDX NEWMARKET, ON 1480 kHz  
Note: Database value of 16.09 for Q used in place of calculated value 59.1608 for CHRD DRUMMONDVILLE, QC 1480 kHz  
Note: Assumed antenna parameters used for KLVV CP PASADENA, TX 1480 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App SAN ANGELO, TX 1480 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;  
Note: Database value of 3 for Q used in place of calculated value 10 for KCHL Lic SAN ANTONIO, TX 1480 kHz  
Note: Assumed antenna parameters used for NEW App WINK, TX 1480 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;  
Note: Assumed antenna parameters used for WTOX CP GLEN ALLEN, VA 1480 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App MONONA, WI 1480 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App COLLEGE, AK 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App FAIRBANKS, AK 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App HOMER, AK 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App FAYETTE, AL 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App LEVEL PLAINS, AL 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WIRB CP LEVEL PLAINS, AL 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App NEWTONVILLE, AL 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for KDRS Lic PARAGOULD, AR 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App KACHINA VILLAGE, AZ 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App BISHOP, CA 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App BISHOP, CA 1490 kHz

Note: Assumed parameters: Tower #1 Type assumed as 0;  
Assumed antenna parameters used for NEW App LEMON GROVE, CA 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App SUSANVILLE, CA 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App SUSANVILLE, CA 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App CARDIFF, CO 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App DEL NORTE, CO 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App KIRK, CO 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for KXRE Lic MANITOU SPRINGS, CO 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App SILT, CO 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App YUMA, CO 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App YUMA, CO 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App UNCASVILLE, CT 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WVPR CP BRADENTON, FL 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WNDA Lic DELAND, FL 1490 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;  
Note: Assumed antenna parameters used for NEW App HERNANDO, FL 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WAFZ Lic IMMOKALEE, FL 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW CP CORDELE, GA 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for WKUN Lic MONROE, GA 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App DALTON GARDENS, ID 1490 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App RATHDRUM, ID 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for NEW App RATHDRUM, ID 1490 kHz  
Assumed parameters: Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for KEUN App PINEVILLE, LA 1490 kHz  
Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;  
Note: Assumed antenna parameters used for KEUN App PINEVILLE, LA 1490 kHz  
Assumed parameters: Tower #1 C assumed as 0; Tower #1 D assumed as 0;  
Note: Assumed antenna parameters used for WACM CP WEST SPRINGFIELD, MA 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

**Note: Invalid RMS for XEGT Zamora, Mx 1490 kHz; Power=1 kW (Non-D); RMS = 476.02; RMS/kW = 476.0**  
**Will not be used as an interference contributor**

Note: Assumed antenna parameters used for NEW App HOUGHTON, MI 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App HOUGHTON, MI 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App IRONWOOD, MI 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App IRONWOOD, MI 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App IRONWOOD, MI 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for KQDS Lic DULUTH, MN 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App COLUMBUS, MS 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App ELLISVILLE, MS 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App ELLISVILLE, MS 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App BOZEMAN, MT 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App BOZEMAN, MT 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App LOLO, MT 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App MALMSTROM AFB, MT 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App MALMSTROM AFB, MT 1490 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App MISSOULA, MT 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App ORCHARD HOMES, MT 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App WOODFIN, NC 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App WOODFIN, NC 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App BERLIN, NH 1490 kHz

Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App BERLIN, NH 1490 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for WUSS Lic PLEASANTVILLE, NJ 1490 kHz

Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0;

Note: Assumed antenna parameters used for NEW App FLORA VISTA, NM 1490 kHz

Note:	Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App GALLUP, NM 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for KRTN Lic RATON, NM 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for KRSN App SANTA FE, NM 1490 kHz Assumed parameters: Tower #1 B assumed as 0; Tower #1 C assumed as 0; Tower #1 D assumed as 0; Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App HAWTHORNE, NV 1490 kHz Assumed parameters: Tower #1 Type assumed as 0;
Note:	Assumed antenna parameters used for NEW App LOVELOCK, NV 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App SPRING CREEK, NV 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App SPRING CREEK, NV 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for WOLF CP SYRACUSE, NY 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App BEND, OR 1490 kHz Assumed parameters: Tower #1 Type assumed as 0;
Note:	Assumed antenna parameters used for NEW App DESCHUTES RIVER WOOD, OR 1490 kHz Assumed parameters: Tower #1 Type assumed as 0;
Note:	Assumed antenna parameters used for NEW App MADRAS, OR 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for KRNK App ROSEBURG, OR 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App LEMONT, PA 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App STATE COLLEGE, PA 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App STATE COLLEGE, PA 1490 kHz Assumed parameters: Tower #1 Type assumed as 0;
Note:	Assumed antenna parameters used for WDEP CP PONCE, PR 1490 kHz Assumed parameters: Tower #1 Type assumed as 0;
Note:	Assumed antenna parameters used for NEW App CAMERON, SC 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App CAMERON, SC 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for WCKD CP LEBANON, TN 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App ALPINE, TX 1490 kHz Assumed parameters: Tower #1 Type assumed as 0;
Note:	Assumed antenna parameters used for NEW App MARATHON, TX 1490 kHz Assumed parameters: Tower #1 Type assumed as 0; Assumed antenna parameters used for NEW App MARATHON, TX 1490 kHz Assumed parameters: Tower #1 Type assumed as 0;
Note:	Assumed antenna parameters used for NEW App RICHFIELD, UT 1490 kHz

Note:	Assumed parameters: Tower #1 Type assumed as 0;	
	Assumed antenna parameters used for NEW App SANTA CLARA, UT 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App SPANISH VALLEY, UT 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App ST. GEORGE, UT 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App AUGUSTA SPRINGS, VA 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App JOLIVUE, VA 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App PLUNKETSVILLE, VA 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App CASPER, WY 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App CASPER, WY 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App CASPER, WY 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App JACKSON, WY 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App JACKSON, WY 1490 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for WQCR Lic ALABASTER, AL 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for KIEV CP CULVER CITY, CA 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App CULVER CITY, CA 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App CULVER CITY, CA 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App VENICE, CA 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App PALM SPRINGS, FL 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App TAFT, FL 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;	
Note:	Assumed antenna parameters used for NEW App UNION PARK, FL 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for WGEN Lic GENESEO, IL 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0;	
Note:	Assumed antenna parameters used for WAKE Lic VALPARAISO, IN 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0;	
Note:	Assumed antenna parameters used for WLQV Lic DETROIT, MI 1500 kHz	
	Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0; Tower #5 Type assumed as 0; Tower #6 Type assumed as 0; Tower #7 Type assumed as 0; Tower #8 Type assumed as 0; Tower #9 Type assumed as 0;	

Note: Assumed antenna parameters used for NEW App WINCHESTER, NV 1500 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0; Tower #5 Type assumed as 0; Tower #6 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App WINCHESTER, NV 1500 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0; Tower #4 Type assumed as 0; Tower #5 Type assumed as 0; Tower #6 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App MURRELLS INLET, SC 1500 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for WTNE Lic TRENTON, TN 1500 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for KBRN App BOERNE, TX 1500 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for KBRN App BOERNE, TX 1500 kHz  
Assumed parameters: Tower #1 Type assumed as 0;

Note: Assumed antenna parameters used for NEW App SAN ANGELO, TX 1500 kHz  
Assumed parameters: Tower #1 Type assumed as 0; Tower #2 Type assumed as 0; Tower #3 Type assumed as 0;



**Datavorld**  
**Bethesda, MD**

Datavorld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat		Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)	
								To (deg)	From (deg)	GC (deg)	GeoMag (deg)	Min (deg)	Max (deg)						
WMBD	LIC	Peoria	IL	1470	5.000	136.8	242.3	215.1	34.5	41.1	51.7	46.1	59.9	556.3	627.0	361.02	4.527	100.0	4.527
WRSW	LIC	Warsaw	IN	1480	.500	233.9	307.7	99.0	280.8	41.4	52.2	31.1	45.1	90.6	58.8	254.86	2.997	66.2	5.429
50% Exclusion																			
WLMV	LIC	Madison	WI	1480	5.000	173.1	264.5	338.1	157.5	42.3	53.0	39.3	53.7	49.7	43.2	314.11	2.714	50.0	6.070
WPFR	LIC	Terre Haute	IN	1480	1.000	253.3	322.7	155.7	336.5	40.5	51.3	29.0	42.8	61.2	49.8	240.86	2.399	39.5	6.527
WGVU	LIC	Kentwood	MI	1480	5.000	282.7	346.3	59.3	241.3	42.2	53.0	26.3	39.6	71.5	55.2	210.86	2.328	35.7	6.930
WCIN	CP	Cincinnati	OH	1480	.300	436.7	480.3	125.8	308.4	40.4	51.3	17.3	27.7	103.9	84.4	132.39	2.234	32.2	7.281
25% Exclusion																			
WHBC	LIC	Canton	OH	1480	5.000	613.3	645.1	94.7	279.5	41.3	52.3	11.8	19.9	102.1	89.2	80.14	1.429	19.6	7.420
WNDV	LIC	South Bend	IN	1490	1.000	197.4	281.0	85.6	267.2	41.6	52.4	35.7	50.0	305.8	229.3	290.02	1.330	17.9	7.538
WGEZ	LIC	Beloit	WI	1490	1.000	107.1	226.9	341.4	161.2	42.0	52.7	53.1	65.6	301.0	161.1	392.09	1.263	16.8	7.643
KAUS	LIC	Austin	MN	1480	1.000	424.7	469.4	303.7	120.8	42.6	53.1	17.8	28.4	58.0	47.9	131.30	1.257	16.4	7.746
WSDS	LIC	Salem Township	MI	1480	3.800	418.9	464.2	78.0	261.3	41.9	52.8	18.0	28.8	55.9	44.6	134.69	1.201	15.5	7.838
WOSH	LIC	Oshkosh	WI	1490	1.000	273.9	339.2	1.2	181.3	42.8	53.5	27.1	40.5	387.9	238.4	215.51	1.028	13.1	7.905
WMDD	LIC	Fajardo	PR	1480	5.000	3376.9	3382.8	132.9	324.8	30.5	41.9	.0	.0	975.2	975.2	5.26	1.025	13.0	7.972
KCZZ	LIC	Mission	KS	1480	.500	587.7	620.8	243.6	59.6	40.4	50.8	12.4	20.8	69.7	57.4	89.03	1.022	12.8	8.037
WESL	LIC	East St. Louis	IL	1490	1.000	355.0	407.4	202.4	21.4	40.1	50.7	21.3	33.1	323.5	290.0	171.95	.997	12.4	8.098
WLFN	LIC	La Crosse	WI	1490	1.000	329.8	385.7	320.1	138.3	42.7	53.3	22.8	35.2	305.8	272.0	177.88	.968	12.0	8.156
WKBV	LIC	Richmond	IN	1490	1.000	365.6	416.7	121.0	303.4	40.7	51.6	20.7	32.3	405.6	290.6	163.84	.952	11.7	8.212
CKAN		Newmarket	Ca	1480	10.000	791.8	816.7	67.5	253.7	42.9	53.9	8.5	15.0	76.0	88.1	49.90	.879	10.7	8.258
WABJ	LIC	Adrian	MI	1490	1.000	382.1	431.3	83.2	266.2	41.8	52.6	19.8	31.2	315.4	286.0	151.91	.869	10.5	8.304
WZOE	LIC	Princeton	IL	1490	1.000	76.6	214.2	250.7	70.1	41.5	52.1	61.8	72.0	241.4	98.3	427.34	.840	10.1	8.346
KRIB	LIC	Mason City	IA	1490	1.000	415.8	461.4	296.1	112.9	42.4	52.9	18.2	28.9	360.5	307.7	135.82	.836	10.0	8.388
WABB	LIC	Mobile	AL	1480	4.400	1208.7	1225.2	177.6	357.9	36.2	46.9	4.1	8.5	128.5	127.6	31.29	.798	9.5	8.426
KLVL	CP	Pasadena	TX	1480	.500	1449.4	1463.2	206.2	22.3	35.7	46.1	2.4	6.1	171.3	171.1	23.31	.798	9.5	8.464
WIGM	LIC	Medford	WI	1490	1.000	422.2	467.2	341.1	159.9	43.4	54.0	17.9	28.6	360.0	309.1	129.00	.798	9.4	8.501
WMRN	LIC	Marion	OH	1490	1.000	470.8	511.6	101.4	285.0	41.1	52.0	15.9	25.8	407.2	333.0	117.79	.784	9.2	8.537
KBUR	LIC	Burlington	IA	1490	.760	228.7	303.8	249.2	67.5	41.2	51.8	31.7	45.7	359.2	146.2	261.22	.764	8.9	8.571
WISL	LIC	Shamokin	PA	1480	1.000	1014.2	1033.7	91.1	279.1	41.3	52.4	5.8	11.0	111.5	109.7	34.68	.761	8.9	8.605
WGUS	LIC	Augusta	GA	1480	5.000	1067.8	1086.4	145.0	329.0	37.6	48.6	5.3	10.2	107.7	100.7	36.84	.742	8.6	8.637
WPNA	LIC	Oak Park	IL	1490	1.000	74.7	213.5	63.4	244.0	41.7	52.4	62.4	72.5	241.4	86.5	427.95	.740	8.6	8.669
WMPX	LIC	Midland	MI	1490	1.000	423.5	468.4	56.3	239.3	42.6	53.5	17.8	28.5	301.0	281.5	130.47	.735	8.5	8.700
WZRC	LIC	New York	NY	1480	5.000	1220.8	1237.1	89.0	278.6	41.4	52.6	4.0	8.3	145.9	143.4	24.42	.700	8.0	8.728
KTTR	LIC	Rolla	MO	1490	1.000	485.5	525.1	214.6	32.6	39.8	50.3	15.4	25.1	315.4	297.2	117.38	.698	8.0	8.756

**Datworld  
Bethesda, MD**

Datworld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat GC GeoMag (deg)	Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)
								To	From		Min	Max					
								(deg)	(deg)	(deg)	(deg)	(deg)	(mV/m)	(mV/m)	(uV/m)	(mV/m)	(%)
WOMI	LIC	Owensboro	KY	1490	.830	445.6	488.4	162.9	343.9	39.7	50.4	27.2	401.4	261.6	131.14	.686	7.8
WFKY	LIC	Frankfort	KY	1490	1.000	489.9	529.2	138.9	321.2	39.9	50.7	24.9	316.8	298.3	114.99	.686	7.8
HJTZ		Lebrja	Co	1480	5.000	4124.2	4129.0	154.1	340.8	24.5	35.8	.0	719.0	719.0	4.56	.656	7.4
KQAM	LIC	Wichita	KS	1480	1.000	855.6	878.7	242.9	57.3	39.7	50.0	13.7	65.2	64.0	50.89	.652	7.4
WKRO	LIC	Cairo	IL	1490	1.000	507.2	545.2	185.9	5.5	39.3	50.0	14.7	24.1	305.8	111.44	.649	7.3
KDRO	LIC	Sedalia	MO	1490	.780	510.7	548.4	232.3	49.3	40.2	50.6	14.6	23.9	294.9	108.94	.642	7.2
WGFY	LIC	Charlotte	NC	1480	5.000	970.3	990.7	133.7	318.5	38.5	49.5	6.2	80.5	75.7	42.06	.637	7.2
KXLQ	LIC	Indianola	IA	1490	1.000	416.1	461.7	268.2	84.9	41.5	52.0	18.1	244.5	227.4	138.69	.631	7.1
KPHX	LIC	Phoenix	AZ	1480	.500	2254.9	2263.8	253.9	59.4	38.1	47.5	.0	323.7	323.7	9.52	.616	6.9
KVNR	LIC	Santa Ana	CA	1480	5.000	2707.0	2714.3	260.8	62.6	38.6	47.6	.0	472.5	472.5	6.46	.610	6.8
WCLU	LIC	Glasgow	KY	1490	1.000	562.6	597.1	154.5	336.2	39.3	50.1	13.1	317.0	303.2	96.31	.584	6.5
WSIP	LIC	Paintsville	KY	1490	1.000	652.0	682.0	128.2	311.9	39.7	50.6	11.0	441.0	378.8	76.61	.580	6.4
WCFJ	LIC	Chicago Heights	IL	1470	1.000	81.9	216.1	102.1	282.7	41.5	52.2	60.2	198.4	68.3	421.63	.576	6.4
XEGX		San Luis De La P	Mx	1480	1.000	2518.9	2526.9	210.0	23.7	31.6	41.7	.0	303.3	303.3	9.50	.576	6.4
WJMO	LIC	Cleveland Height	OH	1490	1.000	582.3	615.7	88.4	273.1	41.6	52.5	12.6	359.4	321.5	85.82	.552	6.1
WTIQ	LIC	Manistique	MI	1490	1.000	521.6	558.6	20.2	201.8	43.8	54.5	14.3	301.0	288.4	94.16	.543	6.0
WBEX	LIC	Chillicothe	OH	1490	1.000	536.0	572.1	116.0	299.6	40.5	51.4	13.8	303.0	270.1	100.04	.540	5.9
XEVC		Rio Blanco	Mx	1480	1.000	2655.4	2662.9	200.3	15.9	30.3	40.6	.0	305.5	305.5	8.83	.540	5.9
XE		Palenque	Mx	1480	1.000	2692.4	2699.8	187.6	5.9	29.6	40.2	.0	305.5	305.5	8.70	.532	5.8
XE		Atlixco	Mx	1480	1.000	2687.7	2695.1	203.3	18.2	30.3	40.6	.0	305.5	305.5	8.63	.528	5.8
KOMJ	LIC	Omaha	NE	1490	1.000	615.1	646.8	268.8	84.0	41.5	51.8	11.8	320.3	308.3	80.87	.499	5.4
WMGW	LIC	Meadville	PA	1490	1.000	700.1	728.1	86.8	272.4	41.7	52.7	17.3	423.3	386.1	64.30	.497	5.4
XEIP		Uruapan	Mx	1480	1.000	2773.5	2780.7	211.4	24.4	30.7	40.7	.0	305.6	305.6	8.10	.495	5.4
KDRS	LIC	Paragould	AR	1490	1.000	635.9	666.6	195.3	14.1	38.8	49.4	11.3	307.4	298.5	81.89	.489	5.3
WMOA	LIC	Marietta	OH	1490	1.000	648.4	678.5	109.4	294.1	40.6	51.5	11.1	336.4	322.4	75.38	.486	5.3
WDXL	LIC	Lexington	TN	1490	1.000	661.6	691.2	178.4	358.5	38.6	49.3	10.8	320.3	310.5	77.44	.481	5.2
XEOU		Huajuaplan De Leo	Mx	1480	1.000	2784.2	2791.4	201.0	16.4	29.8	40.1	.0	286.1	286.1	8.17	.468	5.1
KDMO	LIC	Carthage	MO	1490	1.000	695.7	723.8	227.2	43.5	39.4	49.9	10.1	333.1	322.1	70.89	.457	4.9
XEPR		Poza Rica	Mx	1480	.500	2484.3	2492.3	202.1	17.5	31.1	41.4	.0	232.0	232.0	9.82	.456	4.9
XE		Tecpan	Mx	1480	1.000	2940.9	2947.7	206.5	20.5	29.5	39.7	.0	304.1	304.1	7.48	.455	4.9
KYOS	LIC	Merced	CA	1480	5.000	2757.5	2764.8	270.8	70.2	40.6	49.5	.0	409.0	409.0	5.53	.453	4.9
KTOP	LIC	Topeka	KS	1490	1.000	661.1	690.7	247.4	62.8	40.4	50.8	10.8	309.0	300.3	74.79	.449	4.8
KLMS	LIC	Lincoln	NE	1480	.750	673.2	702.3	265.2	79.9	41.3	51.6	10.5	37.4	31.6	71.00	.449	4.8
XEMC		Salvatierra	Mx	1480	1.000	2642.9	2650.4	209.7	23.3	31.0	41.2	.0	255.0	255.0	8.79	.448	4.8

**Datworld**  
**Bethesda, MD**

Datworld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

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Database: FCC

Latitude: N 41° 34' 59.0"  
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Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat GC GeoMag (deg)	Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)
								To	From	(deg)	Min	Max	(deg)	(mV/m)	(uV/m)	(mV/m)	(%)
XECCQ		Cancun	Mx	1480	.500	2285.9	2294.6	175.1	356.1	31.3	42.1	.0	.8	198.1	11.29	.447	4.8
XEXC		Taxco	Mx	1480	1.000	2764.7	2771.9	205.5	19.8	30.2	40.4	.0	.0	267.5	8.22	.440	4.7
KQDS	LIC	Duluth	MN	1490	1.000	636.6	667.3	335.1	152.6	44.2	54.7	11.3	19.1	332.7	319.3	.440	4.7
WJOC	LIC	Chattanooga	TN	1490	1.000	781.8	807.0	157.2	339.2	38.3	49.2	8.7	15.2	381.4	60.24	.439	4.7
WJUM	LIC	Lewisburg	TN	1490	1.000	700.0	728.0	166.4	347.5	38.5	49.3	10.0	17.3	310.6	71.19	.432	4.6
WCSV	LIC	Crossville	TN	1490	1.000	698.2	726.3	152.6	334.8	38.8	49.6	10.1	17.3	312.1	303.9	.431	4.6
KLGR	LIC	Redwood Falls	MN	1490	1.000	624.0	655.2	304.0	119.5	43.1	53.5	11.6	19.5	301.0	282.1	.422	4.5
WFXV	LIC	Middlesboro	KY	1490	1.000	695.1	723.3	141.1	324.1	39.1	50.0	10.1	17.4	304.2	297.4	.421	4.5
WCKD	CP	Lebanon	TN	1490	1.000	631.5	662.4	160.8	342.3	38.9	49.7	11.4	19.3	257.5	82.27	.412	4.4
WOPI	LIC	Bristol	VA	1490	1.000	784.6	809.7	132.9	316.9	39.1	50.1	8.6	15.2	362.1	349.4	.408	4.3
WOHI	LIC	East Liverpool	OH	1490	1.000	678.2	707.0	96.3	281.6	41.2	52.2	10.5	17.9	301.0	294.1	.405	4.3
WSWW	LIC	Charleston	WV	1490	1.000	694.5	722.7	118.8	303.3	40.0	51.0	10.1	17.4	297.7	291.1	.401	4.3
WKLZ	LIC	Kalamazoo	MI	1470	1.000	260.6	328.5	72.8	254.8	41.9	52.7	28.3	41.9	110.2	83.6	.384	4.1
WTCS	LIC	Fairmont	WV	1490	1.000	752.2	778.3	105.4	290.9	40.6	51.6	9.1	15.9	323.5	316.0	.376	4.0
WDBQ	LIC	Dubuque	IA	1490	1.000	201.7	284.0	301.2	119.8	42.0	52.6	35.1	49.4	436.1	65.2	.371	3.9
WSGB	LIC	Sutton	WV	1490	1.000	744.7	771.1	113.3	298.4	40.2	51.2	9.3	16.1	301.0	295.6	.363	3.8
WTUP	LIC	Tupelo	MS	1490	1.000	814.7	838.9	180.6	.6	37.9	48.6	8.2	14.5	318.7	313.1	.358	3.8
WITA	LIC	Knoxville	TN	1490	1.000	742.0	768.5	145.7	328.7	38.8	49.7	9.3	16.2	282.0	276.7	.357	3.8
CFPS		Port Elgin	Ca	1490	1.000	665.1	694.5	59.3	244.2	43.1	54.0	10.7	18.3	273.6	268.3	.355	3.7
WESB	LIC	Bradford	PA	1490	1.000	828.5	852.3	83.7	270.4	41.9	52.9	8.0	14.2	381.4	366.9	.354	3.7
WAJF	LIC	Decatur	AL	1490	1.000	790.5	815.4	169.2	350.2	38.1	48.9	8.5	15.0	301.0	296.4	.354	3.7
WCNS	LIC	Latrobe	PA	1480	1.000	787.3	812.3	97.6	283.7	41.0	52.0	8.6	15.1	32.1	31.8	.347	3.6
KXRA	LIC	Alexandria	MN	1490	1.000	722.1	749.3	313.6	128.9	43.8	54.2	9.6	16.7	305.5	299.2	.344	3.6
WAey	LIC	Princeton	WV	1490	1.000	794.3	819.1	123.5	308.3	39.5	50.5	8.5	14.9	309.0	303.8	.344	3.6
WODJ	LIC	Whitehall	MI	1490	1.000	273.7	339.0	42.2	223.8	42.5	53.3	27.1	40.5	301.0	76.3	.330	3.5
WHBB	LIC	Selma	AL	1490	1.000	1026.9	1046.2	171.6	352.6	37.0	47.8	5.7	10.8	423.0	410.5	.330	3.5
HJOD		El Rodadero	Co	1480	1.000	3659.7	3665.2	153.3	340.0	26.6	37.8	.0	.0	309.5	309.5	.328	3.4
WARK	LIC	Hagerstown	MD	1490	1.000	943.9	964.9	99.7	286.8	40.7	51.8	6.5	12.1	408.8	395.3	.320	3.4
WYYZ	LIC	Jasper	GA	1490	1.000	870.0	892.7	153.9	336.5	38.0	48.9	7.4	13.4	317.0	312.5	.320	3.3
KWXT	LIC	Dardanelle	AR	1490	1.000	809.7	834.1	210.6	27.7	38.4	48.9	8.3	14.6	278.4	274.5	.315	3.3
WDAN	LIC	Danville	IL	1490	1.000	179.2	268.6	152.5	333.1	40.9	51.6	38.4	52.7	389.5	49.2	.308	3.2
WSTP	LIC	Salisbury	NC	1490	1.000	960.6	981.2	130.4	315.5	38.7	49.7	6.4	11.8	365.3	357.9	.304	3.2
KOTN	LIC	Pine Bluff	AR	1490	1.000	870.1	892.8	200.9	18.8	37.9	48.5	7.4	13.4	294.5	291.1	.301	3.1
KNIT	LIC	Dallas	TX	1480	1.900	1220.9	1237.1	218.3	33.4	37.2	47.5	4.0	8.3	40.2	49.5	.299	3.1

**Datworld  
Bethesda, MD**

Datworld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat GC GeoMag (deg)	Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)
								To	From	(deg)	Min	Max	(deg)	(mV/m)	(uV/m)	(mV/m)	(%)
WPRR	LIC	Johnstown	PA	1490	1.000	826.3	850.2	96.5	282.9	41.1	52.1	14.3	301.0	296.9	50.16	.298	3.1
WCLD	LIC	Cleveland	MS	1490	1.000	892.2	914.3	192.7	11.4	37.7	48.3	13.0	307.4	297.7	49.96	.297	3.1
KORN	LIC	Mitchell	SD	1490	1.000	803.4	827.9	290.2	103.8	42.7	53.0	14.7	318.7	292.9	50.66	.297	3.1
WSAR	LIC	Fall River	MA	1480	5.000	1444.1	1457.9	83.6	275.2	42.0	53.2	6.1	86.2	86.1	16.95	.292	3.0
WPCI	LIC	Greenville	SC	1490	1.000	922.5	943.9	142.2	326.0	38.3	49.2	12.4	310.6	307.3	46.15	.284	3.0
WDUR	LIC	Durham	NC	1490	1.000	1047.0	1066.0	123.4	309.5	38.9	49.9	10.5	394.3	385.8	36.40	.281	2.9
WLQR	LIC	Toledo	OH	1470	1.000	425.9	470.6	87.6	271.0	41.6	52.5	17.7	28.3	105.6	132.85	.280	2.9
KKAN	LIC	Phillipsburg	KS	1490	1.000	925.6	947.0	261.1	74.1	40.8	51.0	6.8	12.4	320.3	43.21	.273	2.8
WKUN	LIC	Monroe	GA	1490	1.000	965.3	985.8	152.0	335.0	37.7	48.6	6.3	11.7	317.0	43.54	.273	2.8
WCHM	LIC	Clarksville	GA	1490	1.000	892.8	914.9	148.7	331.8	38.1	49.0	13.0	281.5	279.0	48.93	.273	2.8
WAZL	LIC	Hazleton	PA	1490	1.000	1057.3	1076.1	89.7	278.0	41.4	52.6	10.3	441.0	426.3	31.99	.273	2.8
WRLA	LIC	West Point	GA	1490	1.000	1014.0	1033.5	161.6	343.7	37.2	48.1	5.8	11.0	338.0	40.73	.272	2.8
HJFC	CP	Pereira 3	NY	1480	1.000	4370.6	4375.2	159.4	344.7	22.9	34.1	.0	309.5	309.5	4.35	.269	2.8
WOLF	LIC	Syracuse	NY	1490	1.000	1034.3	1053.4	76.7	265.1	42.5	53.6	10.7	441.0	424.4	31.53	.268	2.8
WSVM	LIC	Valdese	NC	1490	1.000	891.4	913.6	134.6	319.0	38.7	49.7	13.0	276.8	274.3	48.12	.264	2.7
KGOE	LIC	Eureka	CA	1480	1.000	2960.0	2966.7	280.2	76.3	42.6	51.2	.0	318.7	318.7	4.12	.262	2.7
WHOC	LIC	Philadelphia	MS	1490	1.000	981.6	1001.7	182.9	2.6	37.2	47.9	6.1	11.5	305.8	43.24	.262	2.7
WAZZ	LIC	Fayetteville	NC	1490	1.000	1112.4	1130.3	127.5	313.5	38.4	49.5	9.6	394.3	387.8	33.30	.258	2.7
WLOE	LIC	Eden	NC	1490	1.000	947.8	968.7	123.7	309.2	39.1	50.2	6.5	12.0	298.3	42.80	.255	2.6
KXAR	LIC	Hope	AR	1490	.700	981.3	1001.5	208.2	25.1	37.7	48.1	11.5	301.6	296.2	42.93	.254	2.6
WLRT	LIC	Hampton	VA	1490	1.000	1165.7	1182.8	111.7	299.5	39.5	50.6	9.0	434.5	425.4	29.35	.250	2.6
HJIB		Florenia	Co	1480	1.000	4683.2	4687.5	160.4	345.4	21.5	32.7	.0	309.5	309.5	4.01	.248	2.6
KMFS	LIC	Guthrie	OK	1490	1.000	990.6	1010.6	233.1	47.6	38.8	49.1	6.0	11.3	303.9	301.5	.248	2.6
WCVA	LIC	Culpeper	VA	1490	.680	966.0	986.5	107.4	294.2	40.2	51.2	6.3	11.7	310.5	303.6	.242	2.5
WRTM	LIC	Vicksburg	MS	1490	1.000	1045.0	1064.0	191.8	10.4	37.0	47.6	10.5	305.8	303.7	39.27	.239	2.5
WGCD	LIC	Chester	SC	1490	1.000	1001.5	1021.2	137.4	322.0	38.2	49.2	5.9	11.2	297.7	295.5	.238	2.5
WPAK	LIC	Farmville	VA	1490	1.000	995.7	1015.5	115.1	301.6	39.6	50.6	6.0	11.2	309.0	306.4	.237	2.5
KRUS	LIC	Ruston	LA	1490	1.000	1070.6	1089.1	200.9	18.5	37.1	47.6	5.2	10.2	309.0	307.0	.232	2.4
WNBT	LIC	Wellsboro	PA	1490	1.000	938.7	959.8	85.1	272.7	41.8	52.9	6.6	12.2	294.5	291.8	.227	2.3
KWSL	LIC	Sioux City	IA	1470	5.000	652.7	682.7	280.7	95.5	42.1	52.4	11.0	18.6	159.8	155.7	.226	2.3
WBTA	LIC	Batavia	NY	1490	.710	870.0	892.7	76.3	263.3	42.4	53.4	7.4	13.4	261.7	258.3	.224	2.3
KPLT	LIC	Paris	TX	1490	1.000	1074.2	1092.7	216.9	32.6	37.7	48.0	5.2	10.1	305.8	301.8	.223	2.3
WFNT	LIC	Flint	MI	1470	1.000	436.3	480.0	67.6	250.9	42.3	53.2	17.3	27.7	95.2	126.50	.215	2.2
KBIX	LIC	Muskogee	OK	1490	.450	872.2	894.8	224.5	40.3	38.7	49.1	7.4	13.4	212.7	209.6	.212	2.2

**Dataworld  
Bethesda, MD**

Dataworld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat GC GeoMag (deg)	Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)
								To	From	(deg)	Min	Max	(deg)	(mV/m)	(uV/m)	(mV/m)	(%)
KOVC	LIC	Valley City	ND	1490	1.000	954.6	975.4	311.5	125.0	44.3	54.6	11.9	305.8	303.0	34.49	.209	2.2
-2000102	CP	Cordele	GA	1490	1.000	1151.8	1169.1	156.8	339.7	36.8	47.7	4.5	312.0	310.6	33.22	.206	2.1
WQSY	CP	Cordele	GA	1490	1.000	1151.8	1169.1	156.8	339.7	36.8	47.7	4.5	312.0	310.6	33.22	.206	2.1
CHRD		Drummondville	Ca	1480	10.000	1374.8	1389.3	64.7	255.8	44.0	55.2	2.9	61.8	62.8	16.26	.204	2.1
WJDJ	LIC	Hartsville	SC	1490	1.000	1095.6	1113.7	134.3	319.6	38.0	49.1	5.0	294.5	293.0	34.67	.203	2.1
WPWC	CP	Dumfries-triangl	VA	1480	.500	1014.2	1033.7	105.6	292.9	40.2	51.3	5.8	29.9	27.3	36.48	.199	2.1
WDAS	LIC	Philadelphia	PA	1480	1.000	1139.5	1157.0	94.5	283.2	41.0	52.1	4.6	35.2	33.9	28.50	.193	2.0
KYZS	LIC	Tyler	TX	1490	1.000	1182.0	1198.8	212.1	28.1	37.0	47.4	4.3	305.8	299.8	32.02	.192	2.0
WSYL	LIC	Sylvania	GA	1490	1.000	1161.6	1178.7	145.7	329.9	37.2	48.2	4.4	296.1	294.9	32.26	.190	2.0
WIKC	LIC	Bogalusa	LA	1490	1.000	1205.2	1221.7	185.8	5.1	36.2	46.8	4.1	302.6	301.5	31.48	.190	2.0
WECM	LIC	Milton	FL	1490	1.000	1226.2	1242.4	173.0	353.9	36.1	46.9	3.9	310.6	309.5	30.53	.189	1.9
WTYX	LIC	Watkins Glen	NY	1490	.400	972.7	993.1	81.0	268.9	42.1	53.2	6.2	272.8	262.5	35.98	.189	1.9
KBMS	LIC	Vancouver	WA	1480	2.500	2761.9	2769.1	290.9	87.0	44.9	53.7	.0	244.6	244.6	3.85	.188	1.9
KHVL	LIC	Huntsville	TX	1490	1.000	1360.6	1375.2	209.4	25.3	36.2	46.6	3.0	362.1	360.6	25.70	.185	1.9
KVWC	LIC	Vernon	TX	1490	1.000	1246.8	1262.8	232.0	45.4	38.0	48.2	3.8	317.0	315.9	28.51	.180	1.9
WKNY	LIC	Kingston	NY	1490	1.000	1209.4	1225.9	83.3	273.0	42.0	53.2	4.1	362.1	359.2	24.10	.173	1.8
KQTY	LIC	Borger	TX	1490	1.000	1287.7	1303.2	243.6	55.5	38.8	48.9	3.5	328.3	327.1	26.26	.172	1.8
WWNB	LIC	New Bern	NC	1490	1.000	1233.4	1249.5	121.8	309.0	38.5	49.6	3.9	305.8	304.8	27.60	.168	1.7
KEUN	LIC	Eunice	LA	1490	1.000	1281.7	1297.2	196.7	14.4	36.0	46.6	3.5	294.5	293.7	28.52	.168	1.7
WWIL	LIC	Wilmington	NC	1490	1.000	1239.4	1255.4	127.8	314.4	38.0	49.1	3.8	301.0	300.0	27.89	.167	1.7
WTOX	CP	Glen Allen	VA	1480	1.500	1038.8	1057.9	111.0	298.1	39.8	50.9	5.5	24.4	23.3	35.63	.166	1.7
WRMT	LIC	Rocky Mount	NC	1490	1.000	1124.1	1141.8	120.5	307.2	38.9	50.0	4.8	259.1	257.9	32.11	.166	1.7
WVGB	LIC	Beaufort	SC	1490	1.000	1234.3	1250.4	142.9	327.7	37.1	48.1	3.9	284.9	284.0	29.12	.165	1.7
WSFB	LIC	Quitman	GA	1490	1.000	1282.3	1297.8	157.9	340.9	36.2	47.1	3.5	294.5	293.7	28.06	.165	1.7
KWUD	LIC	Woodville	TX	1490	1.000	1312.6	1327.7	205.3	21.8	36.2	46.6	3.3	301.0	300.3	27.31	.164	1.7
WCDO	LIC	Sidney	NY	1490	1.000	1095.0	1113.1	81.3	270.1	42.1	53.3	5.0	282.0	280.4	28.88	.162	1.7
WDLC	LIC	Port Jervis	NY	1490	1.000	1158.9	1176.0	86.6	275.8	41.7	52.8	4.5	301.0	299.7	26.61	.160	1.6
WBCB	LIC	Levittown	PA	1490	1.000	1166.6	1183.6	93.2	282.2	41.1	52.2	4.4	294.5	293.3	27.14	.159	1.6
WLPA	LIC	Lancaster	PA	1490	.600	1046.4	1065.4	95.2	283.3	41.0	52.1	5.5	240.6	238.7	33.32	.159	1.6
WWBG	LIC	Greensboro	NC	1470	5.000	963.7	984.3	126.0	311.4	38.9	50.0	6.3	197.0	188.6	41.87	.158	1.6
WNDA	LIC	Deland	FL	1490	1.000	1544.6	1557.5	152.4	336.7	35.4	46.4	1.8	381.4	380.7	20.63	.157	1.6
KJIN	LIC	Houma	LA	1490	1.000	1349.2	1363.9	188.8	7.6	35.6	46.2	3.0	297.7	297.1	26.36	.157	1.6
WMOG	LIC	Brunswick	GA	1490	.600	1321.5	1336.6	149.0	333.2	36.4	47.4	3.2	297.9	295.9	26.38	.156	1.6
CKER		Edmonton	Ca	1480	10.000	2262.6	2271.4	313.9	115.4	48.2	57.6	.0	198.6	198.6	3.93	.156	1.6

**Datavorld  
Bethesda, MD**

Datavorld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat	Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)	
								To (deg)	From (deg)	GC GeoMag (deg)	Min (deg)	Max (deg)						
WCSS	LIC	Amsterdam	NY	1490	1.000	1195.1	1211.7	77.8	267.5	42.5	53.7	4.2	8.6	307.4	306.2	23.93	.147	1.5
WXBD	LIC	Biloxi	MS	1490	1.000	1244.5	1260.5	181.8	1.5	36.0	46.7	3.8	8.1	244.6	243.9	29.92	.146	1.5
WEAG	LIC	Starke	FL	1490	.650	1420.9	1434.9	153.7	337.5	35.8	46.8	2.6	6.3	300.9	299.8	23.67	.142	1.5
WICY	LIC	Malone	NY	1490	1.000	1214.8	1231.1	67.8	257.7	43.4	54.6	4.0	8.4	325.1	323.6	21.81	.141	1.4
WUSS	LIC	Pleasantville	NJ	1490	.400	1214.6	1230.9	96.9	286.1	40.7	51.9	4.0	8.4	270.7	266.5	25.66	.137	1.4
KGOS	LIC	Torrington	WY	1490	1.000	1293.9	1309.3	277.6	87.2	42.1	52.0	3.4	7.5	299.3	298.6	22.60	.135	1.4
KNDC	LIC	Hettinger	ND	1490	1.000	1231.4	1247.5	298.4	108.6	44.0	54.0	3.9	8.2	305.8	304.8	22.05	.134	1.4
WIRB	CP	Level Plains	AL	1490	.430	1170.6	1187.6	166.8	348.4	36.4	47.3	4.4	8.9	200.5	199.7	32.70	.131	1.3
KLBP	LIC	Brooklyn Park	MN	1470	5.000	548.8	584.1	316.8	133.6	43.4	53.8	13.5	22.3	75.7	72.8	89.71	.131	1.3
KRTN	LIC	Raton	NM	1490	1.000	1458.0	1471.7	254.2	64.2	39.5	49.4	2.4	6.0	318.7	318.2	20.47	.130	1.3
KZZN	LIC	Littlefield	TX	1490	1.000	1474.0	1487.6	239.2	50.8	38.0	48.0	2.3	5.9	304.2	303.8	21.24	.129	1.3
KFON	LIC	Austin	TX	1490	1.000	1500.9	1514.1	215.8	30.5	36.0	46.3	2.1	5.7	294.5	294.2	21.77	.128	1.3
CKLO	CP	L'annonciation	Ca	1490	1.000	1220.2	1236.5	59.2	248.8	44.2	55.3	4.0	8.3	313.8	312.6	20.47	.128	1.3
KYYW	CP	Abilene	TX	1470	1.000	1412.1	1426.2	227.9	41.1	37.2	47.3	2.6	6.4	268.9	269.7	23.49	.127	1.3
KXRE	LIC	Manitou Springs	CO	1490	1.000	1416.1	1430.1	263.1	72.5	40.5	50.4	2.6	6.4	305.8	305.3	20.68	.126	1.3
KBST	LIC	Big Spring	TX	1490	1.000	1539.6	1552.6	231.8	44.1	37.1	47.2	1.9	5.3	305.8	305.5	20.19	.123	1.3
WSIR	LIC	Winter Haven	FL	1490	1.000	1631.7	1643.9	155.4	339.4	34.8	45.8	1.4	4.6	318.7	318.5	18.98	.121	1.2
KFCR	LIC	Custer	SD	1490	.830	1246.1	1262.0	286.0	95.8	42.9	52.9	3.8	8.0	258.1	257.4	23.17	.119	1.2
WFAD	LIC	Middlebury	VT	1490	1.000	1286.1	1301.6	72.8	263.3	43.1	54.2	3.5	7.6	299.3	298.5	19.96	.119	1.2
WKVT	LIC	Brattleboro	VT	1490	1.000	1324.5	1339.5	78.6	269.4	42.5	53.7	3.2	7.2	301.0	300.3	19.53	.117	1.2
KCFC	LIC	Boulder	CO	1490	1.000	1409.6	1423.7	268.5	77.6	41.1	51.0	2.7	6.4	288.1	287.7	20.27	.117	1.2
KNEL	LIC	Brady	TX	1490	1.000	1504.8	1518.0	222.9	36.5	36.5	46.7	2.1	5.6	270.4	270.1	21.41	.116	1.2
WWNN	LIC	Pompano Beach	FL	1470	2.500	1876.8	1887.4	153.2	337.9	34.0	45.0	.2	3.0	382.7	382.7	15.05	.115	1.2
KUGR	LIC	Green River	WY	1490	1.000	1729.4	1740.9	276.7	82.8	42.0	51.6	.9	4.0	436.1	435.8	13.02	.113	1.2
WGCH	LIC	Greenwich	CT	1490	1.000	1250.1	1266.0	87.9	277.8	41.5	52.7	3.7	8.0	241.4	240.7	23.19	.112	1.1
KIBL	LIC	Beeville	TX	1490	1.000	1684.1	1695.9	212.3	27.0	35.1	45.4	1.1	4.3	305.8	305.6	18.18	.111	1.1
WACM	CP	West Springfield	MA	1490	1.000	1322.8	1337.8	82.2	272.9	42.1	53.3	3.2	7.3	276.5	275.8	20.06	.111	1.1
KLCL	LIC	Lake Charles	LA	1470	.500	1326.8	1341.7	199.9	17.1	35.9	46.4	3.2	7.2	204.8	204.3	26.96	.110	1.1
WVOI	LIC	Marco Island	FL	1480	1.000	1847.8	1858.6	157.6	341.5	33.8	44.8	.3	3.2	35.4	35.4	15.57	.110	1.1
WCCM	LIC	Haverhill	MA	1490	1.000	1445.4	1459.1	78.9	270.7	42.5	53.8	2.4	6.1	333.1	332.5	16.32	.109	1.1
WMRC	LIC	Milford	MA	1490	1.000	1413.9	1428.0	81.8	273.3	42.2	53.4	2.6	6.4	302.6	302.1	17.47	.106	1.1
WUVR	LIC	Lebanon	NH	1490	.640	1356.1	1370.8	74.7	265.9	42.9	54.1	3.0	6.9	292.2	290.9	18.10	.105	1.1
WNNY	LIC	Ithaca	NY	1470	1.000	1005.3	1025.0	80.8	269.0	42.1	53.2	5.9	11.1	156.7	154.3	33.83	.104	1.1
WTTB	LIC	Vero Beach	FL	1490	1.000	1721.6	1733.2	151.8	336.5	34.7	45.7	.9	4.0	299.3	299.3	17.28	.103	1.1

**Datavorld**  
**Bethesda, MD**

Datavorld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat		Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)
								To (deg)	From (deg)	GC (deg)	GeoMag (deg)	Min (deg)	Max (deg)					
WIKE	LIC	Newport	VT	1490	1.000	1374.6	1389.1	68.7	260.0	43.6	54.8	2.9	6.8	307.4	306.8	16.80	.103	1.1
WTTR	LIC	Westminster	MD	1470	1.000	1002.0	1021.8	99.0	286.6	40.7	51.8	5.9	11.2	146.3	141.1	36.45	.103	1.1
WBAE	LIC	Portland	ME	1490	1.000	1514.1	1527.2	75.1	267.5	43.0	54.2	2.0	5.6	359.0	358.3	14.30	.102	1.0
KWMC	LIC	Del Rio	TX	1490	1.000	1750.1	1761.5	223.0	35.8	35.6	45.7	.8	3.8	305.8	305.7	16.73	.102	1.0
XERCN		Tijuana	Mx	1470	5.000	2696.3	2703.7	257.2	59.9	37.9	47.0	.0	.0	748.3	748.3	6.74	.101	1.0
KRSN	LIC	Los Alamos	NM	1490	1.000	1655.2	1667.2	253.3	62.2	39.1	48.9	1.2	4.5	305.8	305.7	16.48	.101	1.0
KPKE	LIC	Gunnison	CO	1490	1.000	1591.4	1603.9	263.9	72.0	40.4	50.2	1.6	4.9	301.0	300.8	16.68	.100	1.0
WEMJ	LIC	Laconia	NH	1490	1.000	1417.7	1431.7	75.4	267.1	42.9	54.1	2.6	6.4	301.0	300.5	16.55	.099	1.0
KRUJ	LIC	Ruidoso Downs	NM	1490	1.000	1753.6	1765.0	243.9	53.5	37.8	47.6	.7	3.8	317.0	317.0	15.58	.099	1.0
WCLA	LIC	Claxton	GA	1470	.260	1203.4	1220.0	148.3	332.3	36.9	47.9	4.1	8.5	161.7	161.0	30.62	.099	1.0
KBSR	LIC	Laurel	MT	1490	1.000	1678.8	1690.7	292.4	98.4	44.1	53.7	1.1	4.3	404.0	403.6	11.96	.097	1.0
KLNT	LIC	Laredo	TX	1490	1.000	1852.4	1863.2	215.7	29.5	34.7	44.9	.3	3.2	307.4	307.4	15.49	.095	1.0
WNAU	CP	New Albany	MS	1470	.500	788.7	813.7	182.8	2.5	38.0	48.7	8.6	15.1	77.4	77.7	60.07	.093	1.0
WLUV	LIC	Dunedin	FL	1470	.500	1595.3	1607.7	158.7	342.0	34.9	45.8	1.6	4.9	226.5	226.3	19.79	.090	0.9
WAFZ	LIC	Immokalee	FL	1490	.700	1810.2	1821.2	156.5	340.5	34.0	45.0	.5	3.4	267.7	267.7	16.07	.086	0.9
YVJW		Valencia 2	Ve	1470	10.000	4037.5	4042.4	144.2	333.6	26.2	37.6	.0	.0	978.6	978.6	4.39	.086	0.9
CKBM		Montmagny	Ca	1490	1.000	1555.5	1568.3	61.1	253.8	44.6	55.9	1.8	5.2	362.1	361.6	11.74	.085	0.9
WTVL	LIC	Waterville	ME	1490	1.000	1573.7	1586.3	71.5	264.5	43.5	54.7	1.7	5.1	326.7	326.4	12.67	.083	0.8
CKOA		Amprior	Ca	1490	.250	1075.9	1094.3	62.5	250.9	43.7	54.8	5.2	10.1	150.8	149.9	27.29	.082	0.8
WBKV	LIC	West Bend	WI	1470	2.500	201.9	284.2	10.0	190.3	42.5	53.2	35.0	49.3	22.3	13.9	282.06	.078	0.8
WWPR	CP	Bradenton	FL	1490	.500	1662.7	1674.7	158.7	342.2	34.6	45.5	1.2	4.4	210.0	209.9	18.52	.078	0.8
KKTY	LIC	Douglas	WY	1470	.500	1387.4	1401.8	281.0	89.7	42.5	52.3	2.8	6.6	199.4	199.1	19.40	.077	0.8
WRGA	LIC	Rome	GA	1470	5.000	863.9	886.8	158.5	340.6	38.0	48.8	7.5	13.5	78.3	69.4	51.91	.072	0.7
WMBM	LIC	Miami Beach	FL	1490	1.000	1922.3	1932.6	153.5	338.3	33.7	44.8	.0	2.7	241.4	241.4	14.49	.070	0.7
KCUZ	LIC	Clifton	AZ	1490	1.000	2054.1	2063.9	249.2	56.5	37.8	47.4	.0	2.0	301.0	301.0	11.56	.070	0.7
XEAR		Tampico	Mx	1490	1.000	2318.3	2326.9	204.7	19.8	32.0	42.3	.0	.7	305.8	305.8	10.96	.067	0.7
WKAP	LIC	Allentown	PA	1470	5.000	1102.7	1120.7	91.1	279.8	41.3	52.4	5.0	9.7	107.7	112.3	29.81	.067	0.7
XEGG		Cd.mante	Mx	1490	1.000	2306.8	2315.5	207.9	22.3	32.3	42.5	.0	.7	300.0	300.0	10.99	.066	0.7
KYFO	LIC	Ogden	UT	1490	1.000	1944.0	1954.3	276.7	81.1	42.0	51.5	.0	2.6	305.8	305.8	10.32	.063	0.6
KAIR	LIC	Atchison	KS	1470	1.000	581.7	615.1	250.1	65.9	40.6	51.1	12.6	21.0	13.3	35.0	89.76	.063	0.6
XEME		Valladolid	Mx	1490	1.000	2322.3	2330.9	179.0	359.2	31.1	41.9	.0	.6	281.6	281.6	11.03	.062	0.6
BERMUDA		Bermuda	Bd	1490	1.000	2344.1	2352.6	108.4	302.9	37.5	48.9	.0	.5	378.3	378.3	8.14	.062	0.6
CHOW		Welland	Ca	1470	10.000	782.0	807.2	75.7	262.0	42.4	53.4	8.7	15.2	60.1	58.6	52.13	.061	0.6
XEXE		Queretaro	Mx	1490	1.000	2581.4	2589.2	209.0	22.8	31.2	41.4	.0	.0	331.3	331.3	9.14	.061	0.6

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Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	----- Azimuth ----- To (deg)	From (deg)	Mid-Pt Lat GC GeoMag (deg)	----- Theta ----- Min (deg)	Max (deg)	Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)	
KYCA	LIC	Prescott	AZ	1490	1.000	2221.2	2230.2	257.2	62.3	38.7	48.1	.0	1.1	312.2	312.2	9.54	.060	0.6
KDBM	LIC	Dillon	MT	1490	1.000	1975.9	1986.0	290.0	93.3	44.0	53.5	.0	2.4	341.2	341.2	8.56	.058	0.6
HOR 43		Radio Exito	Pm	1490	3.000	3826.5	3831.8	164.4	348.3	24.9	36.0	.0	.0	536.0	536.0	5.26	.056	0.6
WVOL	LIC	Berry Hill	TN	1470	1.000	618.8	650.3	164.7	345.8	38.9	49.7	11.7	19.7	38.6	32.9	84.78	.056	0.6
XEREC		Reforma	Mx	1470	1.000	2659.4	2666.9	190.7	8.4	29.8	40.3	.0	.0	305.5	305.5	8.87	.054	0.6
CJSN		Shaunavon	Ca	1490	1.000	1779.3	1790.5	307.0	112.7	46.0	55.8	.6	3.6	305.8	305.8	8.80	.054	0.5
WKCK	LIC	Orocovis	PR	1470	2.500	3339.2	3345.2	134.3	325.7	30.4	41.8	.0	.0	493.6	493.6	5.40	.053	0.5
CKMV		Grand Sault	Ca	1490	1.000	1762.9	1774.2	62.8	257.5	44.8	56.1	.7	3.7	305.8	305.8	8.69	.053	0.5
KCID	LIC	Caldwell	ID	1490	1.000	2294.1	2302.8	285.2	86.0	43.5	52.7	.0	.8	404.0	404.0	6.56	.053	0.5
XEPOP		Puebla	Mx	1490	1.000	2664.1	2671.6	202.9	17.9	30.4	40.7	.0	.0	298.9	298.9	8.76	.052	0.5
XEVZ		Acayucan	Mx	1490	1.000	2694.3	2701.7	194.8	11.6	29.8	40.3	.0	.0	297.9	297.9	8.67	.052	0.5
XECH		Toluca	Mx	1490	1.000	2689.9	2697.3	206.2	20.5	30.6	40.7	.0	.0	300.3	300.3	8.59	.052	0.5
XEYT		Teocelo	Mx	1490	1.000	2592.3	2600.0	200.3	16.0	30.5	40.9	.0	.0	277.8	277.8	9.19	.051	0.5
XEYA		Irapuato	Mx	1470	.500	2620.0	2627.6	211.1	24.4	31.3	41.4	.0	.0	287.0	287.0	8.89	.051	0.5
XEVP		Guasave	Mx	1490	1.000	2550.0	2557.8	231.9	40.7	34.0	43.6	.0	.0	290.8	290.8	8.74	.051	0.5
XEDR		Guaymas	Mx	1490	1.000	2530.8	2538.7	240.2	47.3	35.3	44.8	.0	.0	297.6	297.6	8.50	.051	0.5
KZZZ	LIC	Bullhead City	AZ	1490	1.000	2365.9	2374.4	260.8	64.5	39.1	48.3	.0	.4	305.8	305.8	8.26	.051	0.5
KFFN	LIC	Tucson	AZ	1490	1.000	2230.0	2239.0	249.5	55.9	37.4	47.0	.0	1.1	241.4	241.4	10.00	.048	0.5
KUOL	LIC	San Marcos	TX	1470	.250	1545.0	1557.9	215.7	30.3	35.8	46.1	1.8	5.3	115.9	115.8	20.78	.048	0.5
KRTK	LIC	Chubbuck	ID	1490	1.000	1965.7	1975.9	282.4	86.2	42.9	52.3	.0	2.5	251.1	251.1	9.49	.048	0.5
XEIB		Todos Santos	Mx	1490	1.000	2844.5	2851.6	231.6	39.7	33.0	42.5	.0	.0	325.0	325.0	7.30	.047	0.5
XEBAL		Becal	Mx	1470	.500	2351.2	2359.7	183.7	3.0	31.0	41.7	.0	.5	216.0	216.0	10.83	.047	0.5
KICO	LIC	Calexico	CA	1490	1.000	2567.2	2574.9	256.1	59.7	37.9	47.1	.0	.0	312.2	312.2	7.43	.046	0.5
WLOA	LIC	Farrell	PA	1470	.500	674.9	703.9	90.9	276.3	41.5	52.4	10.5	18.0	35.4	33.7	68.72	.046	0.5
TGRE		Modelo	Gt	1490	1.000	3018.0	3024.6	186.5	5.0	28.1	38.7	.0	.0	309.5	309.5	7.44	.046	0.5
XEED		Ameca	Mx	1490	1.000	2752.0	2759.2	216.6	28.4	31.3	41.2	.0	.0	281.0	281.0	8.11	.046	0.5
KUTY	LIC	Palmdale	CA	1470	5.000	2670.0	2677.5	262.9	64.5	39.1	48.1	.0	.0	325.9	325.9	6.48	.042	0.4
KMET	LIC	Banning	CA	1490	1.000	2616.8	2624.4	260.3	62.7	38.6	47.7	.0	.0	304.2	304.2	6.91	.042	0.4
CJPR		Coleman	Ca	1490	1.000	2187.4	2196.5	302.9	104.2	46.3	55.7	.0	1.3	379.8	379.8	5.45	.041	0.4
CJMC		Ste Anne De Mont	Ca	1490	1.000	1915.6	1926.0	56.4	252.3	45.9	57.2	.0	2.8	305.8	305.8	6.29	.038	0.4
HJTB		Ibague	Co	1470	2.000	4377.4	4382.0	158.6	344.1	23.0	34.2	.0	.0	433.8	433.8	4.33	.038	0.4
XEKN		Huetamo	Mx	1490	1.000	2806.0	2813.2	208.3	21.9	30.2	40.4	.0	.0	235.0	235.0	7.99	.038	0.4
KWAC	LIC	Bakersfield	CA	1490	1.000	2721.4	2728.8	265.4	66.2	39.5	48.5	.0	.0	301.0	301.0	6.08	.037	0.4
KOWL	LIC	South Lake Tahoe	CA	1490	1.000	2661.6	2669.1	274.1	73.6	41.3	50.3	.0	.0	318.7	318.7	5.66	.036	0.4



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KBKO	LIC	Santa Barbara	CA	1490	1.000	2820.2	2827.3	263.8 64.4	39.0 48.0	.0 .0	310.6	310.6	5.80	.036	0.4
WDEP	CP	Ponce	PR	1490	.790	3353.5	3359.5	134.9 326.1	30.2 41.6	.0 .0	332.1	332.1	5.38	.036	0.4
KBKR	LIC	Baker	OR	1490	1.000	2381.3	2389.7	288.5 88.3	44.1 53.2	.0 .4	305.8	305.8	5.72	.035	0.4
HJAY	LIC	Barranquilla	Co	1490	1.000	3662.7	3668.2	154.6 341.0	26.4 37.6	.0 .0	309.5	309.5	5.33	.033	0.3
KTEL	LIC	Walla Walla	WA	1490	1.000	2421.4	2429.6	291.9 91.1	44.8 53.9	.0 .2	318.7	318.7	5.18	.033	0.3
WMMW	LIC	Meriden	CT	1470	2.500	1312.4	1327.5	84.9 275.4	41.8 53.0	3.3 7.4	77.7	77.4	20.73	.032	0.3
KRKC	LIC	King City	CA	1490	1.000	2858.3	2865.3	268.8 68.0	40.1 48.9	.0 .0	296.1	296.1	5.31	.031	0.3
HJPX	LIC	Cartagena 3	Co	1470	1.000	3947.3	3952.4	157.2 343.0	24.9 36.2	.0 .0	309.5	309.5	4.91	.030	0.3
CJVB	LIC	Vancouver	Ca	1470	50.000	2790.0	2797.2	299.4 94.5	46.7 55.5	.0 .0	501.4	501.4	3.03	.030	0.3
HJOJ	LIC	S Marcos	Co	1490	1.000	3948.1	3953.1	156.6 342.5	25.0 36.2	.0 .0	309.5	309.5	4.89	.030	0.3
4VAA	LIC	Pt Au Prince	Ha	1470	.500	2989.5	2996.2	144.1 332.5	30.3 41.6	.0 .0	218.8	218.8	6.81	.030	0.3
KTOB	LIC	Petaluma	CA	1490	1.000	2906.3	2913.2	274.0 71.8	41.2 49.9	.0 .0	310.6	310.6	4.76	.030	0.3
HJIM	LIC	Medellin 3	Co	1470	1.000	4150.7	4155.5	158.3 343.8	24.0 35.2	.0 .0	309.5	309.5	4.62	.029	0.3
WLAM	LIC	Lewiston	ME	1470	5.000	1518.3	1531.4	73.4 265.9	43.2 54.4	2.0 5.5	100.6	100.2	14.00	.028	0.3
KBLF	LIC	Red Bluff	CA	1490	1.000	2811.7	2818.8	278.1 75.8	42.1 50.9	.0 .0	294.5	294.5	4.76	.028	0.3
KSYC	LIC	Yreka	CA	1490	1.000	2809.8	2816.9	281.8 78.8	42.9 51.7	.0 .0	313.8	313.8	4.46	.028	0.3
YVSQ	LIC	Merida 2	Ve	1490	1.000	4097.2	4102.1	150.5 338.2	25.1 36.4	.0 .0	309.5	309.5	4.50	.028	0.3
KBSN	LIC	Moses Lake	WA	1470	1.000	2498.7	2506.7	294.7 92.9	45.4 54.4	.0 .0	304.9	304.9	4.54	.028	0.3
HJTC	LIC	Sonson	Co	1490	1.000	4270.5	4275.2	158.4 343.9	23.5 34.7	.0 .0	309.5	309.5	4.46	.028	0.3
HJHQ	LIC	Pacho	Co	1470	1.000	4313.5	4318.2	156.6 342.6	23.5 34.7	.0 .0	309.5	309.5	4.37	.027	0.3
KEYG	LIC	Grand Coulee	WA	1490	1.000	2484.6	2492.6	296.9 95.2	45.8 54.8	.0 .0	304.2	304.2	4.40	.027	0.3
KRNR	LIC	Roseburg	OR	1490	1.000	2837.6	2844.6	285.5 81.6	43.7 52.5	.0 .0	326.7	326.7	4.06	.027	0.3
HJNT	LIC	Palmira 3	Co	1470	1.000	4457.0	4461.5	160.8 345.7	22.4 33.6	.0 .0	309.5	309.5	4.27	.026	0.3
XEUK	LIC	Caborca	Mx	1470	.250	2438.4	2446.6	248.0 53.7	36.7 46.2	.0 .1	152.9	152.9	8.65	.026	0.3
KYNR	LIC	Toppenish	WA	1490	1.000	2574.8	2582.6	292.7 90.4	45.1 54.1	.0 .0	301.0	301.0	4.39	.026	0.3
HJBS	LIC	Bogota 8	Co	1490	1.000	4410.9	4415.4	157.0 343.0	23.0 34.2	.0 .0	309.5	309.5	4.25	.026	0.3
KABN	LIC	Concord	CA	1480	.500	2859.5	2866.5	273.0 71.3	41.0 49.8	.0 .0	26.3	26.3	4.99	.026	0.3
KIID	LIC	Sacramento	CA	1470	1.000	2797.9	2805.0	274.2 72.6	41.3 50.1	.0 .0	253.3	253.3	5.12	.026	0.3
HJCL	LIC	Garzon	Co	1490	1.000	4587.7	4592.0	160.1 345.3	21.9 33.1	.0 .0	309.5	309.5	4.11	.025	0.3
KBZY	LIC	Salem	OR	1490	1.000	2792.2	2799.3	289.4 85.4	44.6 53.3	.0 .0	325.1	325.1	3.87	.025	0.3
HJIF	LIC	Pt Asis	Co	1470	1.000	4778.8	4782.9	162.1 346.7	20.9 32.1	.0 .0	309.5	309.5	3.94	.024	0.2
KELA	LIC	Centralia-chehal	WA	1470	1.000	2776.2	2783.4	293.5 89.2	45.4 54.2	.0 .0	313.8	313.8	3.57	.022	0.2
XEDS	LIC	Colima	Mx	1470	.200	2865.7	2872.6	214.5 26.6	30.6 40.6	.0 .0	145.4	145.4	7.62	.022	0.2
KLOG	LIC	Kelso	WA	1490	1.000	2772.3	2779.5	292.2 88.0	45.1 53.9	.0 .0	291.3	291.3	3.70	.022	0.2

**Dataworld  
Bethesda, MD**

Dataworld AM Detailed Individual Night Limit for Study Site (Contributor Records)

**Title: Millbrook IL 1480 kHz**

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Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat		Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)
								To (deg)	From (deg)	GC (deg)	Lat (deg)	Min (deg)	Max (deg)					
KBRO	LIC	Bremerton	WA	1490	1.000	2754.0	2761.2	295.6	91.3	45.9	54.7	.0	.0	301.0	301.0	3.47	.021	0.2
KBIS	LIC	Forks	WA	1490	1.000	2884.2	2891.1	296.5	90.8	46.2	54.9	.0	.0	320.3	320.3	3.00	.019	0.2
HCAE4		Esmeraldas	Ec	1490	.500	4694.1	4698.4	166.7	350.1	20.9	32.0	.0	.0	218.8	218.8	4.10	.018	0.2
WAZN	CP	Watertown	MA	1470	3.400	1437.3	1451.2	80.5	272.2	42.3	53.6	2.5	6.2	52.2	51.8	16.72	.017	0.2
KWOK	LIC	Hoquiam	WA	1490	1.000	2843.9	2850.9	294.2	89.2	45.7	54.4	.0	.0	261.9	261.9	3.30	.017	0.2
HCED1		Cayambe	Ec	1470	.360	4736.0	4740.2	164.4	348.4	20.9	32.0	.0	.0	185.7	185.7	4.02	.015	0.2
CFWB		Campbell River	Ca	1490	.880	2952.7	2959.5	301.1	94.3	47.3	56.0	.0	.0	289.9	289.9	2.45	.014	0.1
KNFL	CP	Tremonton	UT	1470	.940	1948.2	1958.5	277.8	82.1	42.2	51.6	.0	2.6	17.1	17.1	10.16	.003	0.0

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								To (deg)	From (deg)	GC (deg)	GeoMag (deg)	Min (deg)	Max (deg)					
WJBM	LIC	Jerseyville	IL	1480	.032	310.5	369.4	208.4	27.3	40.4	51.0	24.2	36.9	63.8	53.8	198.35	2.136	D
WCIN	LIC	Cincinnati	OH	1480	.500	439.8	483.1	126.5	309.2	40.4	51.2	17.1	27.5	105.1	70.3	131.25	1.846	S
XEZJ1		Guadalajara	Mx	1480	5.000	2707.9	2715.3	215.0	27.2	31.3	41.3	.0	.0	922.9	922.9	8.35	1.542	N
WHBC	LIC	Canton	OH	1480	5.000	606.9	639.0	96.7	281.4	41.2	52.2	12.0	20.1	108.4	94.0	81.68	1.535	
-2004012	APP	Monona	WI	1480	3.100	173.1	264.5	338.1	157.5	42.3	53.0	39.3	53.7	56.2	24.2	314.11	1.520	A
TGBH		Horizontes	Gt	1480	10.000	3020.1	3026.7	183.9	3.0	28.0	38.7	.0	.0	978.6	978.6	7.43	1.455	I
WIOS	PRM	Tawas City-east	MI	1480	.109	508.0	546.0	52.4	235.8	43.0	53.8	14.7	24.0	64.0	62.3	100.46	1.253	AD
WSDS	APP	Plymouth	MI	1480	3.800	418.9	464.2	78.0	261.3	41.9	52.8	18.0	28.8	56.4	45.0	134.69	1.211	A
KLEE	LIC	Ottumwa	IA	1480	.017	330.0	385.9	260.4	77.9	41.3	51.8	22.8	35.2	57.3	28.6	183.16	1.048	D
KTHS	LIC	Berryville	AR	1480	.064	721.4	748.6	218.0	34.9	39.0	49.5	9.7	16.7	71.7	70.4	67.71	.953	D
WHVO	LIC	Hopkinsville	KY	1480	.024	532.2	568.6	169.5	350.2	39.2	50.0	13.9	23.0	45.6	43.8	104.36	.914	D
CKDX		Newmarket	Ca	1480	10.000	791.8	816.7	67.5	253.7	42.9	53.9	8.5	15.0	76.0	88.1	49.90	.879	N
WTLO	PRM	Somerset	KY	1480	.028	604.8	637.0	144.4	326.9	39.4	50.2	12.0	20.2	49.8	48.4	86.59	.838	AD
WBBP	PRM	Memphis	TN	1480	.041	737.2	763.9	190.6	9.7	38.3	49.0	9.4	16.3	63.9	62.5	66.30	.828	AD
KLVL	LIC	Pasadena	TX	1480	.500	1449.4	1463.2	206.2	22.3	35.7	46.1	2.4	6.1	171.3	171.1	23.31	.798	S
WJLE	LIC	Smithville	TN	1480	.034	673.6	702.6	158.1	339.9	38.8	49.6	10.5	18.0	53.1	52.0	74.95	.780	D
KIOU	LIC	Shreveport	LA	1480	.129	1100.3	1118.3	206.1	23.0	37.1	47.6	5.0	9.8	108.0	107.4	36.02	.774	D
WYMR	LIC	Bridgeport	AL	1480	.039	780.2	805.4	160.2	342.0	38.3	49.1	8.7	15.3	62.3	61.1	60.55	.740	D
KKCQ	LIC	Fosston	MN	1480	.090	871.1	893.8	322.1	137.1	44.6	55.0	7.4	13.4	90.9	89.8	39.80	.715	D
KKCQ	APP	Fosston	MN	1480	.090	871.3	893.9	322.1	137.1	44.6	55.0	7.4	13.4	90.9	89.8	39.78	.715	AD
KSDR	PRM	Watertown	SD	1480	.050	782.2	807.4	301.3	115.4	43.3	53.6	8.7	15.2	66.2	65.2	51.50	.672	AD
WJFC	PRM	Jefferson City	TN	1480	.034	752.8	779.0	142.3	325.6	38.9	49.8	9.1	15.9	53.4	52.6	62.91	.662	AD
XEVIC		Cd.victoria	Mx	1480	1.000	2215.4	2224.4	209.4	23.6	32.7	43.0	.0	1.2	281.7	281.7	11.71	.660	N
XETKR		Guadalupe	Mx	1480	.500	2062.7	2072.4	214.7	28.2	33.8	43.9	.0	2.0	231.4	231.4	13.03	.603	O
WYZE	LIC	Atlanta	GA	1480	.044	949.6	970.4	155.6	338.2	37.7	48.5	6.5	12.0	65.8	65.1	44.83	.584	D
WCFJ	APP	Dolton	IL	1470	1.000	81.9	216.1	102.1	282.7	41.5	52.2	60.2	70.9	197.2	67.9	421.63	.573	A
KAVA	LIC	Pueblo	CO	1480	.107	1410.3	1424.4	260.4	70.0	40.2	50.1	2.6	6.4	129.4	129.2	21.10	.545	D
XE		Palenque	Mx	1480	1.000	2693.8	2701.3	187.9	6.2	29.6	40.2	.0	.0	305.5	305.5	8.69	.531	S
XEHM1		Cd.delicias	Mx	1480	.500	2135.7	2145.0	231.0	41.3	35.2	45.0	.0	1.6	220.5	220.5	11.77	.519	N
WCKD	CP	Lebanon	TN	1490	1.000	630.8	661.8	160.6	342.1	38.9	49.7	11.4	19.3	317.0	306.3	82.39	.505	S
WKGC	PRM	Panama City Beac	FL	1480	.087	1292.9	1308.3	167.9	349.6	35.9	46.7	3.4	7.6	88.8	88.5	27.99	.496	AD
-2004102	APP	Houghton	MI	1490	1.000	613.5	645.3	.1	180.1	44.3	55.0	11.8	19.9	328.3	314.4	71.96	.452	A
HREZ		Tegucigalpa	Ho	1480	1.000	3063.0	3069.5	176.7	357.5	27.8	38.6	.0	.0	309.5	309.5	7.25	.449	I
-2004012	APP	Houghton	MI	1490	1.000	612.9	644.7	359.8	179.8	44.3	55.0	11.8	19.9	316.2	305.0	72.13	.440	A

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WTOY	LIC	Salem	VA	1480	.020	874.0	896.6	120.5	305.9	39.5	50.5	7.4	13.3	45.1	44.4	48.39	.430	D
WZFB	LIC	Fair Bluff	NC	1480	.048	1164.7	1181.7	130.8	316.7	38.1	49.1	4.4	9.0	68.8	68.4	31.14	.426	D
WFLN	LIC	Arcadia	FL	1480	.131	1710.2	1721.8	156.8	340.7	34.5	45.4	1.0	4.1	113.6	113.6	17.64	.401	D
WUNA	LIC	Ocoee	FL	1480	.071	1582.8	1595.4	154.0	338.0	35.1	46.1	1.6	5.0	98.6	98.5	19.89	.392	D
WYRN	LIC	Louisburg	NC	1480	.035	1079.8	1098.1	120.9	307.4	39.0	50.0	5.2	10.0	56.9	56.6	34.37	.389	D
HIAH	LIC	S Domingo 4	Dr	1480	1.000	3122.7	3129.1	139.7	329.3	30.4	41.7	.0	.0	309.5	309.5	6.21	.385	I
WZJY	LIC	Mount Pleasant	SC	1480	.044	1244.0	1260.0	138.7	324.0	37.3	48.3	3.8	8.1	65.0	64.8	28.49	.369	D
TIAC	LIC	Puntarenas	Cs	1480	1.000	3624.8	3630.3	173.1	354.8	25.4	36.3	.0	.0	309.5	309.5	5.78	.358	I
WLEA	LIC	Hornell	NY	1480	.019	908.8	930.5	81.4	268.7	42.1	53.1	6.9	12.7	43.9	43.4	40.74	.353	D
CMHR	LIC	Florida	Cu	1480	.250	2435.5	2443.7	153.3	338.8	31.6	42.8	.0	.1	179.1	179.1	9.83	.352	C
WPFJ	LIC	Franklin	NC	1480	.013	845.3	868.6	145.6	328.9	38.4	49.3	7.8	13.9	32.3	31.8	53.01	.337	D
-2004013	APP	Woodfin	NC	1490	1.000	844.7	868.1	139.9	323.7	38.6	49.6	7.8	13.9	310.4	306.0	52.70	.322	A
KRAE	LIC	Cheyenne	WY	1480	.065	1352.5	1367.2	273.2	82.5	41.6	51.5	3.0	7.0	74.3	74.1	21.32	.316	D
XENS1	LIC	Navojia	Mx	1480	.250	2492.4	2500.4	236.3	44.3	34.8	44.4	.0	.0	176.7	176.7	8.90	.315	N
-2004012	APP	Fayette	AL	1490	1.000	880.5	902.9	175.3	355.8	37.6	48.4	7.3	13.2	305.8	302.2	50.91	.308	A
-2004012	APP	Du Bois	PA	1490	1.000	818.7	842.8	90.2	276.7	41.5	52.5	8.1	14.4	308.7	304.0	50.10	.305	A
-2004012	APP	Wink	TX	1480	.500	1691.6	1703.4	234.4	45.7	36.9	46.9	1.1	4.2	87.8	88.2	17.15	.302	A
WLQR	APP	Walbridge	OH	1470	.750	419.1	464.3	88.6	272.0	41.6	52.5	18.0	28.7	156.0	108.7	135.80	.295	A
GRAVENHU			Gravenhurst		Ca	1490	1.000	831.2	854.9	60.4	246.7	43.3	54.3	7.9	14.2	321.8	316.2 44.81	.283
-2004012	APP	Julesburg	CO	1480	.250	1142.1	1159.5	271.2	82.2	41.5	51.5	4.6	9.2	48.3	48.1	29.23	.281	A
-2004012	APP	Jolivet	VA	1490	1.000	900.3	922.3	112.0	298.1	40.0	51.0	7.1	12.8	305.8	302.4	45.28	.274	A
XE		Hermosillo	Mx	1480	.250	2444.1	2452.3	242.5	49.4	35.9	45.4	.0	.1	152.8	152.8	8.91	.272	O
WNEZ	PRM	Windsor	CT	1480	.014	1319.8	1334.9	83.4	274.0	42.0	53.2	3.2	7.3	67.1	67.0	20.31	.272	AD
XEXU		Villa Frontera	Mx	1480	.100	2006.2	2016.1	219.8	32.5	34.4	44.5	.0	2.3	99.9	99.9	13.49	.270	D
KWAY	LIC	Waverly	IA	1470	.061	342.5	396.6	292.6	110.0	42.2	52.7	22.0	34.1	87.1	78.0	172.73	.269	D
CHRD		Drummondville	Ca	1480	35.000	1374.8	1389.3	64.7	255.8	44.0	55.2	2.9	6.8	79.1	81.7	16.26	.266	N
-2004012	APP	Ironwood	MI	1490	.250	555.7	590.6	347.7	166.6	44.0	54.6	13.3	22.0	158.1	151.1	85.34	.258	A
-2004012	APP	Lemont	PA	1490	1.000	904.8	926.6	91.9	279.0	41.3	52.4	7.0	12.8	306.0	302.7	42.48	.257	A
-2004102	APP	Ironwood	MI	1490	.250	556.9	591.8	347.7	166.7	44.0	54.6	13.2	22.0	152.9	147.0	85.04	.250	A
-2004102	APP	Ironwood	MI	1490	.250	556.9	591.8	347.7	166.7	44.0	54.6	13.2	22.0	152.9	147.0	85.04	.250	A
KHQN	LIC	Spanish Fork	UT	1480	.133	1941.4	1951.7	272.7	77.5	41.4	50.9	.0	2.6	115.0	115.0	10.75	.247	D
XEQUB		Itepec	Mx	1480	.250	2857.4	2864.4	194.4	11.2	29.1	39.5	.0	.0	152.8	152.8	7.97	.243	N
XEMCA		Cd.morelos	Mx	1480	.250	2519.7	2527.6	255.3	59.2	37.8	47.1	.0	.0	155.9	155.9	7.74	.241	O

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XEMCA		Cd.morelos	Mx	1480	.250	2529.2	2537.1	254.9	58.9	37.8	47.0	.0	155.9	155.9	7.71	.240	O	
WOLF	LIC	Syracuse	NY	1490	1.000	1034.3	1053.4	76.7	265.1	42.5	53.6	5.6	10.7	383.0	375.9	31.53	.237	S
WADR	PRM	Remsen	NY	1480	.019	1117.0	1134.8	75.5	264.6	42.7	53.8	4.8	9.6	42.6	42.4	27.02	.229	AD
WGNR	LIC	Anderson	IN	1470	.036	296.2	357.4	123.9	305.7	40.8	51.6	25.2	38.2	61.7	51.2	206.17	.211	D
WEOO	LIC	Shippensburg	PA	1480	.009	945.2	966.1	96.6	283.8	41.0	52.0	6.5	12.1	26.3	26.1	39.98	.209	D
WPWC	LIC	Dumfries-triangl	VA	1480	.500	1014.2	1033.7	105.6	292.9	40.2	51.3	5.8	11.0	29.8	27.2	36.48	.198	S
KEUN	APP	Pineville	LA	1490	1.000	1192.4	1209.0	197.9	15.6	36.5	47.0	4.2	8.6	305.0	304.1	31.93	.194	A
KEUN	APP	Pineville	LA	1490	1.000	1192.4	1209.1	197.9	15.6	36.5	47.0	4.2	8.6	305.0	303.8	31.93	.194	A
WNBX	PRM	Springfield	VT	1480	.023	1333.4	1348.3	76.5	267.4	42.7	53.9	3.2	7.1	48.6	48.4	18.98	.184	AD
XEZJ		Guadalajara	Mx	1480	.200	2706.5	2713.9	215.3	27.5	31.3	41.3	.0	.0	109.5	109.5	8.35	.183	OD
-2004102	APP	Cameron	SC	1490	1.000	1129.4	1147.0	139.7	324.5	37.6	48.6	4.7	9.4	256.9	255.9	33.38	.171	A
-2004013	APP	Hernando	FL	1490	1.000	1515.8	1529.0	156.2	339.9	35.3	46.3	2.0	5.5	389.9	388.9	21.41	.167	A
-2004012	APP	Cameron	SC	1490	1.000	1129.6	1147.2	139.7	324.5	37.6	48.6	4.7	9.4	249.8	248.8	33.37	.166	A
WEAG	APP	Kincaid Hills	FL	1490	1.000	1448.1	1461.8	154.8	338.5	35.6	46.6	2.4	6.1	323.1	322.6	23.00	.148	A
KFMZ	LIC	Brookfield	MO	1470	.020	424.3	469.0	244.3	61.4	40.7	51.2	17.8	28.4	56.2	52.9	137.47	.146	D
WBFC	LIC	Stanton	KY	1470	.082	576.5	610.2	133.9	316.9	39.8	50.6	12.7	21.2	80.8	78.4	91.86	.144	D
WAZN	APP	Watertown	MA	1470	3.400	1437.3	1451.2	80.5	272.2	42.3	53.6	2.5	6.2	431.8	430.5	16.72	.144	A
-2004012	APP	Newtonville	AL	1490	.250	900.1	922.1	175.2	355.7	37.5	48.3	7.1	12.8	144.9	143.6	49.24	.141	A
-2004013	APP	Augusta Springs	VA	1490	.250	884.0	906.3	112.8	298.8	39.9	51.0	7.3	13.1	152.9	151.1	46.74	.141	A
KRXR	LIC	Gooding	ID	1480	.093	2145.3	2154.6	282.7	85.0	43.0	52.3	.0	1.5	89.5	89.5	7.86	.141	D
-2004012	APP	Plunketsville	VA	1490	.250	898.2	920.2	111.9	298.1	40.0	51.0	7.1	12.9	152.9	150.9	45.45	.137	A
-2004012	APP	State College	PA	1490	.250	904.0	925.9	92.0	279.1	41.3	52.4	7.0	12.8	158.1	156.1	42.54	.133	A
WEMM	LIC	Huntington	WV	1470	.072	629.0	660.0	122.2	306.1	40.0	51.0	11.5	19.4	85.1	82.2	80.18	.132	D
-2004012	APP	State College	PA	1490	.250	902.3	924.2	92.0	279.1	41.3	52.4	7.0	12.8	152.9	151.2	42.69	.129	A
CKLO		L'annonciation	Ca	1490	1.000	1220.2	1236.5	59.2	248.8	44.2	55.3	4.0	8.3	313.8	312.6	20.47	.128	N
-2000020	APP	Level Plains	AL	1490	.400	1168.0	1185.0	166.7	348.3	36.5	47.3	4.4	8.9	195.7	194.9	32.81	.128	A
-2004013	APP	Woodfin	NC	1490	.250	842.0	865.4	139.7	323.5	38.7	49.6	7.8	13.9	122.0	120.1	52.95	.127	AD
KNTB	LIC	Lakewood	WA	1480	.111	2747.1	2754.4	294.6	90.5	45.6	54.5	.0	.0	177.6	177.6	3.57	.127	D
KYYW	LIC	Abilene	TX	1470	1.000	1412.1	1426.2	227.9	41.1	37.2	47.3	2.6	6.4	267.0	266.0	23.49	.125	S
XESM		Granjas Esmerald	Mx	1470	5.000	2664.2	2671.7	205.1	19.6	30.6	40.8	.0	.0	700.5	700.5	8.74	.122	O
XESM		Granjas Esmerald	Mx	1470	5.000	2665.0	2672.5	205.0	19.6	30.6	40.8	.0	.0	690.7	690.7	8.73	.121	N
-2004012	APP	Columbus	MS	1490	.250	900.8	922.7	178.8	359.0	37.5	48.2	7.0	12.8	122.0	120.7	49.24	.119	AD
WACM	LIC	West Springfield	MA	1490	.470	1322.3	1337.3	82.2	272.9	42.1	53.3	3.2	7.3	297.9	294.7	20.07	.118	S
WPYT	LIC	Portage	PA	1470	.088	844.6	868.0	95.8	282.3	41.1	52.1	7.8	13.9	130.8	121.2	48.27	.117	D

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Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	----- Azimuth ----- To From (deg) (deg)	Mid-Pt Lat GC GeoMag (deg) (deg)	----- Theta ----- Min Max (deg) (deg)	Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)
WXAG	PRM	Athens	GA	1470	.176	967.6	988.1	150.0 333.3	37.8 48.7	6.3 11.7	131.0	129.7	43.28	.112	AD
-2004012	APP	Ellisville	MS	1490	.250	1106.9	1124.8	182.9 2.5	36.6 47.3	4.9 9.7	152.9	152.1	35.93	.109	A
-2004102	APP	Ellisville	MS	1490	.250	1106.9	1124.8	182.9 2.5	36.6 47.3	4.9 9.7	152.9	152.1	35.93	.109	A
WBCR	LIC	Alcoa	TN	1470	.082	764.9	790.6	146.4 329.3	38.7 49.6	8.9 15.6	89.8	88.0	61.68	.109	D
WWPR	LIC	Bradenton	FL	1490	1.000	1659.0	1671.1	158.8 342.2	34.6 45.5	1.2 4.5	291.3	291.2	18.58	.108	S
KITO	LIC	Vinita	OK	1470	.088	786.0	811.0	227.8 43.7	39.2 49.6	8.6 15.1	93.1	91.4	59.12	.108	D
KRSN	APP	Santa Fe	NM	1490	1.000	1642.9	1655.1	252.1 61.2	39.0 48.8	1.3 4.6	316.8	316.6	16.79	.106	A
WTOE	LIC	Spruce Pine	NC	1470	.103	845.4	868.7	136.2 320.2	38.8 49.7	7.8 13.9	101.7	100.2	52.37	.105	D
XEHES		Chihuahua	Mx	1490	1.000	2136.8	2146.2	233.1 43.0	35.4 45.2	.0 1.6	437.7	437.7	11.67	.102	N
XERCN		Tijuana	Mx	1470	5.000	2696.3	2703.7	257.2 59.9	37.9 47.0	.0 .0	756.5	756.5	6.74	.102	O
POINTE C		Pointe Claire	Ca	1470	5.000	1267.2	1282.9	65.5 255.8	43.7 54.9	3.6 7.8	259.9	259.0	19.63	.102	N
XEQF		Loma Bonita	Mx	1470	5.000	2702.8	2710.2	197.1 13.4	29.9 40.3	.0 .0	564.7	564.7	8.61	.097	O
-2005011	APP	Del Norte	CO	1490	1.000	1577.8	1590.5	259.9 68.5	40.0 49.8	1.7 5.0	272.9	272.8	17.33	.095	A
WNAU	LIC	New Albany	MS	1470	.500	788.7	813.7	182.8 2.5	38.0 48.7	8.6 15.1	77.4	77.7	60.07	.093	S
-2004013	APP	Los Lunas	NM	1470	1.000	1762.6	1773.9	249.7 58.5	38.4 48.2	.7 3.7	305.8	305.8	15.04	.092	A
-2004012	APP	Alpine	TX	1490	1.000	1840.2	1851.0	232.2 43.3	36.2 46.2	.3 3.2	305.8	305.8	15.01	.092	A
WUJK	LIC	Evergreen	AL	1470	.177	1137.3	1154.7	172.0 353.0	36.5 47.3	4.6 9.3	132.0	131.3	34.33	.090	D
XEMS		Matamoros	Mx	1490	1.000	1932.4	1942.7	208.0 23.0	33.8 44.1	.0 2.7	306.6	306.6	14.65	.090	O
-2004102	APP	Berlin	NH	1490	1.000	1449.2	1463.0	71.3 263.2	43.4 54.6	2.4 6.1	293.1	292.7	15.25	.089	A
WQXL	LIC	Columbia	SC	1470	.138	1069.8	1088.4	139.3 323.9	37.9 48.9	5.2 10.2	116.6	115.8	36.37	.084	D
WQXL	CP	Columbia	SC	1470	.100	1076.0	1094.4	139.5 324.2	37.8 48.8	5.2 10.1	118.4	116.6	36.06	.084	D
XEFF		Matehuala	Mx	1490	1.000	2285.6	2294.4	213.0 26.4	32.8 42.9	.0 .8	378.8	378.8	11.06	.084	O
KSBQ	LIC	Santa Maria	CA	1480	.061	2861.7	2868.7	265.6 65.5	39.4 48.2	.0 .0	75.5	75.5	5.52	.083	D
-2004012	APP	Yuma	CO	1490	.250	1197.4	1214.0	266.9 77.6	41.1 51.1	4.2 8.6	152.9	152.3	27.37	.083	A
-2004012	APP	Yuma	CO	1490	.250	1200.2	1216.7	266.9 77.6	41.1 51.1	4.1 8.6	152.9	152.3	27.25	.083	A
-2004012	APP	Spanish Valley	UT	1490	1.000	1802.8	1813.9	265.8 72.3	40.5 50.1	.5 3.5	314.5	314.5	13.10	.082	A
-2004102	APP	Spanish Valley	UT	1490	1.000	1802.8	1813.9	265.8 72.3	40.5 50.1	.5 3.5	314.5	314.5	13.10	.082	A
-2004012	APP	Gallup	NM	1490	1.000	1872.0	1882.6	255.4 62.8	39.0 48.6	.2 3.0	305.8	305.8	13.11	.080	A
XEGT		Zamora	Mx	1490	1.000	2726.8	2734.1	212.3 25.2	31.0 41.0	.0 .0	476.0	476.0	8.31	.079	D
XERO		Aguascalientes	Mx	1490	1.000	2538.5	2546.4	214.6 27.2	31.9 42.0	.0 .0	422.3	422.3	9.29	.078	O
-2004012	APP	San Angelo	TX	1480	.500	1536.8	1549.8	226.9 39.8	36.7 46.8	1.9 5.4	18.7	18.6	20.51	.076	A
KYUU	LIC	Liberal	KS	1470	.170	1166.9	1183.9	248.5 60.7	39.5 49.6	4.4 8.9	124.2	123.7	30.49	.075	D
CMDP		Cardenas	Cu	1470	1.000	2174.3	2183.5	159.3 343.3	32.4 43.4	.0 1.4	309.5	309.5	11.99	.074	C
-2004012	APP	Berlin	NH	1490	1.000	1449.3	1463.1	71.3 263.2	43.4 54.6	2.4 6.1	241.0	240.8	15.24	.073	A

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XEYA1		Irapuato	Mx	1470	1.000	2620.0	2627.6	211.1	24.4	31.3	41.4	.0	405.9	405.9	8.89	.072	N
XEJC1		Cd.juarez	Mx	1490	1.000	1926.4	1936.7	241.1	50.3	37.0	46.8	.0	266.6	266.6	13.44	.072	N
-2004102	APP	Santa Clara	UT	1490	1.000	2190.4	2199.5	265.1	69.2	40.0	49.4	.0	380.0	380.0	9.16	.070	A
-2004012	APP	Kirk	CO	1490	.250	1199.7	1216.3	264.1	75.0	40.8	50.8	4.1	121.4	121.0	27.58	.067	AD
WLMC	PRM	Georgetown	SC	1470	.147	1227.5	1243.6	135.0	320.7	37.6	48.6	3.9	115.4	114.9	28.88	.066	AD
XE0047		Hidalgo Del Parr	Mx	1490	1.000	2252.1	2260.9	229.0	39.3	34.5	44.4	.0	304.5	304.5	10.86	.066	N
XEQS		Freshillo	Mx	1470	.500	2439.8	2448.0	217.2	29.5	32.6	42.6	.0	330.5	330.5	9.85	.065	O
XEJC		Cd.juarez	Mx	1490	1.000	1927.8	1938.1	241.1	50.4	37.0	46.8	.0	241.4	241.4	13.42	.065	O
KUOL	APP	San Marcos	TX	1470	.250	1545.9	1558.8	215.6	30.2	35.8	46.1	1.8	153.5	153.4	20.77	.064	A
WCHJ	PRM	Brookhaven	MS	1470	.082	1126.2	1143.9	189.0	7.9	36.6	47.2	4.7	91.2	90.7	34.98	.063	AD
XE		Cd.cuauhtemoc	Mx	1490	1.000	2208.1	2217.2	234.3	43.7	35.3	45.1	.0	278.8	278.8	11.00	.061	N
XEAQ1		Agua Prieta	Mx	1490	1.000	2185.6	2194.8	245.3	52.7	36.9	46.5	.0	284.1	284.1	10.61	.060	N
XEIND		Tlanchinol	Mx	1470	1.000	2480.5	2488.5	205.4	20.1	31.4	41.6	.0	305.5	305.5	9.81	.060	O
KHND	LIC	Harvey	ND	1470	.161	1125.8	1143.4	311.4	123.4	44.8	55.0	4.7	121.4	120.8	24.66	.060	D
-2004013	APP	Bozeman	MT	1490	1.000	1855.4	1866.1	291.8	96.2	44.2	53.7	.3	305.7	305.7	9.64	.059	A
-2004012	APP	Santa Clara	UT	1490	1.000	2196.1	2205.2	265.3	69.2	40.0	49.4	.0	314.4	314.4	9.10	.057	A
XECAV1		Durango	Mx	1470	1.000	2448.5	2456.7	222.2	33.4	33.1	43.0	.0	295.8	295.8	9.67	.057	N
-2000012	APP	St. George	UT	1490	1.000	2195.9	2205.0	264.9	68.9	40.0	49.3	.0	305.8	305.8	9.14	.056	A
WCHJ	LIC	Brookhaven	MS	1470	.066	1126.1	1143.7	189.0	7.9	36.6	47.2	4.7	79.6	79.2	34.99	.055	D
-2004013	APP	Taos	NM	1470	.250	1571.5	1584.2	254.2	63.4	39.3	49.2	1.7	152.9	152.8	17.97	.055	A
XE		Tlaltenango	Mx	1470	1.000	2595.8	2603.5	216.5	28.6	31.9	41.9	.0	305.5	305.5	8.92	.054	O
KWRD	PRM	Henderson	TX	1470	.083	1180.7	1197.5	209.7	26.0	36.9	47.3	4.3	84.8	84.5	32.15	.054	AD
-2004012	APP	Uncasville	CT	1490	.250	1371.2	1385.7	85.2	276.2	41.8	53.0	2.9	140.8	140.6	19.04	.054	AD
-2004013	APP	Casper	WY	1490	.250	1463.1	1476.7	281.4	89.4	42.6	52.4	2.3	152.9	152.7	17.45	.053	A
CMKN		Mayari	Cu	1490	1.000	2625.8	2633.4	148.5	335.3	31.3	42.5	.0	309.5	309.5	8.57	.053	C
-2005011	APP	Jackson	WY	1490	1.000	1824.9	1835.9	284.0	88.9	43.1	52.6	.4	241.0	241.0	10.90	.053	A
WVBS	LIC	Burgaw	NC	1470	.093	1219.1	1235.4	126.5	313.1	38.2	49.3	4.0	92.3	92.0	28.56	.053	D
WVBS	LIC	Burgaw	NC	1470	.093	1220.3	1236.5	126.6	313.2	38.2	49.3	4.0	92.3	92.0	28.51	.052	D
XESK1		Ruiz	Mx	1490	1.000	2676.7	2684.2	220.4	31.5	32.0	41.9	.0	312.0	312.0	8.40	.052	N
WBTX	PRM	Broadway-timberv	VA	1470	.036	894.3	916.4	108.4	294.7	40.2	51.3	7.1	58.3	57.7	45.37	.052	AD
XE		Benjamin Hill	Mx	1490	1.000	2386.5	2394.9	245.0	51.6	36.4	45.9	.0	281.6	281.6	9.14	.052	N
-2005011	APP	Richfield	UT	1490	1.000	2012.0	2022.0	268.9	73.6	40.8	50.2	.0	242.7	242.7	10.39	.050	A
-2004013	APP	Cardiff	CO	1490	.250	1596.2	1608.7	268.1	75.8	40.9	50.7	1.6	152.9	152.8	16.17	.049	A
HRRD		La Ceiba 4	Ho	1470	1.000	2871.6	2878.5	176.1	357.0	28.7	39.5	.0	309.5	309.5	7.89	.049	N

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HRLP 23		Progreso	Ho	1490	1.000	2913.9	2920.8	178.3	358.6	28.5	39.3	.0	309.5	309.5	7.76	.048	N
VIRDEN		Virden	Ca	1490	.250	1320.4	1335.5	318.1	129.3	45.9	56.0	3.2	144.8	144.6	16.53	.048	N
XEHI		Cd.miguel Aleman	Mx	1470	.250	1939.6	1949.9	212.7	26.8	34.1	44.3	.0	164.5	164.5	14.45	.048	O
-2004102	APP	Uncasville	CT	1490	.196	1370.9	1385.4	85.1	276.1	41.8	53.0	2.9	124.2	124.0	19.04	.047	AD
XEHI		Cd.miguel Aleman	Mx	1470	.250	1939.6	1949.9	212.7	26.8	34.1	44.3	.0	163.3	163.3	14.45	.047	N
-2004102	APP	Spring Creek	NV	1490	1.000	2255.2	2264.0	276.6	78.7	42.0	51.2	.0	305.8	305.8	7.65	.047	A
XEBAL1		Becal	Mx	1470	.500	2356.0	2364.5	183.7	3.0	31.0	41.7	.0	216.0	216.0	10.80	.047	N
XEHI		Cd.miguel Aleman	Mx	1470	.250	1939.6	1949.9	212.7	26.8	34.1	44.3	.0	158.1	158.1	14.45	.046	N
-2004013	APP	Casper	WY	1490	.250	1473.2	1486.7	281.4	89.4	42.6	52.4	2.3	130.2	130.1	17.21	.045	AD
-2004013	APP	Flora Vista	NM	1490	.250	1749.7	1761.1	258.9	66.5	39.6	49.3	.8	152.9	152.9	14.48	.044	A
-2004012	APP	Missoula	MT	1490	1.000	2095.2	2104.7	294.9	97.0	44.9	54.3	.0	316.2	316.2	6.97	.044	A
CKBM		Montmagny	Ca	1490	.250	1555.5	1568.3	61.1	253.8	44.6	55.9	1.8	181.1	180.8	11.74	.042	S
-2004012	APP	Casper	WY	1490	.250	1467.4	1481.0	281.5	89.5	42.6	52.4	2.3	122.0	121.8	17.34	.042	AD
-2004012	APP	Del Norte	CO	1490	.250	1577.8	1590.5	259.9	68.5	40.0	49.8	1.7	121.4	121.3	17.33	.042	AD
-2004012	APP	Orchard Homes	MT	1490	1.000	2104.2	2113.7	295.2	97.2	45.0	54.4	.0	305.8	305.8	6.87	.042	A
-2004012	APP	Lemon Grove	CA	1490	1.000	2689.0	2696.4	257.8	60.4	38.0	47.1	.0	305.5	305.5	6.73	.041	A
CKOA		Amprior	Ca	1490	.250	1075.9	1094.3	62.5	250.9	43.7	54.8	5.2	75.4	75.0	27.29	.041	ND
XEQS		Freshillo	Mx	1470	.500	2439.8	2448.0	217.2	29.5	32.6	42.6	.0	207.2	207.2	9.85	.041	N
YNPE		R Campesina	Nu	1490	1.000	3293.0	3299.0	173.6	355.1	26.9	37.7	.0	309.5	309.5	6.56	.041	N
-2004102	APP	Bishop	CA	1490	1.000	2587.0	2594.7	269.4	70.2	40.4	49.4	.0	317.9	317.9	6.38	.041	A
-2004102	APP	Malmstrom Afb	MT	1490	.580	1902.3	1912.8	297.8	101.8	45.1	54.6	.0	232.9	232.9	8.43	.039	A
-2004013	APP	Malmstrom Afb	MT	1490	.570	1905.4	1915.9	297.8	101.8	45.1	54.6	.0	230.9	230.9	8.40	.039	A
-2004012	APP	Silt	CO	1490	.250	1621.7	1634.0	268.3	75.8	41.0	50.7	1.4	121.4	121.3	15.68	.038	AD
CMCN		San Jose	Cu	1490	.250	2156.9	2166.1	161.9	345.3	32.3	43.3	.0	154.7	154.7	12.21	.038	C
XEUK		Caborca	Mx	1470	.250	2438.4	2446.6	248.0	53.7	36.7	46.2	.0	216.0	216.0	8.65	.037	O
-2004012	APP	Marathon	TX	1490	.250	1822.5	1833.5	230.7	42.1	36.1	46.1	.4	121.4	121.4	15.33	.037	AD
XEACE		Mazatlan	Mx	1470	.500	2625.6	2633.2	224.4	34.7	32.7	42.5	.0	216.0	216.0	8.56	.037	O
CKEN		Kentville	Ca	1490	.750	1980.5	1990.5	70.4	267.1	44.0	55.3	.0	254.4	254.4	7.17	.036	N
CKBM		Montmagny	Ca	1490	.250	1548.5	1561.4	61.2	253.8	44.6	55.9	1.8	150.9	150.8	11.88	.036	N
-2004012	APP	Marathon	TX	1490	.250	1887.9	1898.5	232.9	43.7	36.1	46.1	.1	121.4	121.4	14.35	.035	AD
WDEP	LIC	Ponce	PR	1490	1.000	3353.5	3359.4	134.9	326.1	30.2	41.6	.0	318.3	318.3	5.38	.034	S
-2004102	APP	Hawthorne	NV	1490	1.000	2567.7	2575.5	272.3	72.7	41.0	50.0	.0	274.0	274.0	6.23	.034	A
-2000020	APP	Kachina Village	AZ	1490	.300	2122.5	2131.9	258.0	63.6	39.0	48.4	.0	164.0	164.0	10.29	.034	A
XEAY		Parras	Mx	1470	.250	2184.4	2193.6	219.0	31.5	33.7	43.7	.0	140.8	140.8	11.75	.033	ND



**Datworld**  
**Bethesda, MD**

Datworld AM Detailed Individual Night Limit for Study Site (Non-Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	----- Azimuth----- To (deg)	From (deg)	Mid-Pt Lat GC GeoMag (deg)	----- Theta----- Min (deg)	Max (deg)	Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)	
WPDM	LIC	Potsdam	NY	1470	.044	1149.0	1166.3	68.2	257.5	43.3	54.4	9.2	65.8	65.5	24.56	.032	D	
-2004012	APP	Susanville	CA	1490	1.000	2674.3	2681.7	278.0	76.7	42.1	51.0	.0	.0	300.4	300.4	5.29	.032	A
-2004012	APP	Vanderwagen	NM	1490	.250	1886.3	1896.9	254.7	62.1	38.9	48.5	.1	3.0	121.4	121.4	12.99	.032	AD
WAZN	LIC	Marlborough	MA	1470	5.000	1407.8	1422.0	80.8	272.2	42.3	53.5	2.7	6.5	90.6	89.8	17.49	.031	
-2004012	APP	Dalton Gardens	ID	1490	1.000	2312.6	2321.2	296.7	96.7	45.5	54.7	.0	.7	292.7	292.7	5.30	.031	A
-2004012	APP	Bozeman	MT	1490	.250	1853.9	1864.7	291.8	96.2	44.2	53.7	.3	3.2	158.1	158.1	9.66	.031	A
XEAQ		Agua Prieta	Mx	1490	.250	2185.8	2195.0	245.2	52.6	36.9	46.5	.0	1.3	142.1	142.1	10.62	.030	O
-2004013	APP	Huron	CA	1470	.400	2768.1	2775.3	268.1	68.0	40.0	48.9	.0	.0	261.0	261.0	5.70	.030	A
-2004013	APP	Jackson	WY	1490	.250	1818.4	1829.4	284.2	89.1	43.1	52.6	.4	3.4	130.2	130.2	10.96	.029	AD
KVLH	LIC	Pauls Valley	OK	1470	.035	1074.8	1093.2	227.4	42.1	38.2	48.5	5.2	10.1	39.1	38.9	36.47	.028	D
XECAV		Durango	Mx	1470	.250	2448.5	2456.7	222.2	33.4	33.1	43.0	.0	.0	145.4	145.4	9.67	.028	O
HIKF		Azua 1	Dr	1490	.500	3078.4	3084.9	141.2	330.4	30.3	41.6	.0	.0	218.8	218.8	6.41	.028	I
-2004012	APP	Deschutes River	OR	1490	1.000	2664.8	2672.3	286.9	84.3	44.0	52.8	.0	.0	305.8	305.8	4.55	.028	A
-2004013	APP	Lovelock	NV	1490	.250	2504.2	2512.2	276.4	76.6	41.8	50.9	.0	.0	220.5	220.5	6.20	.027	A
KRNR	APP	Roseburg	OR	1490	1.000	2839.4	2846.4	285.4	81.6	43.7	52.4	.0	.0	327.0	327.0	4.06	.027	A
KEZZ	LIC	Estes Park	CO	1470	.053	1425.5	1439.4	270.0	78.9	41.3	51.1	2.6	6.3	66.6	66.5	19.69	.026	D
CBDQ		Labrador City	Ca	1490	1.000	2054.0	2063.7	44.7	240.8	47.8	59.0	.0	2.0	315.4	315.4	4.09	.026	N
-2004012	APP	Richfield	UT	1490	.250	2012.0	2022.0	268.9	73.6	40.8	50.2	.0	2.2	121.4	121.4	10.39	.025	AD
-2004013	APP	Spring Creek	NV	1490	.250	2259.8	2268.7	276.8	78.8	42.0	51.2	.0	.9	152.9	152.9	7.60	.023	A
CKOO-1		Oliver	Ca	1490	1.000	2538.9	2546.8	300.1	97.7	46.5	55.5	.0	.0	301.0	301.0	3.86	.023	N
XECU		Los Mochis	Mx	1470	.250	2565.3	2573.1	233.2	41.7	34.1	43.7	.0	.0	133.3	133.3	8.60	.023	OD
XEDS		Colima	Mx	1470	.200	2860.7	2867.7	214.5	26.7	30.7	40.6	.0	.0	145.4	145.4	7.65	.022	S
KDHN	LIC	Dimmitt	TX	1470	.149	1427.1	1441.0	241.4	52.9	38.3	48.3	2.5	6.3	49.6	49.5	22.27	.022	D
HIOS		Dajabon	Dr	1490	.250	2923.5	2930.4	141.8	330.6	30.8	42.1	.0	.0	154.7	154.7	7.00	.022	I
-2004013	APP	Lolo	MT	1490	.250	2100.0	2109.5	294.5	96.6	44.9	54.3	.0	1.8	152.9	152.9	6.97	.021	A
KCHL	LIC	San Antonio	TX	1480	.090	1616.1	1628.4	216.3	30.5	35.6	45.8	1.4	4.8	5.5	5.5	19.31	.021	D
HIAP		Moca	Dr	1490	.250	2999.3	3005.9	139.8	329.2	30.8	42.1	.0	.0	154.7	154.7	6.65	.021	I
XESK		Ruiz	Mx	1490	.200	2673.7	2681.2	220.4	31.5	32.0	41.9	.0	.0	120.6	120.6	8.41	.020	D
HICH		Barahona 2	Dr	1470	.250	3085.4	3091.8	142.2	331.1	30.2	41.5	.0	.0	154.7	154.7	6.41	.020	I
-2004012	APP	Coalinga	CA	1470	.400	2796.3	2803.5	268.0	67.8	40.0	48.8	.0	.0	174.7	174.7	5.59	.020	A
-2004013	APP	Bishop	CA	1490	.250	2593.8	2601.5	269.6	70.3	40.5	49.5	.0	.0	152.9	152.9	6.33	.019	A
-2004013	APP	Madras	OR	1490	.500	2642.8	2650.3	288.4	85.8	44.3	53.2	.0	.0	212.8	212.8	4.51	.019	A
HIRP		Seibo	Dr	1490	.250	3141.4	3147.8	137.9	328.0	30.5	41.9	.0	.0	154.7	154.7	6.10	.019	I
-2004012	APP	Coalinga	CA	1470	.250	2796.3	2803.4	268.0	67.8	40.0	48.8	.0	.0	159.9	159.9	5.59	.018	A

**Datavorld  
Bethesda, MD**

Datavorld AM Detailed Individual Night Limit for Study Site (Non-Contributor Records)

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	Azimuth		Mid-Pt Lat GC GeoMag (deg)	Theta		Horiz. Rad. (mV/m)	Max. V-Rad. (mV/m)	S.W. Mult. (uV/m)	Night Limit (mV/m)	RSS Limit (mV/m)	
								To (deg)	From (deg)		Min (deg)	Max (deg)						
CKEN		Kentville	Ca	1490	1.000	1980.5	1990.5	70.4	267.1	44.0	55.3	.0	2.4	124.1	124.1	7.17	.018	N
-2004012	APP	Susanville	CA	1490	.250	2677.0	2684.4	278.0	76.6	42.1	51.0	.0	.0	152.9	152.9	5.28	.016	A
-2004013	APP	Rathdrum	ID	1490	.250	2324.7	2333.3	296.9	96.8	45.6	54.8	.0	.6	152.9	152.9	5.21	.016	A
-2004013	APP	Rathdrum	ID	1490	.250	2324.7	2333.3	296.9	96.8	45.6	54.8	.0	.6	152.9	152.9	5.21	.016	A
-2004013	APP	Hawthorne	NV	1490	.250	2567.6	2575.4	272.4	72.7	41.0	50.0	.0	.0	121.4	121.4	6.23	.015	AD
-2004012	APP	Lovelock	NV	1490	.250	2503.3	2511.2	276.4	76.6	41.9	50.9	.0	.0	121.4	121.4	6.20	.015	AD
-2004013	APP	Bend	OR	1490	.250	2656.4	2664.0	287.0	84.5	44.0	52.9	.0	.0	152.9	152.9	4.58	.014	A
-2004012	APP	Alturas	CA	1490	.250	2642.8	2650.4	280.5	79.0	42.7	51.6	.0	.0	121.4	121.4	5.20	.013	AD
KNXN	LIC	Sierra Vista	AZ	1470	.039	2222.3	2231.3	246.9	53.8	37.1	46.6	.0	1.1	60.7	60.7	10.22	.012	D
WJDY	LIC	Salisbury	MD	1470	.043	1157.8	1175.0	103.6	291.9	40.2	51.3	4.5	9.0	21.0	21.2	28.79	.012	D
-2004012	APP	Gainseville	FL	1470	1.000	1435.8	1449.6	154.8	338.5	35.7	46.6	2.5	6.2	23.0	23.4	23.32	.011	A
-2004012	APP	Anchorage	AK	1470	10.000	4560.0	4564.4	319.9	89.6	55.3	60.0	.0	.0	1160.0	1160.0	.29	.007	A
-2004012	APP	Homer	AK	1490	5.000	4659.6	4663.9	317.7	86.4	54.8	60.0	.0	.0	981.0	981.0	.27	.005	A
KNFL	APP	Tremonton	UT	1470	.880	1948.2	1958.5	277.8	82.1	42.2	51.6	.0	2.6	17.1	17.1	10.16	.003	A
KNFL	APP	Tremonton	UT	1470	.880	1948.2	1958.5	277.8	82.1	42.2	51.6	.0	2.6	17.1	17.1	10.16	.003	A
KNFL	CP	Tremonton	UT	1470	1.000	1948.2	1958.4	277.8	82.1	42.2	51.6	.0	2.6	13.2	13.2	10.16	.003	S
-2004012	APP	Fairbanks	AK	1490	1.000	4468.9	4473.4	325.5	95.8	56.6	60.0	.0	.0	305.8	305.8	.31	.002	A
-2004012	APP	Delta Junction	AK	1490	1.000	4363.0	4367.5	324.5	96.8	56.1	60.0	.0	.0	278.8	278.8	.34	.002	A
-2004012	APP	College	AK	1490	1.000	4472.0	4476.5	325.6	95.8	56.7	60.0	.0	.0	292.8	292.8	.31	.002	A
-2004012	APP	Soldotna	AK	1470	1.000	4627.1	4631.4	319.0	87.8	55.2	60.0	.0	.0	305.8	305.8	.27	.002	A

>> End of Detailed Night Limit Study <<

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
-2004012 CJVB=2.309	APP	Anchorage	AK	1470	10.000	4560.0	4564.4	319.9 89.6	55.3 60.0	.0 .0	.29	2.309	2.309	.577	9999.9	20.2 100476.9	
-2004012 CJVB=2.374	APP	Soldotna	AK	1470	1.000	4627.1	4631.4	319.0 87.8	55.2 60.0	.0 .0	.27	2.374	2.374	.594	9999.9	17.0 108923.7	
WLJK WRGA=24.704; WVOL=20.004; WNAU=12.405	LIC	Evergreen	AL	1470	.177	1137.3	1154.7	172.0 353.0	36.5 47.3	4.6 9.3	34.33	31.788	34.123	8.531	9999.9	111.0 12313.6	
KNXN XERCN=12.756; XEUK=6.617; KYW=3.945	LIC	Sierra Vista	AZ	1470	.039	2222.3	2231.3	246.9 53.8	37.1 46.6	.0 1.1	10.22	14.370	14.902	3.725	9999.9	137.7 18082.7	
-2004012 KUTY=19.817; XERCN=16.587	APP	Coalinga	CA	1470	.250	2796.3	2803.4	268.0 67.8	40.0 48.8	.0 .0	5.59	25.842	25.842	6.461	9999.9	19.1 57727.9	
-2004012 KUTY=19.826; XERCN=16.585	APP	Coalinga	CA	1470	.400	2796.3	2803.5	268.0 67.8	40.0 48.8	.0 .0	5.59	25.848	25.848	6.462	9999.9	19.1 57743.7	
-2004013 XERCN=16.798; KUTY=14.762	APP	Huron	CA	1470	.400	2768.1	2775.3	268.1 68.0	40.0 48.9	.0 .0	5.70	22.362	22.362	5.591	9999.9	19.0 49015.9	
KUTY XERCN=27.624	LIC	Palmdale	CA	1470	5.000	2670.0	2677.5	262.9 64.5	39.1 48.1	.0 .0	6.48	27.624	27.624	6.906	9999.9	44.4 53256.2	
KIID XERCN=9.608; KUTY=3.935; KELA=2.968; KBSN=2.891	LIC	Sacramento	CA	1470	1.000	2797.9	2805.0	274.2 72.6	41.3 50.1	.0 .0	5.12	9.608	11.179	2.795	9999.9	31.2 27238.7	
KEZZ KKTY=7.858; XERCN=4.135; KNFL=2.327	LIC	Estes Park	CO	1470	.053	1425.5	1439.4	270.0 78.9	41.3 51.1	2.6 6.3	19.69	8.879	9.179	2.295	5826.4	17.1 5809.3	
WMMW WKAP=9.352; WNY=4.097; WLAM=4.035; WTTR=3.100; WAZN=3.089	LIC	Meriden	CT	1470	2.500	1312.4	1327.5	84.9 275.4	41.8 53.0	3.3 7.4	20.73	9.352	11.819	2.955	7126.2	147.5 6978.8	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
WLWU	LIC	Dunedin	FL	1470	.500	1595.3	1607.7	158.7 342.0	34.9 45.8	1.6 4.9	19.79	21.031	21.031	5.258	9999.9	33.0	13247.8
WRGA=18.386; WWNN=10.211																	
-2004012	APP	Gainseville	FL	1470	1.000	1435.8	1449.6	154.8 338.5	35.7 46.6	2.5 6.2	23.32	24.759	28.479	7.120	9999.9	20.0	15248.0
WRGA=24.759; WWNN=10.440; WLWU=9.435																	
WWNN	LIC	Pompano Beach	FL	1470	2.500	1876.8	1887.4	153.2 337.9	34.0 45.0	.2 3.0	15.05	13.988	15.065	3.766	9999.9	20.4	12489.3
WRGA=11.558; WLWU=7.880; WWBG=5.592																	
WXAG	PRM	Athens	GA	1470	.176	967.6	988.1	150.0 333.3	37.8 48.7	6.3 11.7	43.28	28.650	30.596	7.649	8835.9	30.3	8805.6
WRGA=28.650; WWBG=7.718; WVOL=7.465																	
WCLA	LIC	Claxton	GA	1470	.260	1203.4	1220.0	148.3 332.3	36.9 47.9	4.1 8.5	30.62	33.302	34.908	8.727	9999.9	36.0	14215.6
WRGA=33.302; WWBG=10.466																	
WRGA	LIC	Rome	GA	1470	5.000	863.9	886.8	158.5 340.6	38.0 48.8	7.5 13.5	51.91	9.181	12.617	3.154	3038.0	29.8	3008.2
WVOL=5.565; WNAU=5.463; WCLA=4.844; WLQR=4.362; WWBG=4.328; WLOA=3.705; WWNN=3.587; WLWU=3.249																	
KWSL	LIC	Sioux City	IA	1470	5.000	652.7	682.7	280.7 95.5	42.1 52.4	11.0 18.6	72.52	7.998	9.574	2.394	1650.3	57.4	1592.9
WMBD=7.998; KYYW=2.895; WKLZ=2.765; KLMS=2.445; KKTY=2.385																	
KWAY	LIC	Waverly	IA	1470	.061	342.5	396.6	292.6 110.0	42.2 52.7	22.0 34.1	172.73	34.891	34.891	8.723	2524.9	75.1	2449.8
WMBD=30.410; KAIR=17.105																	
WCFJ	LIC	Chicago Heights	IL	1470	1.000	81.9	216.1	102.1 282.7	41.5 52.2	60.2 70.9	421.63	37.122	37.122	9.280	1100.5	19.5	1081.1
WMBD=37.122																	
WCFJ	APP	Dolton	IL	1470	1.000	81.9	216.1	102.1 282.7	41.5 52.2	60.2 70.9	421.63	37.122	37.122	9.280	1100.5	19.5	1081.1
WMBD=37.122																	
WMBD	LIC	Peoria	IL	1470	5.000	136.8	242.3	215.1 34.5	41.1 51.7	46.1 59.9	361.02	3.232	4.726	1.182	163.6	44.2	119.5
WCFJ=2.379; KWSL=1.563; KYYW=1.531; WWBG=1.390; KLCL=1.334; KLBP=1.316; WKLZ=1.301; WWNN=1.295; WLQR=1.292; WFNT=1.188																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
WGNR	LIC	Anderson	IN	1470	.036	296.2	357.4	123.9 305.7	40.8 51.6	25.2 38.2	206.17	22.715	22.715	5.679	1377.2	70.1	1307.1
WMBD=17.533; WLQR=14.442																	
KAIR	LIC	Atchison	KS	1470	1.000	581.7	615.1	250.1 65.9	40.6 51.1	12.6 21.0	89.76	8.122	9.644	2.411	1343.0	104.7	1238.3
KWSL=7.112; KYYW=3.921; KXNO=3.846; WMBD=3.500																	
KYUU	LIC	Liberal	KS	1470	.170	1166.9	1183.9	248.5 60.7	39.5 49.6	4.4 8.9	30.49	11.511	11.975	2.994	4909.5	126.0	4783.5
KAIR=9.821; KYYW=6.004; XERCN=3.302																	
WBFC	LIC	Stanton	KY	1470	.082	576.5	610.2	133.9 316.9	39.8 50.6	12.7 21.2	91.86	13.286	14.981	3.745	2038.5	77.1	1961.3
WLOA=10.437; WLQR=8.220; WRGA=4.186; WKAP=3.924; WMBD=3.873																	
KLCL	LIC	Lake Charles	LA	1470	.500	1326.8	1341.7	199.9 17.1	35.9 46.4	3.2 7.2	26.96	4.450	6.873	1.718	3186.6	237.1	2949.6
KUOL=2.437; WLQR=2.285; WNAU=2.095; XEREC=2.062; KYYW=1.980; WLJU=1.963; XEYA=1.938; XEBAL=1.861; WXOK=1.802; WMBD=1.790; XERCN=1.781; WLOA=1.677																	
WAZN	LIC	Marlborough	MA	1470	5.000	1407.8	1422.0	80.8 272.2	42.3 53.5	2.7 6.5	17.49	9.184	9.992	2.498	7140.7	181.2	6959.4
WLAM=9.184; WKAP=3.938																	
WAZN	APP	Watertown	MA	1470	3.400	1437.3	1451.2	80.5 272.2	42.3 53.6	2.5 6.2	16.72	11.293	12.072	3.018	9023.3	183.4	8839.9
WLAM=11.293; WKAP=4.264																	
WAZN	CP	Watertown	MA	1470	3.400	1437.3	1451.2	80.5 272.2	42.3 53.6	2.5 6.2	16.72	11.293	12.072	3.018	9023.3	183.4	8839.9
WLAM=11.293; WKAP=4.264																	
WJDY	LIC	Salisbury	MD	1470	.043	1157.8	1175.0	103.6 291.9	40.2 51.3	4.5 9.0	28.79	28.672	32.647	8.162	9999.9	17.1	14157.2
WKAP=28.672; WTTR=12.779; WWBG=8.970																	
WTTR	LIC	Westminster	MD	1470	1.000	1002.0	1021.8	99.0 286.6	40.7 51.8	5.9 11.2	36.45	9.546	9.922	2.481	3403.1	37.8	3365.3
WKAP=9.546; CHOW=2.706																	
WLAM	LIC	Lewiston	ME	1470	5.000	1518.3	1531.4	73.4 265.9	43.2 54.4	2.0 5.5	14.00	4.903	6.840	1.710	6108.5	239.7	5868.7
WDDY=3.467; WKAP=2.526; WNNY=2.374; WLOA=2.314; WSAR=2.297; WAZN=2.145; WLQR=2.113; CHOW=1.747																	

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
WFNT	LIC	Flint	MI	1470	1.000	436.3	480.0	67.6 250.9	42.3 53.2	17.3 27.7	126.50	6.087	8.773	2.193	866.9	241.6	625.3
WMBD=4.053; WCFJ=3.215; WKLZ=3.207; WLQR=2.782; CHOW=2.685; WNNY=2.342; WTTR=2.233; KLBP=2.219; WHBC=2.214; WWBG=2.161																	
WKLZ	LIC	Kalamazoo	MI	1470	1.000	260.6	328.5	72.8 254.8	41.9 52.7	28.3 41.9	229.56	16.308	17.122	4.280	932.3	157.0	775.3
WMBD=13.513; WLQR=9.130; WCFJ=5.216																	
KLBP	LIC	Brooklyn Park	MN	1470	5.000	548.8	584.1	316.8 133.6	43.4 53.8	13.5 22.3	89.71	33.250	36.082	9.021	5027.8	22.4	5005.4
KWSL=24.286; WMBD=22.710; KAIR=10.217; WBKV=9.591																	
KFMZ	LIC	Brookfield	MO	1470	.020	424.3	469.0	244.3 61.4	40.7 51.2	17.8 28.4	137.47	11.292	12.171	3.043	1106.7	120.8	985.9
WMBD=7.987; KAIR=7.983; KWSL=3.436; KYYW=2.968																	
WCHJ	LIC	Brookhaven	MS	1470	.066	1126.1	1143.7	189.0 7.9	36.6 47.2	4.7 9.4	34.99	13.169	13.606	3.402	4860.9	199.9	4660.9
WNAU=7.733; WVOL=7.594; KLCL=7.480; KYYW=3.423																	
WCHJ	PRM	Brookhaven	MS	1470	.082	1126.2	1143.9	189.0 7.9	36.6 47.2	4.7 9.4	34.98	13.195	13.630	3.408	4870.4	199.8	4670.5
WNAU=7.752; WVOL=7.626; KLCL=7.474; KYYW=3.419																	
WNAU	CP	New Albany	MS	1470	.500	788.7	813.7	182.8 2.5	38.0 48.7	8.6 15.1	60.07	10.948	12.651	3.163	2632.7	165.9	2466.8
WVOL=6.945; WRGA=6.492; WLQR=5.430; KYYW=3.789; KLCL=3.675; WLOA=3.511																	
WNAU	LIC	New Albany	MS	1470	.500	788.7	813.7	182.8 2.5	38.0 48.7	8.6 15.1	60.07	10.948	12.651	3.163	2632.7	165.9	2466.8
WVOL=6.945; WRGA=6.492; WLQR=5.430; KYYW=3.789; KLCL=3.675; WLOA=3.511																	
WVBS	LIC	Burgaw	NC	1470	.093	1220.3	1236.5	126.6 313.2	38.2 49.3	4.0 8.3	28.51	57.182	57.182	14.295	9999.9	83.1	24985.3
WWBG=57.182																	
WVBS	LIC	Burgaw	NC	1470	.093	1219.1	1235.4	126.5 313.1	38.2 49.3	4.0 8.3	28.56	57.275	57.275	14.319	9999.9	83.0	24988.7
WWBG=57.275																	
WWBG	LIC	Greensboro	NC	1470	5.000	963.7	984.3	126.0 311.4	38.9 50.0	6.3 11.7	41.87	4.471	5.782	1.446	1726.2	82.3	1643.9
WCLA=3.859; WLJU=2.259; WRGA=2.162; WKAP=1.882; WTTR=1.639; YVJW=1.594																	

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**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

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Frequency: 1480 kHz

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Longitude: W 88° 36' 05.0"

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WTOE LIC Spruce Pine NC 1470 .103 845.4 868.7 136.2 320.2 38.8 49.7 7.8 13.9 52.37 8.160 10.050 2.513 2398.8 74.5 2324.3 WWBG=6.819; WCLA=4.482; WTTR=3.123; WRGA=3.040; WKAP=2.885; WLOA=2.667																	
KHND LIC Harvey ND 1470 .161 1125.8 1143.4 311.4 123.4 44.8 55.0 4.7 9.4 24.66 23.386 24.126 6.031 9999.9 44.6 12183.6 KWSL=19.823; KLBP=12.408; WMBD=5.930																	
-2004013 APP Los Lunas NM 1470 1.000 1762.6 1773.9 249.7 58.5 38.4 48.2 .7 3.7 15.04 9.792 10.388 2.597 8636.2 120.7 8515.5 XERCN=7.152; KYYW=4.737; KNFL=4.720; KAIR=3.469																	
-2004013 APP Taos NM 1470 .250 1571.5 1584.2 254.2 63.4 39.3 49.2 1.7 5.1 17.97 9.786 11.428 2.857 7949.5 93.5 7856.0 KYYW=7.990; XERCN=5.650; KNFL=4.296; KAIR=4.046																	
WNYY LIC Ithaca NY 1470 1.000 1005.3 1025.0 80.8 269.0 42.1 53.2 5.9 11.1 33.83 12.916 13.788 3.447 5094.1 178.0 4916.1 WLOA=8.342; WKAP=7.941; WTTR=5.846; WLQR=4.826																	
WPDM LIC Potsdam NY 1470 .044 1149.0 1166.3 68.2 257.5 43.3 54.4 4.5 9.2 24.56 14.921 17.524 4.381 8920.6 274.9 8645.6 WNYY=10.803; WAZN=7.360; WLOA=7.196; WKAP=5.695; CHOW=5.285; WLQR=4.910																	
WLQR LIC Toledo OH 1470 1.000 425.9 470.6 87.6 271.0 41.6 52.5 17.7 28.3 132.85 8.862 10.110 2.527 951.3 104.3 846.9 WFNT=5.853; WKLZ=5.192; WMBD=4.161; CHOW=3.920; WWBG=2.882																	
WLQR APP Walbridge OH 1470 .750 419.1 464.3 88.6 272.0 41.6 52.5 18.0 28.7 135.80 9.037 10.238 2.559 942.3 96.1 846.2 WFNT=5.957; WKLZ=5.149; WMBD=4.435; CHOW=3.838; WWBG=2.900																	
KVLH LIC Pauls Valley OK 1470 .035 1074.8 1093.2 227.4 42.1 38.2 48.5 5.2 10.1 36.47 9.963 11.562 2.890 3963.2 225.0 3738.2 KYYW=9.963; KLCL=3.664; KAIR=3.517; KWSL=2.935																	
KITO LIC Vinita OK 1470 .088 786.0 811.0 227.8 43.7 39.2 49.6 8.6 15.1 59.12 11.020 13.265 3.316 2804.6 217.4 2587.2 KAIR=11.020; KYYW=4.859; KWSL=4.379; WMBD=3.426																	
WKAP LIC Allentown PA 1470 5.000 1102.7 1120.7 91.1 279.8 41.3 52.4 5.0 9.7 29.81 3.302 4.688 1.172 1965.7 96.2 1869.5 WNYY=2.426; WWBG=1.593; WTKT=1.575; WMMW=1.560; WTTR=1.497; WRGA=1.442; WLAM=1.251; YVJW=1.199; WCLA=1.149																	

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WLOA	LIC	Farrell	PA	1470	.500	674.9	703.9	90.9 276.3	41.5 52.4	10.5 18.0	68.72	9.235	11.517	2.879	2095.1	92.4	2002.7
WLQR=8.248; CHOW=4.155; WKAP=3.934; WTTR=3.566; WWBG=3.321; WKLZ=2.853																	
WPTY	LIC	Portage	PA	1470	.088	844.6	868.0	95.8 282.3	41.1 52.1	7.8 13.9	48.27	10.814	11.638	2.910	3013.5	59.1	2954.5
WKAP=10.814; WNYW=4.303																	
WKCK	LIC	Orocovis	PR	1470	2.500	3339.2	3345.2	134.3 325.7	30.4 41.8	.0 .0	5.40	13.374	14.604	3.651	9999.9	78.8	33721.2
YVJW=13.374; 4VAA=4.606; WWBG=3.633																	
WQXL	CP	Columbia	SC	1470	.100	1076.0	1094.4	139.5 324.2	37.8 48.8	5.2 10.1	36.06	25.069	25.993	6.498	9011.2	66.4	8944.8
WRGA=18.114; WWBG=17.330; WCLA=6.871																	
WQXL	LIC	Columbia	SC	1470	.138	1069.8	1088.4	139.3 323.9	37.9 48.9	5.2 10.2	36.37	24.660	25.583	6.396	8791.8	67.1	8724.7
WWBG=17.445; WRGA=17.430; WCLA=6.810																	
WLMC	PRM	Georgetown	SC	1470	.147	1227.5	1243.6	135.0 320.7	37.6 48.6	3.9 8.2	28.88	32.533	35.568	8.892	9999.9	77.2	15318.8
WWBG=32.533; WRGA=14.378																	
WBCR	LIC	Alcoa	TN	1470	.082	764.9	790.6	146.4 329.3	38.7 49.6	8.9 15.6	61.68	10.155	12.534	3.134	2540.2	43.9	2496.3
WRGA=8.895; WLOA=4.899; WWBG=4.563; WCLA=4.238; WLQR=3.899																	
WVOL	LIC	Berry Hill	TN	1470	1.000	618.8	650.3	164.7 345.8	38.9 49.7	11.7 19.7	84.78	10.381	13.173	3.293	1942.2	59.3	1882.9
WLQR=8.754; WLOA=5.580; WNAU=5.170; WRGA=4.526; WCFJ=4.306																	
KYYW	CP	Abilene	TX	1470	1.000	1412.1	1426.2	227.9 41.1	37.2 47.3	2.6 6.4	23.49	5.557	6.394	1.598	3402.1	226.5	3175.5
KLCL=3.371; XERCN=3.222; KUOL=3.023; XEYA=1.935; WVOL=1.891; KWSL=1.636																	
KYYW	LIC	Abilene	TX	1470	1.000	1412.1	1426.2	227.9 41.1	37.2 47.3	2.6 6.4	23.49	5.557	6.394	1.598	3402.1	226.5	3175.5
KLCL=3.371; XERCN=3.222; KUOL=3.023; XEYA=1.935; WVOL=1.891; KWSL=1.636																	
KDHN	LIC	Dimmitt	TX	1470	.149	1427.1	1441.0	241.4 52.9	38.3 48.3	2.5 6.3	22.27	15.707	16.669	4.167	9356.9	174.3	9182.6
KYYW=15.707; KAIR=5.581																	



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KWRD	PRM	Henderson	TX	1470	.083	1180.7	1197.5	209.7 26.0	36.9 47.3	4.3 8.8	32.15	11.054	12.266	3.066	4768.4	248.9	4519.5
KLCL=8.281; KYYW=7.323; WVOL=3.120; KAIR=3.083; KUOL=3.001																	
KUOL	APP	San Marcos	TX	1470	.250	1545.9	1558.8	215.6 30.2	35.8 46.1	1.8 5.3	20.77	11.511	12.692	3.173	7639.7	249.8	7389.9
KYYW=11.511; KLCL=5.346																	
KUOL	LIC	San Marcos	TX	1470	.250	1545.0	1557.9	215.7 30.3	35.8 46.1	1.8 5.3	20.78	11.544	12.716	3.179	7647.5	249.7	7397.8
KYYW=11.544; KLCL=5.331																	
KNFL	APP	Tremonton	UT	1470	.880	1948.2	1958.5	277.8 82.1	42.2 51.6	.0 2.6	10.16	6.796	7.976	1.994	9817.4	46.7	9770.7
XERCN=5.747; KKTY=3.627; KIID=2.742; KYYW=2.248; KELA=2.206																	
KNFL	APP	Tremonton	UT	1470	.880	1948.2	1958.5	277.8 82.1	42.2 51.6	.0 2.6	10.16	6.796	7.976	1.994	9817.4	46.7	9770.7
XERCN=5.747; KKTY=3.627; KIID=2.742; KYYW=2.248; KELA=2.206																	
KNFL	CP	Tremonton	UT	1470	.940	1948.2	1958.5	277.8 82.1	42.2 51.6	.0 2.6	10.16	6.796	7.976	1.994	9817.4	46.7	9770.7
XERCN=5.747; KKTY=3.627; KIID=2.742; KYYW=2.248; KELA=2.206																	
KNFL	CP	Tremonton	UT	1470	1.000	1948.2	1958.4	277.8 82.1	42.2 51.6	.0 2.6	10.16	6.799	7.979	1.995	9818.3	46.6	9771.6
XERCN=5.750; KKTY=3.627; KIID=2.742; KYYW=2.249; KELA=2.204																	
WBTX	PRM	Broadway-timberv	VA	1470	.036	894.3	916.4	108.4 294.7	40.2 51.3	7.1 12.9	45.37	9.443	10.148	2.537	2795.7	33.4	2762.4
WKAP=8.331; WTTR=4.446; WRGA=2.758; WNYW=2.491																	
KELA	LIC	Centralia-chehal	WA	1470	1.000	2776.2	2783.4	293.5 89.2	45.4 54.2	.0 .0	3.57	5.502	5.703	1.426	9999.9	83.6	19877.8
KUTI=3.729; KBMS=2.995; XERCN=2.718; CJVB=1.503																	
KBSN	LIC	Moses Lake	WA	1470	1.000	2498.7	2506.7	294.7 92.9	45.4 54.4	.0 .0	4.54	11.167	11.167	2.792	9999.9	83.8	30665.2
KELA=11.167																	
WBKV	LIC	West Bend	WI	1470	2.500	201.9	284.2	10.0 190.3	42.5 53.2	35.0 49.3	282.06	39.604	45.652	11.413	2023.2	191.9	1831.3
WMBD=31.573; WCFJ=23.909; WKLZ=19.382; WLQR=11.830																	

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WEMM	LIC	Huntington	WV	1470	.072	629.0	660.0	122.2 306.1	40.0 51.0	11.5 19.4	80.18	11,205	15,197	3,799	2369.0	76.1	2292.9
WLOA=11.205; WWBG=5.175; WKAP=5.150; WTTR=4.333; WLQR=4.199; WRGA=3.959																	
KKTY	LIC	Douglas	WY	1470	.500	1387.4	1401.8	281.0 89.7	42.5 52.3	2.8 6.6	19.40	3,208	4,407	1,102	2840.1	58.7	2781.4
XERCN=3.208; WMBD=1.485; KAIR=1.270; KWSL=1.217; KLBP=1.156; KIID=1.130; KELA=1.102																	
CKER		Edmonton	Ca	1480	10.000	2262.6	2271.4	313.9 115.4	48.2 57.6	.0 .0	7.36	5,472	5,472	2,736	1857.6F	32.9	1824.6
KBMS=5.472																	
WYMR	LIC	Bridgeport	AL	1480	.039	780.2	805.4	160.2 342.0	38.3 49.1	8.7 15.3	60.55	13,364	13,364	3,341	275.9	37.6	238.2
WPFR=9.524; WGUS=6.997; WCIN=6.239																	
WABB	LIC	Mobile	AL	1480	4.400	1208.7	1225.2	177.6 357.9	36.2 46.9	4.1 8.5	31.29	9,652	11,878	2,969	474.5	145.1	329.4
WPFR=6.790; WGUS=5.214; KLV=4.458; KNIT=3.866; KCZZ=3.850; WVOI=3.019; WCIN=3.006																	
KTHS	LIC	Berryville	AR	1480	.064	721.4	748.6	218.0 34.9	39.0 49.5	9.7 16.7	67.71	22,259	22,259	5,565	410.9	234.1	176.8
KCZZ=18.108; KQAM=12.945																	
KPHX	LIC	Phoenix	AZ	1480	.500	2254.9	2263.8	253.9 59.4	38.1 47.5	.0 1.0	9.52	4,883	5,504	1,376	722.5	95.5	627.0
KQAM=3.060; KVN=2.928; KYOS=2.430; XERCN=1.830; KGOE=1.760																	
XEMCA		Cd.morelos	Mx	1480	.250	2529.2	2537.1	254.9 58.9	37.8 47.0	.0 .0	5.51	7,651	9,247	3,826	3469.9F	89.0	3380.9
KVN=7.651; KYOS=3.776; KGOE=2.674; KPHX=2.356																	
XEMCA		Cd.morelos	Mx	1480	.250	2519.7	2527.6	255.3 59.2	37.8 47.1	.0 .0	5.57	8,296	9,075	3,942	3539.9F	86.7	3453.2
KVN=7.300; KYOS=3.942; KGOE=2.738; KPHX=2.455																	
KABN	LIC	Concord	CA	1480	.500	2859.5	2866.5	273.0 71.3	41.0 49.8	.0 .0	4.99	16,196	16,196	4,049	4055.5	26.5	4029.0
KYOS=13.807; KGOE=8.466																	
KGOE	LIC	Eureka	CA	1480	1.000	2960.0	2966.7	280.2 76.3	42.6 51.2	.0 .0	4.12	2,759	3,909	.977	1187.1	55.7	1131.4
KYOS=1.938; KSYC=1.402; KBLF=1.376; KNIT=1.194; KRN=1.193; KIID=1.181; KTOB=1.120; KVN=1.102; KPHX=.978																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---- Theta ---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KYOS	LIC	Merced	CA	1480	5.000	2757.5	2764.8	270.8 70.2	40.6 49.5	.0 .0	5.53	6.732	7.217	1.804	1630.2	18.6	1611.6
KGOE=6.732; KVNRR=2.601																	
KVNR	LIC	Santa Ana	CA	1480	5.000	2707.0	2714.3	260.8 62.6	38.6 47.6	.0 .0	6.46	4.846	5.633	1.408	1090.3	57.9	1032.4
KGOE=3.031; XERCN=2.837; KYOS=2.501; KPHX=2.126; KQAM=1.930																	
KSBQ	LIC	Santa Maria	CA	1480	.061	2861.7	2868.7	265.6 65.5	39.4 48.2	.0 .0	5.52	32.677	32.677	8.169	7393.6	29.5	7364.1
KVNRR=23.255; KYOS=22.956																	
XEHM1		Cd.delicias	Mx	1480	.500	2135.7	2145.0	231.0 41.3	35.2 45.0	.3 .3	8.67	7.221	8.928	3.611	2083.0F	217.2	1865.8
KNIT=4.432; XEGX=4.369; XEIP=3.663; XEMC=3.236; XE=2.542; XEXC=2.339; XE=2.269																	
XEXU		Villa Frontera	Mx	1480	.100	2006.2	2016.1	219.8 32.5	34.4 44.5	.9 .9	10.31	9.111	12.827	4.556	2209.0F	246.1	1962.8
XEGX=6.167; XEIP=4.896; XEMC=4.584; XE=4.202; XEVCRR=3.843; XEPR=3.765; XEXC=3.644; XE=3.382; XEOU=3.191																	
HJOD		El Rodadero	Co	1480	1.000	3659.7	3665.2	153.3 340.0	26.6 37.8	.0 .0	2.28	16.806	19.449	10.000	9999.9F	20.3	21952.9
HJTZ=16.806; WMDD=8.351; HJFC=5.108																	
HJIB		Florencia	Co	1480	1.000	4683.2	4687.5	160.4 345.4	21.5 32.7	.0 .0	1.34	15.811	15.811	10.000	9999.9F	42.1	37171.2
HJTZ=13.431; HJFC=8.342																	
-2004012	APP	Julesburg	CO	1480	.250	1142.1	1159.5	271.2 82.2	41.5 51.5	4.6 9.2	29.23	10.941	12.476	3.119	533.6	20.8	512.8
KLMS=10.941; KNIT=5.052; KQAM=3.229																	
HJTZ		Lebrija	Co	1480	5.000	4124.2	4129.0	154.1 340.8	24.5 35.8	.0 .0	1.75	11.852	12.902	10.000	9999.9F	19.8	28484.9
HJFC=7.454; HJOD=7.166; HJIB=5.793; WMDD=5.099																	
HJFC		Pereira 3	Co	1480	1.000	4370.6	4375.2	159.4 344.7	22.9 34.1	.0 .0	1.56	17.235	19.818	10.000	9999.9F	36.7	32095.7
HJTZ=17.235; HJIB=8.355; HJOD=5.088																	
KAVA	LIC	Pueblo	CO	1480	.107	1410.3	1424.4	260.4 70.0	40.2 50.1	2.6 6.4	21.10	13.360	14.021	3.505	830.5	60.4	770.1
KQAM=9.669; KNIT=9.219; KPHX=4.255																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

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XE		Palenque	Mx	1480	1.000	2692.4	2699.8	187.6 5.9	29.6 40.2	.0 .0	4.66	10.052	13.478	4.879	5230.0F	196.8	5033.2
XE/CR=6.533; XEOU=5.878; WABB=4.879; XEPR=4.528; XEXC=4.348; XECCQ=3.939; XEGX=3.818; XEIP=3.332																	
XE		Palenque	Mx	1480	1.000	2693.8	2701.3	187.9 6.2	29.6 40.2	.0 .0	4.66	10.106	13.584	4.797	5148.5F	198.2	4950.3
XE/CR=6.605; XEOU=5.957; WABB=4.797; XEPR=4.583; XEXC=4.421; XEGX=3.894; XECCQ=3.893; XEIP=3.396																	
TIAC		Puntarenas	Cs	1480	1.000	3624.8	3630.3	173.1 354.8	25.4 36.3	.0 .0	2.33	6.261	7.731	3.003	6454.4F	119.6	6334.8
HJTZ=5.494; HJFC=3.003; HJOD=2.885; XE=2.779; HJIB=2.125																	
WNEZ	PRM	Windsor	CT	1480	.014	1319.8	1334.9	83.4 274.0	42.0 53.2	3.2 7.3	20.31	9.579	10.364	2.591	638.0	159.6	478.4
WSAR=9.579; WZRC=3.957																	
CMHR		Florida	Cu	1480	.250	2435.5	2443.7	153.3 338.8	31.6 42.8	.0 .0	6.14	13.637	15.075	4.000	3258.4F	20.3	3238.1
WGUS=9.216; WABB=7.627; WMDD=6.547; WGFY=4.700; WVOI=4.383																	
HIAH		S Domingo 4	Dr	1480	1.000	3122.7	3129.1	139.7 329.3	30.4 41.7	.0 .0	3.27	14.679	16.200	10.000	9999.9F	66.1	15212.0
WMDD=14.679; HJTZ=5.339; HJOD=4.296																	
WFLN	LIC	Arcadia	FL	1480	.131	1710.2	1721.8	156.8 340.7	34.5 45.4	1.0 4.1	17.64	25.808	27.851	6.963	1974.1	25.0	1949.1
WGUS=20.381; WABB=15.831; WVOI=10.470																	
WVOI	LIC	Marco Island	FL	1480	1.000	1847.8	1858.6	157.6 341.5	33.8 44.8	.3 3.2	15.57	21.920	21.920	5.480	1759.3	27.9	1731.4
WGUS=16.227; WABB=14.737																	
WUNA	LIC	Ocoee	FL	1480	.071	1582.8	1595.4	154.0 338.0	35.1 46.1	1.6 5.0	19.89	30.536	30.536	7.634	1919.2	19.8	1899.4
WGUS=27.221; WABB=13.837																	
WKGC	PRM	Panama City Beac	FL	1480	.087	1292.9	1308.3	167.9 349.6	35.9 46.7	3.4 7.6	27.99	31.220	31.220	7.805	1394.3	87.0	1307.3
WABB=27.678; WGUS=14.444																	
WYZE	LIC	Atlanta	GA	1480	.044	949.6	970.4	155.6 338.2	37.7 48.5	6.5 12.0	44.83	12.272	13.161	3.290	367.0	20.5	346.5
WGUS=12.272; WPFR=4.755																	

**Datworld**  
**Bethesda, MD**

Datworld AM Night Permissible Radiation Study

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Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	--- Theta --- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
WGUS	LIC	Augusta	GA	1480	5.000	1067.8	1086.4	145.0 329.0	37.6 48.6	5.3 10.2	36.84	4.522	5.633	1.408	191.1	48.1	143.0
WRGA=2.867; WHBC=2.510; WMDD=2.436; WGFY=1.762; KQAM=1.698; WCIN=1.690; KLVJ=1.560																	
XEXC		Taxco	Mx	1480	1.000	2764.7	2771.9	205.5 19.8	30.2 40.4	.0 .0	4.39	18.539	24.174	8.690	9906.4F	248.4	9658.0
XE=10.144; XE=9.305; XEOU=8.872; XEVC=8.690; XEIP=8.593; XEGX=8.219; XEMC=7.862; XEPR=6.120																	
XE		Tecpan	Mx	1480	1.000	2940.9	2947.7	206.5 20.5	29.5 39.7	.0 .0	3.77	16.197	19.775	7.576	9999.9F	249.5	9801.4
XEIP=8.509; XEXC=8.295; XEOU=7.984; XEVCR=7.576; XEGX=7.221; XEMC=7.005; XEPR=5.242																	
TGBH-000		Horizontes	Gt	1480	10.000	2647.5	2655.1	184.4 3.4	29.7 40.4	.0 .0	4.88	.0	373.1	.500	511.8S	181.9	329.9
TGBH-001		Horizontes	Gt	1480	10.000	2647.2	2654.7	184.2 3.3	29.7 40.4	.0 .0	4.89	1.0	373.1	.500	511.7S	181.3	330.4
TGBH-002		Horizontes	Gt	1480	10.000	2647.0	2654.6	184.1 3.2	29.7 40.4	.0 .0	4.89	2.0	373.1	.500	511.6S	180.6	331.0
TGBH-003		Horizontes	Gt	1480	10.000	2646.9	2654.5	183.9 3.1	29.7 40.4	.0 .0	4.89	3.0	373.1	.500	511.5S	179.9	331.6
TGBH-004		Horizontes	Gt	1480	10.000	2647.0	2654.5	183.8 3.0	29.7 40.4	.0 .0	4.89	4.0	373.1	.500	511.5S	179.2	332.3
TGBH-005		Horizontes	Gt	1480	10.000	2647.2	2654.7	183.6 2.9	29.7 40.4	.0 .0	4.89	5.0	373.1	.500	511.6S	178.6	333.1
TGBH-006		Horizontes	Gt	1480	10.000	2647.5	2655.0	183.5 2.7	29.7 40.4	.0 .0	4.88	6.0	373.1	.500	511.8S	177.9	333.9
TGBH-007		Horizontes	Gt	1480	10.000	2648.0	2655.5	183.3 2.6	29.7 40.4	.0 .0	4.88	7.0	373.1	.500	512.0S	177.2	334.8
TGBH-008		Horizontes	Gt	1480	10.000	2648.5	2656.1	183.2 2.5	29.7 40.4	.0 .0	4.88	8.0	373.1	.500	512.3S	176.5	335.8
TGBH-009		Horizontes	Gt	1480	10.000	2649.2	2656.8	183.1 2.4	29.7 40.4	.0 .0	4.88	9.0	373.1	.500	512.7S	175.9	336.8
TGBH-010		Horizontes	Gt	1480	10.000	2650.1	2657.6	182.9 2.3	29.7 40.4	.0 .0	4.87	10.0	373.1	.500	513.1S	175.2	337.9
TGBH-011		Horizontes	Gt	1480	10.000	2651.0	2658.5	182.8 2.2	29.7 40.4	.0 .0	4.87	11.0	373.1	.500	513.6S	174.6	339.1
TGBH-012		Horizontes	Gt	1480	10.000	2652.1	2659.6	182.6 2.1	29.7 40.4	.0 .0	4.86	12.0	373.1	.500	514.2S	173.9	340.3
TGBH-013		Horizontes	Gt	1480	10.000	2653.3	2660.8	182.5 2.0	29.7 40.4	.0 .0	4.86	13.0	373.1	.500	514.8S	173.2	341.6
TGBH-014		Horizontes	Gt	1480	10.000	2654.6	2662.2	182.3 1.8	29.7 40.4	.0 .0	4.85	14.0	373.1	.500	515.5S	172.6	342.9
TGBH-015		Horizontes	Gt	1480	10.000	2656.1	2663.6	182.2 1.7	29.6 40.3	.0 .0	4.84	15.0	373.1	.500	516.2S	171.9	344.3
TGBH-016		Horizontes	Gt	1480	10.000	2657.7	2665.2	182.1 1.6	29.6 40.3	.0 .0	4.84	16.0	373.1	.500	517.0S	171.3	345.8
TGBH-017		Horizontes	Gt	1480	10.000	2659.4	2666.9	181.9 1.5	29.6 40.3	.0 .0	4.83	17.0	373.1	.500	517.9S	170.6	347.3
TGBH-018		Horizontes	Gt	1480	10.000	2661.2	2668.7	181.8 1.4	29.6 40.3	.0 .0	4.82	18.0	373.1	.500	518.9S	169.9	348.9
TGBH-019		Horizontes	Gt	1480	10.000	2663.2	2670.7	181.6 1.3	29.6 40.3	.0 .0	4.81	19.0	373.1	.500	519.9S	169.3	350.6
TGBH-020		Horizontes	Gt	1480	10.000	2665.2	2672.7	181.5 1.2	29.6 40.3	.0 .0	4.80	20.0	373.1	.500	521.0S	168.6	352.4
TGBH-021		Horizontes	Gt	1480	10.000	2667.4	2674.9	181.4 1.1	29.6 40.3	.0 .0	4.79	21.0	373.1	.500	522.1S	168.0	354.2
TGBH-022		Horizontes	Gt	1480	10.000	2671.6	2679.0	181.3 1.0	29.6 40.3	.0 .0	4.77	22.0	371.2	.501	525.3s	167.4	357.9
TGBH-023		Horizontes	Gt	1480	10.000	2688.4	2695.8	181.3 1.0	29.5 40.2	.0 .0	4.69	23.0	355.6	.508	541.4s	167.4	374.1
TGBH-024		Horizontes	Gt	1480	10.000	2703.5	2710.9	181.3 1.0	29.4 40.1	.0 .0	4.62	24.0	341.7	.515	557.0s	167.4	389.7

**Datavorld**  
**Bethesda, MD**

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TGBH-025		Horizontes	Gt	1480	10.000	2717.4	2724.7	181.2	1.0	29.4	40.1	.0	.0	.522	571.1s	167.3	403.8
TGBH-026		Horizontes	Gt	1480	10.000	2731.1	2738.4	181.2	1.0	29.3	40.0	.0	.0	.528	584.8s	167.3	417.4
TGBH-027		Horizontes	Gt	1480	10.000	2742.9	2750.2	181.2	1.0	29.2	40.0	.0	.0	.533	596.0s	167.3	428.7
TGBH-028		Horizontes	Gt	1480	10.000	2754.5	2761.7	181.2	1.0	29.2	39.9	.0	.0	.537	606.7s	167.3	439.4
TGBH-029		Horizontes	Gt	1480	10.000	2766.0	2773.2	181.3	1.0	29.1	39.9	.0	.0	.543	620.0s	167.3	452.6
TGBH-030		Horizontes	Gt	1480	10.000	2777.4	2784.6	181.3	1.0	29.1	39.8	.0	.0	.548	631.8s	167.4	464.4
TGBH-031		Horizontes	Gt	1480	10.000	2788.7	2795.9	181.3	1.0	29.0	39.8	.0	.0	.553	642.9s	167.5	475.4
TGBH-032		Horizontes	Gt	1480	10.000	2799.7	2806.8	181.3	1.0	29.0	39.7	.0	.0	.556	652.9s	167.7	485.2
TGBH-033		Horizontes	Gt	1480	10.000	2808.0	2815.1	181.3	1.0	29.0	39.7	.0	.0	.561	663.5s	167.7	495.9
TGBH-034		Horizontes	Gt	1480	10.000	2816.2	2823.3	181.3	1.0	28.9	39.6	.0	.0	.564	671.7s	167.7	504.0
TGBH-035		Horizontes	Gt	1480	10.000	2824.3	2831.4	181.3	1.0	28.9	39.6	.0	.0	.568	681.7s	167.7	513.9
TGBH-036		Horizontes	Gt	1480	10.000	2832.4	2839.5	181.3	1.0	28.8	39.6	.0	.0	.572	691.1s	167.8	523.3
TGBH-037		Horizontes	Gt	1480	10.000	2839.3	2846.4	181.3	1.0	28.8	39.5	.0	.0	.575	699.7s	167.8	531.9
TGBH-038		Horizontes	Gt	1480	10.000	2846.0	2853.1	181.4	1.1	28.8	39.5	.0	.0	.579	708.1s	167.8	540.3
TGBH-039		Horizontes	Gt	1480	10.000	2852.7	2859.7	181.4	1.1	28.8	39.5	.0	.0	.582	716.1s	167.9	548.2
TGBH-040		Horizontes	Gt	1480	10.000	2856.3	2863.3	181.3	1.0	28.7	39.5	.0	.0	.583	719.5s	167.7	551.8
TGBH-041		Horizontes	Gt	1480	10.000	2854.8	2861.8	181.2	.9	28.7	39.5	.0	.0	.580	715.3s	167.1	548.2
TGBH-042		Horizontes	Gt	1480	10.000	2854.9	2861.9	181.1	.9	28.7	39.5	.0	.0	.578	713.0s	166.6	546.4
TGBH-043		Horizontes	Gt	1480	10.000	2855.0	2862.0	181.0	.8	28.7	39.5	.0	.0	.576	710.6s	166.1	544.6
TGBH-044		Horizontes	Gt	1480	10.000	2855.6	2862.5	180.9	.7	28.7	39.5	.0	.0	.574	708.6s	165.6	543.0
TGBH-045		Horizontes	Gt	1480	10.000	2856.0	2863.0	180.8	.6	28.7	39.5	.0	.0	.572	706.3s	165.1	541.2
TGBH-046		Horizontes	Gt	1480	10.000	2856.4	2863.4	180.7	.5	28.7	39.5	.0	.0	.570	704.4s	164.5	539.9
TGBH-047		Horizontes	Gt	1480	10.000	2859.0	2866.0	180.6	.5	28.7	39.5	.0	.0	.570	705.7s	164.2	541.6
TGBH-048		Horizontes	Gt	1480	10.000	2858.4	2865.4	180.5	.4	28.7	39.5	.0	.0	.567	701.8s	163.5	538.3
TGBH-049		Horizontes	Gt	1480	10.000	2860.5	2867.5	180.4	.3	28.7	39.5	.0	.0	.566	702.0s	163.1	538.9
TGBH-050		Horizontes	Gt	1480	10.000	2862.6	2869.6	180.3	.2	28.7	39.5	.0	.0	.565	702.1s	162.6	539.4
TGBH-050		Horizontes	Gt	1480	10.000	2851.5	2858.5	180.0	.0	28.8	39.5	.0	.0	.556	683.4s	161.2	522.3
TGBH-050		Horizontes	Gt	1480	10.000	2848.2	2855.2	180.0	360.0	28.8	39.5	.0	.0	.554	679.3s	160.7	518.6
TGBH-051		Horizontes	Gt	1480	10.000	2865.3	2872.2	180.3	.2	28.7	39.4	.0	.0	.565	703.0s	162.3	540.8
TGBH-051		Horizontes	Gt	1480	10.000	2854.7	2861.7	180.0	360.0	28.7	39.5	.0	.0	.556	685.2s	160.8	524.4
TGBH-051		Horizontes	Gt	1480	10.000	2850.9	2857.9	179.9	359.9	28.8	39.5	.0	.0	.554	680.4s	160.3	520.1
TGBH-052		Horizontes	Gt	1480	10.000	2868.0	2875.0	180.2	.1	28.7	39.4	.0	.0	.564	704.1s	161.9	542.2
TGBH-052		Horizontes	Gt	1480	10.000	2858.2	2865.2	179.9	359.9	28.7	39.5	.0	.0	.556	687.4s	160.5	526.9
TGBH-052		Horizontes	Gt	1480	10.000	2853.7	2860.7	179.8	359.8	28.7	39.5	.0	.0	.553	681.5s	159.8	521.6

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
TGBH-053		Horizontes	Gt	1480	10.000	2870.4	2877.3	180.1 .1	28.7 39.4	.0 .0	4.00	53.0	241.3	.563	704.2s	161.5	542.7
TGBH-053		Horizontes	Gt	1480	10.000	2864.2	2871.2	179.9 359.9	28.7 39.4	.0 .0	4.02	53.0	251.7	.557	692.4s	160.6	531.9
TGBH-053		Horizontes	Gt	1480	10.000	2856.6	2863.6	179.7 359.8	28.7 39.5	.0 .0	4.05	53.0	264.5	.553	682.6s	159.4	523.2
TGBH-054		Horizontes	Gt	1480	10.000	2871.5	2878.5	180.0 360.0	28.7 39.4	.0 .0	3.99	54.0	245.2	.561	701.7s	160.9	540.9
TGBH-054		Horizontes	Gt	1480	10.000	2871.3	2878.2	180.0 360.0	28.7 39.4	.0 .0	4.00	54.0	245.6	.560	701.3s	160.8	540.4
TGBH-054		Horizontes	Gt	1480	10.000	2859.6	2866.5	179.6 359.7	28.7 39.5	.0 .0	4.04	54.0	265.8	.552	683.8s	159.0	524.8
TGBH-055		Horizontes	Gt	1480	10.000	2862.6	2869.6	179.6 359.7	28.7 39.5	.0 .0	4.03	55.0	267.2	.552	685.0s	158.5	526.4
TGBH-056		Horizontes	Gt	1480	10.000	2865.4	2872.4	179.5 359.6	28.7 39.4	.0 .0	4.02	56.0	269.2	.551	685.7s	158.1	527.6
TGBH-057		Horizontes	Gt	1480	10.000	2868.3	2875.3	179.4 359.5	28.7 39.4	.0 .0	4.01	57.0	271.2	.550	686.4s	157.6	528.9
TGBH-058		Horizontes	Gt	1480	10.000	2871.3	2878.3	179.3 359.5	28.7 39.4	.0 .0	4.00	58.0	273.2	.549	687.2s	157.1	530.1
TGBH-059		Horizontes	Gt	1480	10.000	2874.2	2881.1	179.2 359.4	28.7 39.4	.0 .0	3.99	59.0	275.7	.548	687.5s	156.5	531.0
TGBH-060		Horizontes	Gt	1480	10.000	2884.8	2891.7	179.4 359.5	28.6 39.4	.0 .0	3.95	60.0	262.5	.553	700.8s	157.6	543.2
TGBH-061		Horizontes	Gt	1480	10.000	2898.6	2905.5	179.7 359.8	28.5 39.3	.0 .0	3.90	61.0	241.7	.563	721.9s	159.5	562.4
TGBH-062		Horizontes	Gt	1480	10.000	2910.2	2917.1	180.0 360.0	28.5 39.2	.0 .0	3.86	62.0	224.5	.573	741.2s	160.9	580.2
TGBH-063		Horizontes	Gt	1480	10.000	2924.5	2931.3	180.4 .3	28.4 39.2	.0 .0	3.82	63.0	200.5	.586	767.2s	163.0	604.2
TGBH-064		Horizontes	Gt	1480	10.000	2935.4	2942.2	180.7 .5	28.4 39.1	.0 .0	3.79	64.0	182.8	.596	786.8s	164.5	622.3
TGBH-065		Horizontes	Gt	1480	10.000	2951.4	2958.1	181.2 .9	28.3 39.0	.0 .0	3.74	65.0	152.2	.615	822.7s	167.2	655.5
TGBH-066		Horizontes	Gt	1480	10.000	2954.7	2961.5	181.2 1.0	28.3 39.0	.0 .0	3.73	66.0	149.9	.616	825.8s	167.3	658.5
TGBH-067		Horizontes	Gt	1480	10.000	2957.2	2963.9	181.2 .9	28.3 39.0	.0 .0	3.72	67.0	149.8	.616	827.5s	167.2	660.3
TGBH-068		Horizontes	Gt	1480	10.000	2959.7	2966.4	181.2 .9	28.3 39.0	.0 .0	3.71	68.0	149.5	.616	829.3s	167.1	662.2
TGBH-069		Horizontes	Gt	1480	10.000	2962.9	2969.7	181.2 .9	28.3 39.0	.0 .0	3.70	69.0	147.2	.620	836.8s	167.2	669.6
TGBH-070		Horizontes	Gt	1480	10.000	2966.3	2973.0	181.3 1.0	28.2 39.0	.0 .0	3.69	70.0	144.5	.623	844.1s	167.4	676.8
TGBH-071		Horizontes	Gt	1480	10.000	2970.4	2977.1	181.3 1.0	28.2 38.9	.0 .0	3.68	71.0	139.4	.630	855.7s	167.8	687.9
TGBH-072		Horizontes	Gt	1480	10.000	2972.9	2979.6	181.3 1.0	28.2 38.9	.0 .0	3.67	72.0	138.8	.631	858.5s	167.7	690.8
TGBH-073		Horizontes	Gt	1480	10.000	2975.1	2981.8	181.3 1.0	28.2 38.9	.0 .0	3.67	73.0	139.2	.630	859.4s	167.6	691.7
TGBH-074		Horizontes	Gt	1480	10.000	2977.2	2983.9	181.3 1.0	28.2 38.9	.0 .0	3.66	74.0	139.9	.629	859.7s	167.5	692.2
TGBH-075		Horizontes	Gt	1480	10.000	2979.3	2986.0	181.3 1.0	28.2 38.9	.0 .0	3.65	75.0	140.5	.629	860.1s	167.4	692.7
TGBH-076		Horizontes	Gt	1480	10.000	2981.5	2988.2	181.2 1.0	28.2 38.9	.0 .0	3.65	76.0	141.2	.628	860.5s	167.2	693.2
TGBH-077		Horizontes	Gt	1480	10.000	2983.8	2990.5	181.2 .9	28.2 38.9	.0 .0	3.64	77.0	141.9	.627	860.8s	167.1	693.7
TGBH-078		Horizontes	Gt	1480	10.000	2986.0	2992.7	181.2 .9	28.2 38.9	.0 .0	3.63	78.0	142.9	.626	860.7s	167.0	693.7
TGBH-079		Horizontes	Gt	1480	10.000	2988.1	2994.8	181.1 .9	28.1 38.9	.0 .0	3.63	79.0	144.4	.624	859.4s	166.8	692.6
TGBH-080		Horizontes	Gt	1480	10.000	2990.8	2997.4	181.1 .9	28.1 38.9	.0 .0	3.62	80.0	143.4	.625	863.5s	166.8	696.7
TGBH-081		Horizontes	Gt	1480	10.000	2993.5	3000.2	181.2 .9	28.1 38.8	.0 .0	3.61	81.0	141.6	.627	868.5s	167.0	701.5
TGBH-082		Horizontes	Gt	1480	10.000	2996.2	3002.9	181.2 .9	28.1 38.8	.0 .0	3.60	82.0	139.7	.630	873.5s	167.1	706.4

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
TGBH-083		Horizontes	Gt	1480	10.000	2998.9	3005.6	181.2 1.0	28.1 38.8	.0 .0	3.60	83.0	137.8	.632	878.2s	167.2	711.0
TGBH-084		Horizontes	Gt	1480	10.000	3001.5	3008.2	181.3 1.0	28.1 38.8	.0 .0	3.59	84.0	136.0	.635	884.2s	167.4	716.8
TGBH-085		Horizontes	Gt	1480	10.000	3004.5	3011.2	181.4 1.1	28.1 38.8	.0 .0	3.58	85.0	129.4	.645	900.6s	168.0	732.6
TGBH-086		Horizontes	Gt	1480	10.000	3007.0	3013.6	181.4 1.1	28.1 38.8	.0 .0	3.57	86.0	127.0	.648	907.0s	168.2	738.8
TGBH-087		Horizontes	Gt	1480	10.000	3009.3	3016.0	181.5 1.1	28.1 38.8	.0 .0	3.57	87.0	124.6	.652	913.0s	168.4	744.6
TGBH-088		Horizontes	Gt	1480	10.000	3011.6	3018.3	181.5 1.2	28.0 38.8	.0 .0	3.56	88.0	122.2	.656	920.5s	168.6	751.9
TGBH-089		Horizontes	Gt	1480	10.000	3013.8	3020.5	181.6 1.2	28.0 38.7	.0 .0	3.56	89.0	119.8	.659	927.4s	168.9	758.5
TGBH-090		Horizontes	Gt	1480	10.000	3015.9	3022.6	181.6 1.2	28.0 38.7	.0 .0	3.55	90.0	118.4	.662	931.7s	169.0	762.7
TGBH-091		Horizontes	Gt	1480	10.000	3018.0	3024.6	181.6 1.2	28.0 38.7	.0 .0	3.54	91.0	118.6	.661	932.9s	169.0	763.9
TGBH-092		Horizontes	Gt	1480	10.000	3020.0	3026.7	181.6 1.3	28.0 38.7	.0 .0	3.54	92.0	116.5	.664	938.4s	169.2	769.3
TGBH-093		Horizontes	Gt	1480	10.000	3021.4	3028.1	182.0 1.6	28.0 38.7	.0 .0	3.54	93.0	96.7	.658	930.0s	171.0	759.0
TGBH-094		Horizontes	Gt	1480	10.000	3023.0	3029.6	182.1 1.6	28.0 38.7	.0 .0	3.53	94.0	94.5	.644	912.6s	171.2	741.3
TGBH-095		Horizontes	Gt	1480	10.000	3024.6	3031.2	182.1 1.6	28.0 38.7	.0 .0	3.53	95.0	94.0	.641	909.1s	171.3	737.8
TGBH-096		Horizontes	Gt	1480	10.000	3026.3	3032.9	182.1 1.6	28.0 38.7	.0 .0	3.52	96.0	93.8	.640	908.9s	171.3	737.6
TGBH-097		Horizontes	Gt	1480	10.000	3027.9	3034.5	182.1 1.6	28.0 38.7	.0 .0	3.52	97.0	93.9	.641	910.7s	171.3	739.4
TGBH-098		Horizontes	Gt	1480	10.000	3029.5	3036.1	182.1 1.6	28.0 38.7	.0 .0	3.51	98.0	94.0	.641	912.5s	171.3	741.2
TGBH-099		Horizontes	Gt	1480	10.000	3031.2	3037.8	182.1 1.6	28.0 38.7	.0 .0	3.51	99.0	94.0	.642	914.4s	171.4	743.0
TGBH-100		Horizontes	Gt	1480	10.000	3033.3	3039.9	182.0 1.6	27.9 38.7	.0 .0	3.50	100.0	97.5	.663	945.5s	171.1	774.5
TGBH-101		Horizontes	Gt	1480	10.000	3035.4	3042.0	182.0 1.5	27.9 38.6	.0 .0	3.50	101.0	100.0	.677	968.0s	170.9	797.2
TGBH-102		Horizontes	Gt	1480	10.000	3037.3	3043.9	182.0 1.5	27.9 38.6	.0 .0	3.49	102.0	101.1	.677	969.1s	170.8	798.4
TGBH-103		Horizontes	Gt	1480	10.000	3039.3	3045.9	182.0 1.5	27.9 38.6	.0 .0	3.49	103.0	102.2	.677	970.0s	170.7	799.3
TGBH-104		Horizontes	Gt	1480	10.000	3041.3	3047.8	181.9 1.5	27.9 38.6	.0 .0	3.48	104.0	103.3	.676	970.8s	170.7	800.2
TGBH-105		Horizontes	Gt	1480	10.000	3042.8	3049.4	182.0 1.5	27.9 38.6	.0 .0	3.48	105.0	102.3	.677	972.6s	170.8	801.8
TGBH-106		Horizontes	Gt	1480	10.000	3044.0	3050.6	182.0 1.6	27.9 38.6	.0 .0	3.48	106.0	100.2	.677	974.4s	171.0	803.4
TGBH-107		Horizontes	Gt	1480	10.000	3045.1	3051.6	182.1 1.6	27.9 38.6	.0 .0	3.47	107.0	97.9	.665	957.7s	171.3	786.4
TGBH-108		Horizontes	Gt	1480	10.000	3045.3	3051.8	182.2 1.7	27.9 38.6	.0 .0	3.47	108.0	92.8	.635	913.9s	171.7	742.1
TGBH-109		Horizontes	Gt	1480	10.000	3046.4	3052.9	182.2 1.7	27.9 38.6	.0 .0	3.47	109.0	91.4	.626	902.0s	171.9	730.1
TGBH-110		Horizontes	Gt	1480	10.000	3047.6	3054.1	182.2 1.7	27.9 38.6	.0 .0	3.47	110.0	90.3	.619	893.3s	172.1	721.3
TGBH-111		Horizontes	Gt	1480	10.000	3048.7	3055.3	182.3 1.7	27.9 38.6	.0 .0	3.46	111.0	89.4	.613	885.5s	172.2	713.3
TGBH-112		Horizontes	Gt	1480	10.000	3049.9	3056.4	182.3 1.8	27.9 38.6	.0 .0	3.46	112.0	88.5	.608	878.6s	172.3	706.3
TGBH-113		Horizontes	Gt	1480	10.000	3051.1	3057.7	182.3 1.8	27.9 38.6	.0 .0	3.46	113.0	87.9	.605	874.6s	172.4	702.2
TGBH-114		Horizontes	Gt	1480	10.000	3052.4	3058.9	182.3 1.8	27.9 38.6	.0 .0	3.45	114.0	87.4	.601	870.5s	172.5	698.0
TGBH-115		Horizontes	Gt	1480	10.000	3053.7	3060.2	182.3 1.8	27.9 38.6	.0 .0	3.45	115.0	87.2	.600	869.8s	172.6	697.2
TGBH-116		Horizontes	Gt	1480	10.000	3055.0	3061.6	182.4 1.8	27.9 38.6	.0 .0	3.45	116.0	87.1	.599	869.4s	172.6	696.8



**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
TGBH-117		Horizontes	Gt	1480	10.000	3056.4	3063.0	182.4 1.8	27.8 38.5	.0 .0	3.44	117.0	87.1	.600	870.9s	172.7	698.2
TGBH-118		Horizontes	Gt	1480	10.000	3057.9	3064.4	182.4 1.8	27.8 38.5	.0 .0	3.44	118.0	87.3	.601	873.4s	172.7	700.7
TGBH-119		Horizontes	Gt	1480	10.000	3059.3	3065.8	182.4 1.8	27.8 38.5	.0 .0	3.43	119.0	87.5	.602	876.0s	172.8	703.2
TGBH-120		Horizontes	Gt	1480	10.000	3060.8	3067.3	182.4 1.9	27.8 38.5	.0 .0	3.43	120.0	87.7	.603	878.6s	172.8	705.7
TGBH-121		Horizontes	Gt	1480	10.000	3062.7	3069.3	182.4 1.8	27.8 38.5	.0 .0	3.43	121.0	89.0	.611	892.0s	172.8	719.2
TGBH-122		Horizontes	Gt	1480	10.000	3063.4	3070.0	182.4 1.9	27.8 38.5	.0 .0	3.42	122.0	87.7	.603	880.8s	173.0	707.8
TGBH-123		Horizontes	Gt	1480	10.000	3061.7	3068.2	182.5 2.0	27.8 38.5	.0 .0	3.43	123.0	81.9	.567	826.2s	173.5	652.7
TGBH-124		Horizontes	Gt	1480	10.000	3062.0	3068.5	182.6 2.0	27.8 38.5	.0 .0	3.43	124.0	80.1	.555	810.0s	173.7	636.3
TGBH-125		Horizontes	Gt	1480	10.000	3062.4	3068.9	182.6 2.0	27.8 38.5	.0 .0	3.43	125.0	78.7	.547	797.6s	173.9	623.7
TGBH-126		Horizontes	Gt	1480	10.000	3063.1	3069.6	182.7 2.0	27.8 38.5	.0 .0	3.43	126.0	77.9	.541	790.3s	174.0	616.3
TGBH-127		Horizontes	Gt	1480	10.000	3063.8	3070.3	182.7 2.1	27.8 38.5	.0 .0	3.42	127.0	77.1	.537	783.7s	174.1	609.6
TGBH-128		Horizontes	Gt	1480	10.000	3064.5	3071.0	182.7 2.1	27.8 38.5	.0 .0	3.42	128.0	76.5	.533	778.4s	174.2	604.2
TGBH-129		Horizontes	Gt	1480	10.000	3065.5	3072.0	182.7 2.1	27.8 38.5	.0 .0	3.42	129.0	76.4	.532	777.8s	174.3	603.5
TGBH-130		Horizontes	Gt	1480	10.000	3066.5	3073.0	182.7 2.1	27.8 38.5	.0 .0	3.42	130.0	76.3	.531	777.1s	174.4	602.7
TGBH-131		Horizontes	Gt	1480	10.000	3067.5	3074.0	182.8 2.1	27.8 38.5	.0 .0	3.41	131.0	76.1	.530	776.5s	174.5	602.0
TGBH-132		Horizontes	Gt	1480	10.000	3068.4	3074.9	182.8 2.1	27.8 38.5	.0 .0	3.41	132.0	76.0	.529	775.8s	174.6	601.3
TGBH-133		Horizontes	Gt	1480	10.000	3069.3	3075.8	182.8 2.2	27.8 38.5	.0 .0	3.41	133.0	75.9	.529	775.2s	174.7	600.5
TGBH-134		Horizontes	Gt	1480	10.000	3070.2	3076.7	182.8 2.2	27.8 38.5	.0 .0	3.41	134.0	75.8	.528	774.5s	174.7	599.7
TGBH-135		Horizontes	Gt	1480	10.000	3071.1	3077.6	182.8 2.2	27.8 38.5	.0 .0	3.40	135.0	75.6	.527	773.8s	174.8	599.0
TGBH-136		Horizontes	Gt	1480	10.000	3072.0	3078.5	182.9 2.2	27.8 38.5	.0 .0	3.40	136.0	75.5	.526	773.1s	174.9	598.2
TGBH-137		Horizontes	Gt	1480	10.000	3072.8	3079.3	182.9 2.2	27.8 38.5	.0 .0	3.40	137.0	75.4	.525	772.4s	175.0	597.3
TGBH-138		Horizontes	Gt	1480	10.000	3073.7	3080.2	182.9 2.2	27.8 38.5	.0 .0	3.40	138.0	75.2	.524	771.6s	175.1	596.5
TGBH-139		Horizontes	Gt	1480	10.000	3074.5	3081.0	182.9 2.2	27.8 38.5	.0 .0	3.40	139.0	75.1	.524	770.9s	175.2	595.7
TGBH-140		Horizontes	Gt	1480	10.000	3075.3	3081.8	182.9 2.3	27.8 38.5	.0 .0	3.39	140.0	75.0	.523	770.1s	175.3	594.8
TGBH-141		Horizontes	Gt	1480	10.000	3076.0	3082.5	183.0 2.3	27.8 38.5	.0 .0	3.39	141.0	74.9	.522	769.3s	175.4	594.0
TGBH-142		Horizontes	Gt	1480	10.000	3076.9	3083.4	183.0 2.3	27.8 38.4	.0 .0	3.39	142.0	74.9	.522	769.9s	175.5	594.4
TGBH-143		Horizontes	Gt	1480	10.000	3078.0	3084.5	183.0 2.3	27.8 38.4	.0 .0	3.39	143.0	75.2	.524	773.5s	175.5	598.0
TGBH-144		Horizontes	Gt	1480	10.000	3079.0	3085.5	183.0 2.3	27.8 38.4	.0 .0	3.38	144.0	75.5	.526	777.1s	175.6	601.5
TGBH-145		Horizontes	Gt	1480	10.000	3080.1	3086.6	183.0 2.3	27.7 38.4	.0 .0	3.38	145.0	75.8	.528	780.7s	175.7	605.0
TGBH-146		Horizontes	Gt	1480	10.000	3081.1	3087.6	183.0 2.3	27.7 38.4	.0 .0	3.38	146.0	76.1	.530	784.3s	175.8	608.5
TGBH-147		Horizontes	Gt	1480	10.000	3082.2	3088.7	183.1 2.4	27.7 38.4	.0 .0	3.38	147.0	76.4	.532	787.9s	175.9	612.1
TGBH-148		Horizontes	Gt	1480	10.000	3083.2	3089.7	183.1 2.4	27.7 38.4	.0 .0	3.37	148.0	76.7	.534	791.5s	175.9	615.6
TGBH-149		Horizontes	Gt	1480	10.000	3084.2	3090.7	183.1 2.4	27.7 38.4	.0 .0	3.37	149.0	77.0	.536	795.1s	176.0	619.1
TGBH-150		Horizontes	Gt	1480	10.000	3085.6	3092.1	183.1 2.4	27.7 38.4	.0 .0	3.37	150.0	77.8	.541	803.4s	176.1	627.3

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
TGBH-151		Horizontes	Gt	1480	10.000	3087.3	3093.8	183.1 2.4	27.7 38.4	.0 .0	3.36	151.0	79.0	.549	815.6s	176.1	639.5
TGBH-152		Horizontes	Gt	1480	10.000	3089.0	3095.5	183.1 2.4	27.7 38.4	.0 .0	3.36	152.0	80.2	.556	827.9s	176.2	651.7
TGBH-153		Horizontes	Gt	1480	10.000	3091.3	3097.7	183.1 2.4	27.7 38.4	.0 .0	3.35	153.0	82.0	.567	845.8s	176.2	669.6
TGBH-154		Horizontes	Gt	1480	10.000	3094.4	3100.9	183.1 2.4	27.7 38.4	.0 .0	3.34	154.0	84.8	.585	874.3s	176.2	698.1
TGBH-155		Horizontes	Gt	1480	10.000	3098.2	3104.7	183.1 2.4	27.7 38.3	.0 .0	3.34	155.0	88.2	.606	909.1s	176.2	732.9
TGBH-156		Horizontes	Gt	1480	10.000	3097.7	3104.1	183.2 2.4	27.7 38.4	.0 .0	3.34	156.0	86.8	.598	895.8s	176.4	719.4
TGBH-157		Horizontes	Gt	1480	10.000	3097.0	3103.5	183.2 2.5	27.7 38.4	.0 .0	3.34	157.0	85.4	.589	882.1s	176.5	705.6
TGBH-158		Horizontes	Gt	1480	10.000	3096.4	3102.8	183.2 2.5	27.7 38.4	.0 .0	3.34	158.0	84.0	.580	868.5s	176.7	691.8
TGBH-159		Horizontes	Gt	1480	10.000	3095.7	3102.1	183.3 2.5	27.7 38.4	.0 .0	3.34	159.0	82.6	.571	854.9s	176.9	678.1
TGBH-160		Horizontes	Gt	1480	10.000	3095.0	3101.4	183.3 2.5	27.7 38.4	.0 .0	3.34	160.0	81.2	.563	841.3s	177.0	664.2
TGBH-161		Horizontes	Gt	1480	10.000	3094.2	3100.7	183.3 2.6	27.7 38.4	.0 .0	3.35	161.0	79.8	.554	827.6s	177.2	650.3
TGBH-162		Horizontes	Gt	1480	10.000	3093.4	3099.9	183.4 2.6	27.7 38.4	.0 .0	3.35	162.0	78.5	.545	814.0s	177.4	636.6
TGBH-163		Horizontes	Gt	1480	10.000	3092.7	3099.2	183.4 2.6	27.7 38.4	.0 .0	3.35	163.0	77.2	.537	801.7s	177.5	624.2
TGBH-164		Horizontes	Gt	1480	10.000	3092.3	3098.7	183.4 2.7	27.7 38.4	.0 .0	3.35	164.0	76.3	.531	792.4s	177.7	614.8
TGBH-165		Horizontes	Gt	1480	10.000	3091.8	3098.2	183.5 2.7	27.7 38.4	.0 .0	3.35	165.0	75.3	.525	783.1s	177.8	605.3
TGBH-166		Horizontes	Gt	1480	10.000	3091.3	3097.7	183.5 2.7	27.7 38.4	.0 .0	3.35	166.0	74.4	.519	773.7s	177.9	595.8
TGBH-167		Horizontes	Gt	1480	10.000	3090.7	3097.2	183.5 2.7	27.7 38.4	.0 .0	3.35	167.0	73.4	.513	764.3s	178.1	586.2
TGBH-168		Horizontes	Gt	1480	10.000	3090.1	3096.6	183.6 2.7	27.7 38.4	.0 .0	3.36	168.0	72.5	.507	754.9s	178.2	576.7
TGBH-169		Horizontes	Gt	1480	10.000	3089.5	3096.0	183.6 2.8	27.7 38.4	.0 .0	3.36	169.0	71.6	.501	745.5s	178.3	567.1
TGBH-213		Horizontes	Gt	1480	10.000	3082.8	3089.2	184.6 3.6	27.8 38.4	.0 .0	3.37	213.0	72.1	.504	747.3s	183.2	564.1
TGBH-214		Horizontes	Gt	1480	10.000	3082.9	3089.4	184.7 3.6	27.8 38.4	.0 .0	3.37	214.0	73.1	.510	756.4s	183.3	573.1
TGBH-215		Horizontes	Gt	1480	10.000	3083.1	3089.6	184.7 3.6	27.8 38.4	.0 .0	3.37	215.0	74.0	.517	765.6s	183.5	582.1
TGBH-216		Horizontes	Gt	1480	10.000	3083.2	3089.7	184.7 3.6	27.8 38.4	.0 .0	3.37	216.0	75.0	.523	774.6s	183.6	591.0
TGBH-217		Horizontes	Gt	1480	10.000	3083.3	3089.8	184.7 3.7	27.8 38.4	.0 .0	3.37	217.0	75.9	.529	783.7s	183.7	599.9
TGBH-218		Horizontes	Gt	1480	10.000	3083.3	3089.8	184.8 3.7	27.8 38.4	.0 .0	3.37	218.0	76.8	.535	792.6s	183.9	608.7
TGBH-219		Horizontes	Gt	1480	10.000	3083.6	3090.1	184.8 3.7	27.8 38.4	.0 .0	3.37	219.0	78.1	.543	805.0s	184.1	621.0
TGBH-220		Horizontes	Gt	1480	10.000	3083.9	3090.4	184.8 3.7	27.8 38.4	.0 .0	3.37	220.0	79.5	.551	817.6s	184.2	633.4
TGBH-221		Horizontes	Gt	1480	10.000	3084.1	3090.6	184.9 3.8	27.8 38.4	.0 .0	3.37	221.0	80.8	.560	830.2s	184.4	645.8
TGBH-222		Horizontes	Gt	1480	10.000	3084.4	3090.9	184.9 3.8	27.8 38.4	.0 .0	3.37	222.0	82.3	.569	844.6s	184.6	660.0
TGBH-223		Horizontes	Gt	1480	10.000	3084.8	3091.2	185.0 3.8	27.8 38.4	.0 .0	3.37	223.0	83.8	.579	859.3s	184.8	674.5
TGBH-224		Horizontes	Gt	1480	10.000	3085.0	3091.5	185.0 3.9	27.8 38.4	.0 .0	3.37	224.0	85.4	.589	873.9s	185.0	688.9
TGBH-225		Horizontes	Gt	1480	10.000	3085.2	3091.7	185.0 3.9	27.8 38.4	.0 .0	3.37	225.0	87.0	.598	888.5s	185.2	703.3
TGBH-226		Horizontes	Gt	1480	10.000	3085.4	3091.9	185.1 3.9	27.8 38.4	.0 .0	3.37	226.0	88.6	.609	903.5s	185.4	718.1
TGBH-227		Horizontes	Gt	1480	10.000	3085.6	3092.1	185.1 4.0	27.8 38.4	.0 .0	3.37	227.0	90.2	.619	918.4s	185.6	732.8

**Datworld**  
**Bethesda, MD**

Datworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
TGBH-228		Horizontes	Gt	1480	10.000	3085.7	3092.1	185.2 4.0	27.8 38.4	.0 .0	3.37	228.0	91.8	.628	933.2s	185.8	747.3
TGBH-229		Horizontes	Gt	1480	10.000	3085.6	3092.0	185.2 4.0	27.8 38.4	.0 .0	3.37	229.0	93.3	.637	946.1s	186.0	760.1
TGBH-230		Horizontes	Gt	1480	10.000	3085.5	3092.0	185.3 4.1	27.8 38.4	.0 .0	3.37	230.0	94.8	.647	960.0s	186.2	773.7
TGBH-231		Horizontes	Gt	1480	10.000	3085.4	3091.9	185.3 4.1	27.8 38.4	.0 .0	3.37	231.0	96.4	.656	973.9s	186.4	787.5
TGBH-232		Horizontes	Gt	1480	10.000	3085.2	3091.7	185.4 4.1	27.8 38.4	.0 .0	3.37	232.0	98.0	.665	987.8s	186.7	801.1
TGBH-233		Horizontes	Gt	1480	10.000	3085.0	3091.4	185.4 4.2	27.8 38.4	.0 .0	3.37	233.0	99.6	.675	1001.4s	186.9	814.6
TGBH-234		Horizontes	Gt	1480	10.000	3084.7	3091.2	185.4 4.2	27.8 38.4	.0 .0	3.37	234.0	101.1	.677	1004.6s	187.1	817.5
TGBH-235		Horizontes	Gt	1480	10.000	3084.3	3090.8	185.5 4.2	27.8 38.4	.0 .0	3.37	235.0	102.7	.676	1003.5s	187.3	816.2
TGBH-236		Horizontes	Gt	1480	10.000	3083.9	3090.4	185.5 4.3	27.8 38.4	.0 .0	3.37	236.0	104.3	.676	1002.1s	187.5	814.6
TGBH-237		Horizontes	Gt	1480	10.000	3083.4	3089.9	185.6 4.3	27.8 38.4	.0 .0	3.37	237.0	105.8	.675	1000.3s	187.7	812.6
TGBH-238		Horizontes	Gt	1480	10.000	3082.9	3089.4	185.6 4.3	27.8 38.4	.0 .0	3.37	238.0	107.4	.674	998.3s	187.9	810.4
TGBH-239		Horizontes	Gt	1480	10.000	3082.4	3088.9	185.7 4.4	27.8 38.4	.0 .0	3.38	239.0	109.2	.672	995.8s	188.2	807.7
TGBH-240		Horizontes	Gt	1480	10.000	3081.9	3088.4	185.7 4.4	27.8 38.4	.0 .0	3.38	240.0	111.1	.671	993.0s	188.4	804.6
TGBH-241		Horizontes	Gt	1480	10.000	3081.3	3087.8	185.8 4.4	27.8 38.4	.0 .0	3.38	241.0	112.9	.669	989.7s	188.6	801.1
TGBH-242		Horizontes	Gt	1480	10.000	3080.6	3087.1	185.8 4.5	27.8 38.4	.0 .0	3.38	242.0	114.7	.667	986.0s	188.9	797.1
TGBH-243		Horizontes	Gt	1480	10.000	3079.8	3086.3	185.9 4.5	27.8 38.4	.0 .0	3.38	243.0	116.3	.664	982.3s	189.1	793.2
TGBH-244		Horizontes	Gt	1480	10.000	3078.9	3085.4	185.9 4.6	27.8 38.4	.0 .0	3.38	244.0	118.0	.662	978.3s	189.3	789.0
TGBH-245		Horizontes	Gt	1480	10.000	3077.9	3084.4	186.0 4.6	27.8 38.4	.0 .0	3.39	245.0	119.6	.660	974.1s	189.6	784.5
TGBH-246		Horizontes	Gt	1480	10.000	3076.9	3083.4	186.0 4.6	27.8 38.4	.0 .0	3.39	246.0	121.2	.657	969.6s	189.8	779.9
TGBH-247		Horizontes	Gt	1480	10.000	3075.9	3082.4	186.1 4.7	27.8 38.4	.0 .0	3.39	247.0	123.0	.654	964.7s	190.0	774.7
TGBH-248		Horizontes	Gt	1480	10.000	3074.9	3081.4	186.1 4.7	27.8 38.4	.0 .0	3.39	248.0	125.1	.651	958.7s	190.3	768.5
TGBH-249		Horizontes	Gt	1480	10.000	3073.7	3080.2	186.2 4.8	27.8 38.4	.0 .0	3.40	249.0	126.8	.649	954.6s	190.5	764.1
TGBH-250		Horizontes	Gt	1480	10.000	3072.5	3079.0	186.2 4.8	27.8 38.4	.0 .0	3.40	250.0	128.6	.646	950.2s	190.7	759.5
TGBH-251		Horizontes	Gt	1480	10.000	3071.3	3077.8	186.3 4.8	27.8 38.5	.0 .0	3.40	251.0	130.6	.643	944.9s	191.0	754.0
TGBH-252		Horizontes	Gt	1480	10.000	3070.1	3076.6	186.3 4.9	27.8 38.5	.0 .0	3.41	252.0	133.0	.640	938.8s	191.2	747.5
TGBH-253		Horizontes	Gt	1480	10.000	3068.6	3075.1	186.4 4.9	27.9 38.5	.0 .0	3.41	253.0	134.6	.637	933.7s	191.5	742.3
TGBH-254		Horizontes	Gt	1480	10.000	3067.0	3073.5	186.4 5.0	27.9 38.5	.0 .0	3.42	254.0	136.1	.634	928.8s	191.7	737.2
TGBH-255		Horizontes	Gt	1480	10.000	3065.4	3071.9	186.5 5.0	27.9 38.5	.0 .0	3.42	255.0	137.9	.632	923.6s	191.9	731.7
TGBH-256		Horizontes	Gt	1480	10.000	3063.9	3070.4	186.5 5.0	27.9 38.5	.0 .0	3.42	256.0	140.2	.629	918.6s	192.2	726.4
TGBH-257		Horizontes	Gt	1480	10.000	3062.3	3068.9	186.6 5.1	27.9 38.5	.0 .0	3.43	257.0	142.8	.626	912.8s	192.4	720.4
TGBH-258		Horizontes	Gt	1480	10.000	3060.7	3067.3	186.7 5.1	27.9 38.5	.0 .0	3.43	258.0	145.3	.622	906.8s	192.7	714.1
TGBH-259		Horizontes	Gt	1480	10.000	3059.3	3065.8	186.7 5.2	27.9 38.5	.0 .0	3.44	259.0	148.7	.617	898.8s	193.1	705.7
TGBH-260		Horizontes	Gt	1480	10.000	3057.5	3064.0	186.8 5.2	27.9 38.5	.0 .0	3.44	260.0	151.4	.615	894.1s	193.4	700.8
TGBH-261		Horizontes	Gt	1480	10.000	3055.6	3062.1	186.9 5.3	27.9 38.5	.0 .0	3.44	261.0	153.9	.614	891.6s	193.6	697.9

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
TGBH-262		Horizontes	Gt	1480	10.000	3053.6	3060.1	186.9 5.3	27.9 38.5	.0 .0	3.45	262.0	156.4	.613	888.7s	193.9	694.8
TGBH-263		Horizontes	Gt	1480	10.000	3051.4	3058.0	187.0 5.4	27.9 38.5	.0 .0	3.46	263.0	158.9	.612	885.5s	194.2	691.3
TGBH-264		Horizontes	Gt	1480	10.000	3049.3	3055.9	187.0 5.4	28.0 38.6	.0 .0	3.46	264.0	161.7	.610	881.9s	194.5	687.4
TGBH-265		Horizontes	Gt	1480	10.000	3047.1	3053.6	187.1 5.5	28.0 38.6	.0 .0	3.47	265.0	164.4	.608	877.4s	194.8	682.6
TGBH-266		Horizontes	Gt	1480	10.000	3044.7	3051.3	187.2 5.5	28.0 38.6	.0 .0	3.47	266.0	167.3	.606	872.4s	195.1	677.4
TGBH-267		Horizontes	Gt	1480	10.000	3042.3	3048.9	187.2 5.6	28.0 38.6	.0 .0	3.48	267.0	170.4	.603	866.9s	195.4	671.5
TGBH-268		Horizontes	Gt	1480	10.000	3039.8	3046.4	187.3 5.6	28.0 38.6	.0 .0	3.49	268.0	173.5	.600	860.9s	195.7	665.2
TGBH-269		Horizontes	Gt	1480	10.000	3037.2	3043.8	187.4 5.7	28.0 38.6	.0 .0	3.49	269.0	177.0	.598	856.1s	196.0	660.1
TGBH-270		Horizontes	Gt	1480	10.000	3034.6	3041.2	187.5 5.8	28.0 38.6	.0 .0	3.50	270.0	181.2	.596	852.1s	196.4	655.7
TGBH-271		Horizontes	Gt	1480	10.000	3031.9	3038.5	187.6 5.8	28.0 38.6	.0 .0	3.51	271.0	185.5	.594	847.3s	196.8	650.5
TGBH-272		Horizontes	Gt	1480	10.000	3029.0	3035.6	187.7 5.9	28.1 38.6	.0 .0	3.52	272.0	190.2	.592	842.0s	197.2	644.8
TGBH-273		Horizontes	Gt	1480	10.000	3025.9	3032.5	187.7 6.0	28.1 38.7	.0 .0	3.52	273.0	193.4	.590	837.6s	197.5	640.1
TGBH-274		Horizontes	Gt	1480	10.000	3022.3	3028.9	187.6 5.9	28.1 38.7	.0 .0	3.53	274.0	188.4	.593	839.0s	197.1	641.9
TGBH-275		Horizontes	Gt	1480	10.000	3019.0	3025.6	187.6 5.9	28.1 38.7	.0 .0	3.54	275.0	187.0	.594	837.8s	197.0	640.8
TGBH-276		Horizontes	Gt	1480	10.000	3015.7	3022.3	187.6 5.9	28.1 38.7	.0 .0	3.55	276.0	186.2	.594	836.4s	196.9	639.5
TGBH-277		Horizontes	Gt	1480	10.000	3012.5	3019.1	187.6 5.9	28.1 38.7	.0 .0	3.56	277.0	185.4	.594	835.0s	196.9	638.1
TGBH-278		Horizontes	Gt	1480	10.000	3009.3	3015.9	187.6 5.8	28.1 38.7	.0 .0	3.57	278.0	185.0	.595	833.3s	196.8	636.4
TGBH-279		Horizontes	Gt	1480	10.000	3006.0	3012.6	187.6 5.9	28.2 38.8	.0 .0	3.58	279.0	185.8	.594	830.6s	196.9	633.7
TGBH-280		Horizontes	Gt	1480	10.000	3002.7	3009.3	187.6 5.9	28.2 38.8	.0 .0	3.59	280.0	187.2	.593	827.3s	197.0	630.4
TGBH-281		Horizontes	Gt	1480	10.000	2999.3	3005.9	187.6 5.9	28.2 38.8	.0 .0	3.60	281.0	188.9	.593	824.2s	197.1	627.1
TGBH-282		Horizontes	Gt	1480	10.000	2995.8	3002.5	187.7 5.9	28.2 38.8	.0 .0	3.60	282.0	190.4	.592	820.9s	197.2	623.7
TGBH-283		Horizontes	Gt	1480	10.000	2992.4	2999.1	187.7 5.9	28.2 38.8	.0 .0	3.61	283.0	191.2	.591	818.3s	197.3	621.0
TGBH-284		Horizontes	Gt	1480	10.000	2989.2	2995.9	187.7 5.9	28.2 38.8	.0 .0	3.62	284.0	190.8	.592	816.1s	197.2	618.9
TGBH-285		Horizontes	Gt	1480	10.000	2985.9	2992.6	187.6 5.9	28.3 38.8	.0 .0	3.63	285.0	190.4	.592	814.2s	197.1	617.1
TGBH-286		Horizontes	Gt	1480	10.000	2982.7	2989.4	187.6 5.9	28.3 38.9	.0 .0	3.64	286.0	190.1	.592	812.4s	197.0	615.3
TGBH-287		Horizontes	Gt	1480	10.000	2979.6	2986.3	187.6 5.9	28.3 38.9	.0 .0	3.65	287.0	189.4	.592	810.8s	196.9	613.9
TGBH-288		Horizontes	Gt	1480	10.000	2976.5	2983.2	187.6 5.8	28.3 38.9	.0 .0	3.66	288.0	188.6	.593	809.3s	196.8	612.5
TGBH-289		Horizontes	Gt	1480	10.000	2973.5	2980.2	187.5 5.8	28.3 38.9	.0 .0	3.67	289.0	187.8	.593	807.8s	196.7	611.2
TGBH-290		Horizontes	Gt	1480	10.000	2970.4	2977.1	187.5 5.8	28.3 38.9	.0 .0	3.68	290.0	187.3	.593	806.2s	196.6	609.6
TGBH-291		Horizontes	Gt	1480	10.000	2967.3	2974.0	187.5 5.8	28.3 38.9	.0 .0	3.69	291.0	187.1	.593	804.3s	196.5	607.8
TGBH-292		Horizontes	Gt	1480	10.000	2963.4	2970.1	187.5 5.8	28.4 38.9	.0 .0	3.70	292.0	189.9	.592	799.9s	196.6	603.3
TGBH-293		Horizontes	Gt	1480	10.000	2958.5	2965.3	187.6 5.9	28.4 39.0	.0 .0	3.72	293.0	195.7	.589	792.5s	197.0	595.4
TGBH-294		Horizontes	Gt	1480	10.000	2953.5	2960.2	187.7 6.0	28.4 39.0	.0 .0	3.73	294.0	201.5	.586	784.8s	197.4	587.4
TGBH-295		Horizontes	Gt	1480	10.000	2948.3	2955.1	187.8 6.0	28.4 39.0	.0 .0	3.75	295.0	207.4	.583	778.1s	197.8	580.3

**Datworld  
Bethesda, MD**

Datworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
TGBH-296		Horizontes	Gt	1480	10.000	2944.4	2951.2	187.8	6.0	28.4	39.0	.0	.0	.582	774.7s	197.9	576.8
TGBH-297		Horizontes	Gt	1480	10.000	2941.0	2947.8	187.8	6.0	28.5	39.0	.0	.0	.582	772.7s	197.7	574.9
TGBH-298		Horizontes	Gt	1480	10.000	2937.6	2944.4	187.7	6.0	28.5	39.1	.0	.0	.582	770.6s	197.6	573.0
TGBH-299		Horizontes	Gt	1480	10.000	2934.3	2941.1	187.7	6.0	28.5	39.1	.0	.0	.582	768.7s	197.5	571.2
TGBH-300		Horizontes	Gt	1480	10.000	2931.0	2937.8	187.7	6.0	28.5	39.1	.0	.0	.583	766.7s	197.3	569.3
TGBH-301		Horizontes	Gt	1480	10.000	2927.7	2934.5	187.7	5.9	28.5	39.1	.0	.0	.583	764.7s	197.2	567.5
TGBH-302		Horizontes	Gt	1480	10.000	2924.3	2931.1	187.6	5.9	28.5	39.1	.0	.0	.582	762.4s	197.1	565.3
TGBH-303		Horizontes	Gt	1480	10.000	2920.8	2927.6	187.6	5.9	28.5	39.1	.0	.0	.582	759.8s	197.0	562.9
TGBH-304		Horizontes	Gt	1480	10.000	2917.2	2924.1	187.6	5.9	28.6	39.1	.0	.0	.582	757.3s	196.9	560.4
TGBH-305		Horizontes	Gt	1480	10.000	2913.7	2920.6	187.6	5.9	28.6	39.2	.0	.0	.581	754.7s	196.8	557.9
TGBH-306		Horizontes	Gt	1480	10.000	2910.2	2917.0	187.5	5.8	28.6	39.2	.0	.0	.581	752.1s	196.7	555.5
TGBH-307		Horizontes	Gt	1480	10.000	2906.7	2913.6	187.5	5.8	28.6	39.2	.0	.0	.581	749.6s	196.6	553.0
TGBH-308		Horizontes	Gt	1480	10.000	2903.2	2910.1	187.5	5.8	28.6	39.2	.0	.0	.580	747.1s	196.4	550.6
TGBH-309		Horizontes	Gt	1480	10.000	2899.7	2906.6	187.5	5.8	28.6	39.2	.0	.0	.580	744.5s	196.3	548.2
TGBH-310		Horizontes	Gt	1480	10.000	2896.3	2903.2	187.4	5.8	28.6	39.2	.0	.0	.580	742.0s	196.2	545.9
TGBH-311		Horizontes	Gt	1480	10.000	2892.9	2899.8	187.4	5.7	28.7	39.3	.0	.0	.579	739.5s	196.0	543.5
TGBH-312		Horizontes	Gt	1480	10.000	2889.5	2896.4	187.4	5.7	28.7	39.3	.0	.0	.579	736.4s	195.9	540.5
TGBH-313		Horizontes	Gt	1480	10.000	2886.1	2893.0	187.3	5.7	28.7	39.3	.0	.0	.579	733.7s	195.7	538.0
TGBH-314		Horizontes	Gt	1480	10.000	2882.7	2889.6	187.3	5.7	28.7	39.3	.0	.0	.578	731.1s	195.5	535.5
TGBH-315		Horizontes	Gt	1480	10.000	2879.4	2886.3	187.2	5.6	28.7	39.3	.0	.0	.578	728.4s	195.4	533.1
TGBH-316		Horizontes	Gt	1480	10.000	2876.1	2883.0	187.2	5.6	28.7	39.3	.0	.0	.578	725.8s	195.2	530.7
TGBH-317		Horizontes	Gt	1480	10.000	2872.8	2879.7	187.2	5.6	28.7	39.3	.0	.0	.577	723.2s	195.0	528.2
TGBH-318		Horizontes	Gt	1480	10.000	2869.3	2876.3	187.1	5.5	28.8	39.4	.0	.0	.577	720.3s	194.8	525.4
TGBH-319		Horizontes	Gt	1480	10.000	2865.6	2872.6	187.1	5.5	28.8	39.4	.0	.0	.576	716.9s	194.7	522.2
TGBH-320		Horizontes	Gt	1480	10.000	2861.9	2868.8	187.1	5.5	28.8	39.4	.0	.0	.575	713.4s	194.5	518.8
TGBH-321		Horizontes	Gt	1480	10.000	2858.1	2865.1	187.0	5.5	28.8	39.4	.0	.0	.573	709.1s	194.4	514.8
TGBH-322		Horizontes	Gt	1480	10.000	2854.3	2861.3	187.0	5.4	28.8	39.4	.0	.0	.573	705.9s	194.2	511.7
TGBH-323		Horizontes	Gt	1480	10.000	2851.6	2858.6	186.9	5.4	28.8	39.4	.0	.0	.573	704.2s	193.9	510.3
TGBH-324		Horizontes	Gt	1480	10.000	2851.0	2858.0	186.8	5.3	28.8	39.4	.0	.0	.575	706.3s	193.5	512.8
TGBH-325		Horizontes	Gt	1480	10.000	2850.5	2857.5	186.7	5.2	28.8	39.4	.0	.0	.576	708.2s	193.1	515.1
TGBH-326		Horizontes	Gt	1480	10.000	2850.1	2857.1	186.6	5.2	28.8	39.4	.0	.0	.578	710.0s	192.6	517.4
TGBH-327		Horizontes	Gt	1480	10.000	2849.8	2856.8	186.5	5.1	28.8	39.5	.0	.0	.580	711.8s	192.2	519.6
TGBH-328		Horizontes	Gt	1480	10.000	2848.9	2855.9	186.5	5.0	28.8	39.5	.0	.0	.581	712.3s	191.8	520.5
TGBH-329		Horizontes	Gt	1480	10.000	2848.0	2855.1	186.4	5.0	28.8	39.5	.0	.0	.582	712.9s	191.4	521.5

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
TGBH-330		Horizontes	Gt	1480	10.000	2847.3	2854.3	186.3 4.9	28.8 39.5	.0 .0	4.08	330.0	208.6	.582	713.5s	191.0	522.5
TGBH-331		Horizontes	Gt	1480	10.000	2846.6	2853.6	186.2 4.8	28.8 39.5	.0 .0	4.08	331.0	206.9	.583	714.1s	190.7	523.5
TGBH-332		Horizontes	Gt	1480	10.000	2846.0	2853.1	186.1 4.8	28.8 39.5	.0 .0	4.09	332.0	205.2	.584	714.7s	190.3	524.4
TGBH-333		Horizontes	Gt	1480	10.000	2845.6	2852.6	186.0 4.7	28.8 39.5	.0 .0	4.09	333.0	203.5	.585	715.3s	189.9	525.4
TGBH-334		Horizontes	Gt	1480	10.000	2845.2	2852.2	186.0 4.6	28.8 39.5	.0 .0	4.09	334.0	201.8	.585	715.9s	189.5	526.4
TGBH-335		Horizontes	Gt	1480	10.000	2844.9	2851.9	185.9 4.6	28.8 39.5	.0 .0	4.09	335.0	200.1	.586	716.6s	189.1	527.4
TGBH-336		Horizontes	Gt	1480	10.000	2844.6	2851.7	185.8 4.5	28.8 39.5	.0 .0	4.09	336.0	198.4	.587	717.7s	188.8	529.0
TGBH-337		Horizontes	Gt	1480	10.000	2844.5	2851.5	185.7 4.5	28.8 39.5	.0 .0	4.09	337.0	196.7	.588	719.0s	188.4	530.6
TGBH-338		Horizontes	Gt	1480	10.000	2844.5	2851.5	185.6 4.4	28.8 39.5	.0 .0	4.09	338.0	195.0	.589	720.2s	188.0	532.2
TGBH-339		Horizontes	Gt	1480	10.000	2844.5	2851.5	185.6 4.3	28.8 39.5	.0 .0	4.09	339.0	193.3	.590	721.4s	187.7	533.7
TGBH-340		Horizontes	Gt	1480	10.000	2844.6	2851.6	185.5 4.3	28.8 39.5	.0 .0	4.09	340.0	191.6	.591	722.6s	187.3	535.3
TGBH-341		Horizontes	Gt	1480	10.000	2844.8	2851.9	185.4 4.2	28.8 39.5	.0 .0	4.09	341.0	189.9	.592	723.8s	186.9	536.9
TGBH-342		Horizontes	Gt	1480	10.000	2845.1	2852.1	185.3 4.1	28.8 39.5	.0 .0	4.09	342.0	188.2	.593	725.0s	186.6	538.4
TGBH-342		Horizontes	Gt	1480	10.000	2722.3	2729.7	186.4 5.0	29.4 40.0	.0 .0	4.55	342.0	321.4	.526	577.9s	191.7	386.2
TGBH-342		Horizontes	Gt	1480	10.000	2717.4	2724.8	186.5 5.1	29.4 40.0	.0 .0	4.57	342.0	326.8	.523	572.5s	191.9	380.6
TGBH-343		Horizontes	Gt	1480	10.000	2844.8	2851.8	185.3 4.1	28.8 39.5	.0 .0	4.09	343.0	187.3	.593	725.3s	186.2	539.1
TGBH-343		Horizontes	Gt	1480	10.000	2726.0	2733.3	186.3 4.9	29.4 40.0	.0 .0	4.53	343.0	315.1	.529	583.0s	190.9	392.1
TGBH-343		Horizontes	Gt	1480	10.000	2716.6	2723.9	186.3 5.0	29.4 40.0	.0 .0	4.57	343.0	325.3	.524	572.9s	191.3	381.6
TGBH-344		Horizontes	Gt	1480	10.000	2844.4	2851.5	185.2 4.0	28.8 39.5	.0 .0	4.09	344.0	186.4	.594	725.6s	185.9	539.7
TGBH-344		Horizontes	Gt	1480	10.000	2733.4	2740.7	186.1 4.7	29.3 40.0	.0 .0	4.50	344.0	305.0	.533	591.8s	190.0	401.7
TGBH-344		Horizontes	Gt	1480	10.000	2715.9	2723.2	186.2 4.9	29.4 40.1	.0 .0	4.57	344.0	323.8	.524	573.4s	190.7	382.7
TGBH-345		Horizontes	Gt	1480	10.000	2844.2	2851.2	185.1 4.0	28.8 39.5	.0 .0	4.09	345.0	185.6	.594	726.1s	185.5	540.5
TGBH-345		Horizontes	Gt	1480	10.000	2742.0	2749.3	185.9 4.6	29.3 39.9	.0 .0	4.47	345.0	293.9	.539	602.4s	189.2	413.2
TGBH-345		Horizontes	Gt	1480	10.000	2715.3	2722.7	186.1 4.8	29.4 40.1	.0 .0	4.57	345.0	322.3	.525	574.0s	190.1	383.8
TGBH-346		Horizontes	Gt	1480	10.000	2844.0	2851.0	185.0 3.9	28.8 39.5	.0 .0	4.09	346.0	184.7	.595	726.5s	185.2	541.3
TGBH-346		Horizontes	Gt	1480	10.000	2748.1	2755.4	185.7 4.5	29.3 39.9	.0 .0	4.45	346.0	285.7	.543	610.5s	188.4	422.1
TGBH-346		Horizontes	Gt	1480	10.000	2714.8	2722.2	186.0 4.7	29.4 40.1	.0 .0	4.58	346.0	320.8	.526	574.5s	189.5	385.0
TGBH-347		Horizontes	Gt	1480	10.000	2843.8	2850.8	185.0 3.9	28.8 39.5	.0 .0	4.09	347.0	183.8	.595	727.0s	184.9	542.1
TGBH-347		Horizontes	Gt	1480	10.000	2752.3	2759.6	185.6 4.4	29.3 39.9	.0 .0	4.43	347.0	279.6	.546	616.1s	187.7	428.3
TGBH-347		Horizontes	Gt	1480	10.000	2714.5	2721.9	185.8 4.6	29.4 40.1	.0 .0	4.58	347.0	319.3	.527	575.2s	189.0	386.2
TGBH-348		Horizontes	Gt	1480	10.000	2843.7	2850.8	184.9 3.8	28.8 39.5	.0 .0	4.09	348.0	182.9	.596	727.4s	184.6	542.9
TGBH-348		Horizontes	Gt	1480	10.000	2754.0	2761.3	185.5 4.3	29.2 39.9	.0 .0	4.43	348.0	276.4	.548	618.7s	187.2	431.5
TGBH-348		Horizontes	Gt	1480	10.000	2714.3	2721.7	185.7 4.5	29.4 40.1	.0 .0	4.58	348.0	317.8	.527	575.9s	188.4	387.5
TGBH-349		Horizontes	Gt	1480	10.000	2843.4	2850.4	184.8 3.8	28.8 39.5	.0 .0	4.10	349.0	182.4	.596	727.5s	184.2	543.3



**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
WSPY	APP	Millbrook	IL	1480	.250	.0	.0	.0	.0	.0	.00	5.429	7.281	1.820	.0?	0.0	0.0
WMBD=4.527; WRSW=2.997; WLMV=2.714; WPFR=2.399; WGVU=2.328; WCIN=2.234																	
WPFR	LIC	Terre Haute	IN	1480	1.000	253.3	322.7	155.7 336.5	40.5 51.3	29.0 42.8	240.86	3.438	4.999	1.250	25.9	29.7	-3.8
WMBD=3.034; WCIN=1.617; WHBC=1.568; WRSW=1.531; WLMV=1.360; WGVU=1.332; WESL=1.278; WSDS=1.259; WFKY=1.236																	
WRSW	LIC	Warsaw	IN	1480	.500	233.9	307.7	99.0 280.8	41.4 52.2	31.1 45.1	254.86	9.119	9.607	2.402	47.1	16.4	30.7
WPFR=9.119; WGVU=3.022																	
XEZJ		Guadalajara	Mx	1480	.200	2706.5	2713.9	215.3 27.5	31.3 41.3	.0 .0	4.61	14.580	20.369	7.290	7908.8F	250.6	7658.3
XEIP=9.249; XEGX=8.347; XEMC=7.574; XE=7.074; XE=6.677; XEXC=6.351; XEVC=5.931; XEOU=5.671																	
XEZJ1		Guadalajara	Mx	1480	5.000	2707.9	2715.3	215.0 27.2	31.3 41.3	.0 .0	4.60	14.775	20.657	7.388	8024.4F	250.8	7773.6
XEIP=9.373; XEGX=8.445; XEMC=7.689; XE=7.164; XE=6.776; XEXC=6.449; XEVC=6.027; XEOU=5.767																	
KCZZ	LIC	Mission	KS	1480	.500	587.7	620.8	243.6 59.6	40.4 50.8	12.4 20.8	89.03	7.444	9.525	2.525	141.8=	141.1	0.7
KLMS=5.704; WPFR=4.783; KAUS=3.445; KNIT=3.073; KQAM=2.760; WSPY=2.525																	
KQAM	LIC	Wichita	KS	1480	1.000	855.6	878.7	242.9 57.3	39.7 50.0	7.6 13.7	50.89	4.729	5.547	1.564	153.7=	156.7	-3.0
KLMS=2.976; WPFR=2.895; KCZZ=2.263; WSPY=1.564; KLV=1.489; KPHX=1.372; KMFS=1.365																	
WHVO	LIC	Hopkinsville	KY	1480	.024	532.2	568.6	169.5 350.2	39.2 50.0	13.9 23.0	104.36	27.178	29.721	7.430	356.0	82.8	273.2
WPFR=27.178; WCIN=12.028																	
WTLO	PRM	Somerset	KY	1480	.028	604.8	637.0	144.4 326.9	39.4 50.2	12.0 20.2	86.59	9.024	10.160	2.540	146.7	50.7	96.0
WCIN=7.811; WPFR=4.519; WGUS=3.562; WHBC=3.017																	
KIOU	LIC	Shreveport	LA	1480	.129	1100.3	1118.3	206.1 23.0	37.1 47.6	5.0 9.8	36.02	13.642	16.002	4.000	555.4	245.3	310.1
KNIT=12.141; KCZZ=6.221; KLV=5.625; WPFR=4.573; KQAM=4.173																	
WSAR	LIC	Fall River	MA	1480	5.000	1444.1	1457.9	83.6 275.2	42.0 53.2	2.4 6.1	16.95	2.725	4.423	1.106	326.1	158.5	167.6
WZRC=2.141; WMDD=1.686; WKVT=1.340; WEMJ=1.281; WACM=1.140; WKNY=1.140; WBAE=1.125; WKAP=1.123; WAZN=1.102; WCSS=1.091; WCCM=1.083																	



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Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

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Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
XEIP		Uruapan	Mx	1480	1.000	2773.5	2780.7	211.4 24.4	30.7 40.7	.0 .0	4.35	16.815	21.433	7.760	8913.5F	252.0	8661.5
XEMC=8.722; XEGX=8.641; XE=8.474; XE=7.760; XEXC=7.589; XEVCOR=6.856; XEOU=6.688; XEPR=5.225																	
WGVU	LIC	Kentwood	MI	1480	5.000	282.7	346.3	59.3 241.3	42.2 53.0	26.3 39.6	210.86	20.177	21.823	8.288	196.5-	233.5	-37.0
WRSW=12.087; WHBC=9.478; WSDS=9.296; WSPY=9.209; WPFR=8.314																	
WSDS	APP	Plymouth	MI	1480	3.800	418.9	464.2	78.0 261.3	41.9 52.8	18.0 28.8	134.69	13.605	14.826	3.967	147.3=	170.9	-23.6
WHBC=10.550; WRSW=8.591; WPFR=4.354; WSPY=3.967																	
WSDS	LIC	Salem Township	MI	1480	3.800	418.9	464.2	78.0 261.3	41.9 52.8	18.0 28.8	134.69	13.605	14.826	3.967	147.3=	170.9	-23.6
WHBC=10.550; WRSW=8.591; WPFR=4.354; WSPY=3.967																	
WIOS	PRM	Tawas City-east	MI	1480	.109	508.0	546.0	52.4 235.8	43.0 53.8	14.7 24.0	100.46	69.961	69.961	17.490	870.5	331.7	538.8
WSDS=46.923; WGVU=40.481; WHBC=32.466																	
KAUS	LIC	Austin	MN	1480	1.000	424.7	469.4	303.7 120.8	42.6 53.1	17.8 28.4	131.30	4.024	5.153	1.982	75.5=	67.4	8.0
WMBD=2.808; WLMV=2.084; KLMS=1.992; WSPY=1.982; KAIR=1.616; WHBC=1.442; WLFN=1.321																	
KKCQ	APP	Fosston	MN	1480	.090	871.3	893.9	322.1 137.1	44.6 55.0	7.4 13.4	39.78	11.606	12.074	3.018	379.3	32.2	347.2
KAUS=8.016; WLMV=6.172; KLMS=5.688; KLBP=3.327																	
KKCQ	LIC	Fosston	MN	1480	.090	871.1	893.8	322.1 137.1	44.6 55.0	7.4 13.4	39.80	11.606	12.074	3.018	379.2	32.1	347.2
KAUS=8.017; WLMV=6.169; KLMS=5.691; KLBP=3.327																	
WGFY	LIC	Charlotte	NC	1480	5.000	970.3	990.7	133.7 318.5	38.5 49.5	6.2 11.6	42.06	12.622	13.062	3.265	388.2	79.2	309.1
WGUS=12.622; WHBC=3.361																	
WZFB	LIC	Fair Bluff	NC	1480	.048	1164.7	1181.7	130.8 316.7	38.1 49.1	4.4 9.0	31.14	50.577	50.577	12.644	2030.2	82.6	1947.6
WGFY=50.577																	
WPFJ	LIC	Franklin	NC	1480	.013	845.3	868.6	145.6 328.9	38.4 49.3	7.8 13.9	53.01	14.634	14.634	3.658	345.1	46.3	298.8
WGUS=14.634																	

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WYRN	LIC	Louisburg	NC	1480	.035	1079.8	1098.1	120.9 307.4	39.0 50.0	5.2 10.0	34.37	16.928	16.928	4.232	615.6	75.4	540.2
WGFY=12.336; WTOX=11.593																	
KLMS	LIC	Lincoln	NE	1480	.750	673.2	702.3	265.2 79.9	41.3 51.6	10.5 18.0	71.00	3.795	5.047	1.262	88.9	27.7	61.2
WPFR=2.633; KQAM=1.934; KCZZ=1.931; WLMV=1.438; KAUS=1.421; KPHX=1.374; KNIT=1.337; KTOP=1.333; KKAN=1.240																	
XETKR		Guadalupe	Mx	1480	.500	2062.7	2072.4	214.7 28.2	33.8 43.9	.7 .7	9.54	11.699	15.428	5.274	2763.5F	250.9	2512.6
XEGX=6.983; XEIP=5.641; XEMC=5.337; XE=5.274; XEVC=4.970; XEPR=4.640; XEOU=4.134																	
WLEA	LIC	Hornell	NY	1480	.019	908.8	930.5	81.4 268.7	42.1 53.1	6.9 12.7	40.74	27.829	31.014	7.753	951.7	172.1	779.6
WISL=21.830; WCNS=17.259; WZRC=10.082; WHBC=9.261																	
WZRC	LIC	New York	NY	1480	5.000	1220.8	1237.1	89.0 278.6	41.4 52.6	4.0 8.3	24.42	2.953	4.827	1.207	247.1	113.6	133.5
WDAS=1.841; WMDD=1.737; WISL=1.520; WKAP=1.468; WSAR=1.392; WHBC=1.355; WCSS=1.227; WCDO=1.219; WBCB=1.209; WACM=1.190; WMRC=1.183; WKVT=1.175																	
WADR	PRM	Rensen	NY	1480	.019	1117.0	1134.8	75.5 264.6	42.7 53.8	4.8 9.6	27.02	22.442	26.759	6.690	1238.1	221.0	1017.2
WISL=18.542; WZRC=12.642; WSAR=8.791; WCNS=8.300; WHBC=8.139																	
XEOU		Huajuapán De Leo	Mx	1480	1.000	2784.2	2791.4	201.0 16.4	29.8 40.1	.0 .0	4.31	16.333	23.446	8.166	9465.6F	241.1	9224.4
XEVC=10.030; XE=9.856; XE=8.308; XEXC=8.096; XEIP=7.072; XEGX=7.044; XEMC=6.371; XE=6.241; XEPR=6.183																	
XEQUB		Itepec	Mx	1480	.250	2857.4	2864.4	194.4 11.2	29.1 39.5	.0 .0	4.04	15.575	19.956	7.280	8999.1F	223.2	8775.9
XEVC=8.066; XE=7.940; XEOU=7.842; XE=7.280; XE=6.391; XEXC=5.948; XEPR=5.194; XEGX=5.180; XEIP=5.062																	
WHBC	LIC	Canton	OH	1480	5.000	606.9	639.0	96.7 281.4	41.2 52.2	20.1 20.1	81.68	2.960	4.579	1.145	70.1	49.3	20.8
WCNS=1.516; WLOA=1.498; WSDS=1.486; WMDD=1.419; WTCS=1.344; WPRR=1.293; WSGB=1.260; WABJ=1.214; WMOA=1.211; WGFY=1.209; WSWW=1.172; WISL=1.167																	
WHBC	LIC	Canton	OH	1480	5.000	613.3	645.1	94.7 279.5	41.3 52.3	11.8 19.9	80.14	2.887	4.468	1.117	69.7	63.2	6.5
WISL=1.515; WSDS=1.506; WMDD=1.406; WTCS=1.339; WPRR=1.304; WMOA=1.259; WLOA=1.218; WABJ=1.214; WSGB=1.213; WZRC=1.167; WGFY=1.146; WSWW=1.115																	
WCIN	CP	Cincinnati	OH	1480	.300	436.7	480.3	125.8 308.4	40.4 51.3	17.3 27.7	132.39	4.779	6.217	2.026	76.5=	77.5	-1.0
WPFR=3.489; WHBC=2.410; WSDS=2.205; WSPY=2.026; WLQR=1.951; WRSW=1.713; WCNS=1.595; WGVU=1.556																	

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WCIN 1480 500 439.8 483.1 126.5 309.2 40.4 51.2 17.1 27.5 131.25 4.820 6.199 1.993 75.9= 78.0 -2.1																	
WPFR=3.525; WHBC=2.447; WSDS=2.195; WSPY=1.993; WLQR=1.912; WRSW=1.651; WCNS=1.594; WGVU=1.520																	
CKAN Newmarket Ca 1480 10.000 791.8 816.7 67.5 253.7 42.9 53.9 11.8 11.8 87.36 32.051 38.271 14.919 853.9F 263.6 590.3																	
WHBC=23.884; WCNS=15.304; WSDS=14.919; WISL=14.312; WGVU=10.888; WZRC=10.679																	
CKDX Newmarket Ca 1480 10.000 791.8 816.7 67.5 253.7 42.9 53.9 11.8 11.8 87.36 32.051 38.271 14.919 853.9F 263.6 590.3																	
WHBC=23.884; WCNS=15.304; WSDS=14.919; WISL=14.312; WGVU=10.888; WZRC=10.679																	
WCNS LIC Latrobe PA 1480 1.000 787.3 812.3 97.6 283.7 41.0 52.0 8.6 15.1 54.46 3.227 4.820 1.205 110.6 45.7 64.9																	
WCAN=2.153; WZRC=1.817; WMDD=1.574; WCIN=1.526; WSDS=1.416; WDAS=1.413; WSGB=1.324; WMOA=1.282; WOHI=1.281; WNBT=1.203																	
WDAS LIC Philadelphia PA 1480 1.000 1139.5 1157.0 94.5 283.2 41.0 52.1 4.6 9.3 28.50 3.576 5.003 1.251 219.4 70.7 148.8																	
WZRC=3.078; WMDD=1.821; WISL=1.600; WHBC=1.575; WSAR=1.422; WDLC=1.376; WKAP=1.329; WCNS=1.232																	
WISL LIC Shamokin PA 1480 1.000 1014.2 1033.7 91.1 279.1 41.3 52.4 5.8 11.0 34.68 3.913 5.464 1.366 196.9 95.6 101.4																	
WDAS=3.258; WPWC=2.168; WHBC=1.951; WMDD=1.646; CKAN=1.500; WZRC=1.445; WDLC=1.367; WBCB=1.350																	
WEEO LIC Shippensburg PA 1480 .009 945.2 966.1 96.6 283.8 41.0 52.0 6.5 12.1 39.98 5.478 6.479 1.620 202.6 54.4 148.2																	
WZRC=4.757; WDAS=2.717; WCNS=2.202; WHBC=2.059; WMDD=1.695																	
WMDD LIC Fajardo PR 1480 5.000 3376.9 3382.8 132.9 324.8 30.5 41.9 .0 .0 5.26 7.104 8.476 2.119 2015.1 80.8 1934.3																	
HJTZ=5.080; WGFY=3.567; WGUS=3.455; WZRC=2.954; HJOD=2.867; WABB=2.103																	
XE Atlixco Mx 1480 1.000 2687.7 2695.1 203.3 18.2 30.3 40.6 .0 .0 4.69 16.591 22.289 8.296 8840.4F 245.2 8595.1																	
XEVC=9.926; XEQU=9.735; XEXC=9.054; XEGX=8.020; XEIP=7.761; XEMC=7.292; XEPR=6.620																	
CHRD Drummondville Ca 1480 10.000 1374.8 1389.3 64.7 255.8 44.0 55.2 4.8 4.8 33.47 22.931 29.707 11.466 1712.8F 298.4 1414.4																	
WSAR=18.540; WHBC=13.495; WISL=10.631; CKAN=8.094; WSDS=7.961; WCNS=7.652; WGVU=7.497																	
CHRD Drummondville Ca 1480 35.000 1374.8 1389.3 64.7 255.8 44.0 55.2 4.8 4.8 33.47 22.931 29.707 11.466 1712.8F 298.4 1414.4																	
WSAR=18.540; WHBC=13.495; WISL=10.631; CKAN=8.094; WSDS=7.961; WCNS=7.652; WGVU=7.497																	

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XECCQ		Cancun	Mx	1480	.500	2285.9	2294.6	175.1 356.1	31.3 42.1	.0 .0	7.14	14.211	18.038	7.106	4972.6F	131.8	4840.8
WABB=14.211; WVOI=6.666; WGUS=6.518; XE=6.040																	
WZJY	LIC	Mount Pleasant	SC	1480	.044	1244.0	1260.0	138.7 324.0	37.3 48.3	3.8 8.1	28.49	53.727	53.727	13.432	2357.0	68.9	2288.2
WGFY=39.000; WGUS=36.953																	
KSDR	PRM	Watertown	SD	1480	.050	782.2	807.4	301.3 115.4	43.3 53.6	8.7 15.2	51.50	14.023	14.917	3.729	362.1	76.2	285.8
KLMS=14.023; KWSL=5.087																	
XE		Hermosillo	Mx	1480	.250	2444.1	2452.3	242.5 49.4	35.9 45.4	.0 .0	6.08	6.365	7.218	3.183	2619.3F	166.1	2453.2
KVN=5.455; KPHX=3.280; XEGX=2.082; XEIP=1.937; KQAM=1.869																	
XENS1		Navojoa	Mx	1480	.250	2492.4	2500.4	236.3 44.3	34.8 44.4	.0 .0	5.73	5.867	7.416	2.933	2561.2F	205.7	2355.5
KVN=3.806; XEGX=3.224; XEIP=3.089; XEMC=2.493; KNIT=2.344; KPHX=2.335; XE=1.849																	
XEVIC		Cd.victoria	Mx	1480	1.000	2215.4	2224.4	209.4 23.6	32.7 43.0	.0 .0	7.83	14.187	19.823	6.534	4172.6F	251.6	3921.0
XEGX=8.320; XE=6.762; XEIP=6.604; XEVCR=6.534; XEMC=6.336; XEXC=5.754; XEPR=5.721; XEOU=5.653; XE=5.529; KNIT=4.812																	
WJFC	PRM	Jefferson City	TN	1480	.034	752.8	779.0	142.3 325.6	38.9 49.8	9.1 15.9	62.91	8.877	9.949	2.487	197.7	57.3	140.4
WGUS=8.877; WHBC=3.332; WGFY=3.012																	
WBBP	PRM	Memphis	TN	1480	.041	737.2	763.9	190.6 9.7	38.3 49.0	9.4 16.3	66.30	15.955	17.894	4.473	337.3	197.8	139.6
WPFR=13.810; KCZZ=7.990; KQAM=5.796; WCIN=5.661																	
WJLE	LIC	Smithville	TN	1480	.034	673.6	702.6	158.1 339.9	38.8 49.6	10.5 18.0	74.95	14.923	15.602	3.900	260.2	26.4	233.8
WPFR=11.280; WCIN=9.769; WGUS=4.554																	
KNIT	LIC	Dallas	TX	1480	1.900	1220.9	1237.1	218.3 33.4	37.2 47.5	4.0 8.3	30.20	7.687	8.198	2.049	339.3	245.5	93.8
KQAM=6.056; KLV=4.735; KCZZ=2.848																	
KLVL	CP	Pasadena	TX	1480	.500	1449.4	1463.2	206.2 22.3	35.7 46.1	2.4 6.1	23.31	6.045	9.111	2.278	488.6	248.3	240.3
KNIT=4.126; WPFR=3.193; KQAM=3.053; XEGX=2.859; KCZZ=2.841; WABB=2.772; XEVCR=2.446; XE=2.388; WVOI=2.362; XEPR=2.298																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KLVL KNIT=4.126; WPFR=3.193; KQAM=3.053; XEGX=2.859; KCZZ=2.841; WABB=2.772; XEVCRC=2.446; XE=2.388; WVOI=2.362; XEPR=2.298	LIC	Pasadena	TX	1480	.500	1449.4	1463.2	206.2 22.3	35.7 46.1	2.4 6.1	23.31	6.045	9.111	2.278	488.6	248.3	240.3
-2004012 APP KNIT=5.238; KQAM=4.325; KLV=3.812; XEGX=2.610; XEIP=2.067	TX	San Angelo	TX	1480	.500	1536.8	1549.8	226.9 39.8	36.7 46.8	1.9 5.4	20.51	7.789	8.471	2.118	516.3	230.1	286.2
KCHL KNIT=9.642; KLV=5.776; XEGX=3.555; KQAM=3.405	LIC	San Antonio	TX	1480	.090	1616.1	1628.4	216.3 30.5	35.6 45.8	1.4 4.8	19.31	11.240	12.270	3.068	794.3	249.4	544.9
-2004012 APP KQAM=3.191; KNIT=2.498; XEGX=2.424; KLV=2.266; XEIP=2.013; XEMC=1.809; XE=1.753; XEVCRC=1.656	TX	Wink	TX	1480	.500	1691.6	1703.4	234.4 45.7	36.9 46.9	1.1 4.2	17.15	4.722	6.370	1.592	464.4	210.0	254.4
KHQN KPHX=6.334; KVNRC=5.651; KYOS=4.903; KNIT=3.750; KQAM=2.787	LIC	Spanish Fork	UT	1480	.133	1941.4	1951.7	272.7 77.5	41.4 50.9	.0 2.6	10.75	9.803	10.859	2.715	1262.6	25.3	1237.3
WPWC WZRC=3.485; WCNS=2.640; WISL=2.283; WHBC=2.185; WGFY=2.071; WMDD=1.934	CP	Dumfries-triangl	VA	1480	.500	1014.2	1033.7	105.6 292.9	40.2 51.3	5.8 11.0	36.48	4.932	6.094	1.523	208.8	21.0	187.8
WPWC WZRC=3.485; WCNS=2.640; WISL=2.283; WHBC=2.185; WGFY=2.071; WMDD=1.934	LIC	Dumfries-triangl	VA	1480	.500	1014.2	1033.7	105.6 292.9	40.2 51.3	5.8 11.0	36.48	4.932	6.094	1.523	208.8	21.0	187.8
WTOX WHBC=2.553; WZRC=2.521; WMDD=2.083; WCNS=1.817; WISL=1.732; WDAS=1.521; WGUS=1.488; WCIN=1.434	CP	Glen Allen	VA	1480	1.500	1038.8	1057.9	111.0 298.1	39.8 50.9	5.5 10.6	35.63	4.148	5.486	1.371	192.4	45.2	147.3
WTOY WGUS=4.641; WHBC=4.066; WCNS=3.109; WGFY=3.034; WCIN=3.003; WZRC=2.493; WPWC=2.131	LIC	Salem	VA	1480	.020	874.0	896.6	120.5 305.9	39.5 50.5	7.4 13.3	48.39	6.910	8.759	2.190	226.2	74.0	152.2
XEPR XEVCRC=9.301; XE=9.127; XEGX=8.064; XEOU=8.015; XEXC=7.292; XEIP=6.960; XE=6.951; XEMC=6.754; XE=5.999	Mx	Poza Rica	Mx	1480	.500	2484.3	2492.3	202.1 17.5	31.1 41.4	.0 .0	5.79	17.294	23.035	8.015	6921.6F	243.2	6678.4
XEVCRC XEOU=9.928; XE=9.926; XEXC=7.680; XE=7.543; XEGX=7.248; XEIP=6.857; XEPR=6.706; XE=6.533; XEMC=6.374	Mx	Rio Blanco	Mx	1480	1.000	2655.4	2662.9	200.3 15.9	30.3 40.6	.0 .0	4.85	16.002	23.255	7.680	7923.4F	239.6	7683.8

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
WSAR=9.879; WISL=6.757; WZRC=4.165; WHBC=3.386																	
WNBX	PRM	Springfield	VT	1480	.023	1333.4	1348.3	76.5 267.4	42.7 53.9	3.2 7.1	18.98	11.969	13.117	3.279	863.8	215.2	648.6
KNTB LIC Lakewood KBMS=31.700																	
KNTB	LIC	Lakewood	WA	1480	.111	2747.1	2754.4	294.6 90.5	45.6 54.5	.0 .0	3.57	31.700	31.700	7.925	9999.9	83.8	11014.4
KBMS LIC Vancouver KGOE=5.725; KYOS=2.192																	
KBMS	LIC	Vancouver	WA	1480	2.500	2761.9	2769.1	290.9 87.0	44.9 53.7	.0 .0	3.85	5.725	6.131	1.533	1992.9	81.8	1911.1
WLMV LIC Madison WMBD=4.606; WHBC=2.637; WCFJ=2.075; WRSW=2.047; WGVU=1.743; WSDS=1.658																	
WLMV	LIC	Madison	WI	1480	5.000	173.1	264.5	338.1 157.5	42.3 53.0	39.3 53.7	314.11	5.307	6.515	1.629	25.9	53.0	-27.1
-2004012 APP Monona WMBD=4.606; WHBC=2.637; WCFJ=2.075; WRSW=2.047; WGVU=1.743; WSDS=1.658																	
-2004012	APP	Monona	WI	1480	3.100	173.1	264.5	338.1 157.5	42.3 53.0	39.3 53.7	314.11	5.307	6.515	1.629	25.9	53.0	-27.1
KRAE LIC Cheyenne KLMS=6.748; KNIT=5.570; KQAM=3.608; KPHX=3.471; KVNR=2.692																	
KRAE	LIC	Cheyenne	WY	1480	.065	1352.5	1367.2	273.2 82.5	41.6 51.5	3.0 7.0	21.32	8.750	10.434	2.609	611.9	27.9	584.0
-2004012 APP College CFWB=188; KBIS=156; CJPR=140; KBRO=130; KBZY=125; KRNR=123; KEYG=116; KLOG=115; KWOK=113; KSYC=110																	
-2004012	APP	College	AK	1490	1.000	4472.0	4476.5	325.6 95.8	56.7 60.0	.0 .0	.31	.281	.423	.106	9999.9	55.1	17098.3
-2004012 APP Delta Junction CFWB=225; KBIS=186; CJPR=163; KBZY=154; KBRO=152; KRNR=149; KLOG=124; KEYG=117; KLOG=116; KWOK=114; KSYC=111																	
-2004012	APP	Delta Junction	AK	1490	1.000	4363.0	4367.5	324.5 96.8	56.1 60.0	.0 .0	.34	.334	.507	.127	9999.9	48.4	18795.9
-2004012 APP Fairbanks CFWB=189; KBIS=157; CJPR=141; KBRO=131; KBZY=127; KRNR=124; KEYG=117; KLOG=116; KWOK=114; KSYC=111																	
-2004012	APP	Fairbanks	AK	1490	1.000	4468.9	4473.4	325.5 95.8	56.6 60.0	.0 .0	.31	.283	.426	.106	9999.9	54.7	17178.7
-2004012 APP Homer CFWB=290; KBIS=278; KBZY=231; KRNR=225; KBRO=224; KLOG=212; KWOK=211; KSYC=197; KYNR=179; KTOB=177																	
-2004012	APP	Homer	AK	1490	5.000	4659.6	4663.9	317.7 86.4	54.8 60.0	.0 .0	.27	.463	.712	.178	9999.9	17.7	33488.3
WAJF LIC Decatur WDXL=13.853; WTUP=13.774; WYYZ=13.099; WCSV=12.908; WRLA=12.692; WUJM=11.965; WCKD=11.923; WCLU=11.907; WHOC=11.665; WKUN=11.197; WKRO=10.360; WCHM=10.354																	
WAJF	LIC	Decatur	AL	1490	1.000	790.5	815.4	169.2 350.2	38.1 48.9	8.5 15.0	59.67	26.829	42.237	10.559	8848.4	90.1	8758.2

**Dataworld  
Bethesda, MD**

# Dataworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----- Theta ----- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
-2004012	APP	Fayette	AL	1490	1.000	880.5	902.9	175.3 355.8	37.6 48.4	7.3 13.2	50.91	27.008	39.923	9.981	9803.1	127.5	9675.7
WAJF=13.563; WHOC=13.529; WJUM=13.395; WDXL=13.528; WDLA=12.543; WTUP=11.690; WJOC=11.355; WYYZ=10.931; WRTM=10.870; WECM=10.238; KDRS=9.953																	
-2000020	APP	Level Plains	AL	1490	.400	1168.0	1185.0	166.7 348.3	36.5 47.3	4.4 8.9	32.81	27.245	37.324	9.331	9999.9	78.8	14140.6
-2000102=13.937; WQSY=13.937; WECM=13.489; WRLA=13.111; WSFB=12.984; WKUN=10.608; WHOC=9.913; WYYZ=9.774; WJOC=9.455; WAJF=9.299																	
WIRB	CP	Level Plains	AL	1490	.430	1170.6	1187.6	166.8 348.4	36.4 47.3	4.4 8.9	32.70	27.193	37.213	9.303	9999.9	79.4	14145.9
-2000102=13.901; WQSY=13.901; WECM=13.433; WRLA=13.135; WSFB=12.973; WKUN=10.531; WHOC=9.908; WYYZ=9.701; WJOC=9.404; WAJF=9.245																	
-2004012	APP	Newtonville	AL	1490	.250	900.1	922.1	175.2 355.7	37.5 48.3	7.1 12.8	49.24	26.761	40.149	10.037	9999.9	127.3	10064.8
WAJF=13.905; WHOC=13.416; WJUM=13.175; WDXL=13.009; WRLA=12.694; WTUP=12.540; WJOC=11.301; WRTM=11.015; WYYZ=10.846; WECM=10.720; WIKC=9.789																	
WHBB	LIC	Selma	AL	1490	1.000	1026.9	1046.2	171.6 352.6	37.0 47.8	5.7 10.8	40.21	26.477	41.116	10.279	9999.9	107.9	12673.7
WECM=13.591; WHOC=13.349; WRLA=13.104; WAJF=12.900; WTUP=12.668; -2000102=11.444; WQSY=11.444; WJOC=10.817; WYYZ=10.794; WIKC=10.606; WJUM=10.566; WKUN=10.460																	
KWXT	LIC	Dardanella	AR	1490	1.000	809.7	834.1	210.6 27.7	38.4 48.9	8.3 14.6	57.36	25.260	35.694	8.924	7778.6	241.5	7537.1
KOTN=13.765; KDMO=12.779; KDRS=12.514; KRUS=11.343; KTTR=10.786; KPLT=9.916; KXAR=9.439; WRTM=9.363; KBIX=9.080; KMFS=9.020; WCLD=8.990																	
KXAR	LIC	Hope	AR	1490	.700	981.3	1001.5	208.2 25.1	37.7 48.1	6.1 11.5	42.93	23.459	36.389	9.097	9999.9	245.2	10349.9
KRUS=13.856; KOTN=13.763; KWXT=12.997; WRTM=11.494; KWUD=10.340; KHLV=10.053; KPLT=9.676; KDMO=9.462; KEUN=9.216; KDRS=9.209; WCLD=8.993																	
KDRS	LIC	Paragould	AR	1490	1.000	635.9	666.6	195.3 14.1	38.8 49.4	11.3 19.2	81.89	26.801	38.197	9.549	5830.6	208.2	5622.3
WKRO=14.064; WDXL=13.800; KTTR=13.018; WTUP=12.672; KOTN=12.489; WESL=12.161; KWXT=11.497; WJUM=10.441; KDMO=9.934; WAJF=9.846																	
KOTN	LIC	Pine Bluff	AR	1490	1.000	870.1	892.8	200.9 18.8	37.9 48.5	7.4 13.4	51.76	26.331	36.114	9.028	8722.2	232.7	8489.5
KRUS=13.700; WRTM=13.094; KWXT=13.016; KDRS=12.836; WTUP=11.561; WHOC=11.013; WDXL=10.057; KDMO=9.465; KPLT=9.182; KXAR=8.996																	
KZZZ	LIC	Bullhead City	AZ	1490	1.000	2365.9	2374.4	260.8 64.5	39.1 48.3	.0 4	8.26	22.003	25.668	6.417	9999.9	58.3	38779.4
KYCA=13.583; KMET=12.538; KICO=11.935; KWAC=8.688; KBKO=7.589; KCUZ=6.450																	
KCUZ	LIC	Clifton	AZ	1490	1.000	2054.1	2063.9	249.2 56.5	37.8 47.4	.0 2.0	11.56	18.482	22.976	5.744	9999.9	124.0	24724.0
KFFN=11.099; KYCA=10.506; KRUI=10.393; KRSN=8.534; KZZZ=6.537; KICO=6.063; XEDR=5.831																	

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

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Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
-2000020	APP	Kachina Village	AZ	1490	.300	2122.5	2131.9	258.0 63.6	39.0 48.4	.0 1.6	10.29	20.140	25.322	6.331	9999.9	72.6	30684.2
KZZZ=12.267; KYCA=11.892; KCUZ=10.665; KFFN=8.328; KICO=8.067; KRSN=7.205; KMET=7.017																	
KYCA	LIC	Prescott	AZ	1490	1.000	2221.2	2230.2	257.2 62.3	38.7 48.1	.0 1.1	9.54	19.912	24.279	6.070	9999.9	76.5	31728.5
KZZZ=13.625; KCUZ=10.299; KICO=10.236; KFFN=9.173; KMET=8.591; KRSN=5.917																	
KFFN	LIC	Tucson	AZ	1490	1.000	2230.0	2239.0	249.5 55.9	37.4 47.0	.0 1.1	10.00	17.986	23.654	5.913	9999.9	122.1	29446.7
KCUZ=13.762; KYCA=11.581; KICO=8.399; KZZZ=7.728; XEDR=7.438; KRUI=7.100																	
-2004012	APP	Alturas	CA	1490	.250	2642.8	2650.4	280.5 79.0	42.7 51.6	.0 .0	5.20	25.481	30.754	7.688	9999.9	56.9	73812.2
KSYC=13.989; KBLF=13.444; KOWL=11.872; KRNR=11.485; KCID=9.332; KTOB=8.900; KBZY=8.189; KBKR=7.948																	
KWAC	LIC	Bakersfield	CA	1490	1.000	2721.4	2728.8	265.4 66.2	39.5 48.5	.0 .0	6.08	22.076	27.951	6.988	9999.9	30.3	57436.6
KRKC=13.293; KMET=12.470; KBKO=12.455; KOWL=9.158; KZZZ=8.787; KICO=8.200; KTOB=8.101																	
KMET	LIC	Banning	CA	1490	1.000	2616.8	2624.4	260.3 62.7	38.6 47.7	.0 .0	6.91	25.415	27.921	6.980	9999.9	61.0	50475.4
KICO=13.612; KZZZ=12.558; KWAC=12.425; KBKO=12.189; KYCA=8.745; KRKC=7.564																	
-2004102	APP	Bishop	CA	1490	1.000	2587.0	2594.7	269.4 70.2	40.4 49.4	.0 .0	6.38	22.206	29.863	7.466	9999.9	16.4	58502.1
KOWL=13.349; KWAC=13.224; KRKC=11.834; KBKO=10.214; KTOB=9.403; KMET=8.875; KZZZ=8.439; KBLF=7.483																	
-2004013	APP	Bishop	CA	1490	.250	2593.8	2601.5	269.6 70.3	40.5 49.5	.0 .0	6.33	22.340	29.950	7.488	9999.9	16.4	59124.8
KOWL=13.532; KWAC=13.135; KRKC=11.977; KBKO=10.142; KTOB=9.656; KMET=8.676; KZZZ=8.209; KBLF=7.691																	
KICO	LIC	Calexico	CA	1490	1.000	2567.2	2574.9	256.1 59.7	37.9 47.1	.0 .0	7.43	20.719	24.601	6.150	9999.9	81.9	41312.5
KMET=13.610; KZZZ=11.821; KYCA=10.214; KBKO=8.326; KWAC=7.973; KFFN=6.561																	
KRKC	LIC	King City	CA	1490	1.000	2858.3	2865.3	268.8 68.0	40.1 48.9	.0 .0	5.31	22.348	27.226	6.806	9999.9	17.1	64036.2
KWAC=13.486; KBKO=12.672; KTOB=12.530; KOWL=11.110; KMET=7.748; KBLF=7.638																	
-2004012	APP	Lemon Grove	CA	1490	1.000	2689.0	2696.4	257.8 60.4	38.0 47.1	.0 .0	6.73	21.817	27.174	6.794	9999.9	73.5	50364.5
KICO=13.331; KMET=13.297; KBKO=11.020; KZZZ=10.143; KWAC=9.987; KYCA=7.736																	



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KTOB	LIC	Petaluma	CA	1490	1.000	2906.3	2913.2	274.0 71.8	41.2 49.9	.0 .0	4.76	22.059	26.210	6.553	9999.9	30.5	68764.4
KBLF=13.061; KOWL=12.930; KRKC=12.199; KSYC=9.298; KWAC=7.906; KBKO=7.170																	
KBLF	LIC	Red Bluff	CA	1490	1.000	2811.7	2818.8	278.1 75.8	42.1 50.9	.0 .0	4.76	23.404	26.702	6.676	9999.9	47.8	70115.7
KSYC=14.013; KTOB=13.431; KOWL=13.075; KRNR=10.307; KRKC=7.683																	
KBKO	LIC	Santa Barbara	CA	1490	1.000	2820.2	2827.3	263.8 64.4	39.0 48.0	.0 .0	5.80	22.026	26.778	6.695	9999.9	38.7	57691.2
KWAC=13.242; KRKC=12.602; KMET=12.287; KICO=8.411; KZZZ=7.534; KOWL=7.249; KTOB=7.204																	
KOWL	LIC	South Lake Tahoe	CA	1490	1.000	2661.6	2669.1	274.1 73.6	41.3 50.3	.0 .0	5.66	20.977	26.458	6.614	9999.9	31.1	58374.3
KTOB=12.902; KBLF=12.667; KRKC=10.634; KSYC=9.370; KWAC=8.811; KBKO=7.076; KCID=6.671																	
-2004012	APP	Susanville	CA	1490	.250	2677.0	2684.4	278.0 76.6	42.1 51.0	.0 .0	5.28	23.579	29.980	7.495	9999.9	47.2	70927.1
KOWL=13.865; KBLF=13.555; KSYC=13.415; KTOB=11.567; KRNR=9.487; KCID=8.040; KRKC=7.373																	
-2004012	APP	Susanville	CA	1490	1.000	2674.3	2681.7	278.0 76.7	42.1 51.0	.0 .0	5.29	23.593	29.967	7.492	9999.9	47.2	70749.5
KOWL=13.865; KBLF=13.610; KSYC=13.384; KTOB=11.511; KRNR=9.465; KCID=8.074; KRKC=7.356																	
KSYC	LIC	Yreka	CA	1490	1.000	2809.8	2816.9	281.8 78.8	42.9 51.7	.0 .0	4.46	21.748	26.472	6.618	9999.9	61.3	74106.2
KBLF=13.790; KRNR=13.619; KBZY=9.867; KOWL=9.447; KTOB=9.234; KCID=7.300																	
KCFC	LIC	Boulder	CO	1490	1.000	1409.6	1423.7	268.5 77.6	41.1 51.0	2.7 6.4	20.27	22.792	27.535	6.884	9999.9	17.6	16959.0
KXRE=13.672; KPKE=13.382; KGOS=12.389; KRTN=10.065; KUGR=9.036; KRSN=7.467																	
-2004013	APP	Cardiff	CO	1490	.250	1596.2	1608.7	268.1 75.8	40.9 50.7	1.6 4.9	16.17	23.094	30.053	7.513	9999.9	18.9	23215.5
KCFC=13.455; KXRE=13.306; KPKE=13.239; KRTN=9.295; KGOS=8.762; KRSN=8.502; KUGR=8.437; KYFO=7.950																	
-2004012	APP	Del Norte	CO	1490	.250	1577.8	1590.5	259.9 68.5	40.0 49.8	1.7 5.0	17.33	27.349	30.672	7.668	9999.9	63.4	22056.0
KXRE=14.004; KRSN=13.813; KRTN=13.812; KPKE=13.049; KCFC=11.351; KUGR=7.999																	
-2005011	APP	Del Norte	CO	1490	1.000	1577.8	1590.5	259.9 68.5	40.0 49.8	1.7 5.0	17.33	27.349	30.672	7.668	9999.9	63.4	22056.0
KXRE=14.004; KRSN=13.813; KRTN=13.812; KPKE=13.049; KCFC=11.351; KUGR=7.999																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	--- Theta --- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin Rad. (mV/m)
KPKE KXRE=14.036;	LIC	Gunnison	CO	1490	1.000	1591.4	1603.9	263.9 72.0	40.4 50.2	1.6 4.9	16.68	25.157	27.763	6.941	9999.9	38.1	20762.8
KRTN=11.878; KRSN=11.315; KUGR=9.114; KGOS=7.407																	
-2004012 APP KXRE=13.388;	APP	Kirk	CO	1490	.250	1199.7	1216.3	264.1 75.0	40.8 50.8	4.1 8.6	27.58	21.885	29.089	7.272	9999.9	36.2	13146.4
KCFC=12.515; KKAN=11.963; KGOS=10.687; KRTN=10.384; KPKE=8.835; KQTY=8.193																	
KXRE KPKE=14.067;	LIC	Manitou Springs	CO	1490	1.000	1416.1	1430.1	263.1 72.5	40.5 50.4	2.6 6.4	20.68	23.574	29.503	7.376	9999.9	43.3	17790.4
KRTN=13.352; KRSN=10.028; KGOS=9.312; KUGR=8.149; KQTY=7.810																	
-2004012 APP KPKE=13.631;	APP	Silt	CO	1490	.250	1621.7	1634.0	268.3 75.8	41.0 50.7	1.4 4.7	15.68	22.718	29.496	7.374	9999.9	18.2	23501.8
KCFC=13.000; KXRE=12.701; KRTN=8.899; KYFO=8.437; KRSN=8.362; KGOS=8.359; KUGR=7.982																	
-2004012 APP KXRE=12.968;	APP	Yuma	CO	1490	.250	1197.4	1214.0	266.9 77.6	41.1 51.1	4.2 8.6	27.37	24.844	28.781	7.195	9999.9	23.2	13121.7
KCFC=12.890; KGOS=12.161; KKAN=11.620; KRTN=9.261; KPKE=8.617; KQTY=7.146																	
-2004012 APP KXRE=13.024;	APP	Yuma	CO	1490	.250	1200.2	1216.7	266.9 77.6	41.1 51.1	4.1 8.6	27.25	24.889	28.842	7.211	9999.9	23.1	13205.3
KCFC=12.953; KGOS=12.197; KKAN=11.545; KRTN=9.286; KPKE=8.675; KQTY=7.135																	
WGCH WBCB=13.339;	LIC	Greenwich	CT	1490	1.000	1250.1	1266.0	87.9 277.8	41.5 52.7	3.7 8.0	23.19	25.691	38.539	9.635	9999.9	123.0	20646.5
WMRC=12.804; WCSS=12.633; WKVT=12.592; WCDO=12.077; WDLC=11.860; WACM=11.859; WCCM=11.017; WNBT=9.864; WTOP=9.513; WEMJ=9.431																	
-2004012 APP WKVT=13.476;	APP	Uncasville	CT	1490	.250	1371.2	1385.7	85.2 276.2	41.8 53.0	2.9 6.8	19.04	25.443	39.912	9.978	9999.9	145.0	26054.0
WDLCO=12.848; WCCM=12.455; WCSS=12.064; WEMJ=11.933; WMRC=11.542; WBCB=11.254; WGCH=10.800; WKNY=10.636; WBAE=10.565; WFAD=10.110; WCDO=9.988																	
-2004102 APP WKVT=13.480;	APP	Uncasville	CT	1490	.196	1370.9	1385.4	85.1 276.1	41.8 53.0	2.9 6.8	19.04	25.452	39.908	9.977	9999.9	146.0	26060.1
WDLCO=12.843; WCCM=12.429; WCSS=12.111; WEMJ=12.002; WMRC=11.379; WBCB=11.213; WGCH=10.812; WKNY=10.605; WBAE=10.602; WFAD=10.177; WCDO=10.011																	
WWPR WTTB=13.307;	CP	Bradenton	FL	1490	.500	1662.7	1674.7	158.7 342.2	34.6 45.5	1.2 4.4	18.52	23.438	29.101	7.275	9999.9	33.2	19612.4
WAFZ=11.406; WSIR=11.137; WNDA=10.868; WEAG=9.216; WSFB=9.024; WMBM=8.942; WMOG=7.152																	
WWPR WTTB=13.247;	LIC	Bradenton	FL	1490	1.000	1659.0	1671.1	158.8 342.2	34.6 45.5	1.2 4.5	18.58	23.468	29.129	7.282	9999.9	33.6	19558.5
WAFZ=11.445; WSIR=11.233; WNDA=10.867; WEAG=9.224; WSFB=9.100; WMBM=8.855; WMOG=7.171																	

**Datworld  
Bethesda, MD**

Datworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
WNDA	LIC	Deland	FL	1490	1.000	1544.6	1557.5	152.4 336.7	35.4 46.4	1.8 5.3	20.63	21.390	31.949	7.987	9999.9	21.9	19334.0
WTTB=13.511; WSIR=12.306; WSFB=11.116; WAFZ=9.928; WWPR=9.407; -2000102=9.013; WQSY=9.013; WVGB=8.764; WSYL=8.425; WMOG=8.119																	
-2004013 APP	Hernando	FL	1490	1.000	1.000	1515.8	1529.0	156.2 339.9	35.3 46.3	2.0 5.5	21.41	21.535	32.442	8.110	9999.9	23.0	18915.9
WTTB=12.569; WSFB=12.509; WSIR=12.219; -2000102=9.940; WQSY=9.940; WAFZ=9.859; WWPR=9.753; WMOG=8.309; WSYL=8.117; WVGB=7.992																	
WAFZ	LIC	Immokalee	FL	1490	.700	1810.2	1821.2	156.5 340.5	34.0 45.0	.5 3.4	16.07	22.578	27.968	6.992	9999.9	23.9	21728.6
WTTB=13.776; WSIR=13.765; WNDA=11.424; WMBM=10.544; WWPR=9.913; WEAG=7.940																	
WEAG	APP	Kincaid Hills	FL	1490	1.000	1448.1	1461.8	154.8 338.5	35.6 46.6	2.4 6.1	23.00	25.110	34.208	8.552	9999.9	20.0	18574.9
WSFB=13.468; WSIR=13.457; -2000102=11.576; WQSY=11.576; WTTB=11.429; WSYL=9.796; WVGB=9.614; WWPR=8.930; WAFZ=8.416; WRLA=8.372																	
WMBM	LIC	Miami Beach	FL	1490	1.000	1922.3	1932.6	153.5 338.3	33.7 44.8	.0 2.7	14.49	21.228	25.787	6.447	9999.9	20.1	22232.8
WTTB=13.485; WSIR=11.866; WAFZ=11.312; WNDA=10.341; WWPR=8.002; WEAG=6.589																	
WECM	LIC	Milton	FL	1490	1.000	1226.2	1242.4	173.0 353.9	36.1 46.9	3.9 8.3	30.53	22.910	34.141	8.535	9999.9	117.7	13860.7
WIKC=12.014; WRLA=11.578; WXBD=11.205; WHOC=10.998; -2000102=10.504; WQSY=10.504; WSFB=10.189; KJIN=9.346; WIRB=8.910; WRTM=8.752; WTUP=8.537																	
WEAG	LIC	Starke	FL	1490	.650	1420.9	1434.9	153.7 337.5	35.8 46.8	2.6 6.3	23.67	25.559	33.802	8.451	9999.9	19.9	17833.2
WSFB=13.547; WSIR=13.189; -2000102=12.161; WQSY=12.161; WTTB=10.907; WSYL=10.712; WVGB=10.553; WRLA=8.714; WWPR=8.266																	
WTTB	LIC	Vero Beach	FL	1490	1.000	1721.6	1733.2	151.8 336.5	34.7 45.7	.9 4.0	17.28	20.320	28.071	7.018	9999.9	23.4	20287.8
WSIR=13.098; WAFZ=11.442; WMBM=10.508; WNDA=9.780; WWPR=9.504; WEAG=8.983; WSFB=7.390; WMOG=7.335																	
WSIR	LIC	Winter Haven	FL	1490	1.000	1631.7	1643.9	155.4 339.4	34.8 45.8	1.4 4.6	18.98	20.039	28.548	7.137	9999.9	21.0	18777.6
WTTB=13.329; WAFZ=11.463; WSFB=9.619; WMBM=9.060; WEAG=9.049; WWPR=8.505; WMOG=7.936; -2000102=7.555; WQSY=7.555																	
WMOG	LIC	Brunswick	GA	1490	.600	1321.5	1336.6	149.0 333.2	36.4 47.4	3.2 7.3	26.38	26.886	37.487	9.372	9999.9	33.2	17728.6
WSYL=13.736; WVGB=13.600; WSFB=13.240; -2000102=13.189; WQSY=13.189; WNDA=11.320; WSIR=10.262; WKUN=10.058; WRLA=9.524; WUDJ=9.115																	
WCHM	LIC	Clarksville	GA	1490	1.000	892.8	914.9	148.7 331.8	38.1 49.0	7.1 13.0	48.93	26.512	44.728	11.182	9999.9	35.5	11391.3
WCSV=13.416; WFXV=13.315; WGCD=13.241; WITA=13.050; WRLA=12.804; WSVN=12.741; WPCI=12.493; WOPI=12.036; WSYL=11.812; -2000102=11.738; WQSY=11.738; WJMJ=11.217																	

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
-2000102 WKUN=13.606;	CP	Cordele	GA	1490	1.000	1151.8	1169.1	156.8 339.7	36.8 47.7	4.5 9.1	33.22	26.428	39.788	9.947	9999.9	24.2	14948.0
WRA=13.045; WRLA=13.045; WSYL=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
WQSY	CP	Cordele	GA	1490	1.000	1151.8	1169.1	156.8 339.7	36.8 47.7	4.5 9.1	33.22	26.428	39.788	9.947	9999.9	24.2	14948.0
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
WYYZ	LIC	Jasper	GA	1490	1.000	870.0	892.7	153.9 336.5	38.0 48.9	7.4 13.4	51.17	26.937	45.142	11.285	9999.9	19.7	11008.3
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
WKUN	LIC	Monroe	GA	1490	1.000	965.3	985.8	152.0 335.0	37.7 48.6	6.3 11.7	43.54	27.501	44.738	11.185	9999.9	24.1	12820.4
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
WSFB	LIC	Quitman	GA	1490	1.000	1282.3	1297.8	157.9 340.9	36.2 47.1	3.5 7.7	28.06	25.615	36.144	9.036	9999.9	28.9	16069.6
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
WSYL	LIC	Sylvania	GA	1490	1.000	1161.6	1178.7	145.7 329.9	37.2 48.2	4.4 9.0	32.26	26.735	42.380	10.595	9999.9	45.6	16376.7
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
WRLA	LIC	West Point	GA	1490	1.000	1014.0	1033.5	161.6 343.7	37.2 48.1	5.8 11.0	40.73	28.023	41.401	10.350	9999.9	47.7	12657.4
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
KBUR	LIC	Burlington	IA	1490	.760	228.7	303.8	249.2 67.5	41.2 51.8	31.7 45.7	26.122	23.202	33.966	8.491	1625.4	50.4	1575.0
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
WDBQ	LIC	Dubuque	IA	1490	1.000	201.7	284.0	301.2 119.8	42.0 52.6	35.1 49.4	28.466	22.190	32.678	8.169	1435.0	59.1	1375.9
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	
KXLQ	LIC	Indianola	IA	1490	1.000	416.1	461.7	268.2 84.9	41.5 52.0	18.1 28.9	138.69	20.544	30.432	7.608	2742.8	22.0	2720.9
WQSY=13.606; WSFB=13.274; WSYL=13.045; WRLA=13.045; WRC=10.297; WJOC=10.243; WNDA=9.706; WHBB=9.666																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KRIB	LIC	Mason City	IA	1490	1.000	415.8	461.4	296.1 112.9	42.4 52.9	18.2 28.9	135.82	20.060	30.889	7.722	2842.8	77.6	2765.2
WLFN=13.294; KXLQ=10.640; KOMJ=10.605; WIGM=9.841; KLGR=9.373; WGEZ=9.102; KXRA=8.854; WOSH=8.644; KBUR=8.456; KQDS=7.717																	
KCID	LIC	Caldwell	ID	1490	1.000	2294.1	2302.8	285.2 86.0	43.5 52.7	.0 .8	6.56	20.137	25.781	6.445	9999.9	71.4	49053.5
KBKR=13.798; KTEL=11.096; KDBM=9.592; KRTK=8.201; KYNR=7.792; KYFO=7.185; KBZY=6.337; KRNR=6.276																	
KRTK	LIC	Chubbuck	ID	1490	1.000	1965.7	1975.9	282.4 86.2	42.9 52.3	.0 2.5	9.49	20.707	24.970	6.242	9999.9	63.2	32809.6
KYFO=13.749; KDBM=11.927; KCID=9.874; KUGR=8.670; KBSR=8.478; KBKR=6.903																	
-2004012	APP	Dalton Gardens	ID	1490	1.000	2312.6	2321.2	296.7 96.7	45.5 54.7	.0 .7	5.30	20.802	27.422	6.856	9999.9	83.2	64550.9
KEYG=13.149; KTEL=12.581; KYNR=10.076; CJPR=9.911; KBKR=9.610; KCID=8.042; KDBM=8.001																	
-2004013	APP	Rathdrum	ID	1490	.250	2324.7	2333.3	296.9 96.8	45.6 54.8	.0 .6	5.21	20.836	28.118	7.030	9999.9	83.1	67390.6
KEYG=13.196; KTEL=12.498; KYNR=10.188; CJPR=9.912; KBKR=9.388; KCID=7.857; KDBM=7.684; KBRO=7.024																	
-2004013	APP	Rathdrum	ID	1490	.250	2324.7	2333.3	296.9 96.8	45.6 54.8	.0 .6	5.21	20.836	28.118	7.030	9999.9	83.1	67392.8
KEYG=13.196; KTEL=12.499; KYNR=10.189; CJPR=9.912; KBKR=9.389; KCID=7.857; KDBM=7.683; KBRO=7.024																	
WKRO	LIC	Cairo	IL	1490	1.000	507.2	545.2	185.9 5.5	39.3 50.0	14.7 24.1	111.44	27.515	38.192	9.548	4284.0	163.1	4120.9
WESL=14.291; KDRS=14.034; WDXL=13.855; KTTR=13.855; WJUM=12.010; WCLU=11.602; WTUP=11.218; WAJF=10.263; WCKD=10.196; WJOC=9.356																	
WDAN	LIC	Danville	IL	1490	1.000	179.2	268.6	152.5 333.1	40.9 51.6	38.4 52.7	312.61	23.730	34.911	8.728	1395.9	36.2	1359.7
WNDV=13.220; WESL=12.250; WGEZ=11.100; WFKY=10.728; WZOE=10.679; WPNA=10.335; WKBV=9.523; WABJ=9.353; WKRO=9.294; WMRN=9.266; WCLU=9.185																	
WESL	LIC	East St. Louis	IL	1490	1.000	355.0	407.4	202.4 21.4	40.1 50.7	21.3 33.1	171.95	22.767	33.778	8.444	2455.6	181.8	2273.8
KTTR=13.864; WKRO=13.795; KDRS=11.654; WDXL=9.806; KDRO=9.514; KDMO=9.119; WZOE=8.538; WCLU=8.505; KBUR=8.436; WDBQ=8.300; WKBV=8.215																	
WPNA	LIC	Oak Park	IL	1490	1.000	74.7	213.5	63.4 244.0	41.7 52.4	62.4 72.5	427.95	21.705	34.109	8.527	996.3	17.0	979.3
WNDV=13.276; WGEZ=13.187; WZOE=10.997; WABJ=10.409; WOSH=10.224; WKBV=9.871; WMIPX=8.999; WLFN=8.996; WMRN=8.668; KBUR=8.519; WESL=8.509																	
WZOE	LIC	Princeton	IL	1490	1.000	76.6	214.2	250.7 70.1	41.5 52.1	61.8 72.0	427.34	20.998	32.346	8.086	946.1	22.3	923.9
WGEZ=13.516; WNDV=11.485; WESL=11.239; WPNA=10.337; WLFN=10.218; WOSH=10.040; KRIB=9.385; WKBV=8.780; KTTR=8.132; WIGM=7.874																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	--- Theta --- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
WKBV	LIC	Richmond	IN	1490	1.000	365.6	416.7	121.0 303.4	40.7 51.6	20.7 32.3	163.84	22.424	35.133	8.783	2680.5	69.4	2611.1
WFKY=13.725; WNDV=12.615; WABJ=12.463; WMOA=11.210; WCLU=10.604; WSWW=9.995; WFXV=9.220; WJMO=8.993; WOHI=8.744; WSGB=8.719; WOPI=8.670																	
WNDV	LIC	South Bend	IN	1490	1.000	197.4	281.0	85.6 267.2	41.6 52.4	35.7 50.0	290.02	21.212	33.597	8.399	1448.0	62.2	1385.9
WABJ=13.382; WGEZ=12.049; WMPX=11.211; WPNA=10.006; WMRN=9.886; WOSH=9.819; WKBV=9.486; WZOE=9.154; WFKY=8.518; WDBQ=8.414; WJMO=8.211																	
KKAN	LIC	Phillipsburg	KS	1490	1.000	925.6	947.0	261.1 74.1	40.8 51.0	6.8 12.4	43.21	14.861	24.257	6.064	7016.8	53.8	6963.0
KOMJ=10.514; KTOP=10.503; KQTY=7.410; KMFS=7.396; KXRE=6.896; KDMO=6.883; KGOS=6.718; KRTN=6.298; KCFC=6.261; KDRO=6.247																	
KTOP	LIC	Topeka	KS	1490	1.000	661.1	690.7	247.4 62.8	40.4 50.8	10.8 18.4	74.79	21.002	29.748	7.437	4971.7	123.2	4848.6
KDMO=12.784; KOMJ=12.706; KKAN=10.779; KTTR=9.696; KMFS=9.071; KDRO=8.956; KXLO=8.625; KBUR=7.622; WESL=7.408																	
WFKY	LIC	Frankfort	KY	1490	1.000	489.9	529.2	138.9 321.2	39.9 50.7	15.3 24.9	114.99	23.022	39.406	9.952	4283.6	66.7	4216.9
WCLU=13.775; WFXV=13.607; WCSV=12.454; WITA=11.380; WOPI=11.313; WSWW=11.200; WMOA=10.672; WCKD=10.641; WJOC=10.394; WMRN=10.130; WJMJ=10.114; WAEV=9.991																	
WCLU	LIC	Glasgow	KY	1490	1.000	562.6	597.1	154.5 336.2	39.3 50.1	13.1 21.7	96.31	27.337	42.700	10.675	5542.2	20.2	5522.0
WJMJ=13.973; WFXV=13.802; WFKY=13.790; WCSV=13.092; WITA=12.689; WDXL=12.292; WJAF=11.676; WKRO=11.443; WOMI=11.407; WYYZ=11.290; WJOC=11.071; WOPI=10.792																	
WFXV	LIC	Middlesboro	KY	1490	1.000	695.1	723.3	141.1 324.1	39.1 50.0	10.1 17.4	70.70	26.886	44.956	11.239	7948.0	61.4	7886.5
WCLU=13.721; WFKY=13.575; WPCI=13.304; WCSV=13.165; WCHM=12.833; WYYZ=12.813; WSVN=12.789; WAEV=12.716; WSWW=11.828; WJMJ=11.304; WSTP=11.260; WKUN=11.236; WJOC=11.108																	
WOMI	LIC	Owensboro	KY	1490	.830	445.6	488.4	162.9 343.9	39.7 50.4	16.9 27.2	131.14	26.719	40.426	10.107	3853.3	41.9	3811.4
WKRO=13.761; WFKY=13.639; WCLU=13.424; WJMJ=12.584; WDXL=12.541; WESL=12.180; WCSV=11.961; WCKD=11.933; WJOC=10.580; WFXV=10.503; WKBV=10.345																	
WSIP	LIC	Paintsville	KY	1490	1.000	652.0	682.0	128.2 311.9	39.7 50.6	11.0 18.7	76.61	27.648	45.090	11.273	7357.4	81.6	7275.8
WFXV=14.060; WAEV=13.922; WFKY=13.703; WSGB=13.607; WSWW=12.933; WMOA=12.908; WITA=12.154; WSVN=11.767; WCLU=11.687; WCSV=11.527; WTCS=11.488; WSTP=11.146; WLOE=11.091																	
WIKC	LIC	Bogalusa	LA	1490	1.000	1205.2	1221.7	185.8 5.1	36.2 46.8	4.1 8.5	31.48	26.293	35.030	8.757	9999.9	186.9	13722.7
KJIN=13.749; WRTM=13.625; WHOC=12.823; KEUN=12.337; WECM=12.102; KRUS=10.747; WHBB=9.769; WXBD=9.693; WTUP=9.189																	

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**Title: Millbrook IL 1480 kHz**

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Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KEUN KWUD=13.570; KJIN=13.550; KRUS=13.103; WIKC=12.648; WRTM=12.422; KHV L=11.378; WHOC=8.845; WXBD=8.568; KXAR=8.458	LIC	Eunice	LA	1490	1.000	1281.7	1297.2	196.7 14.4	36.0 46.6	3.5 7.7	28.52	26.446	34.733	8.683	9999.9	228.5	14995.5
KJIN WIKC=13.784; KEUN=13.300; WXBD=11.138; WRTM=11.050; WECM=9.612; KRUS=9.542; KWUD=9.270; WHOC=9.175; WHBB=8.623; KHV L=8.240	LIC	Houma	LA	1490	1.000	1349.2	1363.9	188.8 7.6	35.6 46.2	3.0 7.0	26.36	22.157	33.300	8.325	9999.9	201.1	15590.0
KEUN WRTM=13.731; KWUD=13.536; KRUS=13.414; WIKC=12.563; KJIN=12.331; KHV L=11.346; KOTN=10.364; WHOC=9.986; KXAR=9.724	APP	Pineville	LA	1490	1.000	1192.4	1209.1	197.9 15.6	36.5 47.0	4.2 8.6	31.93	26.637	35.945	8.986	9999.9	231.0	13842.7
KEUN WRTM=13.731; KWUD=13.537; KRUS=13.413; WIKC=12.562; KJIN=12.330; KHV L=11.347; KOTN=10.365; WHOC=9.985; KXAR=9.725	APP	Pineville	LA	1490	1.000	1192.4	1209.0	197.9 15.6	36.5 47.0	4.2 8.6	31.93	26.636	35.944	8.986	9999.9	231.0	13842.1
KRUS WRTM=13.884; KOTN=13.411; KEUN=12.767; KWUD=12.341; KHV L=10.787; WIKC=10.638; WHOC=10.440; KWXT=10.363; KPLT=9.750; KJIN=9.304	LIC	Ruston	LA	1490	1.000	1070.6	1089.1	200.9 18.5	37.1 47.6	5.2 10.2	37.70	26.228	36.269	9.067	9999.9	236.8	11787.5
WCCM WKVT=12.825; WFAD=12.105; WTVL=11.799; WACM=11.698; WCSS=11.596; WEMJ=11.238; WIKE=11.147; WKNY=11.114; WMRC=10.362; WDLC=9.413; WICY=9.073	LIC	Haverhill	MA	1490	1.000	1445.4	1459.1	78.9 270.7	42.5 53.8	2.4 6.1	16.32	24.230	37.066	9.267	9999.9	196.4	28191.4
WMRC WEMJ=13.324; WKVT=12.784; WCSS=12.078; WFAD=11.419; WKNY=11.329; WBAE=11.103; WDLC=11.100; WGCH=10.260; WTVL=10.020; WACM=9.823; WIKE=9.600	LIC	Milford	MA	1490	1.000	1413.9	1428.0	81.8 273.3	42.2 53.4	2.6 6.4	17.47	24.845	37.234	9.309	9999.9	172.9	26467.5
WACM WCSS=13.308; WDLC=13.289; WEMJ=13.082; WFAD=12.195; WCCM=11.944; WCDO=11.449; WMRC=11.435; WBAE=10.951; WGCH=10.871; WKVT=10.804; WBCB=10.784	CP	West Springfield	MA	1490	1.000	1322.8	1337.8	82.2 272.9	42.1 53.3	3.2 7.3	20.06	25.953	39.360	9.840	9999.9	169.5	24361.2
WACM WCSS=13.309; WDLC=13.299; WEMJ=13.074; WFAD=12.190; WCCM=11.961; WMRC=11.471; WCDO=11.461; WBAE=10.944; WGCH=10.867; WKVT=10.833; WBCB=10.801	LIC	West Springfield	MA	1490	.470	1322.3	1337.3	82.2 272.9	42.1 53.3	3.2 7.3	20.07	25.952	39.387	9.847	9999.9	169.4	24357.8
WARK WPRR=13.473; WTCS=13.243; WNB T=12.144; WPAK=12.079; WBCB=11.879; WOHI=11.630; WSGB=11.460; WESB=10.758; WMOA=10.621; WDLC=10.109; WLPA=9.851	LIC	Hagerstown	MD	1490	1.000	943.9	964.9	99.7 286.8	40.7 51.8	6.5 12.1	40.47	25.500	38.546	9.636	9999.9	33.2	11871.9
WBAE WMRC=12.860; WKVT=12.541; WIKE=12.182; WEMJ=11.567; WFAD=11.504; WTVL=10.897; WCCM=10.809; WACM=10.169; WCSS=9.439; WKNY=9.162; WICY=8.903	LIC	Portland	ME	1490	1.000	1514.1	1527.2	75.1 267.5	43.0 54.2	2.0 5.6	14.30	24.593	36.448	9.112	9999.9	226.8	31634.1

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WTVL	LIC	Waterville	ME	1490	1.000	1573.7	1586.3	71.5 264.5	43.5 54.7	1.7 5.1	12.67	21.037	32.477	8.119	9999.9	254.3	31777.6
WEMJ=12.719; WIKE=12.027; WCCM=11.668; CKBM=10.230; WFAD=9.889; WKVT=9.750; WMRC=9.744; CKMV=8.952; WUVR=8.535; WICY=8.167																	
WABJ	LIC	Adrian	MI	1490	1.000	382.1	431.3	83.2 266.2	41.8 52.6	19.8 31.2	151.91	21.318	32.682	8.171	2689.2	129.3	2560.0
WNDV=13.426; WMPX=13.129; WOHI=10.091; WMOA=9.853; WKBV=9.647; WMGW=9.228; WBEX=8.465; WJMO=8.227; WFKY=8.185; CFPS=8.144; WDAN=8.108																	
-2004012	APP	Houghton	MI	1490	1.000	612.9	644.7	359.8 179.8	44.3 55.0	11.8 19.9	72.12	18.464	22.478	5.619	3896.1	289.9	3606.2
WTIQ=11.406; WIGM=10.293; KQDS=10.241; WOSH=8.840; WLFN=6.945; WDBQ=6.161																	
-2004102	APP	Houghton	MI	1490	1.000	613.5	645.3	.1 180.1	44.3 55.0	11.8 19.9	71.98	18.439	22.434	5.609	3896.2	291.6	3604.5
WTIQ=11.459; WIGM=10.266; KQDS=10.164; WOSH=8.830; WLFN=6.900; WDBQ=6.140																	
-2004012	APP	Ironwood	MI	1490	.250	555.7	590.6	347.7 166.6	44.0 54.6	13.3 22.0	85.34	20.109	26.211	6.553	3839.2	204.8	3634.4
KQDS=11.547; WLFN=9.740; WOSH=9.502; WTIQ=9.268; WIGM=9.148; WDBQ=7.367; KRIB=7.313; KXRA=7.007; WGEZ=6.488																	
-2004102	APP	Ironwood	MI	1490	.250	556.9	591.8	347.7 166.7	44.0 54.6	13.2 22.0	85.04	20.088	26.193	6.548	3850.1	205.5	3644.6
KQDS=11.549; WLFN=9.698; WOSH=9.490; WTIQ=9.275; WIGM=9.209; WDBQ=7.351; KRIB=7.285; KXRA=6.990; WGEZ=6.464																	
-2004102	APP	Ironwood	MI	1490	.250	556.9	591.8	347.7 166.7	44.0 54.6	13.2 22.0	85.04	20.088	26.193	6.548	3850.1	205.5	3644.6
KQDS=11.549; WLFN=9.698; WOSH=9.490; WTIQ=9.275; WIGM=9.209; WDBQ=7.351; KRIB=7.285; KXRA=6.990; WGEZ=6.464																	
WTIQ	LIC	Manistique	MI	1490	1.000	521.6	558.6	20.2 201.8	43.8 54.5	14.3 23.4	94.16	16.394	23.397	5.849	3105.9	363.5	2742.4
WOSH=9.676; WMPX=9.544; WIGM=9.168; WGEZ=6.624; WDBQ=6.449; WLFN=6.290; KQDS=6.272; WNDV=6.204; CFPS=6.200; WABJ=6.112																	
WMPX	LIC	Midland	MI	1490	1.000	423.5	468.4	56.3 239.3	42.6 53.5	17.8 28.5	130.47	20.406	31.075	7.769	2977.2	298.8	2678.4
WABJ=13.100; WNDV=11.281; CFPS=10.842; WTIQ=9.544; WMRN=9.385; WOSH=9.159; WJMO=8.842; WMGW=8.465; WKBV=8.427; WODJ=8.082																	
WODJ	LIC	Whitehall	MI	1490	1.000	273.7	339.0	42.2 223.8	42.5 53.3	27.1 40.5	216.70	25.240	33.826	8.456	1951.2	278.6	1672.6
WNDV=13.252; WMPX=13.228; WGEZ=12.032; WABJ=11.902; WTIQ=10.182; WPNA=9.939; WOSH=8.991; WKBV=8.666; WMRN=8.633; WIGM=8.616																	
KXRA	LIC	Alexandria	MN	1490	1.000	722.1	749.3	313.6 128.9	43.8 54.2	9.6 16.7	57.47	18.759	25.761	6.440	5602.8	34.9	5567.9
KOV=11.457; KQDS=10.630; KSTP=10.374; KRIB=9.262; KLGR=7.934; WIGM=7.916; WLFN=7.618; WDBQ=6.507																	



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KQDS	LIC	Duluth	MN	1490	1.000	636.6	667.3	335.1 152.6	44.2 54.7	11.3 19.1	68.86	17.462	24.470	6.118	4441.9	114.2	4327.7
WIGM=10.611; KXRA=10.498; WLFN=9.063; KSTP=8.043; KRIB=7.914; WOSH=7.803; KLGR=7.627; WDBQ=6.891																	
KLGR	LIC	Redwood Falls	MN	1490	1.000	624.0	655.2	304.0 119.5	43.1 53.5	11.6 19.5	74.71	19.703	28.820	7.205	4821.7	69.3	4752.4
KXRA=13.002; KRIB=11.227; WLFN=9.648; QKDS=9.138; KOMJ=8.880; KOVC=8.657; KSTP=8.524; WIGM=8.406; WDBQ=7.860																	
KDMO	LIC	Carthage	MO	1490	1.000	695.7	723.8	227.2 43.5	39.4 49.9	10.1 17.4	70.89	24.318	32.619	8.155	5751.7	215.3	5536.4
KTTR				KTOP=12.763; KWXT=11.810; KMFS=11.123; KDRS=9.550; KBIX=9.304; WESL=9.128; KOTN=8.735; KDRO=8.346; KXAR=8.099													
KTTR	LIC	Rolla	MO	1490	1.000	485.5	525.1	214.6 32.6	39.8 50.3	15.4 25.1	117.38	26.420	33.357	8.339	3552.3	216.1	3336.1
WESL=14.424; KDRS=12.934; KDMO=12.709; WKRO=12.695; KWXT=9.721; KTOP=9.522; WDXL=9.214; KBUR=8.739; KOTN=8.263																	
KDRO	LIC	Sedalia	MO	1490	.780	510.7	548.4	232.3 49.3	40.2 50.6	14.6 23.9	108.94	26.484	34.325	8.581	3938.6	186.8	3751.7
KTTR				KDMO=13.275; KTOP=13.253; WESL=12.568; KOMJ=9.547; KDRS=9.203; KXLQ=8.858; KBUR=8.748; WKRO=8.699; KWXT=8.383													
WXBD	LIC	Biloxi	MS	1490	1.000	1244.5	1260.5	181.8 1.5	36.0 46.7	3.8 8.1	29.92	25.608	34.773	8.693	9999.9	168.2	14357.9
WECM=13.632; KJIN=13.569; WHOC=12.085; WRTM=11.821; WIKC=11.758; KEUN=10.286; WHBB=9.520; KRUS=8.599; WTUP=8.577; WRLA=8.441																	
WCLE	LIC	Cleveland	MS	1490	1.000	892.2	914.3	192.7 11.4	37.7 48.3	7.2 13.0	49.96	27.237	40.430	10.108	9999.9	210.3	9905.6
WRTM=13.867; WTUP=13.745; WHOC=13.551; KOTN=13.305; KRUS=13.229; KDRS=12.505; WDXL=11.627; KWXT=11.056; WIKC=10.387; KXAR=9.942; WAJF=9.858																	
-2004012	APP	Columbus	MS	1490	.250	900.8	922.7	178.8 359.0	37.5 48.2	7.0 12.8	49.24	25.990	40.092	10.023	9999.9	149.1	10029.3
WAJF=14.021; WDXL=13.074; WJUM=12.436; WRTM=12.383; WHOC=11.804; WRLA=11.581; WTUP=10.784; WJOC=10.753; WIKC=10.550; WECM=10.376; KDRS=10.322; KOTN=10.050																	
-2004012	APP	Ellisville	MS	1490	.250	1106.9	1124.8	182.9 2.5	36.6 47.3	4.9 9.7	35.93	26.257	37.328	9.332	9999.9	172.3	12813.4
WRTM=13.846; WECM=13.011; WIKC=12.908; WHOC=12.720; KJIN=11.839; WTUP=11.720; WXBD=11.203; KRUS=10.366; KEUN=10.165; WRLA=9.496																	
-2004102	APP	Ellisville	MS	1490	.250	1106.9	1124.8	182.9 2.5	36.6 47.3	4.9 9.7	35.93	26.257	37.328	9.332	9999.9	172.3	12813.4
WRTM=13.846; WECM=13.011; WIKC=12.908; WHOC=12.720; KJIN=11.839; WTUP=11.720; WXBD=11.203; KRUS=10.366; KEUN=10.165; WRLA=9.496																	
WHOC	LIC	Philadelphia	MS	1490	1.000	981.6	1001.7	182.9 2.6	37.2 47.9	6.1 11.5	43.24	23.548	38.288	9.572	9999.9	170.7	10898.3
WRTM=13.906; WTUP=13.795; WIKC=13.071; WAJF=11.747; WECM=11.207; WDXL=10.956; KOTN=10.819; KRUS=10.608; WRLA=10.185; WXBD=9.963; WJUM=9.760																	

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)			
WTUP	LIC	Tupelo	MS	1490	1.000	814.7	838.9	180.6	6	37.9	48.6	8.2	14.5	57.23	27.458	38.933	9.733	8503.3	156.7	8346.6
WAJF=14.103; WDXL=13.712; WHOC=13.594; WJUM=13.498; KDRS=12.565; WRTM=11.604; KOTN=11.030; WKRO=11.007; WJOC=10.897; WRLA=10.380																				
WRTM	LIC	Vicksburg	MS	1490	1.000	1045.0	1064.0	191.8	10.4	37.0	47.6	5.5	10.5	39.27	26.951	37.561	9.390	9999.9	209.8	11747.7
KRUS=13.872; WIKC=13.686; WHOC=13.528; KOTN=12.792; KEUN=12.109; WTUP=11.806; KJIN=10.893; WHBB=9.743; KXAR=9.636; WXBD=9.592																				
-2004013	APP	Bozeman	MT	1490	1.000	1855.4	1866.1	291.8	96.2	44.2	53.7	.3	3.2	9.64	15.947	22.435	5.609	9999.9	82.6	28997.1
KDBM=11.134; KRTK=8.391; KUGR=7.742; KCID=7.415; KBSR=6.804; KYFO=6.430; CJPR=6.349; CJSN=5.875; KBKR=5.618																				
-2004012	APP	Bozeman	MT	1490	.250	1853.9	1864.7	291.8	96.2	44.2	53.7	.3	3.2	9.66	15.982	22.418	5.604	9999.9	82.6	28927.6
KDBM=11.193; KRTK=8.375; KUGR=7.745; KCID=7.394; KBSR=6.712; KYFO=6.424; CJPR=6.340; CJSN=5.886; KBKR=5.597																				
KDBM	LIC	Dillon	MT	1490	1.000	1975.9	1986.0	290.0	93.3	44.0	53.5	.0	2.4	8.56	16.968	23.660	5.915	9999.9	80.7	34459.0
KRTK=10.214; KBSR=9.677; KCID=9.485; KBKR=7.971; KUGR=7.713; KYFO=7.405; KTEL=7.230; CJPR=6.461																				
KBSR	LIC	Laurel	MT	1490	1.000	1678.8	1690.7	292.4	98.4	44.1	53.7	1.1	4.3	11.96	13.176	20.441	5.110	9999.9	83.1	21286.7
KDBM=10.526; KUGR=7.925; CJSN=6.456; KRTK=6.358; KNDC=6.304; KFCR=5.742; KYFO=5.576; KGOS=5.534; KCID=5.260																				
-2004013	APP	Lolo	MT	1490	.250	2100.0	2109.5	294.5	96.6	44.9	54.3	.0	1.8	6.97	18.220	25.593	6.398	9999.9	83.8	45796.1
KDBM=12.246; KTEL=9.666; CJPR=9.411; KBKR=8.900; KCID=8.857; KBSR=8.051; KEYG=7.804; KYNR=6.299																				
-2004102	APP	Malmstrom Afb	MT	1490	.580	1902.3	1912.8	297.8	101.8	45.1	54.6	.0	2.9	8.43	19.437	20.982	5.245	9999.9	82.4	31041.8
KDBM=11.149; KBSR=9.446; CJSN=9.154; CJPR=8.972; KCID=5.877; KUGR=5.282																				
-2004013	APP	Malmstrom Afb	MT	1490	.570	1905.4	1915.9	297.8	101.8	45.1	54.6	.0	2.8	8.40	19.447	21.647	5.412	9999.9	82.4	32146.1
KDBM=11.176; KBSR=9.450; CJSN=9.101; CJPR=9.008; KCID=5.906; KUGR=5.275; KTEL=5.262																				
-2004012	APP	Missoula	MT	1490	1.000	2095.2	2104.7	294.9	97.0	44.9	54.3	.0	1.8	6.97	18.142	25.319	6.330	9999.9	83.8	45303.8
KDBM=12.203; CJPR=9.557; KTEL=9.427; KCID=8.640; KBKR=8.594; KBSR=8.079; KEYG=7.751; KYNR=6.171																				
-2004012	APP	Orchard Homes	MT	1490	1.000	2104.2	2113.7	295.2	97.2	45.0	54.4	.0	1.7	6.87	18.192	25.357	6.339	9999.9	83.8	46048.6
KDBM=12.081; CJPR=9.699; KTEL=9.535; KBKR=8.569; KCID=8.544; KEYG=7.985; KBSR=7.903; KYNR=6.275																				

**Dataworld  
Bethesda, MD**

Dataworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	--- Theta --- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
WDUR	LIC	Durham	NC	1490	1.000	1047.0	1066.0	123.4 309.5	38.9 49.9	5.5 10.5	36.40	27.273	41.260	10.315	9999.9	79.8	14089.9
WWNB=13.929; WPAK=13.844; WWIL=13.441; WJDJ=13.324; WAEY=12.590; WLOE=12.402; WGCD=12.329; WSVN=12.104; WOPI=11.387; WRMT=10.553; WPCI=10.329																	
WLOE	LIC	Eden	NC	1490	1.000	947.8	968.7	123.7 309.2	39.1 50.2	6.5 12.0	42.80	26.939	43.171	10.793	9999.9	79.9	12529.4
WAEY=13.938; WPAK=13.796; WSVN=13.437; WGCD=12.671; WJDJ=12.613; WSGB=12.426; WRMT=12.092; WOPI=12.034; WSWW=11.965; WWNB=11.656; WPCI=11.410; WWIL=11.149																	
WAZZ	LIC	Fayetteville	NC	1490	1.000	1112.4	1130.3	127.5 313.5	38.4 49.5	4.9 9.6	33.30	27.515	42.812	10.703	9999.9	83.3	15987.7
WWNB=14.078; WLOE=14.059; WJDJ=13.474; WWIL=13.406; WGCD=13.257; WPAK=12.515; WRMT=12.059; WSVN=11.863; WPCI=10.931; WOPI=10.732; WAEY=10.688; WSTP=10.408																	
WWNB	LIC	New Bern	NC	1490	1.000	1233.4	1249.5	121.8 309.0	38.5 49.6	3.9 8.2	27.60	24.322	32.697	8.174	9999.9	77.4	14731.0
WWIL=13.469; WPAK=12.106; WLOE=11.572; WRMT=11.389; WJDJ=11.362; WSTP=11.095; WGCD=9.096; WTOP=8.639; WDUR=8.244																	
WRMT	LIC	Rocky Mount	NC	1490	1.000	1124.1	1141.8	120.5 307.2	38.9 50.0	4.8 9.5	32.11	27.306	37.734	9.433	9999.9	74.5	14614.6
WLOE=13.974; WPAK=13.880; WWIL=13.786; WWNB=12.947; WSTP=11.913; WJDJ=11.873; WAEY=10.427; WGCD=10.163; WOPI=9.591; WSVN=9.558																	
WSTP	LIC	Salisbury	NC	1490	1.000	960.6	981.2	130.4 315.5	38.7 49.7	6.4 11.8	42.47	27.371	43.037	10.759	9999.9	82.5	12584.1
WPCI=13.886; WJDJ=13.792; WAEY=13.789; WGCD=13.267; WLOE=13.108; WPAK=12.326; WSVN=12.116; WWIL=11.669; WOPI=11.484; WFXV=11.132; WRMT=11.061; WWNB=10.870																	
WSVN	LIC	Valdese	NC	1490	1.000	891.4	913.6	134.6 319.0	38.7 49.7	7.2 13.0	48.12	27.392	44.071	11.018	9999.9	77.6	11370.0
WLOE=14.011; WAEY=13.888; WFXV=13.471; WJDJ=13.404; WPCI=13.376; WGCD=13.027; WCHM=12.963; WITA=12.458; WKUN=11.827; WYYZ=11.603; WSWW=11.209; WCSV=10.951																	
WWIL	LIC	Wilmington	NC	1490	1.000	1239.4	1255.4	127.8 314.4	38.0 49.1	3.8 8.1	27.89	25.459	36.812	9.203	9999.9	83.5	16417.2
WWNB=13.564; WJDJ=13.550; WRMT=12.057; WSTP=11.627; WLOE=11.208; WGCD=11.053; WVGB=10.202; WPAK=10.168; WDUR=9.234; WSYL=9.171; WLRT=9.075																	
-2004013	APP	Woodfin	NC	1490	1.000	844.7	868.1	139.9 323.7	38.6 49.6	7.8 13.9	52.70	27.591	46.110	11.528	9999.9	65.0	10872.0
WFXV=14.035; WCHM=13.820; WGCD=13.797; WYYZ=13.526; WKUN=13.364; WCSV=13.076; WAEY=12.947; WITA=12.669; WLOE=11.988; WSVN=11.956; WJDJ=11.901; WSTP=11.387; WJOC=11.368																	
-2004013	APP	Woodfin	NC	1490	.250	842.0	865.4	139.7 323.5	38.7 49.6	7.8 13.9	52.95	27.574	46.078	11.519	9999.9	65.7	10812.4
WFXV=14.009; WCHM=13.856; WGCD=13.800; WYYZ=13.478; WKUN=13.286; WCSV=13.072; WAEY=13.039; WITA=12.660; WLOE=12.053; WJDJ=11.862; WSVN=11.862; WJOC=11.373; WSTP=11.360																	

**Datworld**  
**Bethesda, MD**

Datworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KNDC	LIC	Hettinger	ND	1490	1.000	1231.4	1247.5	298.4 108.6	44.0 54.0	3.9 8.2	22.05	14.600	18.175	4.544	9999.9	81.6	10222.3
KFCR=9.875; KOVC=7.952; KBSR=7.239; KGOS=6.745; KORN=5.232; KUGR=4.740; KXRA=4.675																	
KOVC	LIC	Valley City	ND	1490	1.000	954.6	975.4	311.5 125.0	44.3 54.6	6.4 11.9	34.49	16.292	20.561	5.140	7452.3	43.8	7408.5
KXRA=11.458; KSTP=8.406; KNDC=7.967; KLGR=7.542; KQDS=6.432; KRIB=5.436; KORN=5.435																	
KOMJ	LIC	Omaha	NE	1490	1.000	615.1	646.8	268.8 84.0	41.5 51.8	11.8 19.8	80.87	22.313	28.470	7.118	4400.5	18.0	4382.5
KTOP=12.564; KXLQ=10.800; KRIB=10.571; KKAN=10.566; KDRO=8.566; WDBQ=7.856; KBUR=7.790; KLGR=7.665; KDMO=7.624																	
-2004102	APP	Berlin	NH	1490	1.000	1449.2	1463.0	71.3 263.2	43.4 54.6	2.4 6.1	15.25	24.520	37.330	9.332	9999.9	255.1	30348.7
WFAD=12.587; WKVT=12.283; WCCM=12.145; WEMJ=12.016; WTVL=11.299; WICY=11.177; WMRC=11.119; WIKE=11.086; WCSS=10.164; CKBM=10.152; WACM=9.316																	
-2004012	APP	Berlin	NH	1490	1.000	1449.3	1463.1	71.3 263.2	43.4 54.6	2.4 6.1	15.24	24.520	37.327	9.332	9999.9	255.1	30351.5
WFAD=12.586; WKVT=12.280; WCCM=12.145; WEMJ=12.021; WTVL=11.295; WICY=11.176; WMRC=11.116; WIKE=11.087; WCSS=10.160; CKBM=10.154; WACM=9.313																	
WEMJ	LIC	Laconia	NH	1490	1.000	1417.7	1431.7	75.4 267.1	42.9 54.1	2.6 6.4	16.55	25.757	36.472	9.118	9999.9	223.7	27326.6
WMRC=13.307; WIKE=12.832; WFAD=12.686; WKVT=12.678; WTVL=12.311; WCSS=12.079; WACM=11.589; WICY=10.886; WKNY=10.793																	
WUVR	LIC	Lebanon	NH	1490	.640	1356.1	1370.8	74.7 265.9	42.9 54.1	3.0 6.9	18.10	25.537	38.928	9.732	9999.9	228.7	26659.7
WMRC=13.162; WCSS=13.056; WIKE=12.748; WICY=12.080; WACM=11.668; WTVL=11.653; WKVT=11.455; WCCM=11.440; WKNY=11.158; WFAD=10.180; WBAE=10.056																	
WUSS	LIC	Pleasantville	NJ	1490	.400	1214.6	1230.9	96.9 286.1	40.7 51.9	4.0 8.4	25.66	23.242	34.365	8.591	9999.9	52.9	16688.0
WDLC=12.916; WBCB=11.461; WKNY=11.075; WTOP=10.925; WGCH=10.780; WLPA=10.352; WARK=10.052; WNB=9.088; WCDO=9.032; WCV=8.819; WACM=8.628																	
-2004013	APP	Flora Vista	NM	1490	.250	1749.7	1761.1	258.9 66.5	39.6 49.3	.8 3.8	14.48	22.343	30.124	7.531	9999.9	68.4	25928.9
KRSN=13.919; KPKE=13.507; KRTN=11.093; KXRE=9.979; KRUI=8.139; KCUZ=8.058; KCFC=7.796; KUGR=7.681; KYCA=7.598																	
-2004012	APP	Gallup	NM	1490	1.000	1872.0	1882.6	255.4 62.8	39.0 48.6	.2 3.0	13.11	20.462	27.801	6.950	9999.9	86.0	26415.9
KRSN=13.263; KCUZ=11.858; KYCA=11.858; KPKE=10.108; KRUI=9.689; KPKE=9.324; KRTN=8.844; KXRE=6.914; KFFN=6.881																	
KRSN	LIC	Los Alamos	NM	1490	1.000	1655.2	1667.2	253.3 62.2	39.1 48.9	1.2 4.5	16.48	21.264	28.587	7.147	9999.9	98.6	21587.5
KRTN=13.727; KRUI=11.736; KPKE=11.225; KXRE=10.028; KZZN=8.486; KQTY=8.442; KCUZ=8.435; KCFC=7.074																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KRTN	LIC	Raton	NM	1490	1.000	1458.0	1471.7	254.2 64.2	39.5 49.4	2.4 6.0	20.47	25.204	29.846	7.461	9999.9	92.9	18134.2
KRSN=13.794; KXRE=13.318; KPKE=11.613; KQTY=11.521; KZZN=9.377; KCFC=9.348; KRUI=8.956																	
KRUI	LIC	Ruidoso Downs	NM	1490	1.000	1753.6	1765.0	243.9 53.5	37.8 47.6	.7 3.8	15.58	18.947	24.149	6.037	9999.9	155.1	19220.6
KRSN=11.558; KZZN=11.125; KCUZ=10.082; KRTN=8.983; KBST=8.881; KQTY=8.039																	
KRSN	APP	Santa Fe	NM	1490	1.000	1642.9	1655.1	252.1 61.2	39.0 48.8	1.3 4.6	16.79	21.299	27.999	7.000	9999.9	106.0	20738.2
KRTN=13.776; KRUI=12.443; KPKE=10.442; KXRE=9.657; KZZN=9.252; KQTY=8.987; KCUZ=8.405																	
-2004012	APP	Vanderwagen	NM	1490	.250	1886.3	1896.9	254.7 62.1	38.9 48.5	.1 3.0	12.99	20.831	27.160	6.790	9999.9	90.2	26044.2
KRSN=13.054; KCUZ=12.532; KYCA=10.319; KRUI=10.012; KPKE=8.764; KRTN=8.575; KFFN=7.289																	
-2004102	APP	Hawthorne	NV	1490	1.000	2567.7	2575.5	272.3 72.7	41.0 50.0	.0 .0	6.23	21.852	26.923	6.731	9999.9	23.7	53967.1
KOWL=12.835; KTOB=10.274; KRKC=10.254; KWAC=10.104; KBLF=9.537; KBKO=7.761; KSYC=7.190; KZZZ=6.668																	
-2004013	APP	Hawthorne	NV	1490	.250	2567.6	2575.4	272.4 72.7	41.0 50.0	.0 .0	6.23	21.846	26.918	6.729	9999.9	23.8	53955.6
KOWL=12.833; KTOB=10.272; KRKC=10.250; KWAC=10.099; KBLF=9.538; KBKO=7.757; KSYC=7.192; KZZZ=6.666																	
-2004013	APP	Lovelock	NV	1490	.250	2504.2	2512.2	276.4 76.6	41.8 50.9	.0 .0	6.20	19.671	26.070	6.518	9999.9	40.6	52497.7
KOWL=13.842; KBLF=10.553; KSYC=9.165; KCID=9.133; KTOB=8.641; KRKC=6.914; KRNR=6.713; KWAC=6.463																	
-2004012	APP	Lovelock	NV	1490	.250	2503.3	2511.2	276.4 76.6	41.9 50.9	.0 .0	6.20	19.663	26.056	6.514	9999.9	40.8	52459.4
KOWL=13.831; KBLF=10.541; KSYC=9.177; KCID=9.163; KTOB=8.610; KRKC=6.881; KRNR=6.728; KBKR=6.447																	
-2004102	APP	Spring Creek	NV	1490	1.000	2255.2	2264.0	276.6 78.7	42.0 51.2	.0 1.0	7.65	17.232	23.230	5.808	9999.9	41.7	37905.9
KYFO=10.922; KCID=10.128; KOWL=8.664; KRTK=8.093; KUGR=7.610; KBKR=6.884; KDBM=6.205; KBLF=5.780																	
-2004013	APP	Spring Creek	NV	1490	.250	2259.8	2268.7	276.8 78.8	42.0 51.2	.0 .9	7.60	17.211	23.257	5.814	9999.9	42.4	38191.3
KYFO=10.793; KCID=10.186; KOWL=8.717; KRTK=8.085; KUGR=7.550; KBKR=7.010; KDBM=6.240; KBLF=5.851																	
WCSS	LIC	Amsterdam	NY	1490	1.000	1195.1	1211.7	77.8 267.5	42.5 53.7	4.2 8.6	23.93	25.647	41.057	10.264	9999.9	203.8	21243.0
WDLC=13.303; WKVT=13.053; WFAD=12.725; WICY=12.187; WMRC=12.040; WEMU=12.031; WCDO=11.858; WACM=11.778; WCCM=11.537; WIKE=10.781; WNBT=10.364; WGCH=10.104																	

**Datworld  
Bethesda, MD**

Datworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
WBTA	LIC	Batavia	NY	1490	.710	870.0	892.7	76.3 263.3	42.4 53.4	7.4 13.4	43.30	20.143	32.802	8.201	9468.7	211.6	9257.1
WNBT=13.178; WCDO=11.077; WPRR=10.460; WOHI=9.662; WCSS=9.533; WDLC=9.254; WKNY=9.243; CFPS=9.198; WARK=9.179; WJMO=8.802; WICY=8.281																	
WKNY	LIC	Kingston	NY	1490	1.000	1209.4	1225.9	83.3 273.0	42.0 53.2	4.1 8.4	24.10	25.786	40.740	10.185	9999.9	160.0	20970.5
WKVT=13.431; WMRC=12.882; WBCB=12.780; WCSS=12.460; WCDO=11.939; WFAD=11.635; WCCM=11.568; WACM=11.064; WDLC=11.046; WNB=10.946; WEMJ=10.922; WGCH=9.979																	
WICY	LIC	Malone	NY	1490	1.000	1214.8	1231.1	67.8 257.7	43.4 54.6	4.0 8.4	21.81	24.790	34.622	8.655	9999.9	278.5	19565.0
WIKE=12.649; WCSS=12.346; CKLO=12.328; WFAD=12.254; WKVT=11.006; WEMJ=10.709; WKNY=9.737; WCDO=9.430; WCCM=9.119; WBAE=9.023																	
WDLC	LIC	Port Jervis	NY	1490	1.000	1158.9	1176.0	86.6 275.8	41.7 52.8	4.5 9.0	26.61	25.491	39.245	9.811	9999.9	132.9	18300.2
WCSS=13.269; WBCB=13.218; WNBT=12.385; WKVT=12.069; WCDO=11.999; WACM=11.782; WMRC=11.126; WLPA=10.066; WARK=9.877; WESB=9.854; WCCM=9.802; WFAD=9.579																	
WCDO	LIC	Sidney	NY	1490	1.000	1095.0	1113.1	81.3 270.1	42.1 53.3	5.0 9.8	28.88	25.473	39.619	9.905	9999.9	175.3	16972.4
WNBT=13.183; WDLC=13.034; WCSS=12.679; WKVT=12.018; WBCB=11.873; WFAD=11.060; WACM=11.016; WESB=10.488; WGCH=10.439; WICY=10.385; WOLF=10.320; WBTA=10.140																	
WOLF	CP	Syracuse	NY	1490	1.000	1034.3	1053.4	76.7 265.1	42.5 53.6	5.6 10.7	31.53	25.090	37.715	9.429	9999.9	210.8	14742.9
WCSS=13.205; WNBT=13.087; WDLC=12.427; WICY=11.376; WKNY=11.287; WCDO=11.161; WBTA=11.148; WFAD=10.829; WESB=10.400; WKVT=10.341; WBCB=9.184																	
WOLF	LIC	Syracuse	NY	1490	1.000	1034.3	1053.4	76.7 265.1	42.5 53.6	5.6 10.7	31.53	25.090	37.715	9.429	9999.9	210.8	14742.9
WCSS=13.205; WNBT=13.087; WDLC=12.427; WICY=11.376; WKNY=11.287; WCDO=11.161; WBTA=11.148; WFAD=10.829; WESB=10.400; WKVT=10.341; WBCB=9.184																	
WTYX	LIC	Watkins Glen	NY	1490	.400	972.7	993.1	81.0 268.9	42.1 53.2	6.2 11.6	35.98	24.172	36.378	9.094	9999.9	175.9	12462.8
WDLC=12.814; WCSS=12.222; WCDO=11.944; WKNY=11.315; WPRR=11.052; WBTA=10.844; WOLF=10.517; WBCB=10.415; WNBT=10.068; WARK=9.849; WICY=9.050																	
WBEX	LIC	Chillicothe	OH	1490	1.000	536.0	572.1	116.0 299.6	40.5 51.4	13.8 22.8	100.04	26.538	39.872	9.968	4981.9	60.9	4921.0
WSWW=13.678; WFKY=13.440; WSGB=13.356; WTCS=12.577; WOHI=12.237; WAEY=11.946; WMOA=11.648; WOPI=11.059; WABJ=11.024; WFX=10.912; WCLU=9.721																	
WJMO	LIC	Cleveland Height	OH	1490	1.000	582.3	615.7	88.4 273.1	41.6 52.5	12.6 21.0	85.82	25.536	36.971	9.243	5384.7	108.3	5276.4
WOHI=13.399; WABJ=13.104; WMOA=12.417; WTCS=12.109; WPRR=11.699; WESB=10.642; WSGB=10.061; WMPX=9.850; WKBV=9.810; WSWW=9.317; WARK=9.129																	
WOHI	LIC	East Liverpool	OH	1490	1.000	678.2	707.0	96.3 281.6	41.2 52.2	10.5 17.9	68.89	26.041	37.579	9.395	6818.9	53.2	6765.7
WPRR=13.774; WSGB=13.058; WTCS=12.839; WMOA=12.371; WSWW=11.618; WESB=10.520; WABJ=10.347; WNBT=10.260; WARK=9.939; WAEY=9.439; WKBV=9.389																	

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WMOA	LIC	Marietta	OH	1490	1.000	648.4	678.5	109.4 294.1	40.6 51.5	11.1 18.8	75.38	26.337	39.029	9.757	6471.6	38.1	6433.5
WOHI=13.872; WAEY=13.066; WSWW=12.919; WSGB=12.791; WPRR=12.458; WTCS=12.074; WOPI=10.925; WFKY=10.526; WKBV=10.219; WARK=10.037; WABJ=9.659																	
WMRN	LIC	Marion	OH	1490	1.000	470.8	511.6	101.4 285.0	41.1 52.0	15.9 25.8	117.79	25.529	36.156	9.039	3836.8	19.6	3817.1
WABJ=13.532; WOHI=13.077; WMOA=12.828; WTCS=11.535; WSWW=11.208; WNDV=11.122; WFKY=10.938; WSGB=10.869; WMPX=9.211; WPRR=9.143																	
KMFS	LIC	Guthrie	OK	1490	1.000	990.6	1010.6	233.1 47.6	38.8 49.1	6.0 11.3	41.11	19.845	29.062	7.266	8836.8	207.8	8629.0
KVWC=12.626; KDMO=11.444; KQTY=10.170; KPLT=9.702; KBIX=9.296; KTOP=9.134; KWXT=8.290; KKAN=7.705; KXAR=7.663																	
KBIX	LIC	Muskogee	OK	1490	.450	872.2	894.8	224.5 40.3	38.7 49.1	7.4 13.4	50.67	22.996	33.979	8.495	8382.2	229.2	8153.0
KMFS=13.998; KDMO=13.277; KWXT=12.513; KPLT=10.237; KXAR=9.780; KOTN=9.647; KTOP=9.567; KVWC=9.183; KTTR=8.951; KDRO=8.735																	
KBKR	LIC	Baker	OR	1490	1.000	2381.3	2389.7	288.5 88.3	44.1 53.2	.0 .4	5.72	19.768	26.139	6.535	9999.9	78.4	56994.5
KTEL=13.237; KYNR=11.688; KEYG=8.884; KDBM=8.470; KBZY=8.387; KLOG=7.393; KRNR=7.331; KSYC=6.481																	
-2004013	APP	Bend	OR	1490	.250	2656.4	2664.0	287.0 84.5	44.0 52.9	.0 .0	4.58	25.224	33.160	8.290	9999.9	75.5	90503.5
KRNR=13.492; KBZY=13.391; KSYC=11.739; KYNR=11.710; KBKR=11.421; KLOG=11.323; KTEL=10.609; KCID=9.599																	
-2004012	APP	Deschutes River	OR	1490	1.000	2664.8	2672.3	286.9 84.3	44.0 52.8	.0 .0	4.55	25.259	32.983	8.246	9999.9	75.3	90469.1
KRNR=13.542; KBZY=13.386; KSYC=11.974; KYNR=11.494; KLOG=11.289; KBKR=11.167; KTEL=10.359; KCID=9.506																	
-2004013	APP	Madras	OR	1490	.500	2642.8	2650.3	288.4 85.8	44.3 53.2	.0 .0	4.51	25.882	35.107	8.777	9999.9	78.2	97282.8
KYNR=13.273; KBZY=13.209; KRNR=12.852; KLOG=12.411; KBKR=11.958; KTEL=11.826; KSYC=10.088; KCID=9.519; KBRO=9.349																	
KRNR	APP	Roseburg	OR	1490	1.000	2839.4	2846.4	285.4 81.6	43.7 52.4	.0 .0	4.06	21.668	27.727	6.932	9999.9	71.8	85232.0
KSYC=13.979; KBZY=13.384; KLOG=9.744; KBLF=9.730; KYNR=9.730; KCID=7.730; KCID=7.084; KBKR=6.933; KWOK=6.828																	
KRNR	LIC	Roseburg	OR	1490	1.000	2837.6	2844.6	285.5 81.6	43.7 52.5	.0 .0	4.06	21.722	27.795	6.949	9999.9	72.0	85449.2
KSYC=13.969; KBZY=13.412; KLOG=9.842; KBLF=9.646; KYNR=9.646; KYNR=9.646; KCID=7.808; KCID=7.106; KBKR=6.978; KWOK=6.893																	
KBZY	LIC	Salem	OR	1490	1.000	2792.2	2799.3	289.4 85.4	44.6 53.3	.0 .0	3.87	24.485	32.368	8.092	9999.9	79.9	104351.7
KRNR=13.478; KLOG=12.655; KYNR=11.730; KWOK=10.959; KBRO=10.873; KSYC=9.723; KBIS=9.647; KTEL=8.790; KBKR=8.068																	

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WESB	LIC	Bradford	PA	1490	1.000	828.5	852.3	83.7 270.4	41.9 52.9	8.0	14.2	48.25	22.334	35.712	8.928	9251.8	152.1	9099.8
WPRR=13.514; WOHI=12.713; WNB=12.433; WTC=10.846; WBTA=10.593; WCDO=10.447; WARK=9.843; WDLC=9.533; WMOA=9.297; WJMO=9.099; WKNY=8.974																		
-2004012	APP	Du Bois	PA	1490	1.000	818.7	842.8	90.2 276.7	41.5 52.5	8.1	14.4	50.10	25.893	37.004	9.251	9231.9	101.0	9130.9
WOHI=13.750; WNB=13.271; WTC=13.001; WPRR=11.672; WMOA=11.138; WBTA=10.877; WSG=10.224; WLPA=9.455; WCDO=9.415; WMRN=9.335; WDLC=9.314																		
WAZL	LIC	Hazleton	PA	1490	1.000	1057.3	1076.1	89.7 278.0	41.4 52.6	5.4	10.3	31.99	26.004	37.286	9.321	9999.9	107.4	14462.9
WNB=13.277; WBCB=13.135; WDLC=13.012; WCDO=12.572; WPRR=11.912; WCSS=11.356; WKNY=11.351; WGCH=10.684; WESB=10.670; WACM=9.293																		
WPRR	LIC	Johnstown	PA	1490	1.000	826.3	850.2	96.5 282.9	41.1 52.1	8.0	14.3	50.16	26.092	37.480	9.370	9340.2	53.6	9286.6
WOHI=13.774; WTC=13.064; WNB=12.823; WSG=12.489; WMOA=12.355; WSWW=10.189; WPAK=10.065; WLPA=9.860; WESB=9.569; WMRN=9.523; WBCB=9.313																		
WLPA	LIC	Lancaster	PA	1490	.600	1046.4	1065.4	95.2 283.3	41.0 52.1	5.5	10.5	33.32	26.135	37.688	9.422	9999.9	64.5	14075.3
WDLC=13.297; WBCB=13.137; WPRR=12.930; WNB=12.902; WKNY=11.040; WCDO=10.797; WESB=10.604; WTC=10.282; WAZL=9.698; WGCH=9.683; WPAK=9.639																		
-2004012	APP	Lemont	PA	1490	1.000	904.8	926.6	91.9 279.0	41.3 52.4	7.0	12.8	42.48	25.018	38.763	9.691	9999.9	88.8	11318.4
WNB=12.554; WPRR=12.536; WOHI=12.508; WTC=12.438; WBCB=11.499; WDLC=11.402; WCDO=10.710; WBTA=10.255; WLPA=10.208; WMOA=9.984; WKNY=9.889; WSG=9.638																		
WBCB	LIC	Levittown	PA	1490	1.000	1166.6	1183.6	93.2 282.2	41.1 52.2	4.4	8.9	27.14	23.831	36.939	9.235	9999.9	80.5	16932.2
WDLC=13.507; WKNY=11.526; WCDO=11.284; WNB=11.194; WGCH=10.934; WTOP=10.382; WCSS=10.159; WACM=9.933; WLPA=9.774; WARK=9.739; WPRR=9.516; WESB=9.299																		
WMGW	LIC	Meadville	PA	1490	1.000	700.1	728.1	86.8 272.4	41.7 52.7	10.0	17.3	64.30	25.547	36.038	9.010	7005.5	125.3	6880.2
WPRR=13.590; WOHI=13.010; WTC=12.520; WNB=11.915; WMOA=11.723; WBTA=10.623; WABJ=10.201; WARK=9.947; WSG=9.843; WMRN=9.795																		
-2004012	APP	State College	PA	1490	.250	902.3	924.2	92.0 279.1	41.3 52.4	7.0	12.8	42.69	25.060	38.745	9.686	9999.9	87.8	11256.1
WNB=12.660; WOHI=12.585; WTC=12.513; WPRR=12.360; WBCB=11.438; WDLC=11.315; WCDO=10.628; WBTA=10.226; WLPA=10.222; WMOA=10.061; WKNY=9.826; WSG=9.722																		
-2004012	APP	State College	PA	1490	.250	904.0	925.9	92.0 279.1	41.3 52.4	7.0	12.8	42.54	25.038	38.760	9.690	9999.9	88.3	11299.6
WNB=12.604; WOHI=12.534; WPRR=12.470; WTC=12.468; WBCB=11.483; WDLC=11.372; WCDO=10.677; WBTA=10.237; WLPA=10.211; WMOA=10.013; WKNY=9.866; WSG=9.673																		
WNB	LIC	Wellsboro	PA	1490	1.000	938.7	959.8	85.1 272.7	41.8 52.9	6.6	12.2	38.94	24.784	36.987	9.247	9999.9	142.6	11729.3
WPRR=13.103; WDLC=12.655; WCDO=12.468; WBTA=11.266; WBCB=11.194; WKNY=11.040; WCSS=10.690; WOHI=10.484; WLPA=9.996; WTC=9.749; WARK=9.353																		



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WDEP	CP	Ponce	PR	1490	.790	3353.5	3359.5	134.9 326.1	30.2 41.6	.0 .0	5.38	5.080	6.871	1.718	9999.9	77.8	15882.8
HJAY=2.987; YVSQ=2.960; HOR 43=2.851; HJOJ=2.325; BERMUDA=1.871; HJTC=1.801; HJBS=1.769; ANGUILLA=1.756; WMDD=1.744																	
WDEP	LIC	Ponce	PR	1490	1.000	3353.5	3359.4	134.9 326.1	30.2 41.6	.0 .0	5.38	5.080	6.871	1.718	9999.9	77.8	15882.7
HJAY=2.987; YVSQ=2.960; HOR 43=2.851; HJOJ=2.325; BERMUDA=1.871; HJTC=1.801; HJBS=1.769; ANGUILLA=1.756; WMDD=1.744																	
WVGB	LIC	Beaufort	SC	1490	1.000	1234.3	1250.4	142.9 327.7	37.1 48.1	3.9 8.2	29.12	24.364	38.914	9.728	9999.9	55.3	16650.8
WJDJ=13.031; WGCD=12.269; -2000102=11.689; WQSY=11.689; WSYL=11.584; WPCI=11.182; WKUN=11.097; WWIL=10.626; WAZZ=10.516; WSTP=10.354; WSFB=10.311; WNDA=10.065																	
-2004012	APP	Cameron	SC	1490	1.000	1129.6	1147.2	139.7 324.5	37.6 48.6	4.7 9.4	33.37	26.736	42.477	10.619	9999.9	65.8	15844.3
WPCI=13.642; WGCD=13.451; WVGB=13.189; WSYL=13.184; WJDJ=12.633; WKUN=12.189; WWIL=12.089; WSTP=11.943; WSVN=11.813; WCHM=11.233; -2000102=10.650; WQSY=10.650																	
-2004102	APP	Cameron	SC	1490	1.000	1129.4	1147.0	139.7 324.5	37.6 48.6	4.7 9.4	33.38	26.740	42.479	10.620	9999.9	65.8	15841.7
WPCI=13.644; WGCD=13.447; WVGB=13.195; WSYL=13.189; WJDJ=12.626; WKUN=12.189; WWIL=12.091; WSTP=11.943; WSVN=11.818; WCHM=11.235; -2000102=10.647; WQSY=10.647																	
WGCD	LIC	Chester	SC	1490	1.000	1001.5	1021.2	137.4 322.0	38.2 49.2	5.9 11.2	40.27	26.127	44.413	11.103	9999.9	71.9	13714.8
WSVM=13.167; WSYL=13.106; WCHM=13.073; WLOE=12.907; WPCI=12.821; WKUN=12.809; WJDJ=12.670; WOPJ=12.122; WVGB=11.992; WYYZ=11.590; WAEY=11.384; WWIL=11.173; WFXV=11.018																	
WPCI	LIC	Greenville	SC	1490	1.000	922.5	943.9	142.2 326.0	38.3 49.2	6.8 12.4	46.15	27.061	45.867	11.467	9999.9	57.8	12366.9
WKUN=13.858; WYYZ=13.743; WSVN=13.302; WFXV=13.209; WJDJ=13.067; WITA=12.940; WCHM=12.844; WGCD=12.685; WSYL=12.514; WCSV=12.138; WOPI=11.832; WSTP=11.564; WJOC=11.392																	
WJDJ	LIC	Hartsville	SC	1490	1.000	1095.6	1113.7	134.3 319.6	38.0 49.1	5.0 9.8	34.67	26.574	42.251	10.563	9999.9	78.3	15153.4
WWIL=13.704; WPCI=13.466; WSVN=13.061; WSYL=12.901; WLOE=12.889; WVGB=12.833; WGCD=12.565; WWNB=11.695; WOPI=11.256; WKUN=10.558; WRMT=10.477; WCHM=10.277																	
KFCR	LIC	Custer	SD	1490	.830	1246.1	1262.0	286.0 95.8	42.9 52.9	3.8 8.0	23.17	17.439	23.114	5.779	9999.9	73.1	12397.5
KGOS=13.245; KNDC=11.345; KBSR=7.678; KCFC=7.322; KUGR=7.105; KXRE=5.802; KKAN=5.782																	
KORN	LIC	Mitchell	SD	1490	1.000	803.4	827.9	290.2 103.8	42.7 53.0	8.3 14.7	50.66	19.163	24.872	6.218	6136.9	79.9	6057.0
KOMJ=10.314; KXRA=9.648; KLGR=9.276; KSTP=9.038; KRIB=8.694; KOVC=8.555; KKAN=7.576; KNDC=6.727																	

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Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
WJOC	LIC	Chattanooga	TN	1490	1.000	781.8	807.0	157.2 339.2	38.3 49.2	8.7 15.2	60.24	27.799	46.601	11.650	9669.9	23.9	9646.0
WJAF=14.120; WJJM=13.886; WCHM=13.855; WKUN=13.734; WCLU=13.374; WFXV=13.310; WITA=13.051; WRLA=12.866; WPCJ=12.506; WCKD=12.084; WDXL=11.843; WCSV=11.498; WYYZ=11.494																	
WCSV	LIC	Crossville	TN	1490	1.000	698.2	726.3	152.6 334.8	38.8 49.6	10.1 17.3	70.91	27.592	45.863	11.466	8084.3	23.8	8060.5
WJJM=14.097; WFXV=13.886; WYYZ=13.794; WCLU=13.398; WCHM=13.336; WJAF=13.067; WFKY=12.695; WKUN=12.386; WPCJ=12.347; WOPJ=11.882; WDXL=11.451; WCKD=11.349; WITA=11.197																	
WITA	LIC	Knoxville	TN	1490	1.000	742.0	768.5	145.7 328.7	38.8 49.7	9.3 16.2	64.50	27.663	45.322	11.330	8783.7	46.2	8737.5
WPCJ=13.995; WCHM=13.900; WYYZ=13.791; WCLU=13.639; WKUN=13.002; WSVN=12.750; WJJM=12.506; WFKY=12.410; WCKD=11.608; WGCD=11.412; WOPI=11.373; WAEY=11.321; WSTP=11.149																	
WCKD	CP	Lebanon	TN	1490	1.000	631.5	662.4	160.8 342.3	38.9 49.7	11.4 19.3	82.27	26.676	42.803	10.701	6503.1	38.3	6464.8
WJAF=13.935; WDXL=13.732; WFXV=13.008; WYYZ=12.636; WFKY=12.601; WITA=12.594; WCSV=12.288; WKRO=11.994; WJJM=11.732; WTUP=11.387; WCLU=11.338; WCHM=10.600																	
WCKD	CP	Lebanon	TN	1490	1.000	630.8	661.8	160.6 342.1	38.9 49.7	11.4 19.3	82.39	26.684	42.787	10.697	6491.8	37.1	6454.7
WJAF=13.907; WDXL=13.705; WFXV=13.064; WFKY=12.653; WYYZ=12.644; WITA=12.628; WCSV=12.204; WKRO=11.954; WJJM=11.887; WTUP=11.325; WCLU=11.187; WCHM=10.625																	
WJJM	LIC	Lewisburg	TN	1490	1.000	700.0	728.0	166.4 347.5	38.5 49.3	10.0 17.3	71.19	27.198	42.502	10.625	7462.6	71.4	7391.3
WCLU=13.813; WDXL=13.578; WCSV=13.563; WTUP=13.440; WYYZ=12.980; WJAF=12.261; WKRO=11.904; WITA=11.482; WRLA=11.230; WFXV=11.165; WKUN=10.644; WCHM=10.498																	
WDXL	LIC	Lexington	TN	1490	1.000	661.6	691.2	178.4 358.5	38.6 49.3	10.8 18.4	77.44	27.996	40.312	10.078	6506.9	139.5	6367.4
WJAF=14.095; WKRO=14.067; WJJM=13.943; KDRS=13.886; WTUP=13.729; WCLU=12.238; WCKD=11.793; WJOC=11.262; WCSV=11.185; WHOC=10.584																	
-2004012	APP	Alpine	TX	1490	1.000	1840.2	1851.0	232.2 43.3	36.2 46.2	.3 3.2	15.01	18.791	23.667	5.917	9999.9	214.3	19490.2
KWMC=11.434; KBST=11.260; KRUI=9.777; KZZN=8.560; KNEI=7.357; KLNT=6.627; KVWC=5.974																	
KFON	LIC	Austin	TX	1490	1.000	1500.9	1514.1	215.8 30.5	36.0 46.3	2.1 5.7	21.77	22.749	29.472	7.368	9999.9	249.5	16670.3
KNEI=12.087; KHVL=11.803; KWMC=10.831; KWUD=10.714; KLNT=9.132; KBST=8.508; KIBL=8.422; KVWC=8.023; KPLT=7.745																	
KIBL	LIC	Beeville	TX	1490	1.000	1684.1	1695.9	212.3 27.0	35.1 45.4	1.1 4.3	18.18	22.681	25.907	6.477	9999.9	251.8	17559.4
KFON=13.156; KHVL=10.922; KWMC=10.888; KLNT=10.172; KNEI=9.101; KWUD=8.598																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)			
KBST=13.585; KVWC=11.714; KNEL=11.354; KWMC=10.608; KQTY=9.764; KRUI=9.099; KFON=8.227																				
KQTY	LIC	Borger	TX	1490	1.000	1287.7	1303.2	243.6	55.5	38.8	48.9	3.5	7.6	26.26	21.751	29.863	7.466	9999.9	156.5	14059.6
KZZN=13.514; KVWC=12.613; KRTN=11.463; KMFS=9.770; KBST=9.392; KRSN=8.049; KRUI=7.860; KXRE=7.425; KKAN=7.299																				
KNEL	LIC	Brady	TX	1490	1.000	1504.8	1518.0	222.9	36.5	36.5	46.7	2.1	5.6	21.41	22.425	30.579	7.645	9999.9	240.5	17612.4
KFON=13.379; KBST=12.841; KWMC=12.609; KVWC=10.632; KHVL=10.334; KIBL=8.506; KZZN=8.475; KLNT=8.256																				
KWMC	LIC	Del Rio	TX	1490	1.000	1750.1	1761.5	223.0	35.8	35.6	45.7	.8	3.8	16.73	21.321	25.971	6.493	9999.9	240.7	19160.7
KNEL=11.141; KBST=10.603; KFON=10.497; KLNT=10.385; KIBL=8.814; KHVL=7.452; KZZN=6.658; KVWC=6.510																				
KHVL	LIC	Huntsville	TX	1490	1.000	1360.6	1375.2	209.4	25.3	36.2	46.6	3.0	6.9	25.70	21.036	30.174	7.544	9999.9	250.2	14427.8
KFON=12.973; KWUD=12.446; KEUN=10.923; KRUS=10.391; KPLT=9.314; KNEL=8.627; KIBL=8.605; KXAR=8.374; WRTM=7.392																				
KLNT	LIC	Laredo	TX	1490	1.000	1852.4	1863.2	215.7	29.5	34.7	44.9	.3	3.2	15.49	18.250	24.119	6.030	9999.9	250.2	19211.1
KWMC=12.865; KFON=9.893; KIBL=8.347; KNEL=7.936; KHVL=7.751; XEGG=7.133; KBST=6.244; XEAR=5.979																				
KZZN	LIC	Littlefield	TX	1490	1.000	1474.0	1487.6	239.2	50.8	38.0	48.0	2.3	5.9	21.24	25.174	29.259	7.315	9999.9	190.9	17027.3
KBST=13.602; KQTY=13.313; KVWC=11.947; KRUI=11.346; KRTN=9.655; KRSN=8.518; KNEL=7.525																				
-2004012	APP	Marathon	TX	1490	.250	1822.5	1833.5	230.7	42.1	36.1	46.1	.4	3.4	15.33	19.406	25.406	6.352	9999.9	218.1	20499.0
KWMC=12.693; KBST=11.662; KRUI=8.915; KZZN=8.425; KNEL=8.091; KLNT=7.294; KFON=6.399; KVWC=6.187																				
-2004012	APP	Marathon	TX	1490	.250	1887.9	1898.5	232.9	43.7	36.1	46.1	.1	3.0	14.35	17.508	22.052	5.513	9999.9	212.9	18990.7
KWMC=10.442; KBST=10.049; KRUI=9.824; KZZN=7.882; KNEL=6.526; KLNT=6.271; KCUZ=5.975																				
KPLT	LIC	Paris	TX	1490	1.000	1074.2	1092.7	216.9	32.6	37.7	48.0	5.2	10.1	37.02	22.375	32.681	8.170	9999.9	245.0	10790.5
KRUS=11.520; KMFS=11.326; KHVL=11.030; KWXT=10.862; KVWC=10.370; KWUD=10.295; KOTN=10.120; KXAR=9.544; KDMO=9.161; KBIX=8.741																				
KYZS	LIC	Tyler	TX	1490	1.000	1182.0	1198.8	212.1	28.1	37.0	47.4	4.3	8.8	32.02	21.937	34.177	8.544	9999.9	249.1	13092.6
KWUD=13.613; KRUS=12.783; KHVL=11.512; KFON=10.233; KXAR=9.998; KEUN=9.912; KOTN=9.349; KWXT=8.745; KVWC=8.734; WRTM=8.644; KPLT=8.309																				

KWUD=13.613; KRUS=12.783; KHVL=11.512; KFON=10.233; KXAR=9.998; KEUN=9.912; KOTN=9.349; KWXT=8.745; KVWC=8.734; WRTM=8.644; KPLT=8.309

**Datavorld**  
**Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	---Theta--- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KVWC	LIC	Vernon	TX	1490	1.000	1246.8	1262.8	232.0 45.4	38.0 48.2	3.8 8.0	28.51	24.226	29.472	7.368	9999.9	213.0	12710.2
KQTY=12.595; KMFS=12.490; KZZN=11.772; KBST=11.561; KNEL=9.232; KPLT=9.012; KHVL=7.632; KFON=7.551																	
KWUD	LIC	Woodville	TX	1490	1.000	1312.6	1327.7	205.3 21.8	36.2 46.6	3.3 7.4	27.31	21.002	31.022	7.756	9999.9	246.5	13950.7
KEUN=13.280; KRUS=12.442; KFON=10.485; WRTM=9.317; KJUN=9.193; KPLT=9.149; KXAR=9.052; WIKC=8.174; KOTN=7.692; KIBL=7.637																	
KYFO	LIC	Ogden	UT	1490	1.000	1944.0	1954.3	276.7 81.1	42.0 51.5	.0 2.6	10.32	16.513	20.328	5.082	9999.9	42.0	24577.8
KRTK=11.915; KCID=8.237; KDBM=7.929; KBSR=6.692; KPKE=6.346; KUGR=5.318; KCFC=5.214																	
-2004012	APP	Richfield	UT	1490	.250	2012.0	2022.0	268.9 73.6	40.8 50.2	.0 2.2	10.39	17.012	22.536	5.634	9999.9	16.8	27094.2
KYFO=12.025; KUGR=9.217; KPKE=7.737; KYCA=7.633; KZZZ=7.622; KRTK=6.172; KCID=5.785; KRSN=5.528																	
-2005011	APP	Richfield	UT	1490	1.000	2012.0	2022.0	268.9 73.6	40.8 50.2	.0 2.2	10.39	17.012	22.536	5.634	9999.9	16.8	27094.2
KYFO=12.025; KUGR=9.217; KPKE=7.737; KYCA=7.633; KZZZ=7.622; KRTK=6.172; KCID=5.785; KRSN=5.528																	
-2004102	APP	Santa Clara	UT	1490	1.000	2190.4	2199.5	265.1 69.2	40.0 49.4	.0 1.3	9.16	17.225	23.315	5.829	9999.9	31.7	31787.8
KZZZ=12.844; KYCA=11.478; KMET=7.568; KYFO=7.294; KUGR=6.869; KICO=6.850; KWAC=6.501																	
-2004012	APP	Santa Clara	UT	1490	1.000	2196.1	2205.2	265.3 69.2	40.0 49.4	.0 1.3	9.10	17.138	24.024	6.006	9999.9	31.0	32959.5
KZZZ=12.844; KYCA=11.345; KMET=7.614; KYFO=7.309; KUGR=6.849; KICO=6.846; KWAC=6.587; KOWL=5.906																	
-2004012	APP	Spanish Valley	UT	1490	1.000	1802.8	1813.9	265.8 72.3	40.5 50.1	.5 3.5	13.10	18.735	26.195	6.549	9999.9	28.4	24970.2
KPKE=13.386; KYFO=9.289; KUGR=9.249; KXRE=8.937; KRSN=8.911; KCFC=8.319; KRTN=7.640; KYCA=6.951																	
-2004102	APP	Spanish Valley	UT	1490	1.000	1802.8	1813.9	265.8 72.3	40.5 50.1	.5 3.5	13.10	18.735	26.195	6.549	9999.9	28.4	24970.2
KPKE=13.386; KYFO=9.289; KUGR=9.249; KXRE=8.937; KRSN=8.911; KCFC=8.319; KRTN=7.640; KYCA=6.951																	
-2000012	APP	St. George	UT	1490	1.000	2195.9	2205.0	264.9 68.9	40.0 49.3	.0 1.3	9.14	17.545	23.587	5.897	9999.9	32.7	32241.7
KZZZ=13.074; KYCA=11.700; KMET=7.725; KYFO=7.122; KICO=7.005; KUGR=6.765; KWAC=6.579																	
-2004013	APP	Augusta Springs	VA	1490	.250	884.0	906.3	112.8 298.8	39.9 51.0	7.3 13.1	46.74	27.649	42.312	10.578	9999.9	51.9	11264.3
WLOE=13.950; WAEY=13.914; WSGB=13.875; WTCS=13.555; WSWW=13.244; WPAK=12.879; WMOA=12.536; WPRR=12.383; WSTP=11.421; WOPI=11.232; WOHI=10.838																	

**Dataworld  
Bethesda, MD**

Dataworld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

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WOPI	LIC	Bristol	VA	1490	1.000	784.6	809.7	132.9 316.9	39.1 50.1	8.6 15.2	58.45	27.348	44.683	11.171	9556.6	79.7	9476.9
WPCI=13.902; WFXV=13.851; WLOE=13.473; WAEY=13.463; WSWW=13.390; WITA=13.032; WGCD=12.927; WSVN=12.810; WSGB=12.188; WCSV=12.094; WCHM=12.030; WFKY=11.349																	
WCVA	LIC	Culpeper	VA	1490	.680	966.0	986.5	107.4 294.2	40.2 51.2	6.3 11.7	39.82	26.250	39.897	9.974	9999.9	28.9	12494.3
WPAK=13.452; WTCS=13.209; WPRR=13.104; WSGB=12.726; WLOE=11.944; WAEY=11.246; WMOA=10.821; WDUR=10.415; WSWW=10.405; WOHI=10.117; WRMT=9.997; WLPA=9.870																	
WPAK	LIC	Farmville	VA	1490	1.000	995.7	1015.5	115.1 301.6	39.6 50.6	6.0 11.2	38.69	25.839	40.401	10.100	9999.9	59.9	12991.6
WLOE=14.081; WAEY=12.884; WSGB=12.402; WRMT=12.230; WNNB=12.115; WSTP=11.785; WTCS=11.754; WSWW=10.750; WAZZ=10.592; WOPI=10.550; WARK=10.068; WMOA=10.017																	
WLRT	LIC	Hampton	VA	1490	1.000	1165.7	1182.8	111.7 299.5	39.5 50.6	4.4 9.0	29.35	22.760	36.839	9.210	9999.9	48.0	15640.5
WPAK=13.824; WNNB=13.385; WRMT=12.155; WLOE=10.952; WTOP=10.951; WAZZ=10.602; WDUR=10.250; WARK=10.243; WWIL=10.071; WSTP=9.511; WCVA=9.219																	
-2004012	APP	Jolivet	VA	1490	1.000	900.3	922.3	112.0 298.1	40.0 51.0	7.1 12.8	45.28	27.559	41.770	10.442	9999.9	48.9	11481.4
WSGB=14.031; WLOE=13.823; WAEY=13.684; WTCS=13.575; WSWW=12.821; WPRR=12.515; WPAK=12.413; WMOA=12.279; WSTP=11.252; WOPI=10.885; WOHI=10.689																	
-2004012	APP	Plunketsville	VA	1490	.250	898.2	920.2	111.9 298.1	40.0 51.0	7.1 12.9	45.45	27.542	41.849	10.462	9999.9	48.6	11460.4
WSGB=14.024; WLOE=13.797; WAEY=13.688; WTCS=13.570; WSWW=12.856; WPRR=12.570; WPAK=12.546; WMOA=12.321; WSTP=11.229; WOPI=10.885; WOHI=10.757																	
WKVT	LIC	Brattleboro	VT	1490	1.000	1324.5	1339.5	78.6 269.4	42.5 53.7	3.2 7.2	19.53	25.477	40.358	10.089	9999.9	198.7	25637.0
WCSS=12.879; WMRC=12.742; WEMJ=12.678; WFAD=12.656; WDLC=12.069; WIKE=11.750; WCDO=11.173; WICY=11.159; WBAE=11.097; WCCM=10.960; WGCH=10.100; WKNY=10.064																	
WFAD	LIC	Middlebury	VT	1490	1.000	1286.1	1301.6	72.8 263.3	43.1 54.2	3.5 7.6	19.96	25.741	40.719	10.180	9999.9	243.3	25254.5
WEMJ=13.047; WKVT=13.037; WCSS=12.956; WIKE=12.432; WCCM=12.014; WMRC=11.632; WICY=11.631; WKNY=11.117; WACM=11.087; WBAE=10.916; WCDO=10.457; WTVL=10.272																	
WIKE	LIC	Newport	VT	1490	1.000	1374.6	1389.1	68.7 260.0	43.6 54.8	2.9 6.8	16.80	24.552	37.505	9.376	9999.9	273.1	27640.2
WEMJ=12.900; WFAD=12.220; WICY=12.127; WTVL=11.832; WKVT=11.696; WCCM=11.126; WBAE=10.826; WCSS=10.781; CKLO=10.478; CKBM=10.456; WMRC=9.522																	
KBRO	LIC	Bremerton	WA	1490	1.000	2754.0	2761.2	295.6 91.3	45.9 54.7	.0 .0	3.47	24.755	31.855	7.964	9999.9	83.7	114825.1
KLOG=12.861; KBIS=12.770; KYNR=12.649; KBZY=11.150; KWOK=11.056; KEYG=10.994; KTEL=8.923; CFWB=8.902																	
KBIS	LIC	Forks	WA	1490	1.000	2884.2	2891.1	296.5 90.8	46.2 54.9	.0 .0	3.00	23.902	28.404	7.101	9999.9	83.3	118245.7
KBRO=13.356; KLOG=11.794; CFWB=11.316; KWOK=11.216; KBZY=9.687; KYNR=9.005; KEYG=7.779																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

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Latitude: N 41° 34' 59.0"  
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Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	-- Azimuth -- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	--- Theta --- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin (mV/m)
KEYG	LIC	Grand Coulee	WA	1490	1.000	2484.6	2492.6	296.9 95.2	45.8 54.8	.0 .0	4.40	21.225	29.042	7.260	9999.9	83.1	82500.6
KYNR=13.026; KTEL=12.679; KBRO=10.958; KBKR=8.917; KLOG=8.573; CJPR=8.317; KBIS=8.053; KBZY=7.328; KWOK=7.225																	
KWOK	LIC	Hoquiam	WA	1490	1.000	2843.9	2850.9	294.2 89.2	45.7 54.4	.0 .0	3.30	24.845	30.879	7.720	9999.9	83.8	116732.9
KBRO=12.700; KBZY=12.613; KLOG=12.260; KBIS=12.108; KYNR=11.183; CFWB=8.439; KRNR=8.373; KEYG=8.356																	
KLOG	LIC	Kelso	WA	1490	1.000	2772.3	2779.5	292.2 88.0	45.1 53.9	.0 .0	3.70	25.974	33.032	8.258	9999.9	82.9	111410.0
KBRO=13.657; KYNR=13.277; KBIS=12.498; KBZY=12.474; KWOK=11.443; KRNR=10.672; KTEL=9.536; KEYG=8.983																	
KYNR	LIC	Toppenish	WA	1490	1.000	2574.8	2582.6	292.7 90.4	45.1 54.1	.0 .0	4.39	25.783	34.674	8.669	9999.9	83.3	98711.8
KTEL=13.312; KEYG=13.008; KBRO=12.649; KLOG=12.584; KBZY=11.914; KBKR=11.749; KWOK=9.733; KBIS=9.335; KCID=8.700																	
KTEL	LIC	Walla Walla	WA	1490	1.000	2421.4	2429.6	291.9 91.1	44.8 53.9	.0 .2	5.18	23.038	30.320	7.580	9999.9	82.7	73102.0
KYNR=13.660; KBKR=13.576; KEYG=12.643; KCID=10.035; KBZY=8.870; KLOG=8.856; KBRO=8.613; KDBM=7.519																	
WGEZ	LIC	Beloit	WI	1490	1.000	107.1	226.9	341.4 161.2	42.0 52.7	53.1 65.6	392.09	20.283	32.038	8.009	1021.4	21.0	1000.4
WLFN=12.229; WNDV=12.073; WZOE=10.776; WIGM=9.995; WPNA=9.732; KRIB=9.598; WOSH=8.468; KBUR=8.183; WKBV=8.143; WESL=7.888; WABJ=7.816																	
WLFN	LIC	La Crosse	WI	1490	1.000	329.8	385.7	320.1 138.3	42.7 53.3	22.8 35.2	177.88	21.524	29.515	7.379	2074.0	18.0	2056.1
WGEZ=12.220; KRIB=10.732; WIGM=10.228; WOSH=9.705; KQDS=9.383; KBUR=8.273; KLGR=8.247; WZOE=8.128; KXLQ=7.702; KXRA=7.614																	
WIGM	LIC	Medford	WI	1490	1.000	422.2	467.2	341.1 159.9	43.4 54.0	17.9 28.6	129.00	20.056	28.569	7.142	2768.2	144.2	2624.0
WLFN=13.085; KQDS=11.590; KRIB=9.834; WGEZ=9.732; WTIQ=8.809; WOSH=8.782; WDBQ=7.818; KXRA=7.358; KLGR=7.017																	
WOSH	LIC	Oshkosh	WI	1490	1.000	273.9	339.2	1.2 181.3	42.8 53.5	27.1 40.5	215.50	21.153	30.850	7.712	1789.4	217.9	1571.5
WGEZ=13.355; WLFN=12.391; WIGM=10.749; WTIQ=10.378; WNDV=9.811; WPNA=9.166; WMPX=8.753; KRIB=8.575; WZOE=8.133																	
WSWW	LIC	Charleston	WV	1490	1.000	694.5	722.7	118.8 303.3	40.0 51.0	10.1 17.4	68.92	25.435	42.216	10.554	7656.2	69.3	7586.9
WTCS=13.572; WAEY=12.980; WLOE=12.175; WFXY=12.083; WOPI=11.874; WOHI=11.820; WFKY=11.619; WSGB=11.317; WSTP=11.074; WMOA=11.048; WPAK=11.027; WSWM=10.698; WSIP=10.524																	
WTCS	LIC	Fairmont	WV	1490	1.000	752.2	778.3	105.4 290.9	40.6 51.6	9.1 15.9	59.57	26.835	39.288	9.822	8244.0	20.6	8223.4
WPRR=13.781; WOHI=13.644; WSWW=13.595; WAEY=12.617; WSGB=12.601; WPAK=11.549; WMOA=10.794; WESB=10.472; WLOE=10.212; WMRN=10.026; WOPI=10.015																	

**Datavorld  
Bethesda, MD**

Datavorld AM Night Permissible Radiation Study

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Call	Auth	City	St	Freq (kHz)	Power (kW)	GC Dist. (km)	Slant Dist. (km)	--Azimuth-- To From (deg) (deg)	Mid-Pt Lat GC GMag (deg) (deg)	----Theta---- Min Max (deg) (deg)	S.W. Mult. (uV/m)	50% Limit (mV/m)	25% Limit (mV/m)	Req'd Prot. (mV/m)	Permis Rad. (mV/m)	Current Rad. (mV/m)	Margin
WAEG	LIC	Princeton	WV	1490	1.000	794.3	819.1	123.5 308.3	39.5 50.5	8.5 14.9	56.54	27.160	43.351	10.838	9583.6	79.1	9504.4
WLOE=14.092; WSGB=13.968; WSVN=13.331; WSWW=12.895; WPAK=12.821; WMOA=12.752; WTCS=12.684; WFXV=12.670; WSTP=11.542; WPCI=11.265; WGCD=11.066; WAZZ=10.518																	
WSGB	LIC	Sutton	WV	1490	1.000	744.7	771.1	113.3 298.4	40.2 51.2	9.3 16.1	61.41	25.906	40.556	10.139	8255.3	53.6	8201.7
WAEY=13.779; WOHI=13.058; WPRR=12.489; WPAK=12.439; WLOE=12.426; WOPI=11.848; WTCS=11.460; WSWW=10.944; WSTP=10.753; WMOA=10.347; WARK=10.144; WDUR=10.110																	
-2004013	APP	Casper	WY	1490	.250	1463.1	1476.7	281.4 89.4	42.6 52.4	2.3 6.0	17.45	19.806	26.488	6.622	9999.9	59.9	18915.5
KGOS=13.318; KFCR=10.830; KCFC=9.880; KBSR=9.224; KUGR=8.601; KXRE=7.405; KPKE=6.981; KNDC=6.836																	
-2004013	APP	Casper	WY	1490	.250	1473.2	1486.7	281.4 89.4	42.6 52.4	2.3 5.9	17.21	19.525	27.059	6.765	9999.9	60.0	19593.0
KGOS=13.162; KFCR=10.600; KCFC=9.779; KBSR=9.302; KUGR=8.441; KXRE=7.337; KPKE=6.982; KNDC=6.736; KYFO=6.723																	
-2004012	APP	Casper	WY	1490	.250	1467.4	1481.0	281.5 89.5	42.6 52.4	2.3 5.9	17.34	19.662	27.172	6.793	9999.9	60.3	19531.3
KGOS=13.238; KFCR=10.756; KCFC=9.780; KBSR=9.281; KUGR=8.556; KXRE=7.334; KPKE=6.941; KNDC=6.824; KYFO=6.620																	
KUGR	LIC	Green River	WY	1490	1.000	1729.4	1740.9	276.7 82.8	42.0 51.6	.9 4.0	13.02	18.570	25.232	6.308	9999.9	42.1	24183.8
KYFO=13.385; KRTK=9.391; KPKE=8.801; KCFC=8.413; KBSR=8.413; KXRE=7.552; KDBM=7.139; KXRE=7.025																	
-2005011	APP	Jackson	WY	1490	1.000	1824.9	1835.9	284.0 88.9	43.1 52.6	.4 3.3	10.90	20.927	25.451	6.363	9999.9	68.2	29118.1
KRTK=12.200; KDBM=12.047; KYFO=11.997; KBSR=9.872; KCID=7.988; KUGR=6.968																	
-2004013	APP	Jackson	WY	1490	.250	1818.4	1829.4	284.2 89.1	43.1 52.6	.4 3.4	10.96	20.798	25.337	6.334	9999.9	68.6	28821.8
KRTK=12.185; KDBM=12.050; KYFO=11.786; KBSR=9.865; KCID=7.891; KUGR=7.059																	
KGOS	LIC	Torrington	WY	1490	1.000	1293.9	1309.3	277.6 87.2	42.1 52.0	3.4 7.5	22.60	19.567	25.575	6.394	9999.9	46.0	14101.8
KCFC=12.128; KFCR=12.058; KXRE=9.507; KUGR=8.474; KPKE=7.472; KKAN=7.117; KNDC=6.896; KBSR=6.735																	

>> End of AM Night Permissible Radiation Study <<

**Dataworld**  
**Bethesda, MD**

Page 82  
Friday, August 26, 2005

Permissible Radiation Limit Summary

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Azimuth	Call	City	St	T-Min (deg)	T-Max (deg)	Rad. (mV/m)	Azimuth	Call	City	St	T-Min (deg)	T-Max (deg)	Rad. (mV/m)
0	WSPY	Millbrook	IL	.0	.0	.0	91	WISL	Shamokin	PA	5.8	11.0	196.9
	-2004102	Houghton	MI	11.8	19.9	3896.2		WKAP	Allentown	PA	5.0	9.7	1965.7
1	WOSH	Oshkosh	WI	27.1	40.5	1789.4		WLOA	Farrell	PA	10.5	18.0	2095.1
10	WBKV	West Bend	WI	35.0	49.3	2023.2	94	WDAS	Philadelphia	PA	4.6	9.3	219.4
20	WTIQ	Manistique	MI	14.3	23.4	3105.9	95	WHBC	Canton	OH	11.8	19.9	69.7
42	WODJ	Whitehall	MI	27.1	40.5	1951.2	96	WOHI	East Liverpool	OH	10.5	17.9	6818.9
56	WMPX	Midland	MI	17.8	28.5	2977.2	97	WHBC	Canton	OH	12.0	20.1	70.1
59	WGVU	Kentwood	MI	26.3	39.6	196.5		WPRR	Johnstown	PA	8.0	14.3	9340.2
63	WPNA	Oak Park	IL	62.4	72.5	996.3	98	WCNS	Latrobe	PA	8.6	15.1	110.6
65	CHRD	Drummondville	Ca	4.8	4.8	1712.8	99	WRSW	Warsaw	IN	31.1	45.1	47.1
	CHRD	Drummondville	Ca	4.8	4.8	1712.8		WTTR	Westminster	MD	5.9	11.2	3403.1
67	CKAN	Newmarket	Ca	11.8	11.8	853.9	101	WMRN	Marion	OH	15.9	25.8	3836.8
	CKDX	Newmarket	Ca	11.8	11.8	853.9	102	WCFJ	Chicago Heights	IL	60.2	70.9	1100.5
68	WFNT	Flint	MI	17.3	27.7	866.9		WCFJ	Dolton	IL	60.2	70.9	1100.5
73	WKLZ	Kalamazoo	MI	28.3	41.9	932.3	105	WTCS	Fairmont	WV	9.1	15.9	8244.0
	WLAM	Lewiston	ME	2.0	5.5	6108.5	106	WPWC	Dumfries-triangle	VA	5.8	11.0	208.8
76	WBTA	Batavia	NY	7.4	13.4	9468.7		WPWC	Dumfries-triangle	VA	5.8	11.0	208.8
78	WSDS	Plymouth	MI	18.0	28.8	147.3	109	WMOA	Marietta	OH	11.1	18.8	6471.6
	WSDS	Salem Township	MI	18.0	28.8	147.3	111	WTOX	Glen Allen	VA	5.5	10.6	192.4
81	WNYV	Ithaca	NY	5.9	11.1	5094.1	113	WSGB	Sutton	WV	9.3	16.1	8255.3
	WAZN	Marlborough	MA	2.7	6.5	7140.7	116	WBEX	Chillicothe	OH	13.8	22.8	4981.9
	WAZN	Watertown	MA	2.5	6.2	9023.3	119	WSWW	Charleston	WV	10.1	17.4	7656.2
	WAZN	Watertown	MA	2.5	6.2	9023.3	121	WKBV	Richmond	IN	20.7	32.3	2680.5
83	WABJ	Adrian	MI	19.8	31.2	2689.2	123	WAEY	Princeton	WV	8.5	14.9	9583.6
84	WSAR	Fall River	MA	2.4	6.1	326.1	126	WCIN	Cincinnati	OH	17.3	27.7	76.5
	WESB	Bradford	PA	8.0	14.2	9251.8		WWBG	Greensboro	NC	6.3	11.7	1726.2
85	WMMW	Meriden	CT	3.3	7.4	7126.2	127	WCIN	Cincinnati	OH	17.1	27.5	75.9
86	WNDV	South Bend	IN	35.7	50.0	1448.0	128	WSIP	Paintsville	KY	11.0	18.7	7357.4
87	WMGW	Meadville	PA	10.0	17.3	7005.5	133	WMDD	Fajardo	PR	.0	.0	2015.1
88	WLQR	Toledo	OH	17.7	28.3	951.3		WOPI	Bristol	VA	8.6	15.2	9556.6
	WJMO	Cleveland Heights	OH	12.6	21.0	5384.7	134	WGFY	Charlotte	NC	6.2	11.6	388.2
89	WZRC	New York	NY	4.0	8.3	247.1	139	WFKY	Frankfort	KY	15.3	24.9	4283.6
	WLQR	Walbridge	OH	18.0	28.7	942.3	141	WFXV	Middlesboro	KY	10.1	17.4	7948.0
90	-2004012	Du Bois	PA	8.1	14.4	9231.9	145	WGUS	Augusta	GA	5.3	10.2	191.1
							146	WITA	Knoxville	TN	9.3	16.2	8783.7



**Dataworld**  
**Bethesda, MD**

Permissible Radiation Limit Summary

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz

Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Azimuth	Call	City	St	T-Min (deg)	T-Max (deg)	Rad. (mV/m)	Azimuth	Call	City	St	T-Min (deg)	T-Max (deg)	Rad. (mV/m)
152	WDAN	Danville	IL	38.4	52.7	1395.9	194	XEQUB	Itepec	Mx	.0	.0	8999.1
153	CMHR	Florida	Cu	.0	.0	3258.4	195	KDRS	Paragould	AR	11.3	19.2	5830.6
	WCSV	Crossville	TN	10.1	17.3	8084.3	200	KLCL	Lake Charles	LA	3.2	7.2	3186.6
154	WCLU	Glasgow	KY	13.1	21.7	5542.2		XEVCB	Rio Blanco	Mx	.0	.0	7923.4
156	WPFR	Terre Haute	IN	29.0	42.8	25.9	201	KOTN	Pine Bluff	AR	7.4	13.4	8722.2
157	WJOC	Chattanooga	TN	8.7	15.2	9669.9		XEOU	Huajuapán De Leon	Mx	.0	.0	9465.6
158	WVOI	Marco Island	FL	.3	3.2	1759.3	202	WESL	East St. Louis	IL	21.3	33.1	2455.6
	WRGA	Rome	GA	7.5	13.5	3038.0		XEPR	Poza Rica	Mx	.0	.0	6921.6
161	WCKD	Lebanon	TN	11.4	19.3	6491.8	203	XE	Atlixco	Mx	.0	.0	8840.4
	WCKD	Lebanon	TN	11.4	19.3	6503.1	205	XEXC	Taxco	Mx	.0	.0	9906.4
163	WOMI	Owensboro	KY	16.9	27.2	3853.3	206	KLVL	Pasadena	TX	2.4	6.1	488.6
165	WVOL	Berry Hill	TN	11.7	19.7	1942.2		KLVL	Pasadena	TX	2.4	6.1	488.6
166	WJMM	Lewisburg	TN	10.0	17.3	7462.6	209	XEVIC	Cd.victoria	Mx	.0	.0	4172.6
169	WAJF	Decatur	AL	8.5	15.0	8848.4	210	XEGX	San Luis De La Paz	Mx	.0	.0	6772.7
173	TIAC	Puntarenas	Cs	.0	.0	6454.4		XEMC	Salvatierra	Mx	.0	.0	8341.1
175	XECCQ	Cancun	Mx	.0	.0	4972.6	211	KWXT	Dardanelle	AR	8.3	14.6	7778.6
	-2004012	Fayette	AL	7.3	13.2	9803.1		XEIP	Uruapan	Mx	.0	.0	8913.5
177	HREZ	Tegucigalpa	Ho	.0	.0	5838.8	215	WMBD	Peoria	IL	46.1	59.9	163.6
178	WABB	Mobile	AL	4.1	8.5	474.5		XETKR	Guadalupe	Mx	.7	.7	2763.5
	WDXL	Lexington	TN	10.8	18.4	6506.9		KTTR	Rolla	MO	15.4	25.1	3552.3
179	TGBH-056	Horizontes	Gt	.0	.0	685.7		XEZJ1	Guadalajara	Mx	.0	.0	8024.4
180	TGBH-050	Horizontes	Gt	.0	.0	679.3	216	KUOL	San Marcos	TX	1.8	5.3	7639.7
181	TGBH-021	Horizontes	Gt	.0	.0	522.1		KUOL	San Marcos	TX	1.8	5.3	7647.5
	WTUP	Tupelo	MS	8.2	14.5	8503.3	218	KNIT	Dallas	TX	4.0	8.3	339.3
182	TGBH-013	Horizontes	Gt	.0	.0	514.8	225	KBIX	Muskogee	OK	7.4	13.4	8382.2
183	TGBH-006	Horizontes	Gt	.0	.0	511.8	227	-2004012	San Angelo	TX	1.9	5.4	516.3
	WNAU	New Albany	MS	8.6	15.1	2632.7		KDMO	Carthage	MO	10.1	17.4	5751.7
	WNAU	New Albany	MS	8.6	15.1	2632.7	228	KYYW	Abilene	TX	2.6	6.4	3402.1
184	TGBH-003	Horizontes	Gt	.0	.0	511.5		KYYW	Abilene	TX	2.6	6.4	3402.1
185	TGBH-359	Horizontes	Gt	.0	.0	512.0	231	XEHM1	Cd.delicias	Mx	.3	.3	2083.0
186	TGBH-352	Horizontes	Gt	.0	.0	515.5	232	KDRO	Sedalia	MO	14.6	23.9	3938.6
	WKRO	Cairo	IL	14.7	24.1	4284.0	233	KMFS	Guthrie	OK	6.0	11.3	8836.8
187	TGBH-323	Horizontes	Gt	.0	.0	704.2	234	-2004012	Wink	TX	1.1	4.2	464.4
188	TGBH-307	Horizontes	Gt	.0	.0	749.6	236	XENS1	Navajoa	Mx	.0	.0	2561.2
	XE	Palenque	Mx	.0	.0	5148.5							

**Dataworld**  
**Bethesda, MD**

Permissible Radiation Limit Summary

**Title: Millbrook IL 1480 kHz**

Frequency: 1480 kHz  
Database: FCC

Latitude: N 41° 34' 59.0"  
Longitude: W 88° 36' 05.0"

Azimuth	Call	City	St	T-Min (deg)	T-Max (deg)	Rad. (mV/m)	Azimuth	Call	City	St	T-Min (deg)	T-Max (deg)	Rad. (mV/m)
243	KQAM	Wichita	KS	7.6	13.7	153.7	317	KLBP	Brooklyn Park	MN	13.5	22.3	5027.8
	XE	Hermosillo	Mx	.0	.0	2619.3	320	WLFN	La Crosse	WI	22.8	35.2	2074.0
244	KCZZ	Mission	KS	12.4	20.8	141.8	335	KQDS	Duluth	MN	11.3	19.1	4441.9
247	KTOP	Topeka	KS	10.8	18.4	4971.7	338	WLMV	Madison	WI	39.3	53.7	25.9
249	KBUR	Burlington	IA	31.7	45.7	1625.4	-2004012		Monona	WI	39.3	53.7	25.9
250	KAIR	Atchison	KS	12.6	21.0	1343.0	341	WGEZ	Beloit	WI	53.1	65.6	1021.4
	-2004013	Los Lunas	NM	.7	3.7	8636.2		WIGM	Medford	WI	17.9	28.6	2768.2
251	WZOE	Princeton	IL	61.8	72.0	946.1	348	-2004012	Ironwood	MI	13.3	22.0	3839.2
254	KPHX	Phoenix	AZ	.0	1.0	722.5	-2004102		Ironwood	MI	13.2	22.0	3850.1
	-2004013	Taos	NM	1.7	5.1	7949.5	-2004102		Ironwood	MI	13.2	22.0	3850.1
255	XEMCA	Cd.morelos	Mx	.0	.0	3469.9	360	-2004012	Houghton	MI	11.8	19.9	3896.1
261	KVNR	Santa Ana	CA	.0	.0	1090.3	>> End of Permissible Radiation Limit Summary <<						
265	KKAN	Phillipsburg	KS	6.8	12.4	7016.8							
268	KLMS	Lincoln	NE	10.5	18.0	88.9							
269	KXLQ	Indianola	IA	18.1	28.9	2742.8							
269	KOMJ	Omaha	NE	11.8	19.8	4400.5							
271	-2004012	Julesburg	CO	4.6	9.2	533.6							
	KYOS	Merced	CA	.0	.0	1630.2							
273	KABN	Concord	CA	.0	.0	4055.5							
278	KNFL	Tremonton	UT	.0	2.6	9817.4							
	KNFL	Tremonton	UT	.0	2.6	9817.4							
	KNFL	Tremonton	UT	.0	2.6	9817.4							
	KNFL	Tremonton	UT	.0	2.6	9818.3							
280	KGOE	Eureka	CA	.0	.0	1187.1							
281	KWSL	Sioux City	IA	11.0	18.6	1650.3							
	KKTY	Douglas	WY	2.8	6.6	2840.1							
290	KORN	Mitchell	SD	8.3	14.7	6136.9							
291	KBMS	Vancouver	WA	.0	.0	1992.9							
296	KRIB	Mason City	IA	18.2	28.9	2842.8							
301	WDBQ	Dubuque	IA	35.1	49.4	1435.0							
304	KAUS	Austin	MN	17.8	28.4	75.5							
	KLGR	Redwood Falls	MN	11.6	19.5	4821.7							
312	KOVC	Valley City	ND	6.4	11.9	7452.3							
314	CKER	Edmonton	Ca	.0	.0	1857.6							
	KXRA	Alexandria	MN	9.6	16.7	5602.8							

307(b)  
Engineering and Field Report in Support of  
Major Change to an Existing License  
400W Day 250W Night  
WSPY-AM  
1480 kHz  
Millbrook, Illinois  
for  
Nelson Multimedia, Inc.

October 2005  
Prepared by

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Lic # PG-18-9128

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Lic # PG00016571

**WSPY-AM**  
**Engineering Exhibits**  
**-307(b)-**  
**Millbrook, Illinois**

The following report was prepared for Nelson Multimedia, Inc. application ARN-20040127ACW for a construction permit for a major change to an existing AM station to be located at Millbrook, Illinois. All contours are based on FCC M-3 and population counts are based on the 2000 US Census. All photos were taken in 2005 by Larry and Pam Nelson.

**Proposed Coverage**

The following shows the day and night population of Day and Night contours of the proposed major change to the existing WSPY-AM station at Millbrook, Illinois 1480 – 400W Day, 250W Night.

<u>DAY</u>				<u>NIGHT</u>	
<u>Millbrook</u>		<u>Population</u>	<u>Sq. KM</u>	<u>Population</u>	<u>Sq. KM</u>
5 mv/m		36,256	646.3		
2 mv/m		68,432	1,606.2		
.5 mv/m		660,355	5,885.1		
5.429 mv/m				29,687	374.9

See the attached map “Millbrook, Illinois Population Study Coverage Map” and “Millbrook, Illinois Population Study Data”.

**Service to Community of Millbrook, Illinois**

Currently there is No AM or FM broadcast station licensed to Millbrook, Illinois. This proposed AM station on 1480 kHz would be the First Service to the community. The community of Millbrook receives non-local distant station contour service by more than 10 AM services 2 mv/m and FM stations 1 mv/m or better. See attached map “Millbrook, Illinois Service Map 307b” and data supporting the map “Millbrook, Illinois AM Service 307b Data” and “Millbrook, Illinois FM Service 307b Data”.

## **Population of Millbrook, Illinois and Additional Pertinent Profile Information on the Community**

Millbrook, Illinois is a growing community located in Kendall County. Millbrook, located on the shores of the Fox River, is a historic community with a long historical agricultural industry. In November 2004 Millbrook incorporated as the Village of Millbrook with an elected Village President, Treasurer, Clerk, and 6 Village Trustees. The community of Millbrook has a school, Millbrook Junior High School, with approximately 108 students.

Millbrook, Illinois has it's own US Post Office with approximately 195 boxes and it's own zip code of 60536. Millbrook has local civic and social organizations, and active and growing businesses. Among the community organizations are the Millbrook Mighty Ones 4-H Club and Millbrook Hunting Club. The community of Millbrook has held a city-wide auction every November for over 40 years raising thousands of dollars benefiting their volunteer Fire Department. The Fire Department expanded with a new building in 2004. Currently the Fire Department equipment includes an engine, a tanker, a command vehicle, a rescue truck and a grass truck. A new Fox Township building is now under construction on land recently annexed into the Village.

Some of the Millbrook businesses are Citizens Bank (formerly the Millbrook Bank), Winding Creek Nursery, Jellystone RV Resort, G.P. Drafting, Irvine Accounting Services, Tax & Accounting Service of Millbrook, Christian Robt Insurance, Monarch Homes, Beecher's Billiards, Crooked Tree Campground, Millbrook Insurance Associates, and Simply Stitches Quilting supplies.

## Millbrook, Illinois Population 2000

Since Millbrook incorporated in 2002, the U.S. Census 2000 did not breakout a population for Millbrook. To determine the approximate population of Millbrook the following census data was used:

Kendall county

Tract 8906

Block Group 3

Blocks 30+

3051

3050

3049

3048

3047

3046

3045

3033

3032

3031

3030

3029

3028

3027

3026

3025

3024

3023

3006

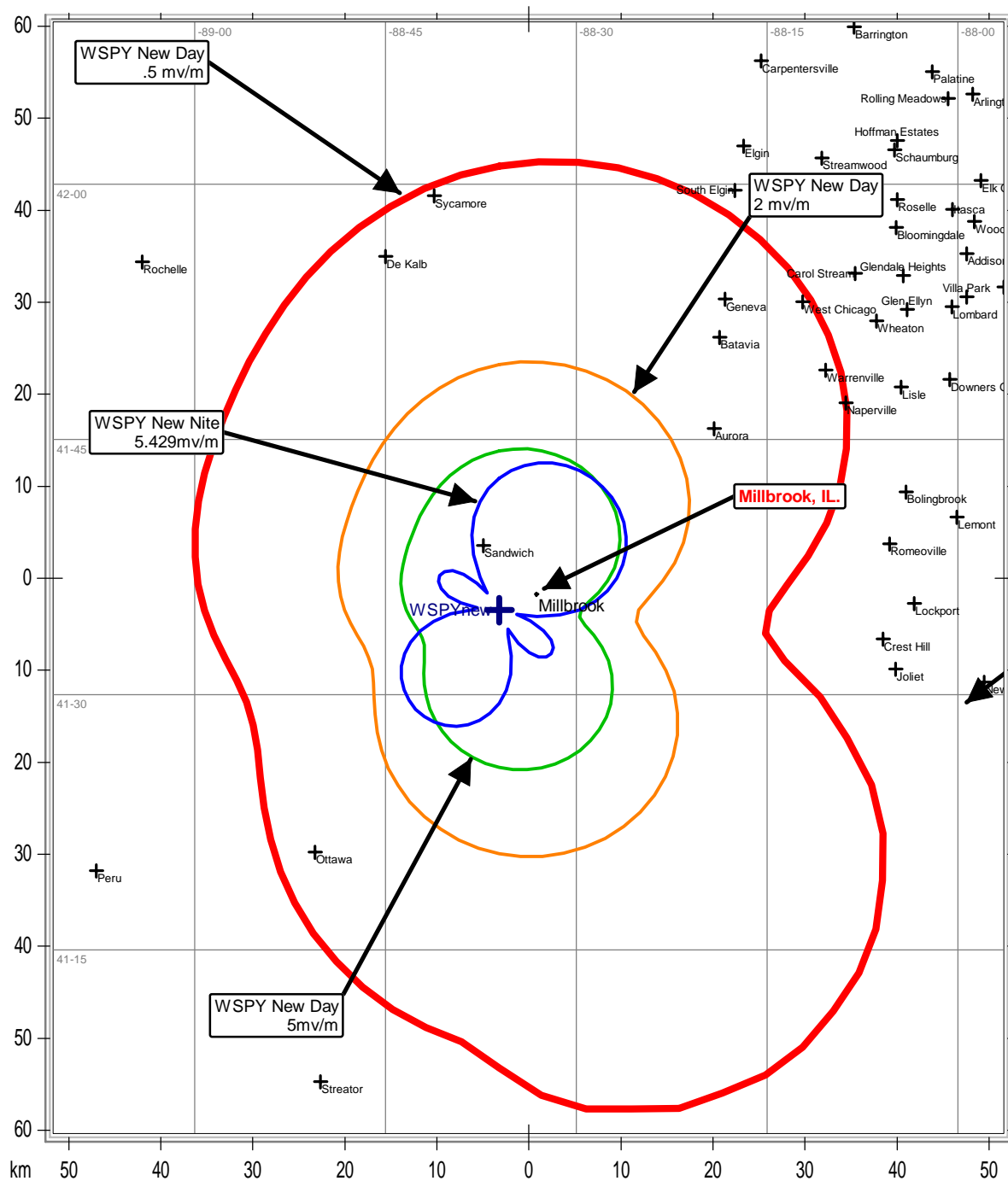
The above information indicates an approximate Millbrook population of 326.

## **Millbrook Illinois Photo Index**

**(Not all businesses are represented)**

- Photo pg 1     Millbrook 4-H Club sign on the Millbrook town limit sign  
                    Millbrook U.S. Post Office
- Photo pg 2     Millbrook Jr. High school sign  
                    Millbrook Jr. High school
- Photo pg 3     Overflow temporary classroom at Millbrook Jr. High School  
                    Millbrook's original Fire Dept. building
- Photo pg 4     Expansion of Fire Department building in Millbrook  
                    Fox Township Highway Department maintenance building located  
                    In Millbrook
- Photo pg 5     Millbrook United Methodist Church  
                    Formerly the Millbrook Bank, now owned by the Citizens Bank Group
- Photo pg 6     Winding Creek Nursery retail facility in Millbrook  
                    Jellystone Camp – RV Resort in Millbrook
- Photo pg 7     Millbrook Insurance Associates Agency  
                    Estates of Millbrook at the west edge of Millbrook

## Millbrook, IL. Population Study Coverage Map



State Borders      Lat/Lon Grid



# Millbrook iL 307b Pop Study Data

Callsign : WSPYnew  
 Coordinates : 41-34-59.0 N, 88-36-05.0 W  
 Comments :  
 Frequency (KHz): 1480  
 Power (w): 400.000  
 Pattern : AD  
 Efficiency : 209.911 mV/M  
 Desc : DA2  
 City/State : GENEVA, IL  
 ARN :  
 Licensee : NELSON MULTIMEDIA, INC.

Tower	Field	Phase	Spcng	Ornt	Hght	TopLd
1	1.000	0.0	0.0	0.0	87.0	0.0
2	1.128	252.8	153.4	215.1	87.0	0.0
3	1.569	152.6	122.0	184.3	87.0	0.0
4	0.856	18.3	64.9	265.7	87.0	0.0

Brng	Span	mV/M

## Field

Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m
0	292.101	75	153.843	150	305.565	225	138.778	300	144.079
5	301.773	80	128.372	155	310.751	230	122.585	305	150.463
10	309.255	85	106.100	160	312.422	235	108.792	310	158.356
15	314.305	90	91.343	165	310.777	240	98.373	315	168.048
20	316.716	95	89.177	170	306.070	245	92.153	320	179.579
25	316.314	100	100.742	175	298.585	250	90.397	325	192.753
30	312.958	105	121.794	180	288.622	255	92.563	330	207.188
35	306.545	110	147.462	185	276.485	260	97.499	335	222.392
40	297.018	115	174.557	190	262.475	265	103.933	340	237.830
45	284.375	120	201.183	195	246.888	270	110.820	345	252.978
50	268.678	125	226.147	200	230.022	275	117.465	350	267.352
55	250.071	130	248.647	205	212.183	280	123.514	355	280.518
60	228.796	135	268.131	210	193.711	285	128.909		
65	205.232	140	284.231	215	174.991	290	133.847		
70	179.952	145	296.736	220	156.487	295	138.728		

0.0 ohm K	: 90.082	1.0 ohm K	: 88.577
RMSS	: 220.657	RMSt	: 209.911
RSS	: 207.105		

Contour type : Ground wave  
 Signal strength : 0.500 mV/m  
 Area covered : 5885.100 sq. km  
 Population covered: 660353 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	292.10	0.500	48.33
5	301.77	0.500	48.98
10	309.25	0.500	49.48
15	314.31	0.500	49.83
20	316.72	0.500	49.99
25	316.31	0.500	49.97
30	312.96	0.500	49.74
35	306.55	0.500	49.30
40	297.02	0.500	48.66
45	284.38	0.500	47.80
50	268.68	0.500	46.67

# Millbrook iL 307b Pop Study Data

55	250.07	0.500	45.27
60	228.80	0.500	43.63
65	205.23	0.500	41.67
70	179.95	0.500	39.41
75	153.84	0.500	36.88
80	128.37	0.500	34.15
85	106.10	0.500	31.46
90	91.34	0.500	29.47
95	89.18	0.500	29.17
100	100.74	0.500	31.62
105	121.79	0.500	36.24
110	147.46	0.500	40.41
115	174.56	0.500	44.88
120	201.18	0.500	48.46
125	226.15	0.500	51.21
130	248.65	0.500	53.88
135	268.13	0.500	55.79
140	284.23	0.500	56.97
145	296.74	0.500	58.05
150	305.56	0.500	58.42
155	310.75	0.500	58.00
160	312.42	0.500	57.75
165	310.78	0.500	56.26
170	306.07	0.500	55.18
175	298.58	0.500	53.07
180	288.62	0.500	49.93
185	276.49	0.500	47.24
190	262.48	0.500	46.20
195	246.89	0.500	45.04
200	230.02	0.500	43.73
205	212.18	0.500	42.24
210	193.71	0.500	40.67
215	174.99	0.500	38.96
220	156.49	0.500	37.16
225	138.78	0.500	35.32
230	122.58	0.500	33.49
235	108.79	0.500	31.80
240	98.37	0.500	30.45
245	92.15	0.500	29.59
250	90.40	0.500	29.34
255	92.56	0.500	29.64
260	97.50	0.500	30.33
265	103.93	0.500	31.18
270	110.82	0.500	32.07
275	117.47	0.500	32.89
280	123.51	0.500	33.60
285	128.91	0.500	34.21
290	133.85	0.500	34.77
295	138.73	0.500	35.32
300	144.08	0.500	35.89
305	150.46	0.500	36.55
310	158.36	0.500	37.35
315	168.05	0.500	38.31
320	179.58	0.500	39.38
325	192.75	0.500	40.59
330	207.19	0.500	41.83
335	222.39	0.500	43.11
340	237.83	0.500	44.35
345	252.98	0.500	45.49
350	267.35	0.500	46.57
355	280.52	0.500	47.53

Contour type : Ground Wave

# Millbrook iL 307b Pop Study Data

Signal strength : 2.000 mV/m  
Area covered : 1606.200 sq. km  
Population covered: 68432 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	292.10	2.000	26.70
5	301.77	2.000	27.09
10	309.25	2.000	27.38
15	314.31	2.000	27.58
20	316.72	2.000	27.67
25	316.31	2.000	27.65
30	312.96	2.000	27.52
35	306.55	2.000	27.28
40	297.02	2.000	26.90
45	284.38	2.000	26.38
50	268.68	2.000	25.70
55	250.07	2.000	24.89
60	228.80	2.000	23.89
65	205.23	2.000	22.72
70	179.95	2.000	21.36
75	153.84	2.000	19.81
80	128.37	2.000	18.12
85	106.10	2.000	16.44
90	91.34	2.000	15.21
95	89.18	2.000	15.02
100	100.74	2.000	16.01
105	121.79	2.000	17.64
110	147.46	2.000	19.40
115	174.56	2.000	21.05
120	201.18	2.000	22.51
125	226.15	2.000	23.76
130	248.65	2.000	24.83
135	268.13	2.000	25.68
140	284.23	2.000	26.38
145	296.74	2.000	26.89
150	305.56	2.000	27.24
155	310.75	2.000	27.44
160	312.42	2.000	27.50
165	310.78	2.000	27.44
170	306.07	2.000	27.26
175	298.58	2.000	26.96
180	288.62	2.000	26.56
185	276.49	2.000	26.05
190	262.48	2.000	25.44
195	246.89	2.000	24.75
200	230.02	2.000	23.95
205	212.18	2.000	23.08
210	193.71	2.000	22.11
215	174.99	2.000	21.07
220	156.49	2.000	19.97
225	138.78	2.000	18.83
230	122.58	2.000	17.70
235	108.79	2.000	16.65
240	98.37	2.000	15.81
245	92.15	2.000	15.28
250	90.40	2.000	15.12
255	92.56	2.000	15.31
260	97.50	2.000	15.74
265	103.93	2.000	16.27
270	110.82	2.000	16.81
275	117.47	2.000	17.32
280	123.51	2.000	17.76

# Millbrook iL 307b Pop Study Data

285	128.91	2.000	18.16
290	133.85	2.000	18.50
295	138.73	2.000	18.83
300	144.08	2.000	19.18
305	150.46	2.000	19.59
310	158.36	2.000	20.09
315	168.05	2.000	20.66
320	179.58	2.000	21.34
325	192.75	2.000	22.06
330	207.19	2.000	22.82
335	222.39	2.000	23.58
340	237.83	2.000	24.33
345	252.98	2.000	25.02
350	267.35	2.000	25.65
355	280.52	2.000	26.22

Contour type : Ground Wave  
Signal strength : 5.000 mV/m  
Area covered : 646.300 sq. km  
Population covered: 36256 persons

Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	292.10	5.000	17.28
5	301.77	5.000	17.56
10	309.25	5.000	17.78
15	314.31	5.000	17.93
20	316.72	5.000	18.00
25	316.31	5.000	17.98
30	312.96	5.000	17.89
35	306.55	5.000	17.70
40	297.02	5.000	17.42
45	284.38	5.000	17.04
50	268.68	5.000	16.55
55	250.07	5.000	15.95
60	228.80	5.000	15.22
65	205.23	5.000	14.36
70	179.95	5.000	13.36
75	153.84	5.000	12.24
80	128.37	5.000	11.02
85	106.10	5.000	9.83
90	91.34	5.000	8.96
95	89.18	5.000	8.83
100	100.74	5.000	9.53
105	121.79	5.000	10.69
110	147.46	5.000	11.95
115	174.56	5.000	13.14
120	201.18	5.000	14.21
125	226.15	5.000	15.13
130	248.65	5.000	15.90
135	268.13	5.000	16.53
140	284.23	5.000	17.04
145	296.74	5.000	17.41
150	305.56	5.000	17.67
155	310.75	5.000	17.82
160	312.42	5.000	17.87
165	310.78	5.000	17.82
170	306.07	5.000	17.69
175	298.58	5.000	17.47
180	288.62	5.000	17.17
185	276.49	5.000	16.80
190	262.48	5.000	16.36
195	246.89	5.000	15.84

# Millbrook iL 307b Pop Study Data

200	230.02	5.000	15.27
205	212.18	5.000	14.62
210	193.71	5.000	13.92
215	174.99	5.000	13.16
220	156.49	5.000	12.36
225	138.78	5.000	11.54
230	122.58	5.000	10.73
235	108.79	5.000	9.98
240	98.37	5.000	9.38
245	92.15	5.000	9.01
250	90.40	5.000	8.90
255	92.56	5.000	9.04
260	97.50	5.000	9.33
265	103.93	5.000	9.71
270	110.82	5.000	10.10
275	117.47	5.000	10.46
280	123.51	5.000	10.77
285	128.91	5.000	11.05
290	133.85	5.000	11.30
295	138.73	5.000	11.54
300	144.08	5.000	11.79
305	150.46	5.000	12.09
310	158.36	5.000	12.44
315	168.05	5.000	12.87
320	179.58	5.000	13.35
325	192.75	5.000	13.88
330	207.19	5.000	14.43
335	222.39	5.000	15.00
340	237.83	5.000	15.53
345	252.98	5.000	16.05
350	267.35	5.000	16.51
355	280.52	5.000	16.92

Callsign : New Nite  
 Coordinates : 41-34-59.0 N, 88-36-05.0 W  
 Comments :  
 Frequency (KHz): 1480  
 Power (w): 250.000  
 Pattern : AN  
 Efficiency : 159.863 mV/M  
 Desc : DA2  
 City/State : GENEVA, IL  
 ARN :  
 Licensee : NELSON MULTIMEDIA, INC.

Tower	Field	Phase	Spcng	Ornt	Hght	TopLd
1	1.000	0.0	0.0	0.0	87.0	0.0
2	1.640	172.0	75.1	214.9	87.0	0.0
3	0.960	345.7	153.4	215.1	87.0	0.0

Brng	Span	mV/M
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Field	Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m	Brng	mV/m
0	221.478	75	193.127	150	33.471	225	210.271	300	74.748	
5	248.191	80	161.578	155	15.860	230	199.900	305	71.468	
10	271.575	85	128.702	160	20.466	235	185.649	310	62.307	
15	291.209	90	95.453	165	44.073	240	167.835	315	47.706	
20	306.780	95	62.974	170	70.388	245	146.890	320	29.005	

# Millbrook iL 307b Pop Study Data

25	318.068	100	32.968	175	96.868	250	123.371	325	15.008
30	324.929	105	13.478	180	122.354	255	97.978	330	32.532
35	327.282	110	27.366	185	145.982	260	71.583	335	62.037
40	325.102	115	46.488	190	167.052	265	45.377	340	94.333
45	318.412	120	61.402	195	185.005	270	21.988	345	127.514
50	307.291	125	70.840	200	199.408	275	16.523	350	160.388
55	291.879	130	74.373	205	209.938	280	33.375	355	191.984
60	272.393	135	71.956	210	216.375	285	50.519		
65	249.141	140	63.858	215	218.590	290	63.820		
70	222.539	145	50.669	220	216.542	295	72.104		

0.0 ohm K : 255.011 1.0 ohm K : 217.818  
 RMSS : 168.305 RMSt : 159.863  
 RSS : 467.735

Contour type : Ground Wave  
 Signal strength : 5.429 mV/m  
 Area covered : 374.900 sq. km  
 Population covered: 29687 persons

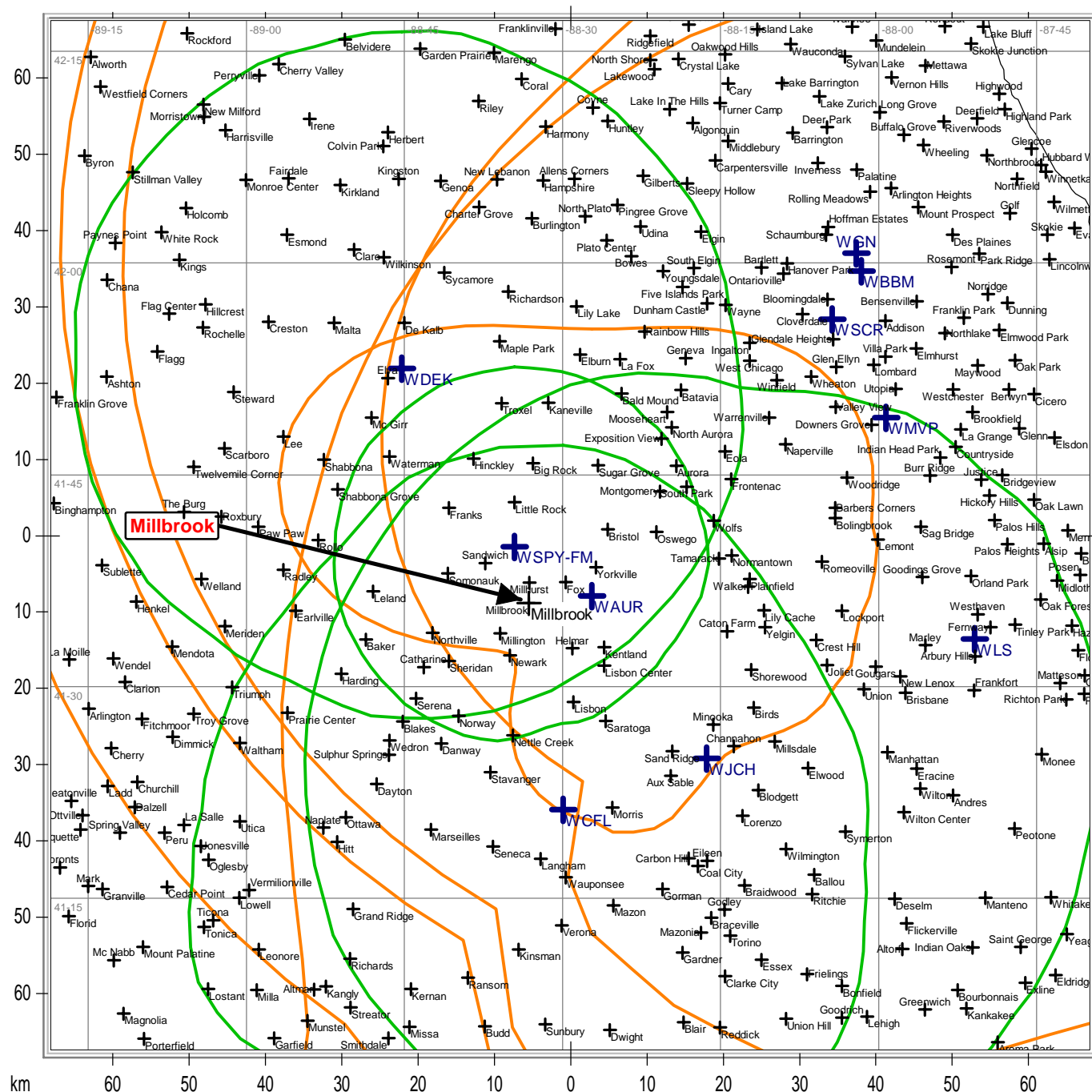
Azimuth Degrees	Field mV/m @ 1 km	Contour mV/m	Distance km
0	221.48	5.429	14.31
5	248.19	5.429	15.21
10	271.57	5.429	15.95
15	291.21	5.429	16.54
20	306.78	5.429	16.98
25	318.07	5.429	17.30
30	324.93	5.429	17.49
35	327.28	5.429	17.55
40	325.10	5.429	17.49
45	318.41	5.429	17.31
50	307.29	5.429	17.00
55	291.88	5.429	16.55
60	272.39	5.429	15.98
65	249.14	5.429	15.24
70	222.54	5.429	14.35
75	193.13	5.429	13.28
80	161.58	5.429	12.01
85	128.70	5.429	10.52
90	95.45	5.429	8.75
95	62.97	5.429	6.65
100	32.97	5.429	4.17
105	13.48	5.429	2.02
110	27.37	5.429	3.61
115	46.49	5.429	5.38
120	61.40	5.429	6.54
125	70.84	5.429	7.21
130	74.37	5.429	7.44
135	71.96	5.429	7.28
140	63.86	5.429	6.72
145	50.67	5.429	5.72
150	33.47	5.429	4.21
155	15.86	5.429	2.31
160	20.47	5.429	2.86
165	44.07	5.429	5.17
170	70.39	5.429	7.17
175	96.87	5.429	8.83
180	122.35	5.429	10.20
185	145.98	5.429	11.33
190	167.05	5.429	12.24
195	185.01	5.429	12.97
200	199.41	5.429	13.52

# Millbrook iL 307b Pop Study Data

205	209.94	5.429	13.91
210	216.37	5.429	14.14
215	218.59	5.429	14.21
220	216.54	5.429	14.14
225	210.27	5.429	13.92
230	199.90	5.429	13.54
235	185.65	5.429	12.99
240	167.83	5.429	12.28
245	146.89	5.429	11.37
250	123.37	5.429	10.25
255	97.98	5.429	8.89
260	71.58	5.429	7.26
265	45.38	5.429	5.28
270	21.99	5.429	3.03
275	16.52	5.429	2.39
280	33.38	5.429	4.20
285	50.52	5.429	5.71
290	63.82	5.429	6.72
295	72.10	5.429	7.29
300	74.75	5.429	7.47
305	71.47	5.429	7.25
310	62.31	5.429	6.61
315	47.71	5.429	5.48
320	29.01	5.429	3.77
325	15.01	5.429	2.21
330	32.53	5.429	4.12
335	62.04	5.429	6.58
340	94.33	5.429	8.68
345	127.51	5.429	10.46
350	160.39	5.429	11.96
355	191.98	5.429	13.23

□

# Millbrook, IL Service Map 307b



Orange = AM 2mv/m-----Green = FM 1mv/m

State Borders      Lat/Lon Grid



Millbrook IL service AM Data 307b

CALL FORMAT	ST	CITY ARN LONGITUDE	FREQ OWNER	PAT	AG	PWR	DESC
LATITUDE							
WBBM	IL	CHICAGO	780.00000 LD			50.000	ND1
41-59-26.0 N		BL20000208ABZ 88-01-39.0 W	INFINITY BROADCASTING EAST INC.				
WAUR	IL	SANDWICH	930.00000 LD			2.500	DA2
41-36-26.0 N		BL19880328AI 88-27-11.0 W	STARBOARD MEDIA FOUNDATION, INC.				
WMVP	IL	CHICAGO	1000.00000 LD			50.000	DA2
41-49-04.0 N		BL19911113AA 87-59-17.0 W	SPORTS RADIO CHICAGO, LLC				
WLS	IL	CHICAGO	890.00000 LU			50.000	ND1
41-33-21.0 N		BL19860731AL 87-50-54.0 W	WLS, INC.				
WGN	IL	CHICAGO	720.00000 LU			50.000	ND1
42-00-42.0 N		BL 88-02-07.0 W	WGN CONTINENTAL BROADCASTING CO.				
WSCR	IL	CHICAGO	670.00000 LU			50.000	ND1
41-56-01.0 N		BL 88-04-23.0 W	INFINITY BROADCASTING EAST INC.				

Millbrook IL service FM Data 307b

CALL FORMAT LATITUDE	ST	CITY ARN LONGITUDE	FREQ OWNER HAAT:m AMSL:m	CHN	CL	ERP	STAT
WJCH Unknown or 1-2-55.0	IL	JOLIET New CP BLED19860505KF 88-16-19.0 W 152.9	91.90000 FAMILY STATIONS, INC. 7 319.000		B	50000.00	LIC
WCFL Unknown or 1-21-17.0	IL	MORRIS New CP BLH19920129KB 88-29-55.0 W 137.8	10.70000 ILLINOIS DISTRICT COUNCIL OF ASSEMBL 2 316.000		B	50000.00	LIC
WDEK Unknown or 1-52-33.0	IL	DEKALB New CP BMLH20011206AAS 88-5-16.0 W 150.9	92.50000 WDEK, INC. 7 12.000		B	20000.00	LIC
WSPY-FM Unknown or 1-39-55.0	IL	PLANO New CP BLH19900716KG 88-3-3.0 W 13.000	107.10000 NELSON ENTERPRISES, INC. 3 8.000		A	1500.00	LIC











Millbrook - Fox  
Fire Dept. Bld  
New Building













JERROLD D. MILLER  
JOHN S. NEELY\*

\*ADMITTED PA AND DC ONLY

LAW OFFICES

MILLER AND NEELY, P. C.

SUITE 704

6900 WISCONSIN AVENUE

BETHESDA, MD 20815

*Handwritten:* STAMP RETURN

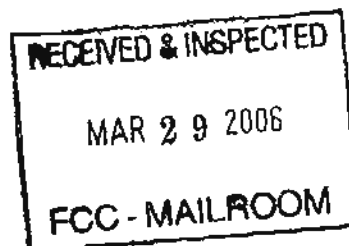
(301) 986-4160

FAX: (301) 986-4162

2006 MAR 29 P 2:06

March 27, 2006

Secretary  
Federal Communications Commission  
Washington, DC 20554



RE: Supplement to §307(b) Showing  
WSPY(AM) Facility ID No. 69700  
Millbrook, IL (major change), File No. BMJP-20040127ACW

Dear Madam Secretary:

Transmitted herewith in triplicate on behalf of Nelson Multimedia, Inc., applicant for a major change of AM station WSPY, as referenced above, is a supplement to the applicant's October 31, 2005, Section 307(b) amendment to the pending application.

Please address any questions concerning this matter to the undersigned.

Sincerely,

John S. Neely

encs.

The following information supplements the 307(b) showing filed by Nelson Multimedia, Inc., ("Nelson") October 31, 2005, concerning MX Group 84-18.

After reading the Audio Division's decision of March 2, 2006, concerning WMCW, Harvard, Illinois (DA-06-502), Nelson would like to clarify its 307(b) showing for major change in community of license from Geneva, IL to Millbrook, IL, and incorporate by reference certain material already a matter of public record in the Commission's files.

The proposed major change would remove the sole transmission service licensed to Geneva, IL, and establish the first local transmission service at Millbrook, IL. As stated in the applicant's pending Form 301 (File No. BMJP-20051031ADG) and the Engineering Report submitted with its Joint Request for Approval of Settlement filed October 31, 2005, the proposed major change of station WSPY should be processed pursuant to the Commission's Interference Reduction Policy, Policies to Encourage Interference Reduction Between AM Broadcast Stations 67 RR 2d 1612, 5 FCC Rcd 4492, (1990) ("Interference Reduction Policy") copy attached.

To encourage interference reduction and revitalize the AM band, the Interference Reduction Policy recognizes the public interest in deleting or modifying an AM station broadcast license, including the broadcast license for a community's sole local transmission service, which causes and receives interference. Nelson hereby expressly reasserts the Interference Reduction Policy in this proceeding and seeks a waiver of the policy against removing the sole local transmission service.

The Commission's consolidated database system indicates that prior to Nelson acquiring control of the broadcast license in 2001, WSPY had been through a series of station ownership changes and unconsummated sales. (See Exhibit 1) According to previous station licensees, the station operated at a financial loss. In April 2001, the then-current owner, Valley Communications, Inc., determined that the radio station could not pay its own costs and was not worthy of further investment nor resources. The licensee turned the station off the air, sold the transmitter/studio real estate to pay accumulated losses and determined to surrender the license for cancellation if the assignment of license to Nelson was not consummated.

On June 28, 2001, Nelson assumed the broadcast license and purchased the station's tangible assets including the transmitter, phaser equipment, etc. The station's licensed tower site was already under development for residential use and was not available for purchase or use by a radio tower. Nelson next took steps to restore broadcast operations. Service resumed with reduced power from a temporary transmitter site pursuant to an STA granted March 4, 2002. Nelson then sought to locate a permanent transmitter site which would serve Geneva, IL, and satisfy the Commission's AM technical requirements. Further information concerning steps to restore operations and the search for a temporary and permanent tower site are a matter of public record in various STA requests which are incorporated herein by reference.

The city of Geneva is an urbanized area within the Chicago metro area. A new directional antenna array serving Geneva will require approximately 10 acres of land to satisfy directional pattern technical requirements. After a thorough search, Nelson, determined that the scarcity of

sufficiently sized and situated parcels of vacant land in the urbanized area, the very tight area to locate the different licensed day and night directional patterns, zoning concerns, and airport locations (air space clearance) precluded an alternate licensed tower site which would serve Geneva consistent with the Commission's technical requirements. Even if each of these substantial hurdles could be cleared successfully, the exorbitant cost of prime real estate in a highly developed urbanized area would irrationally overwhelm the modest revenue of a low powered AM station which receives significant interference in a competitive metro market. Faced with this reality, Nelson began to explore alternate geographical areas where antennas might be relocated.

After a considerable search, Nelson found an alternate location and filed a major change application during the 2004 AM Auction 84 filing window. Larry and Pam Nelson, principals of Nelson, purchased a ten acre transmitter site for the proposed tower site in rural LaSalle/Kendall County, Illinois.

Paragraphs 11 thru 14 of the Interference Reduction Policy describe that when an applicant proposes to delete or modify an AM station, the applicant must demonstrate that a sufficient "local service floor" will be maintained in a community losing a local transmission service. The policy anticipates that the public interest in interference reduction may result in the loss of a community's sole local transmission service. Due to the unique public interest factors which might be presented in each situation, the Commission determined to apply the local service floor issue on a case by case basis. Local service floor issues were explored in 1996, when the Commission cancelled three AM broadcast licenses to accommodate a power increase for WWRL(AM) New York, NY, to serve an area already well served by at least 5 broadcast stations. Included among the cancelled broadcast licenses was that of WERA, the only local transmission service licensed to Plainfield, NJ. The Letter Ruling determined that the residents of Plainfield, NJ, would not be harmed by the loss of the sole local transmission service due to the fact that the community was in a metro area and would continue to be well-served by the primary service contour of at least five other stations: WFAN, WOR, WABC, WCBS and WBBR. (Copy of Letter Ruling attached)

The low-powered directional facilities licensed to WSPY(AM) (1kw Day, 500W Night DA-2) receive a significant amount of interference. The station has had a very difficult time competing in its Chicago market as evidenced by frequent transfers and assignments of station control over the last 20 years, failed attempted station sales, financial difficulty, and the penultimate owner's decision to sell the tower site to pay accrued expenses and possibly surrender the license for cancellation rather than sell the station as a going concern. Further, the tight directional patterns, the unavailability of adequate sites, metro air space and zoning issues and the high real estate costs are major impediments that have made it impractical if not impossible to locate a technically sufficient tower site providing the necessary city-grade signal to Geneva.

The Chicago metro-area is one of the largest radio markets in the nation. The city of Geneva receives 25mv/m or better AM service from WGN, WBBM, WSCR; 5mv/m or better from WLS, WYLL, WBIG, WRMN, etc. (based on M-3). Moreover, there are numerous other Chicagoland AM and FM stations serving Geneva with a primary service contour. This is more primary

service for the community than five services cited as sufficient for Plainfield, NJ, in the WWRL Letter Ruling and the two services cited as sufficient at ¶13 of the Interference Reduction Policy.

The Millbrook proposal significantly reduces given interference on first adjacency .25mv/m to .5mv/m by a total of 874.89 KM and reduces given interference to WPNA by 250,098 persons; WGEZ by 4,821 persons, and WZOE by 10,385 persons. Further, the proposal reduces a more severe interference of .5mv/m to .5mv/m significantly to WPNA by 554,798 persons and completely removes the .5mv/m to .5mv/m overlap with WCFJ (See Exhibit 2). As mentioned above, the station's licensed facilities receive significant interference which would be reduced or eliminated by the proposed change of community.

The proposed move from the Chicago urbanized area to rural Millbrook is also consistent with the Commission's concern when a station proposes to abandon rural service area in favor of relocating to an urbanized area. Nelson is proposing to move the facility from an urbanized metro, significantly reduce destructive interference given and received, and provide a first local transmission service to rural Millbrook, Illinois. This proposal invokes Priority 3 factors which have a higher public interest than the Priority 4 factors used in the WWRL Letter Ruling to justify the cancellation of the only local transmission service to Plainfield, NJ, in favor of WWRL's power increase to serve areas already well-served by more than five aural services.

Taken as a whole, the Millbrook proposal will maximize efficient spectrum use by reducing the interference caused to a number of stations, allow WSPY to reduce the interference received by its licensed operation which is not possible at Geneva, and all with the additional public interest benefits of creating a first local transmission service at Millbrook.

The application of Nelson Multimedia, Inc. for a major change AM construction permit at Millbrook, IL, is amended to submit the attached Section 307(b) information.

A handwritten signature in black ink, appearing to read 'Larry Nelson', is written over a horizontal line.

Larry Nelson  
President  
Nelson Multimedia, Inc

Date: March 23, 2006

Brief Summary of CDBS records concerning Station transfers/assignments

1980 Sold to Miller Broadcasting from Brickhouse

1980 - 1983 - Unclear what happened. Miller had station back by 1983 transfer per FCC on-line records

1983 Transfer from Miller Broadcasting to Gamel November 1983

(old owner said because of financial difficulties)

1983 - 1985 - Unclear what happened - Cassens must have acquired by 1985

1985 Transfer from Cassens back to Gamel

(old owner said because of financial difficulties)

1988 Local owners sell to Valley Communications due to financial difficulties

1990 and 1993 Valley tries to sell but deals fall through (per Valley)

April 1996 CCC Communications Inc files to purchase WFXW

1998 License renewal issue - lost records, EEO, Sale to CCC on hold

2000 Pending Sale finally died - per old owners ?

4-1-2001 Off air due to financial difficulties

6-28-2001 Nelson purchased

3-04-2002 Nelson obtained STA and then restored station to air

2002 to Current - Nelson has operated the station on an STA. Principals Larry and Pam Nelson met with Ed DeLaHunt to discuss WSPY-AM STA and Interference Reduction move.

**Interference Reduction Data****Interference to WPNA .5mv/m Contour**

From .25mv/m:

Current License 1,433,441 population 1,690.57 sq KM

New Millbrook 1,183,346 population 1,428.48 sq KM

**Interference Reduced by: 250,096 persons-17.5% 262.09 sq KM - 15.5%**

From .5mv/m:

Current license 827,968 population

New Millbrook 273,170 population

**Interference Reduced by 554,798 persons - 67.7%****Interference to WCFJ .5mv/m Contour**

From .25mv/m:

Current License 134.58 sq KM

New Millbrook 127.23 sq KM

**Interference Reduced by: 7.35 sq KM 5.3%**

From .5mv/m:

Current License 4.18 sq KM

New Millbrook 0 sq KM

**Interference Reduced by: 4.18 sq KM 100%****Interference to WGEZ .5mv/m**

From .25mv/m:

Current License 5,934 population 320.15 sq KM

New Millbrook 1,113 population 37.04 sq KM

**Interference Reduced by: 4,821 persons-81% 283.11 sq KM - 88.4%****Interference to WZOE .5mv/m**

From .25mv/m:

Current License 13,184 population 636.14 sq KM

New Millbrook 2,799 population 313.80 sq KM

**Interference Reduced by:10,385 persons-78.7% 322.34 sq KM - 50.7%**

Note: Nelson Multimedia, Inc. intends to take field readings to measure the conductivity for it's proposed new transmitter site this summer and adjust the pattern of the day directional to reflect the readings obtained; thus, the population and area of interference may vary but the overall magnitude of the interference reduction will remain similar.



PAGE 03/19

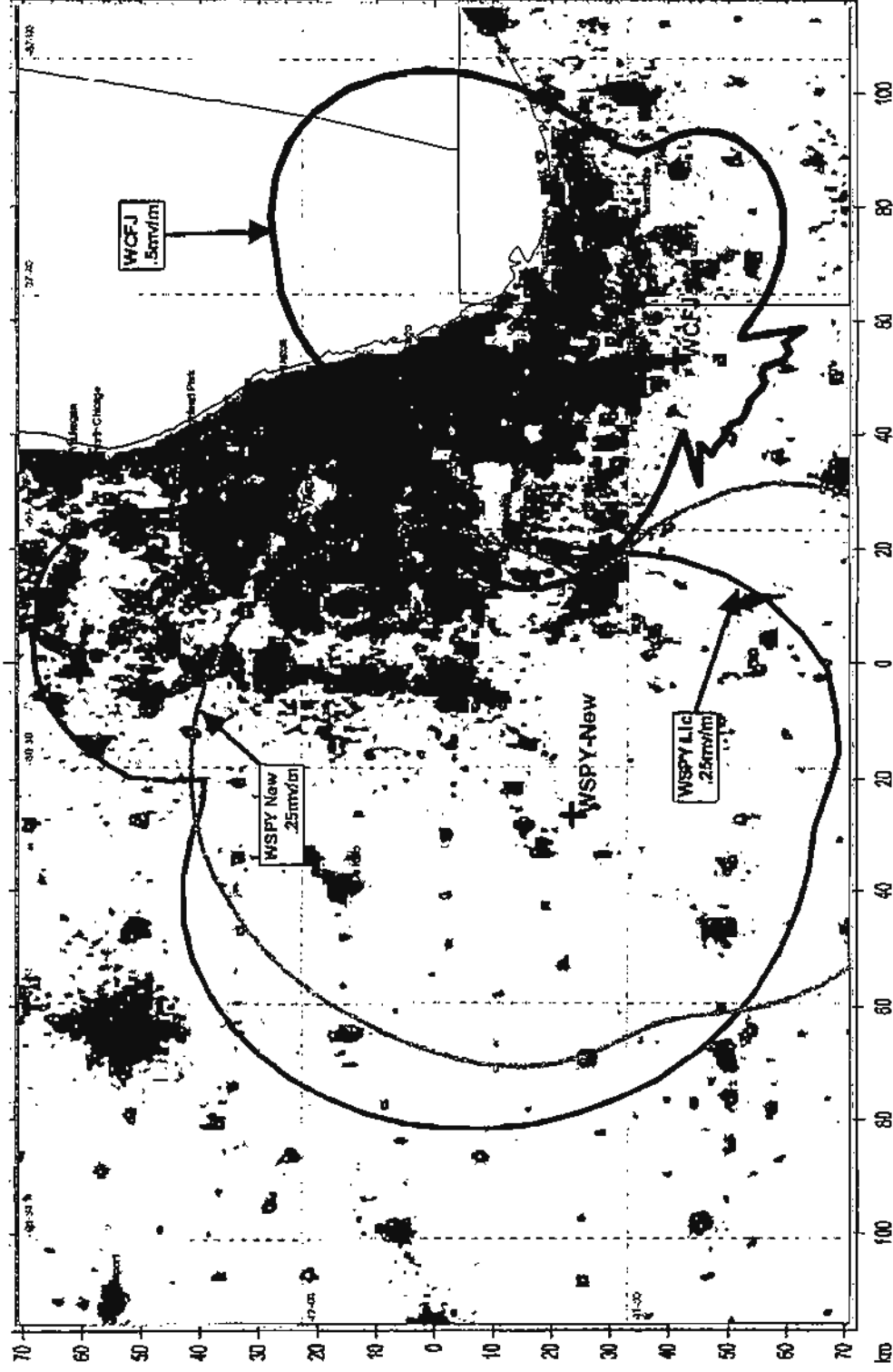


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**Larry Nelson & Doug Nelson Groundwater, Inc. March 2006**

# 25mv/m Interference Reduction to WCFJ 7.35 Sq. Km.

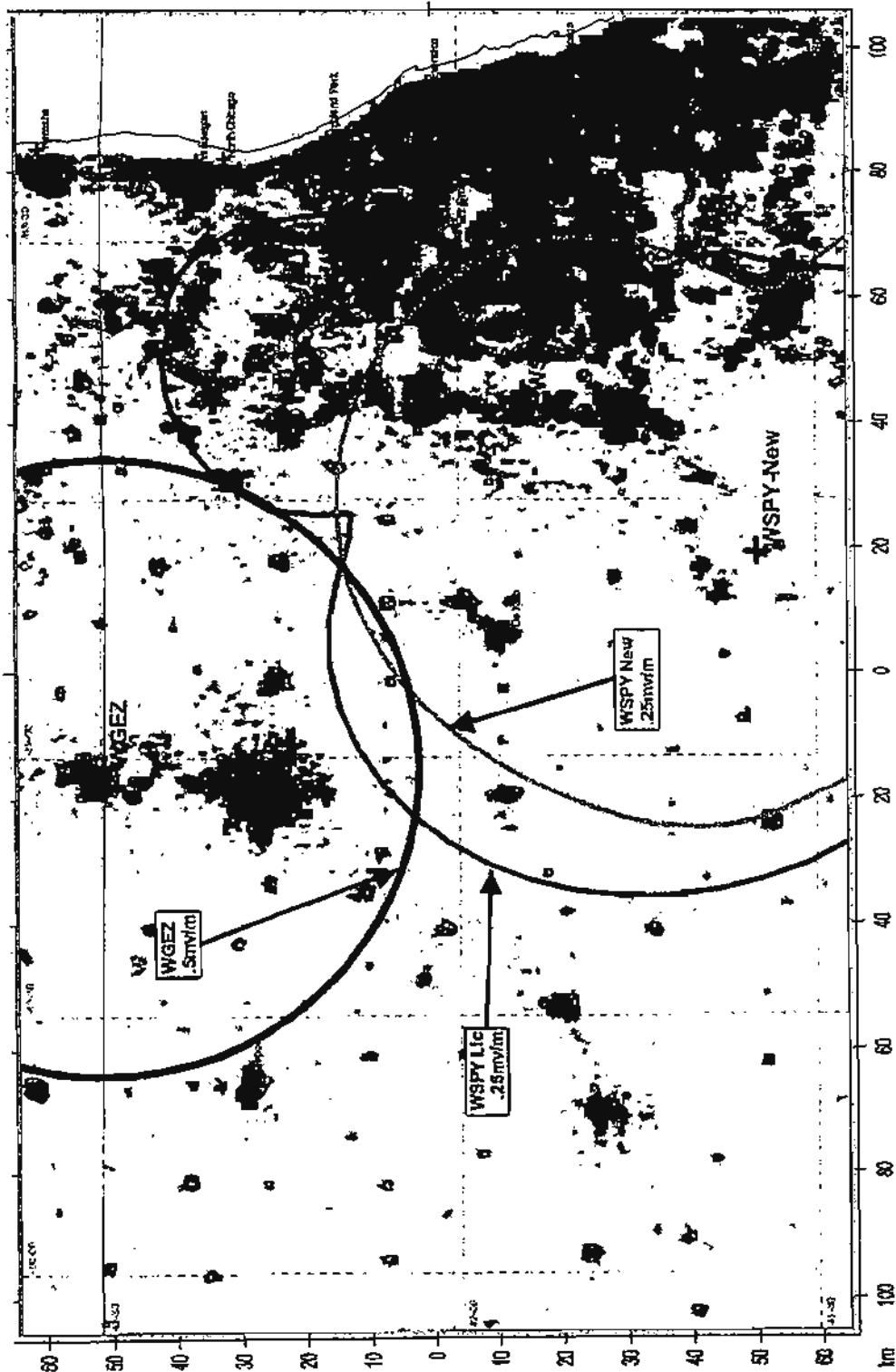


2000 U.S. Census and FCC M-3

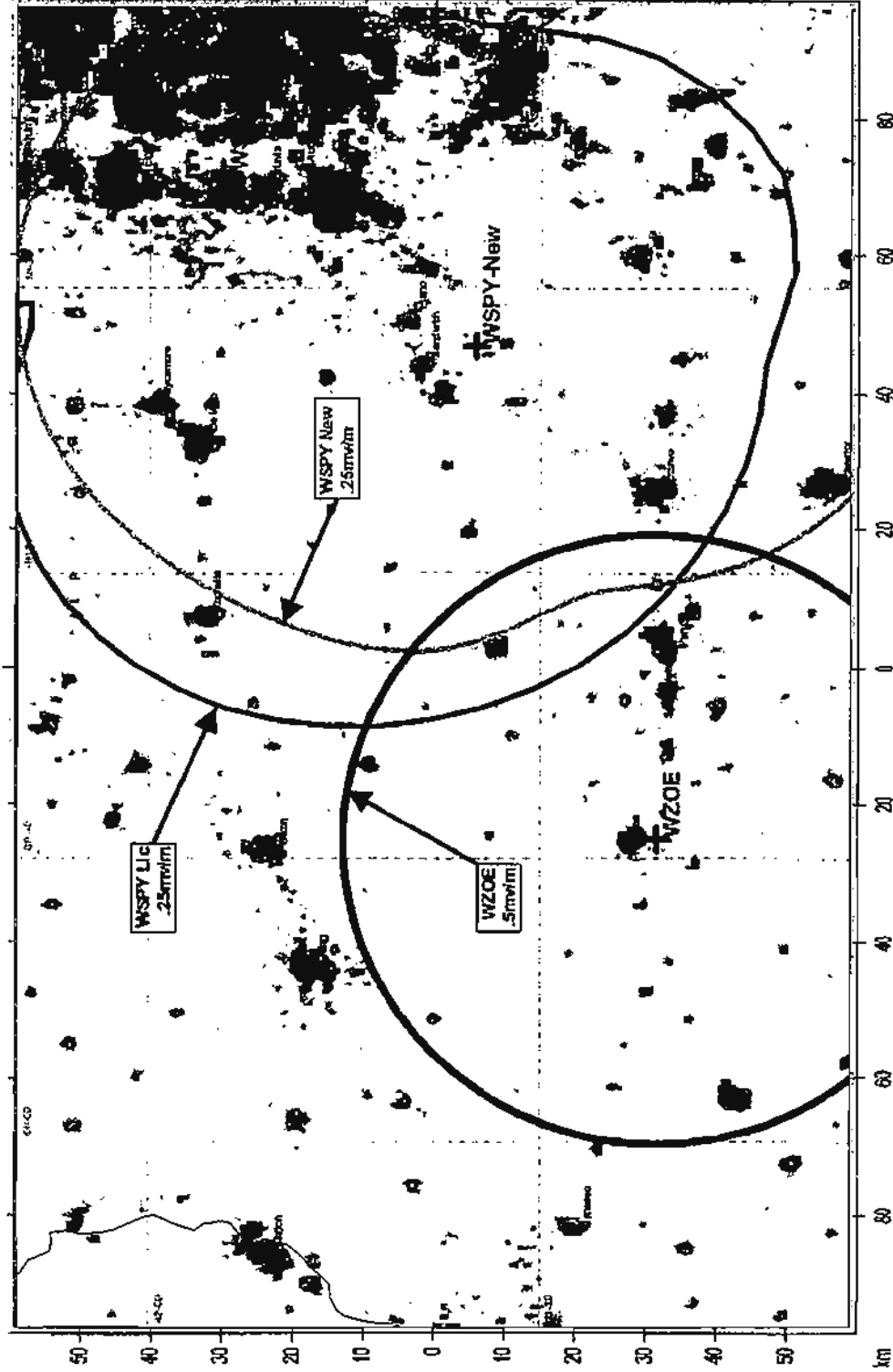
Map Scale: 1:1001698 1 cm = 10.03 km VIB Size: 141.35 x 231.77 km

Larry Nelson & Doug Nelson Groundwave, Inc. March 2006

.25mv/m Interference Reduction to WGEZ 4,821 Persons, 283.11Sq. Km.



.25mv/m Interference Reduction to WZOE 10,385 Persons, 322.34 Sq. Km.

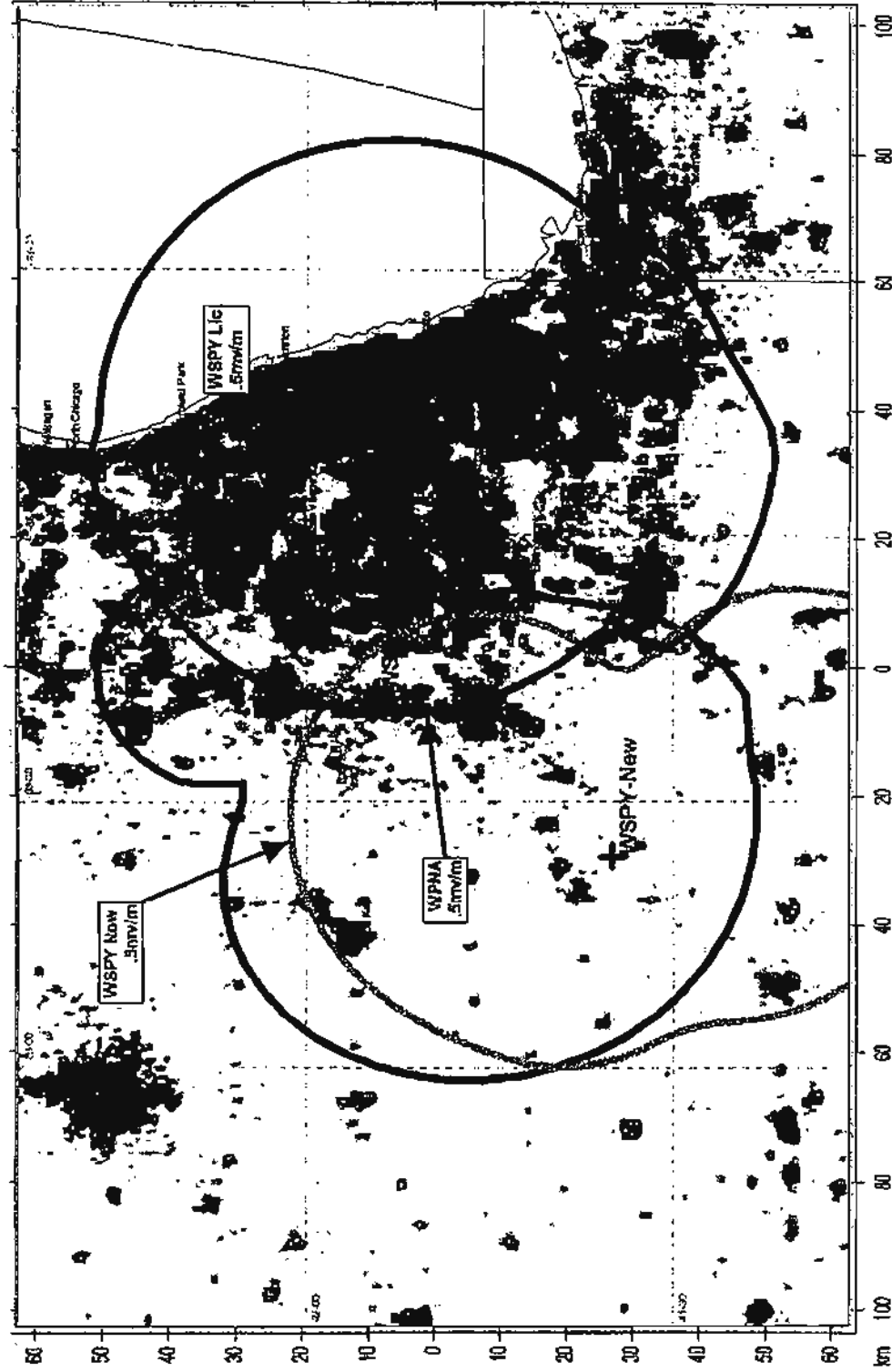


2000 U.S. Census and FCC M-3

Map Scale: 1:83947 1 cm = 3.34 km V/H Size: 117.56 x 192.76 km

Larry Nelson & Deeg Nelson Groundwave, Inc. March 2006

# .5mv/m Interference Reduction to WPNA 554,798 Persons

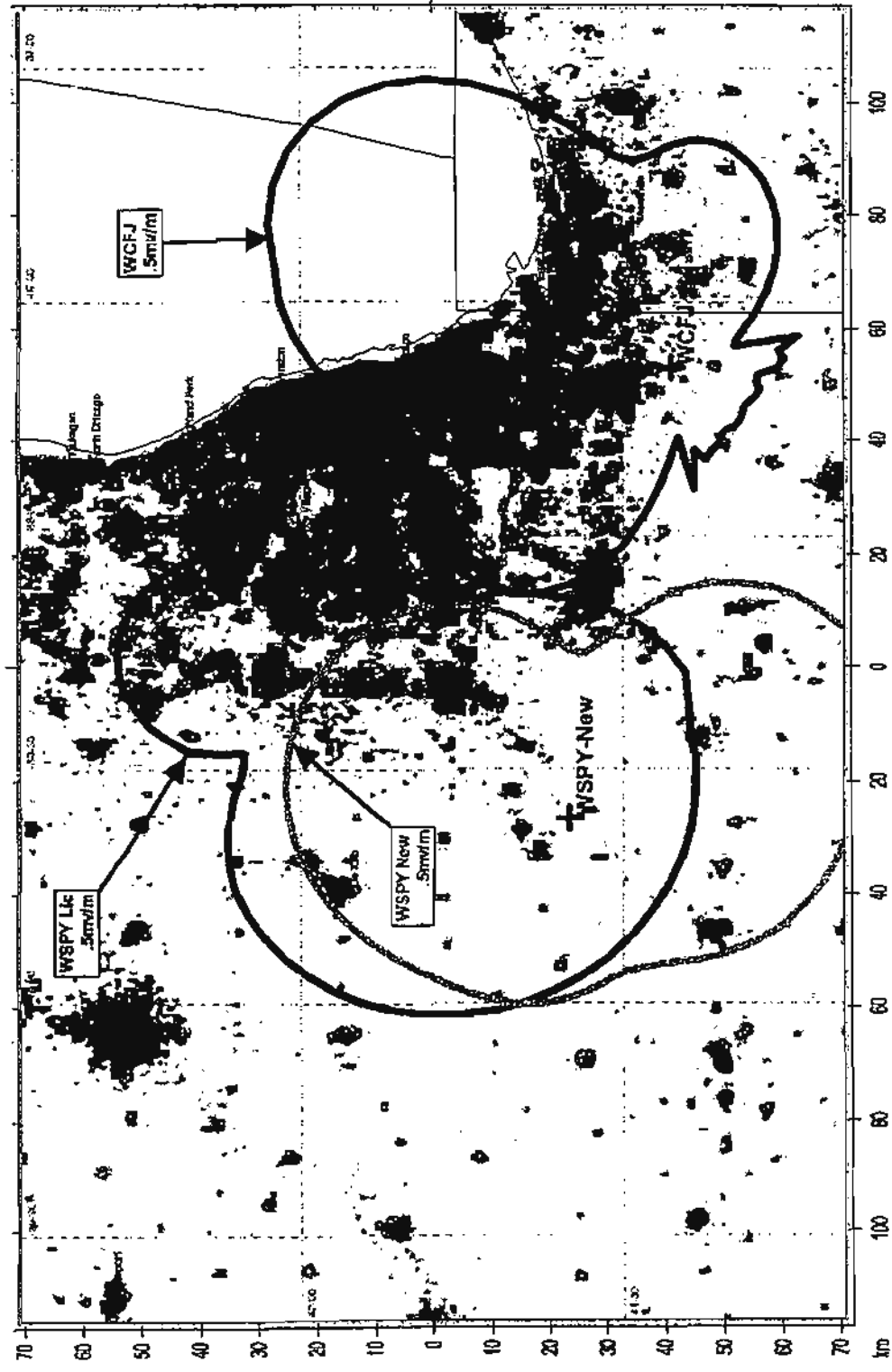


2000 U.S. Census and FCC M-3

Map Scale: 1:806752 1 cm = 8.87 km V/H Size: 125.01 x 204.97 km

Larry Nelson & Doug Nelson Groundwave, Inc. March 2005

.5mv/m Interference Reduction to WCFJ 4.18 Sq. Km.



2000 U.S. Census and FCC M-3

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554

December 5, 1996

IN REPLY REFER TO:  
1800B3-BSH

Steven J. Stone, Esq.  
Rubin, Winston, Diercks, Harris & Cooke, L.L.P.  
1333 New Hampshire Ave., N.W., 10th Floor  
Washington, D.C. 20036

In re: WWRL(AM), New York, NY  
Major Change of Facilities  
BP-960611AB

Dear Mr. Stone:

This is in reference to the above-captioned application filed by Unity Broadcasting Network-New York, Inc. ("Unity"), licensee of WWRL(AM), New York, New York, for a major change to the broadcast facilities of WWRL(AM). This construction permit application seeks consent for WWRL(AM) to increase its daytime operating power from 5 kW to 25 kW and to make changes in its directional antenna system to increase WWRL(AM)'s interference-free 0.5 mV/m daytime contour. In conjunction with this application, Unity has filed an Amended Joint Petition to Grant Applications Pursuant to Interference Reduction Agreements ("Joint Petition"). (FN1) Additionally, Unity requests a waiver of 47 C.F.R. Section 73.37, as grant of the above-captioned application would result in de minimis contour overlap. (FN2)

Furthermore, a petition to deny the above-captioned application was filed on November 8, 1996 by Blount Communications, Inc. ("BCI"), licensee of station WARV(AM), Warwick, Rhode Island. On December 5, 1996, BCI requested that its petition to deny be withdrawn. For the reasons stated below, we will grant the subject application, as conditioned, and the attendant waiver request, and grant BCI's request to withdraw its petition to deny and dismiss the petition.

**Agreement**

The parties joining Unity in the Joint Agreement are Main Street Broadcasting Company, Inc. ("Main Street"), licensee of WLNG(AM), Sag Harbor, New York; Cloud 9 Broadcasting, Inc. ("Cloud 9"), licensee of WERA(AM), Plainfield, New Jersey; and Comko, Ltd. ("Comko"), licensee of WQQW(AM), Waterbury, Connecticut. The parties request approval of an overall interference reduction plan which improves utilization of the 1600 kHz frequency in the New York metropolitan area. Specifically, the Joint Petition provides for: (1) an Asset Purchase and Interference Reduction Agreement between Unity and Main Street, calling for the transfer of certain assets and the FCC license of WLNG(AM) to Unity. (FN3) Upon consummation, the license of WLNG(AM) will be relinquished; (2) an Asset Purchase and Interference Reduction

Agreement between Unity and Cloud 9, which provides for the transfer of certain assets and the FCC license of WERA(AM) to Unity. (FN4) Upon consummation, Unity will relinquish the license of WERA(AM); and (3) a Relinquishment of License and Rights Purchase Agreement between Unity and Comko, providing for the relinquishment of WQQW(AM)'s license, contingent upon the grant of Unity's application for construction permit. (FN5)

## Discussion

The Commission has undertaken significant initiatives to improve and revitalize the AM service. Review of the Technical Assignment Criteria for the AM Broadcast Service, 6 FCC Rcd 6273 (1991), recon. granted in part and denied in part, 8 FCC Rcd 3250 (1993). One such initiative permits licensees to reach agreements to make facilities changes to reduce interference. Policies to Encourage Interference Reduction Between AM Broadcast Stations, 5 FCC Rcd 4492 (1990) ("Interference Reduction Proceeding"). In order to encourage such agreements, the Commission's rules were amended to provide for the acceptance of contingent applications that would facilitate a reduction in overall AM interference. Id at 4493. The amended contingent application rule, 47 C.F.R. Section 73.3517, applies to both deletions and modifications of existing interfering AM stations. In amending the rule to permit the filing of contingent applications that would "reduce interference to one or more AM stations or . . . otherwise increase the area of interference-free service," the Commission removed regulatory barriers that prevent or discourage individual AM stations from entering into private agreements that would ultimately decrease interstation interference and improve the quality of AM service. Id at 4492.

Contingent application arrangements that propose the deletion or modification of an AM station require a case by case public interest determination and the parties must demonstrate that a sufficient "local service floor" will be maintained in the community losing a local transmission service. In order to evaluate the local service floor associated with the contingent modification or deletion of AM stations facilities proposed in an interference reduction agreement, the Commission generally considers four factors: the amount of AM interference that will be eliminated in relation to the number of AM and FM services remaining available to areas that will lose service; the areas and populations that will gain service as a result of the proposed contingent facilities changes; whether the proposed contingent facilities changes will create new "white" or "gray" areas (FN6); and the availability of AM and FM service in the area that will experience a reduction in service due to the contingent facilities changes. Id at 4494.

**Interference Reduction.** The Joint Petition demonstrates that removing the interference caused by WLNG(AM), WERA(AM) and WQQW(AM) to WWRL(AM) would result in increased service by WWRL(AM) to 566,331 persons in an area of 689 square kilometers. Furthermore, grant will result in significant reduction in nighttime interference to, and increased nighttime coverage by, WARV(AM), Warwick, Rhode Island; WAUB(AM), Auburn, New York; WPWA(AM), Chester, Pennsylvania; and WSMN(AM), Nashua, New Hampshire.

**Increased Service.** Grant of an increase in power for WWRL(AM) will result in an additional increase of interference-free 0.5 mV/m service to at least 2,301,736 persons in an additional 3664 square kilometers.



**Local Service Floor.** Engineering exhibits demonstrate that at least five other primary aural services would remain available to the entire areas currently served by WQQW(AM), WLNG(AM) and WERA(AM). Thus, no new white or gray area will result. Moreover, Waterbury will continue to be served by two AM stations (FN7) and two FM stations (FN8) licensed to Waterbury. Furthermore, Sag Harbor will continue to be served by an existing station licensed to Sag Harbor, WLNG-FM. Plainfield will continue to be served by at least the following stations providing primary aural service: WFAN(AM), WOR(AM), WABC(AM), WCBS(AM) and WBBR(AM). Accordingly, these communities will continue to receive an ample number of aural services. See Bay City, Brenham, Cameron, etc., Texas, 10 FCC Rcd 3337, 3337 (1995) (affirming Commission policy that five receptive services is considered adequate).

#### **Waiver of Section 73.37**

Unity requests a waiver of 47 C.F.R. Section 73.37, as WWRL(AM)'s proposed 0.5 mV/m coverage contour will overlap with the 0.025 mV/m interfering contour of station WAQY(AM), East Longmeadow, Massachusetts. We have determined that a waiver of 47 C.F.R. Section 73.37, with respect to this overlap, is justified because available measurement data shows that the location of the overlap area is well outside WWRL(AM)'s primary service area. See Spann Communications, 4 FCC Rcd 617 (1989) (Commission grants waiver of Section 73.37 where overlap exists due to salt water path and does not involve primary service area of either station).

#### **Petition to Deny**

We have examined the affidavit attached to BCI's request to withdraw its petition to deny and find that it complies with 47 C.F.R. Section 73.3588. Furthermore, we have examined the issues raised in BCI's petition and find no basis for further action in regard to those matters. Accordingly, we shall grant BCI's request to withdraw its petition to deny.

#### **Conclusion**

We find that the Joint Petition demonstrates compliance with the local service floor guidelines with respect to the Waterbury, Connecticut, Sag Harbor, New York and Plainfield, New Jersey areas after deletion of the WQQW(AM), WLNG(AM) and WERA(AM) facilities. Our staff has examined the Joint Petition and the exhibits provided therewith and finds that evidence has been provided which supports the conclusion that a net decrease in interference will result.

Based upon its showing, we believe that Unity has demonstrated that the public interest will be served by grant of the Joint Petition. Accordingly, BCI's request to withdraw its petition to deny IS GRANTED and its petition to deny IS HEREBY DISMISSED. Unity's request for a waiver of 47 C.F.R. Section 73.37 IS HEREBY GRANTED. The Amended Joint Petition to Grant Applications Pursuant to Interference Reduction Agreements IS HEREBY GRANTED and the application for a major change in the facilities of WWRL(AM), New York, New York (File No. BP-960611AB) IS HEREBY GRANTED. This action shall be conditioned as follows:

This action shall be conditioned upon the surrender of the licenses of WLNG(AM), Sag Harbor, New York, WERA(AM), Plainfield, New Jersey and WQQW(AM),

Waterbury, Connecticut to the Commission for cancellation upon commencement of Program Test Authority by the WWRL(AM) facility authorized by the subject construction permit, pursuant to the discontinuance of operation provisions in 47 C.F.R. Section 73.1750.

In the event that a conflicting application for facilities operating on 1610 kHz or 1620 kHz is filed pursuant to the Review of the Technical Assignment Criteria for the AM Broadcast Service, 6 FCC Rcd 6273 (1991), any modification necessary to resolve such conflict shall be made to the WWRL(AM) facilities.

Sincerely,

Dennis Williams, Assistant Chief  
Audio Services Division  
Mass Media Bureau  
cc: Barry D. Wood, Esq.  
Thomas DiBiasi, Esq.  
Francis E. Fletcher, Jr., Esq.

-----  
Footnotes:

(FN1):

The Joint Petition to Grant Applications Pursuant to Interference Reduction Agreements was filed on June 11, 1996. The Amended Joint Petition was filed on September 12, 1996. The Petitions will collectively be referred to as the "Joint Petition".

(FN2):

Unity also requested a waiver of 47 C.F.R. Section 73.182. That request is unnecessary and therefore, need not be addressed herein.

(FN3):

On October 24, 1996, the Commission granted the application for assignment of license of WLNG(AM) from Main Street to Unity (File No. BALH-960611HF). This transaction has not yet been consummated.

(FN4):

On October 24, 1996, the Commission granted the application for assignment of license of WERA(AM) from Cloud 9 to Unity (File No. BALH-960830EA). This transaction has not yet been consummated.

(FN5):

WQQW(AM) has been silent since January 1992.

(FN6):

A "white area" is an area that does not receive interference-free primary service from an authorized AM station or does not receive a signal strength of at least 1 mV/m from an authorized FM service. See 47 C.F.R. Section 73.14. A "gray" area received one full-time service. See Interference Reduction Proceeding, 5 FCC Rcd at 4496, n. 14.

(FN7):

The stations are WWCO(AM) and WATR(AM).

(FN8):

The stations are WWYZ(FM) and WMRQ(FM).