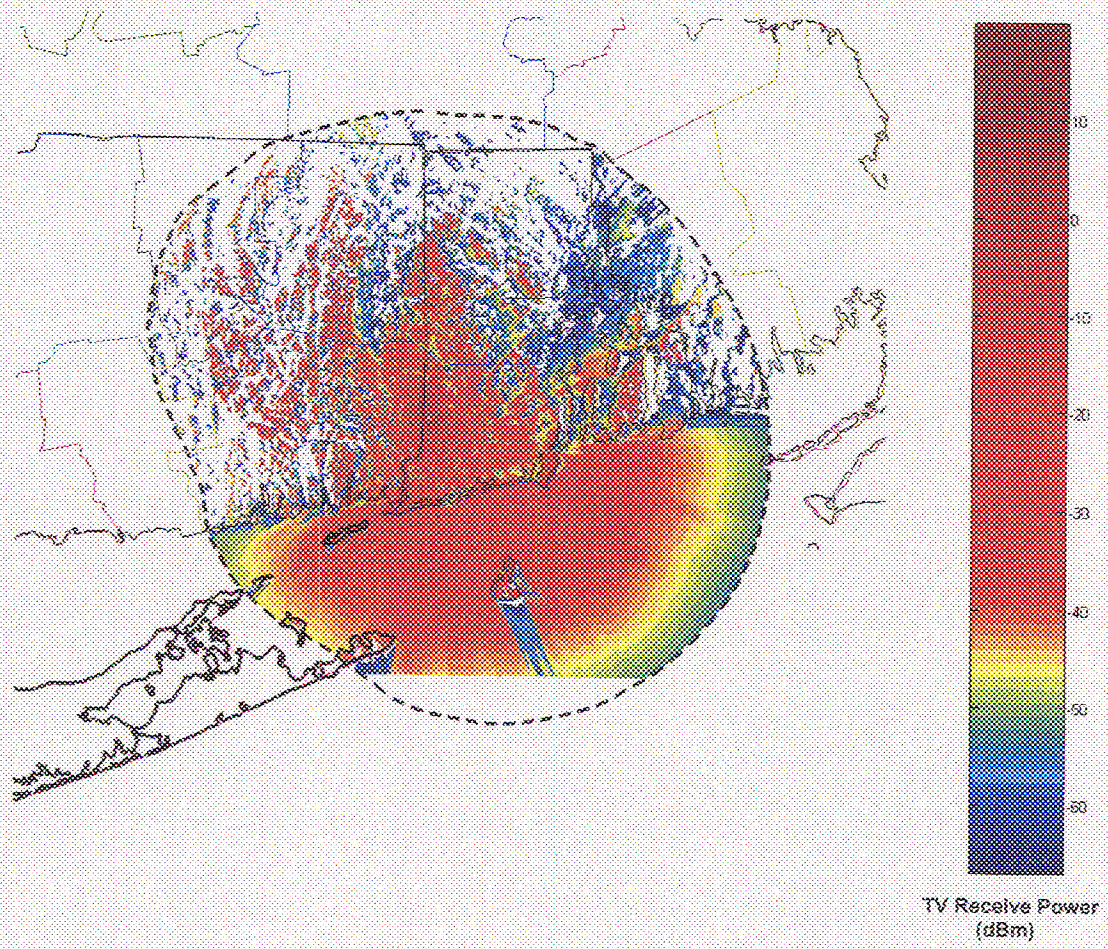


Figure 8a. WPXQ Grade B Service Area Signal Level

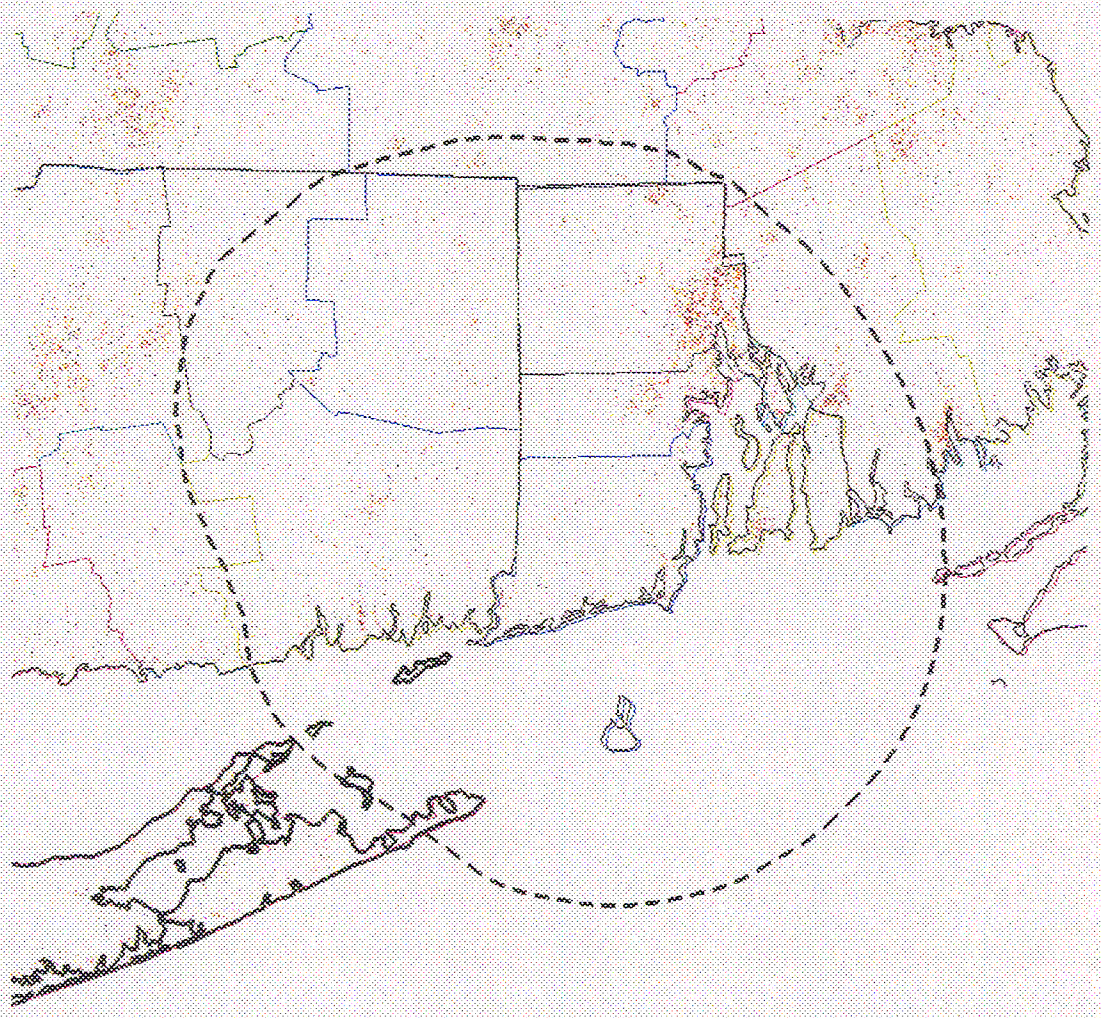


Figure 8b. WPXQ Service Area Population Distribution

5.3 Fixed Base Station Studies

The numerical data presented for each broadcaster in this section consists of the total Grade B service population count and the affected population given in two manners: as an absolute count and as a ratio of the total service population.

Table 9. WMBC - Affected Population Results

Grade B Service Population	Interference Population	% Affected Population
11,173,675	6,826	0.06%

Table 10. WEDY - Affected Population Results

Grade B Service Population	Interference Population	% Affected Population
477,302	0	0%

Table 11. WPVI - Affected Population Results

Grade B Service Population	Interference Population	% Affected Population
8,802,671	63,130	0.72%

Table 12. WQPX - Affected Population Results

Grade B Service Population	Interference Population	% Affected Population
449,342	4,315	0.96%

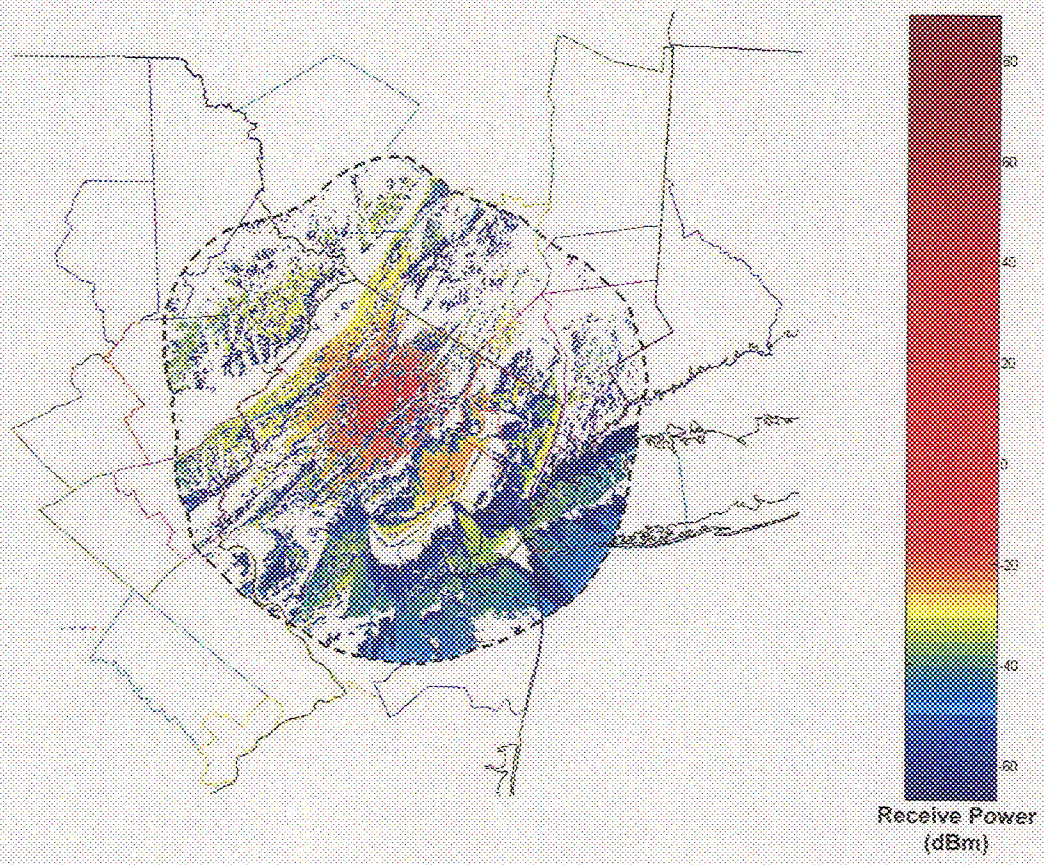


Figure 9a. WMBC Grade B Service Area Signal Level

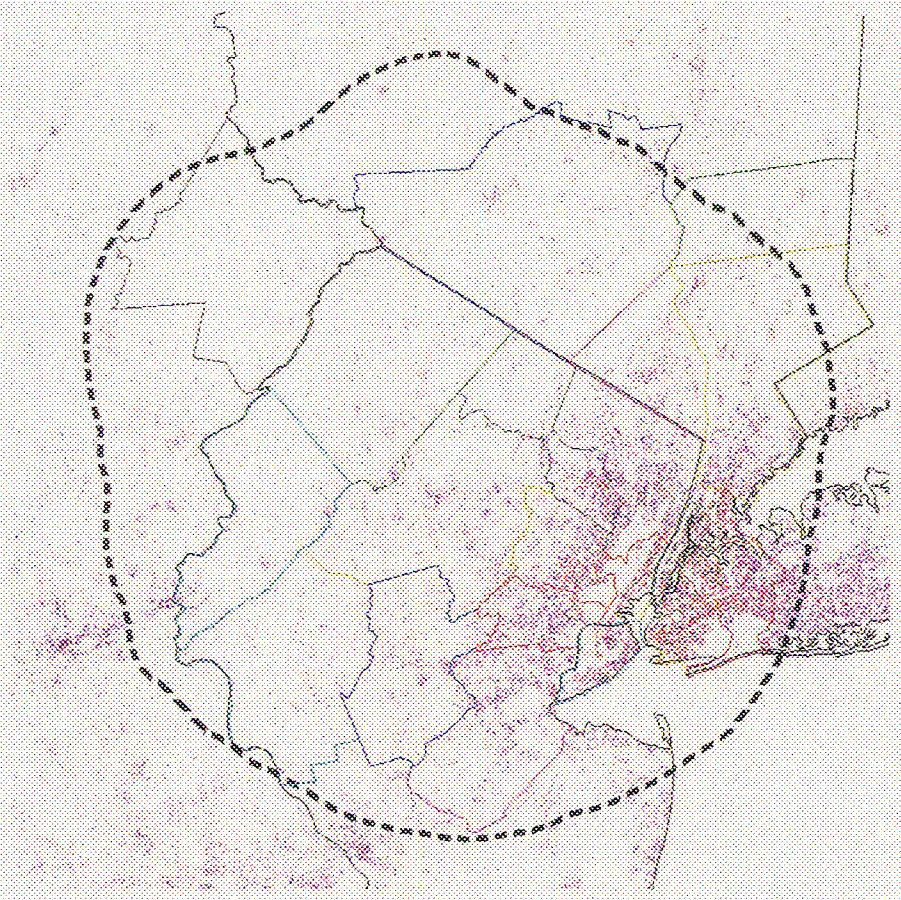


Figure 9b. WMBC Service Area Population Distribution

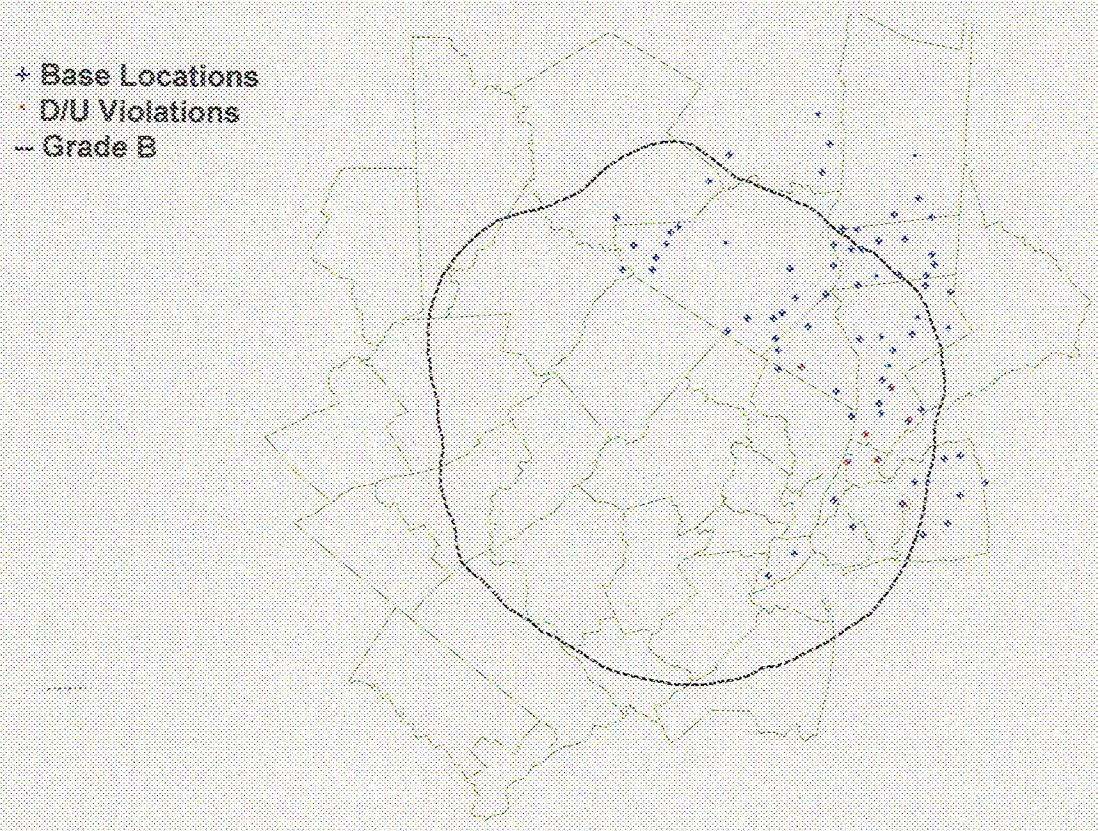


Figure 9c. WMBC Service Cells with D/U Violations

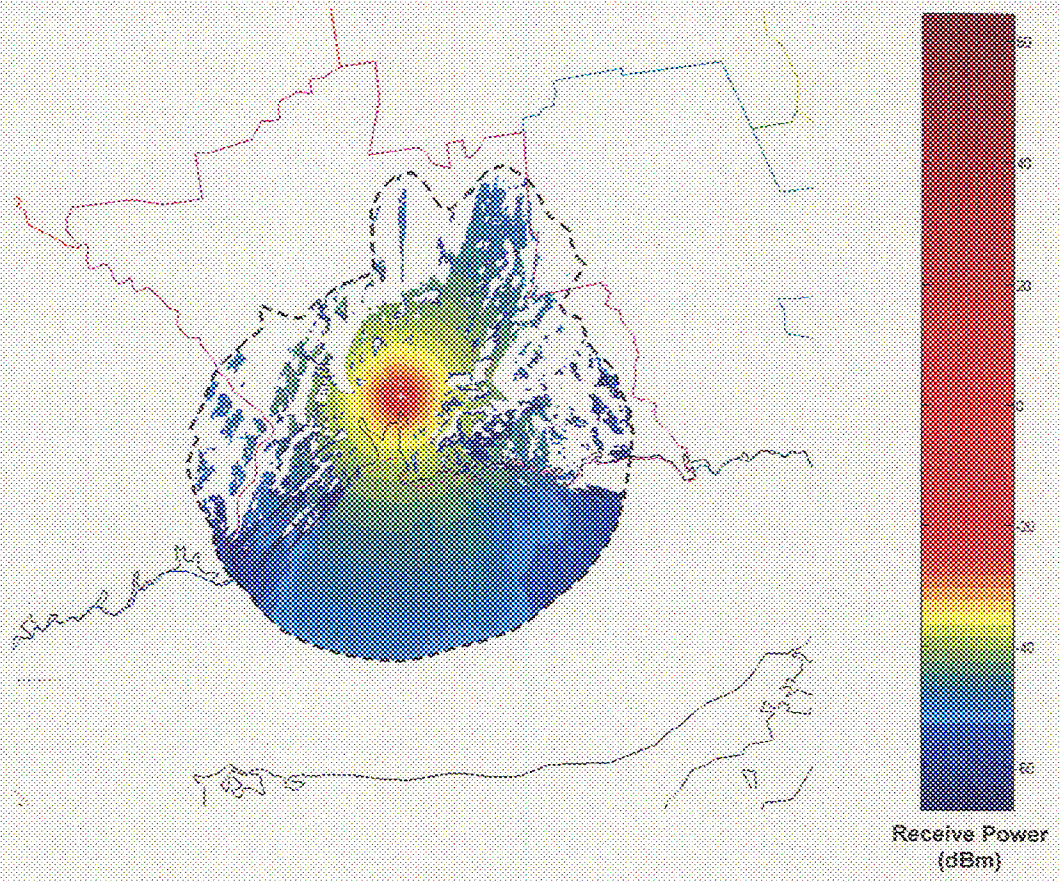


Figure 10a. WEDY Grade B Service Area Signal Level

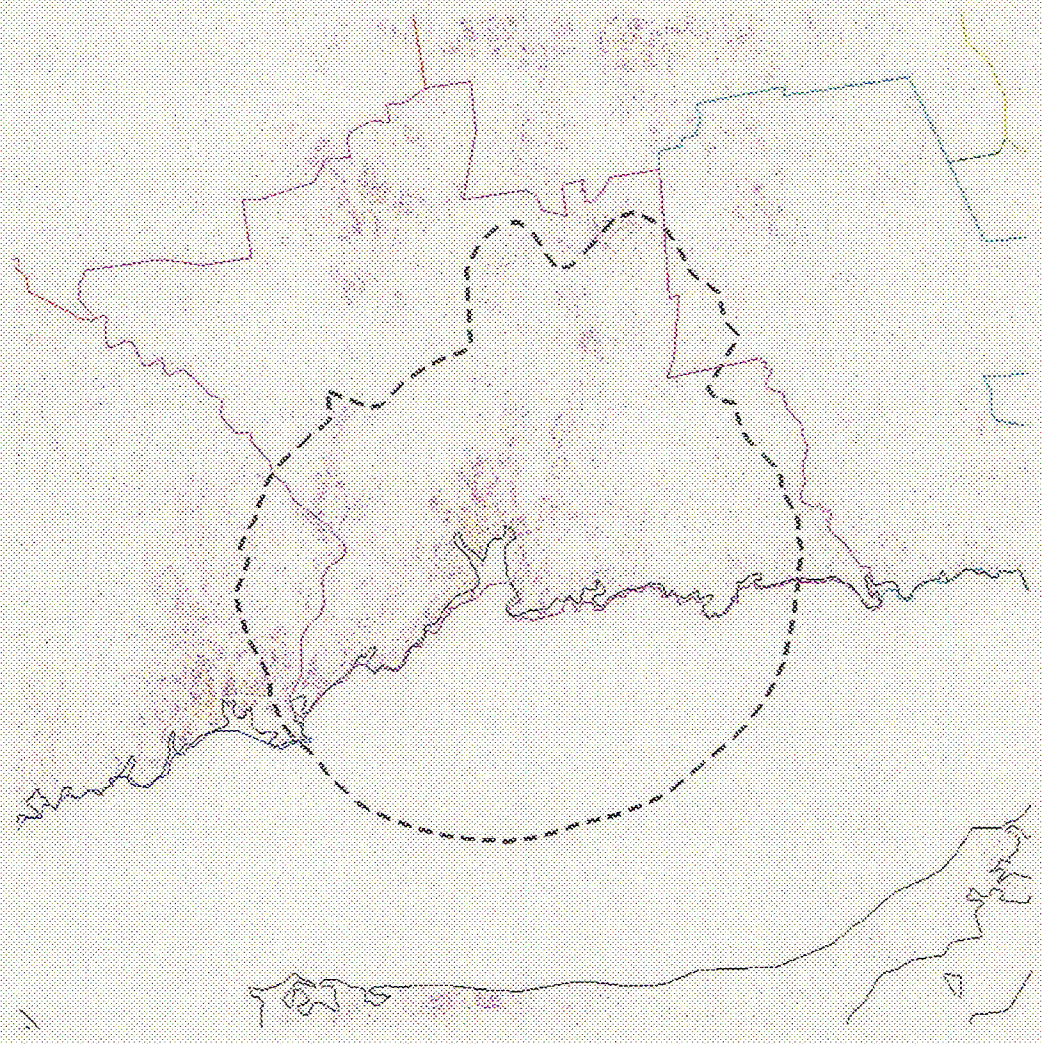


Figure 10b. WEDY Service Area Population Distribution

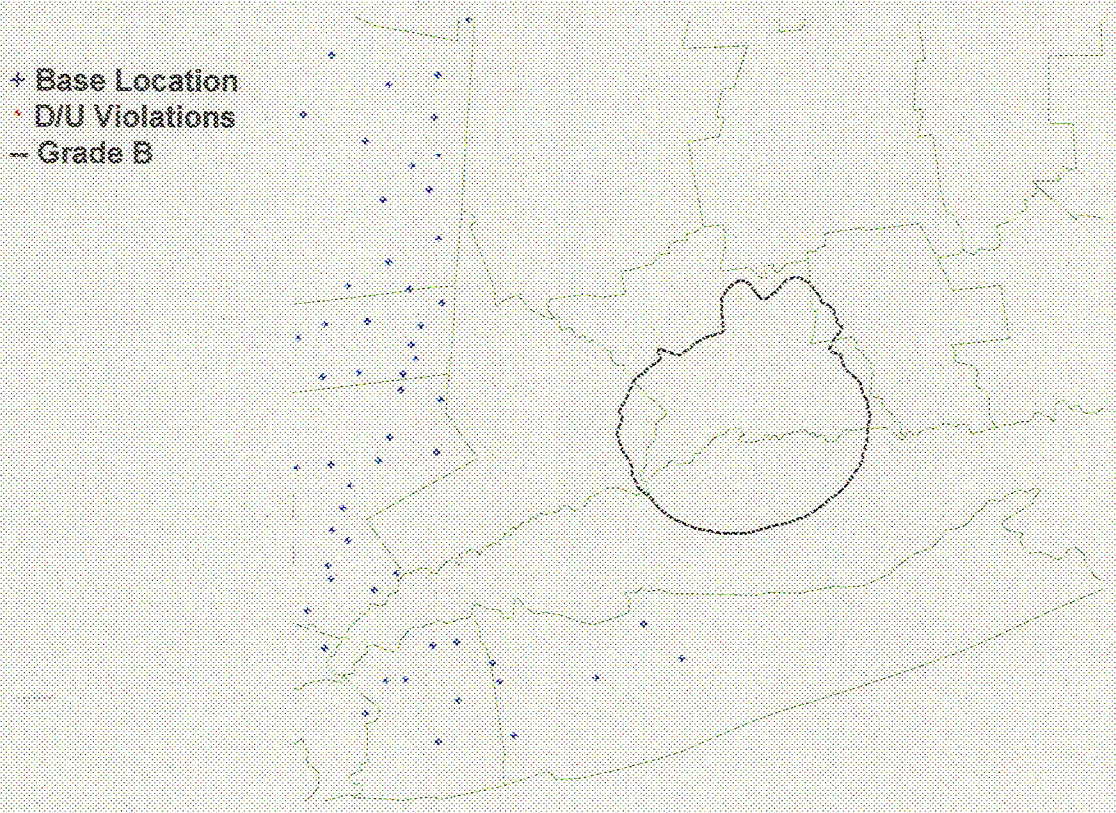


Figure 10c. WEDY Service Cells with D/U Violations

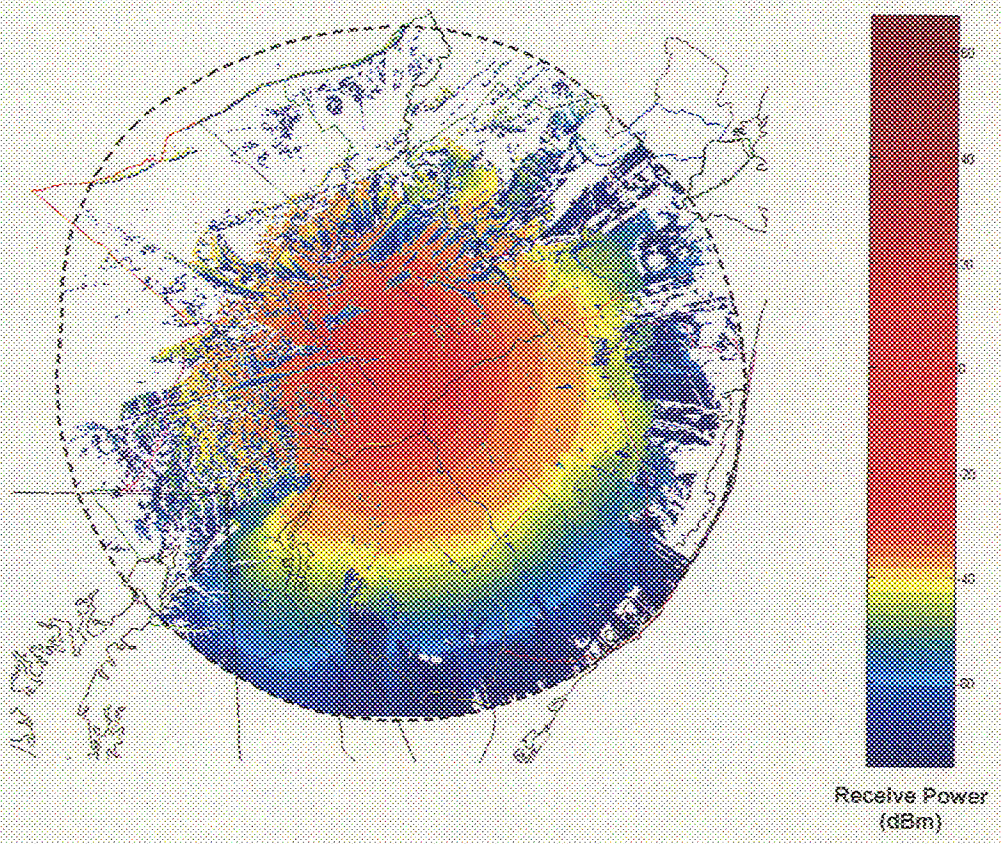


Figure 11a. WPVI Grade B Service Area Signal Level

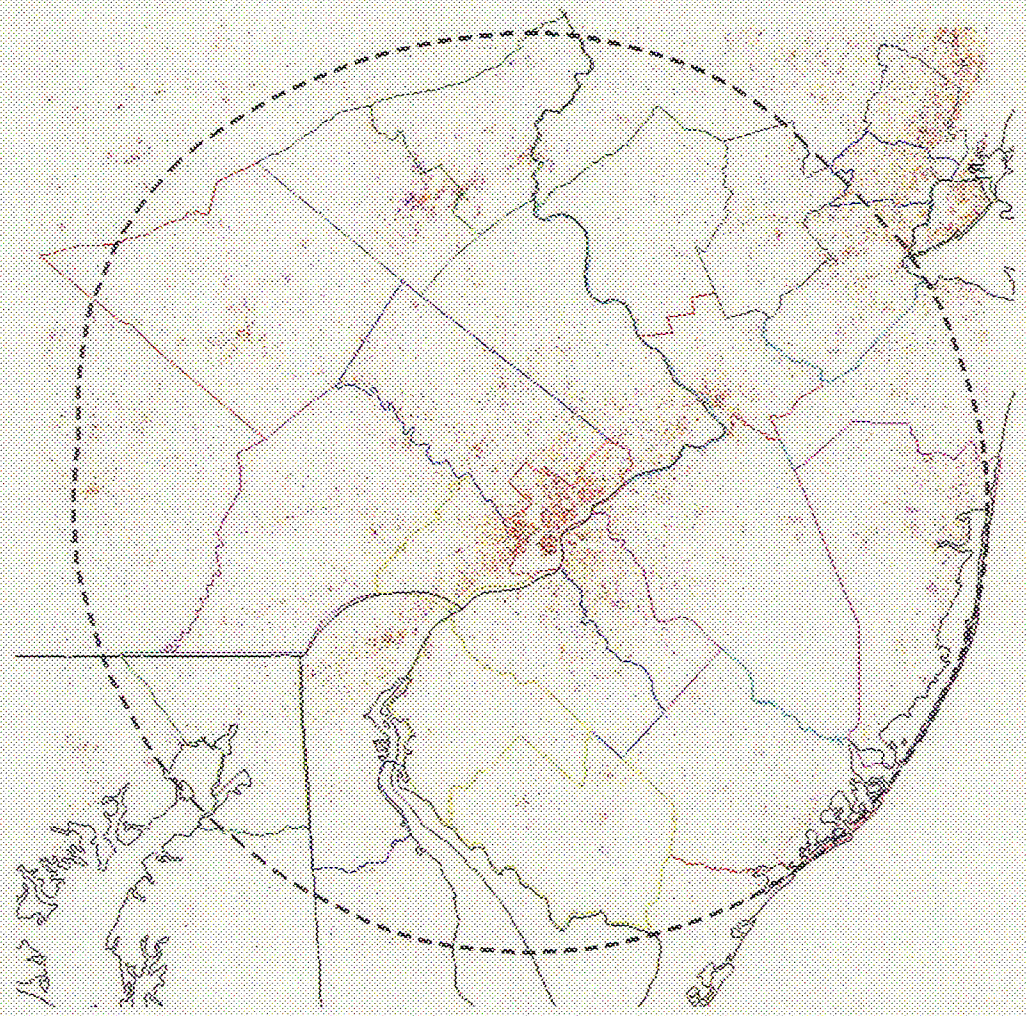


Figure 11b. WPVI Service Area Population Distribution

Figure 11c. WPVI Service Cells with D/U Violations

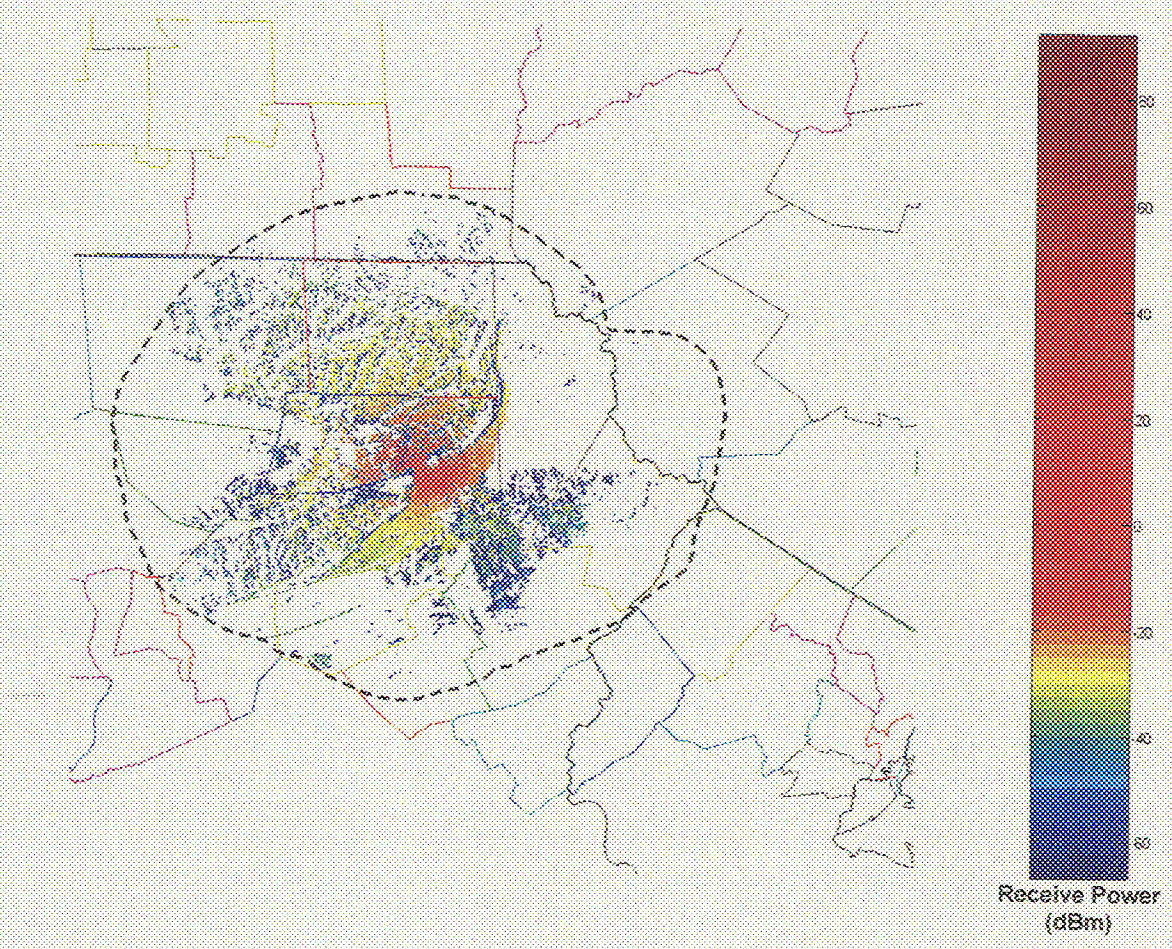


Figure 12a. WQPX Grade B Service Area Signal Level

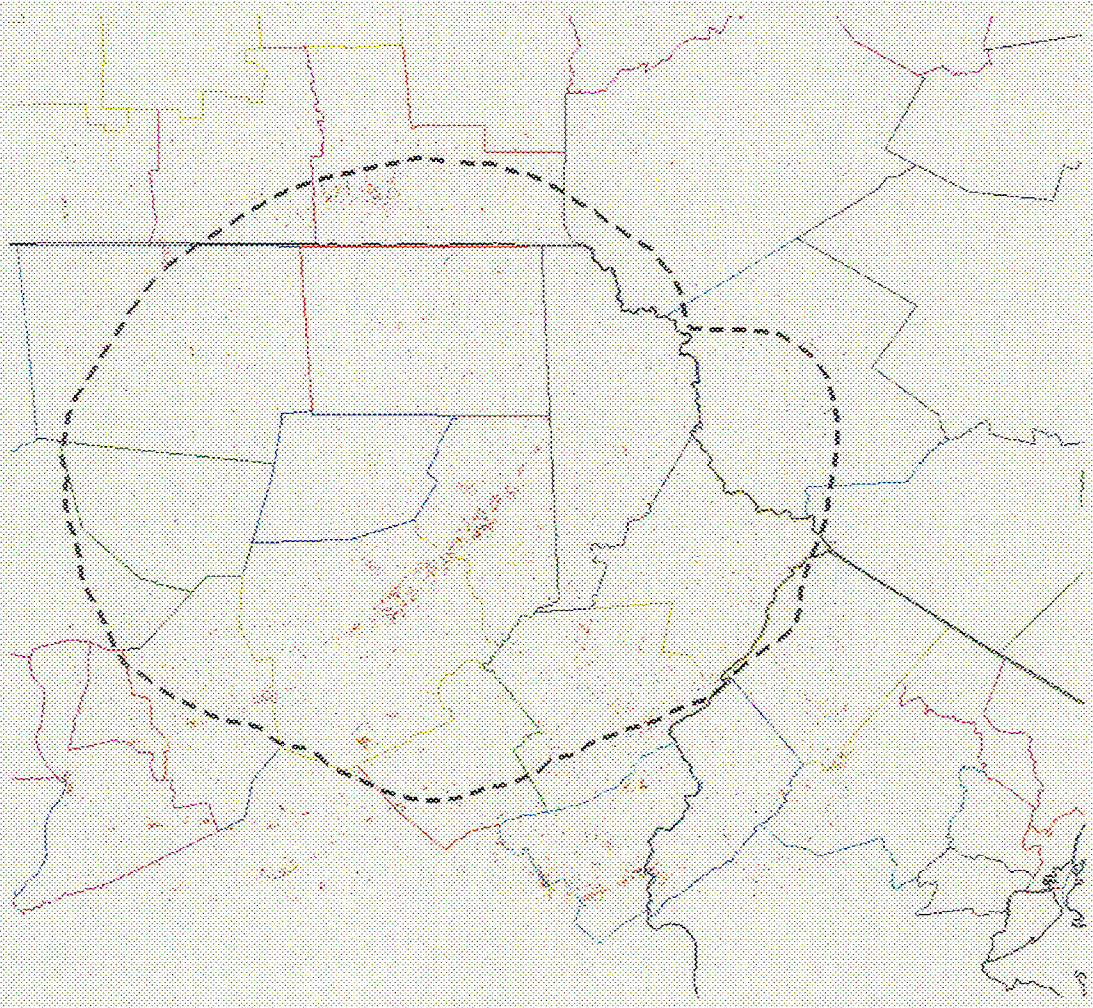


Figure 12b. WQPX Service Area Population Distribution

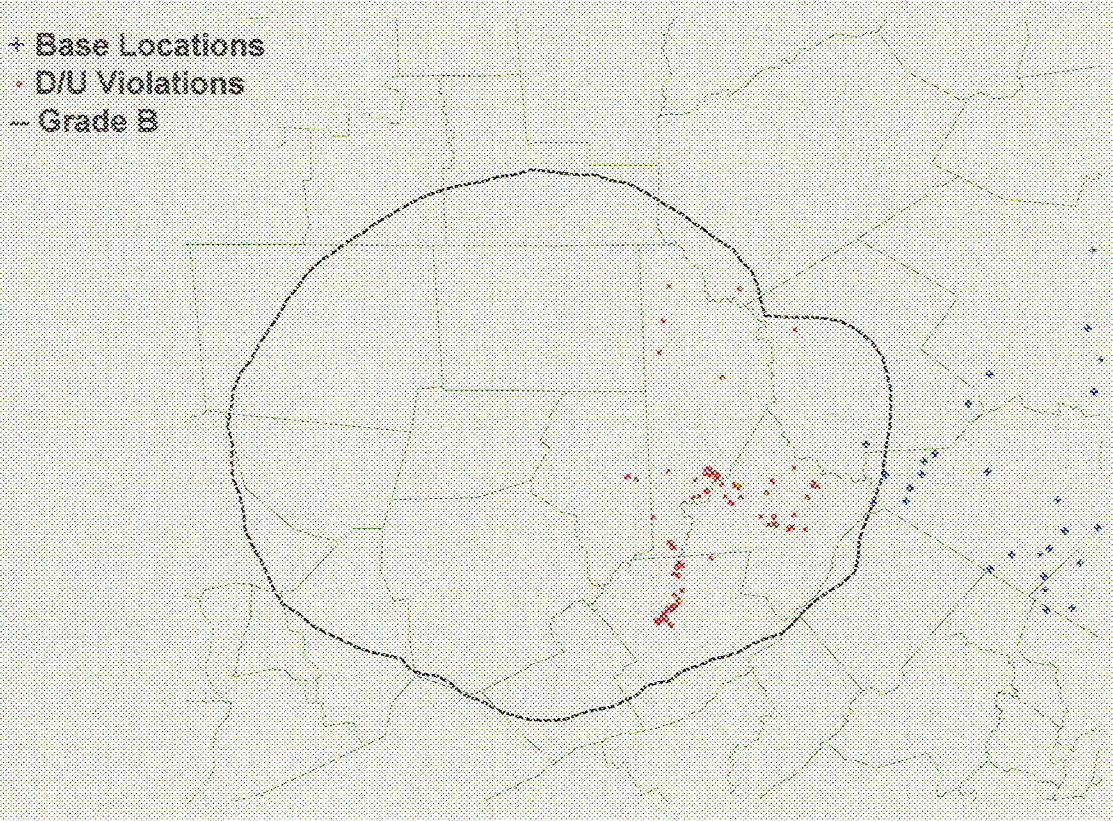


Figure 12c. WQPX Service Cells with D/U Violations

5.4 Summation

This Engineering Study satisfies the intent of § 90.545(c)(1)(ii) by demonstrating the interference environment caused by spectrum sharing with nine broadcasters in the Downstate New York area of operations. Two broadcasters receive over-the-air reception protection based on application of § 90.545 separation distances with the proposed public safety operations complying with ERP and HAAT limitations. Detailed engineering analyses for seven broadcasters using actual terrain elevation and station technical data were presented to justify separation distances less than those specified by § 90.545.

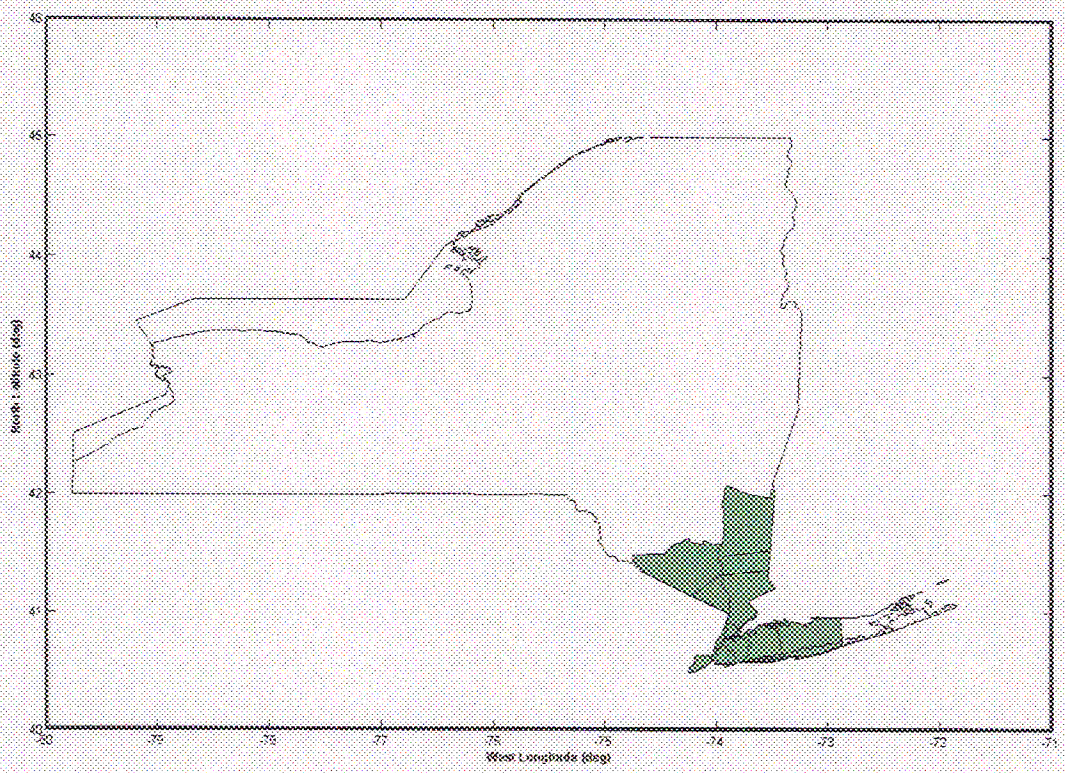
Several conservative engineering postures were adopted for the sake of presenting a simpler understanding of the complex proposed operations. Certain voluntary control measures were put forth as yet further responsible acts towards sharing the spectrum. The description of operations was presented completely: mobile and fixed operations considered, multiple transmitter scenarios examined, and adjacent channel and co-channel situations demonstrated. Common propagation models were used to compute path losses. Attenuation factors beyond free space path loss have been selectively used and then only under justifiable conditions. Federal spectrum rules, protection criteria, broadcaster data bases, and census bureau data bases are the core components of this Engineering Study; all this information is public record.

Interference potential was examined for every 3-arc second cell inside a broadcaster's Grade B service area boundary in terms of the ratio of desired-to-undesired field strengths. Our figure-of-merit protection for compliance is expressed as an *affected population percentage* extracted from census blocks wherein the population cells were linked to cells of failed D/U criterion. This metric and its methodology of arrival are appropriate for evaluating proposed public safety communications sharing of the 700-MHz band during the pending analog-to-digital television transition.

There is no *de minimus* interference allowance given in § 90.545 to permit an obvious conclusion regarding affected population size. Absolute interference-free service is uncertain when providing public safety and security for nearly 13 million citizens over almost four thousand square miles. We submit that the proposed radio operations across densely populated Downstate New York present minimum interference potential—the numerical results in evidence—to over-the-air reception of existing analog television signals.

Attachment 1

Downstate NY Proposed Area of 700-MHz Operations



Downstate region addressed by this Engineering Study is shown in green color.

Attachment 2

Proposed 700-MHz Channels for Downstate New York

Channel	Base Freq	Channel	Mobile Freq
641	774.00000	1601	804.00000
642	774.00625	1602	804.00625
643	774.01250	1603	804.01250
644	774.01875	1604	804.01875
645	774.02500	1605	804.02500
646	774.03125	1606	804.03125
647	774.03750	1607	804.03750
648	774.04375	1608	804.04375
649	774.05000	1609	804.05000
650	774.05625	1610	804.05625
651	774.06250	1611	804.06250
652	774.06875	1612	804.06875
653	774.07500	1613	804.07500
654	774.08125	1614	804.08125
655	774.08750	1615	804.08750
656	774.09375	1616	804.09375
657	774.10000	1617	804.10000
658	774.10625	1618	804.10625
659	774.25000	1641	804.25000
660	774.25625	1642	804.25625
661	774.26250	1643	804.26250
662	774.26875	1644	804.26875
663	774.27500	1645	804.27500
664	774.28125	1646	804.28125
665	774.28750	1647	804.28750
666	774.29375	1648	804.29375
667	774.30000	1649	804.30000
668	774.30625	1650	804.30625
669	774.31250	1651	804.31250
670	774.31875	1652	804.31875
671	774.32500	1653	804.32500
672	774.33125	1654	804.33125
673	774.33750	1655	804.33750
674	774.34375	1656	804.34375
675	774.35000	1657	804.35000
676	774.35625	1658	804.35625
721	774.50000	1681	804.50000
722	774.50625	1682	804.50625
723	774.51250	1683	804.51250
724	774.51875	1684	804.51875
725	774.52500	1685	804.52500
726	774.53125	1686	804.53125
727	774.53750	1687	804.53750
728	774.54375	1688	804.54375
729	774.55000	1689	804.55000
730	774.55625	1690	804.55625
731	774.56250	1691	804.56250
732	774.56875	1692	804.56875
733	774.57500	1693	804.57500
734	774.58125	1694	804.58125
735	774.58750	1695	804.58750

Channel	Base Freq
726	774.59375
727	774.60000
728	774.60625
761	774.75000
762	774.75625
765	774.77500
766	774.78125
767	774.78750
768	774.79375
769	774.80000
770	774.80625
771	774.81250
772	774.81875
773	774.82500
774	774.83125
775	774.83750
776	774.84375
777	774.85000
778	774.85625
801	775.00000
802	775.00625
805	775.02500
806	775.03125
807	775.03750
808	775.04375
809	775.05000
810	775.05625
811	775.06250
812	775.06875
813	775.07500
814	775.08125
815	775.08750
816	775.09375
817	775.10000
818	775.10625
841	775.25000
842	775.25625
845	775.27500
846	775.28125
847	775.28750
848	775.29375
849	775.30000
850	775.30625
851	775.31250
852	775.31875
853	775.32500
854	775.33125
855	775.33750
856	775.34375
857	775.35000
858	775.35625

Channel	Mobile Freq
1606	804.59375
1607	804.60000
1608	804.60625
1721	804.75000
1722	804.75625
1725	804.77500
1726	804.78125
1727	804.78750
1728	804.79375
1729	804.80000
1730	804.80625
1731	804.81250
1732	804.81875
1733	804.82500
1734	804.83125
1735	804.83750
1736	804.84375
1737	804.85000
1738	804.85625
1761	805.00000
1762	805.00625
1765	805.02500
1766	805.03125
1767	805.03750
1768	805.04375
1769	805.05000
1770	805.05625
1771	805.06250
1772	805.06875
1773	805.07500
1774	805.08125
1775	805.08750
1776	805.09375
1777	805.10000
1778	805.10625
1801	805.25000
1802	805.25625
1805	805.27500
1806	805.28125
1807	805.28750
1808	805.29375
1809	805.30000
1810	805.30625
1811	805.31250
1812	805.31875
1813	805.32500
1814	805.33125
1815	805.33750
1816	805.34375
1817	805.35000
1818	805.35625

Channel	Base Freq	Channel	Mobile Freq
881	775.50000	1841	805.50000
882	775.50625	1842	805.50625
885	775.52500	1845	805.52500
886	775.53125	1846	805.53125
887	775.53750	1847	805.53750
888	775.54375	1848	805.54375
889	775.55000	1849	805.55000
890	775.55625	1850	805.55625
891	775.56250	1851	805.56250
892	775.56875	1852	805.56875
893	775.57500	1853	805.57500
894	775.58125	1854	805.58125
895	775.58750	1855	805.58750
896	775.59375	1856	805.59375
897	775.60000	1857	805.60000
898	775.60625	1858	805.60625
921	775.75000	1881	805.75000
922	775.75625	1882	805.75625
925	775.77500	1885	805.77500
926	775.78125	1886	805.78125
927	775.78750	1887	805.78750
928	775.79375	1888	805.79375
929	775.80000	1889	805.80000
930	775.80625	1890	805.80625
931	775.81250	1891	805.81250
932	775.81875	1892	805.81875
933	775.82500	1893	805.82500
934	775.83125	1894	805.83125
935	775.83750	1895	805.83750
936	775.84375	1896	805.84375
937	775.85000	1897	805.85000
938	775.85625	1898	805.85625
958	775.98750	1918	805.98750
959	775.99375	1919	805.99375

90.531(b)(1) Nationwide Interoperability Channels

90.531(b)(4) Low Power Itinerant Channels

90.531(b)(5) State License Channels

Frequency is referenced to lower edge of each 6.25 kHz channel.

Attachment 3

Data Atlas of Proposed Downstate NY Fixed Base Stations

Site_ID	Lat	Lon	Tx_Ant_AGL_m	HAAT_m	ERP_W	Tx_Antenna
1	41-43-10N	73-59-43W	93	301	214	DB810K-XT
2	41-41-18N	73-41-36W	37	265	295	DB810K-XT
3	41-27-25N	73-49-09W	130	131	309	DB810K-XT
4	41-27-43N	73-43-34W	40	226	245	DB810K-XT
5	41-20-18N	73-53-39W	120	155	158	DB810K-XT
6	41-25-11N	73-37-46W	25	25	269	DB810K-XT
7	41-50-37N	73-52-03W	61	109	257	DB810K-XT
8	41-26-49N	74-21-46W	42	22	288	DB810K-XT
9	41-22-25N	74-37-32W	30	159	309	DB810K-XT
10	41-26-27N	74-34-27W	15	166	339	DB810K-XT
11	41-22-44N	74-08-11W	30	297	257	DB810K-XT
12	41-13-28N	74-04-09W	46	216	282	DB810K-XT
13	41-11-57N	73-48-29W	61	115	219	DB810K-XT
14	41-19-11N	73-33-50W	28	128	263	DB810K-XT
15	41-00-54N	73-48-53W	40	109	245	DB810K-XT
16	41-12-25N	73-42-04W	61	135	219	DB810K-XT
17	41-45-03N	73-37-41W	44	199	282	DB810K-XT
18	41-18-40N	74-00-25W	16	173	282	DB810K-XT
19	41-12-31N	74-21-21W	95	302	214	DB810K-XT
20	41-13-24N	73-34-25W	37	126	257	DB810K-XT
21	41-02-57N	73-58-06W	44	34	282	DB810K-XT
22	41-55-03N	73-34-20W	56	210	263	DB810K-XT
23	41-29-23N	74-31-51W	59	191	263	DB810K-XT
24	41-09-28N	74-10-42W	46	51	282	DB810K-XT
25	41-31-43N	73-46-04W	37	199	295	DB810K-XT
26	41-18-12N	74-06-52W	24	200	316	DB810K-XT
27	41-57-04N	73-48-18W	43	138	288	DB810K-XT
28	41-53-58N	73-40-47W	30	87	309	DB810K-XT
29	41-47-54N	74-02-19W	55	123	269	DB810K-XT
30	41-23-22N	73-58-50W	43	169	240	DB810K-XT
31	41-59-24N	74-01-05W	61	95	257	DB810K-XT
32	42-09-54N	73-29-08W	27	173	316	DB810K-XT
33	42-10-35N	73-40-51W	76	173	240	DB810K-XT
34	41-34-22N	73-40-53W	50	231	275	DB810K-XT
35	41-06-47N	74-05-34W	92	117	219	DB810K-XT
36	41-29-20N	73-56-50W	40	332	245	DB810K-XT
37	41-22-04N	73-44-43W	52	166	275	DB810K-XT
38	41-25-54N	73-52-50W	107	266	200	DB810K-XT
39	42-05-58N	73-43-49W	45	130	282	DB810K-XT
40	42-01-00N	73-30-12W	18	153	170	DB810K-XT
41	42-01-00N	73-45-51W	18	76	170	DB810K-XT
42	41-50-24N	73-34-45W	18	49	170	DB810K-XT
43	41-42-27N	73-35-21W	18	-81	170	DB810K-XT
44	41-46-15N	73-34-06W	18	-93	170	DB810K-XT

Site_ID	Lat	Lon	Tx_Ant_AGL_m	HAAT_m	ERP_W	Tx_Antenna
45	41-26-18N	74-41-33W	18	108	170	DB810K-XT
46	41-15-36N	74-09-48W	18	-21	170	DB810K-XT
47	41-28-27N	74-33-51W	18	-15	170	DB810K-XT
48	41-24-24N	74-36-45W	18	-7	170	DB810K-XT
49	41-25-54N	73-55-06W	18	19	170	DB810K-XT
50	41-29-12N	73-53-48W	18	27	170	DB810K-XT
51	41-21-57N	73-38-57W	18	27	170	DB810K-XT
52	41-21-39N	73-49-39W	18	84	170	DB810K-XT
53	41-27-15N	73-36-33W	18	41	170	DB810K-XT
54	41-30-45N	74-45-15W	18	-4	170	DB810K-XT
55	41-20-15N	73-39-09W	18	12	170	DB810K-XT
56	41-15-00N	73-40-45W	18	-45	170	DB810K-XT
57	41-09-39N	73-46-00W	18	56	170	DB810K-XT
58	41-07-18N	73-46-57W	18	8	170	DB810K-XT
59	41-36-57N	73-34-09W	46	172	282	DB810K-XT
60	41-47-45N	73-43-57W	61	91	257	DB810K-XT
61	41-36-49N	74-25-27W	76	253	240	DB810K-XT
62	40-58-11N	73-42-43W	18	-1	631	DB810K-XT
63	40-58-11N	73-42-43W	46	27	282	DB810K-XT
64	41-03-41N	73-46-19W	18	20	631	DB810K-XT
65	41-11-36N	73-53-09W	76	-7	209	DB810K-XT
66	41-06-32N	74-10-28W	61	153	257	DB810K-XT
67	41-22-23N	74-43-48W	152	185	155	DB810K-XT
68	40-58-45N	73-54-53W	59	185	263	DB810K-XT
69	40-51-18N	73-55-37W	76	109	309	DB810K-XT
70	40-51-47N	73-49-17W	114	93	309	DB810K-XT
71	40-44-29N	73-43-53W	83	92	309	DB810K-XT
72	40-40-32N	73-54-37W	66	80	251	DB810K-XT
73	40-45-06N	73-58-33W	305	303	102	DB806-XT
74	41-14-46N	74-17-11W	71	195	123	DB810K-XT
75	41-14-46N	74-11-40W	56	181	269	DB810K-XT
76	41-23-40N	73-37-17W	24	-12	141	DB810K-XT
77	40-59-22N	73-48-32W	18	12	166	DB810K-XT
78	41-26-38N	73-58-50W	24	-123	141	DB810K-XT
79	41-00-07N	73-39-51W	12	-23	155	DB810K-XT
80	41-11-35N	74-11-04W	5	-99	166	DB810K-XT
81	41-29-51N	73-33-48W	38	199	295	DB810K-XT
82	41-31-18N	73-38-04W	86	187	112	DB810K-XT
83	41-41-05N	74-21-15W	43	481	288	DB810K-XT
84	41-38-27N	74-01-15W	79	258	234	DB810K-XT
85	41-04-49N	73-48-24W	143	180	138	DB810K-XT
86	40-55-55N	73-51-45W	91	129	191	DB810K-XT
87	40-41-20N	73-34-17W	55	48	269	DB810K-XT
88	40-48-06N	73-26-02W	80	135	234	DB810K-XT
89	40-54-35N	73-06-58W	84	119	229	DB810K-XT
90	40-48-33N	73-13-18W	115	134	191	DB810K-XT
91	40-50-41N	73-01-58W	78	144	234	DB810K-XT
92	40-39-23N	73-39-21W	61	59	162	DB810K-XT
93	40-48-19N	73-38-36W	82	97	166	DB810K-XT
94	40-52-03N	73-35-00W	46	88	138	DB810K-XT

Site_ID	Lat	Lon	Tx_Ant_AGL_m	HAAT_m	ERP_W	Tx_Antenna
95	40-48-12N	73-41-11W	15	42	48	DB810K-XT
96	40-45-56N	73-31-39W	46	55	282	DB810K-XT
97	40-52-30N	73-31-51W	5	-24	33	DB810K-XT
98	40-50-06N	73-27-07W	5	5	7	DB803K-XT
99	40-42-02N	73-24-20W	47	44	282	DB810K-XT

The technical parameter definitions are:

Site_ID is a sequential number assigned to aid referencing a particular proposed fixed base station.

Lat and **Lon** are location coordinates in degrees-minutes-seconds as referenced to the North American 1927 (NAD27) datum.

Tx_Ant_AGL_m is the transmit antenna centerline height above ground level in units of meters.

HAAT_m is the antenna height above average terrain [see 47 C.F.R. § 90.309(a)(4)] in units of meters.

ERP_W is the effective radiated power in units of Watts.

Tx_Antenna is the manufacturer's model number of the transmit antenna. All antennas have 360° azimuth (i.e., are omni-directional), no mechanical beam downtilt, and are vertically polarized. Gain is 3 dBd, 6 dBd, or 10 dBd depending on the model indicated.

Attachment 4

Determination of Fixed Base Station ERP

Station	NYS Site	TV Chan	Relative to Base Station	Actual HAAT (m)	Actual HAAT> 152m	Actual Dist. (km)	Actual Distance >209 km Co-Ch >108 km Adj-Ch	90.309 ERP Reduction Figure B (dB)	Actual Distance <145 km Co-Ch <96 km Adj-Ch	90.309 Table B/E Max ERP (W)	Actual ERP (W)	90.545 Eng. Study
WMBC	1	63	Adj	301	Y	0	N		Y	0	214	Y
WMBC	2	63	Adj	265	Y	106	N		N	0	295	Y
WMBC	3	63	Adj	131	N	82	N	0.0	Y	0	309	Y
WMBC	4	63	Adj	226	Y	88	N		Y	0	245	Y
WMBC	5	63	Adj	155	Y	69	N		Y	0	158	Y
WMBC	6	63	Adj	25	N	93	N	0.0	Y	0	269	Y
WMBC	7	63	Adj	109	N	110	Y	0.0	N	1000	257	N
WMBC	8	63	Adj	21	N	52	N	0.0	Y	0	288	Y
WMBC	9	63	Adj	159	Y	40	N		Y	0	309	Y
WMBC	10	63	Adj	166	Y	48	N		Y	0	339	Y
WMBC	11	63	Adj	297	Y	56	N		Y	0	257	Y
WMBC	12	63	Adj	216	Y	50	N		Y	0	282	Y
WMBC	13	63	Adj	115	N	69	N	0.0	Y	0	219	Y
WMBC	14	63	Adj	128	N	93	N	0.0	Y	0	263	Y
WMBC	15	63	Adj	109	N	65	N	0.0	Y	0	245	Y
WMBC	16	63	Adj	135	N	78	N	0.0	Y	0	219	Y
WMBC	17	63	Adj	199	Y	115	Y	0.0	N	1000	282	N
WMBC	18	63	Adj	173	Y	59	N		Y	0	282	Y
WMBC	19	63	Adj	302	Y	30	N		Y	0	214	Y
WMBC	20	63	Adj	128	N	89	N	0.0	Y	0	257	Y
WMBC	21	63	Adj	34	N	53	N	0.0	Y	0	282	Y
WMBC	22	63	Adj	210	Y	132	Y	0.0	N	1000	263	N
WMBC	23	63	Adj	191	Y	53	N		Y	0	263	Y
WMBC	24	63	Adj	51	N	38	N	0.0	Y	0	282	Y
WMBC	25	63	Adj	199	Y	90	N		Y	0	295	Y
WMBC	26	63	Adj	200	Y	52	N		Y	0	316	Y
WMBC	27	63	Adj	138	N	123	Y	0.0	N	1000	288	N
WMBC	28	63	Adj	87	N	125	Y	0.0	N	1000	269	N
WMBC	29	63	Adj	123	N	99	N	0.0	N	75	269	Y
WMBC	30	63	Adj	169	Y	66	N		Y	0	240	Y
WMBC	31	63	Adj	95	N	118	Y	0.0	N	1000	257	N
WMBC	32	63	Adj	173	Y	158	Y	0.0	N	1000	316	N
WMBC	33	63	Adj	173	Y	150	Y	0.0	N	1000	240	N
WMBC	34	63	Adj	231	Y	98	N		N	0	275	Y
WMBC	35	63	Adj	117	N	43	N	0.0	Y	0	219	Y
WMBC	36	63	Adj	332	Y	76	N		Y	0	245	Y
WMBC	37	63	Adj	166	Y	81	N		Y	0	275	Y
WMBC	38	63	Adj	266	Y	76	N		Y	0	200	Y
WMBC	39	63	Adj	130	N	141	Y	0.0	N	1000	282	N
WMBC	40	63	Adj	153	Y	144	Y	0.0	N	1000	170	N
WMBC	41	63	Adj	76	N	131	Y	0.0	N	1000	170	N
WMBC	42	63	Adj	49	N	125	Y	0.0	N	1000	170	N
WMBC	43	63	Adj	-81	N	114	Y	0.0	N	1000	170	N
WMBC	44	63	Adj	-93	N	120	Y	0.0	N	1000	170	N

Station	NYS Site	TV Chan	Relative to Base Station	Actual HAAT (m)	Actual HAAT> 152m	Actual Dist. (km)	Actual Distance >209 km Co-Ch >108 km Adj-Ch	90.309 ERP Reduction Figure B (dB)	Actual Distance <145 km Co-Ch <96 km Adj-Ch	90.309 Table B/E Max ERP (W)	Actual ERP (W)	90.545 Eng. Study
WMBC	45	63	Adj	108	N	48	N	0.0	Y	0	170	Y
WMBC	46	63	Adj	-21	N	45	N	0.0	Y	0	170	Y
WMBC	47	63	Adj	-15	N	51	N	0.0	Y	0	170	Y
WMBC	48	63	Adj	-7	N	44	N	0.0	Y	0	170	Y
WMBC	49	63	Adj	19	N	19	N	0.0	Y	0	170	Y
WMBC	50	63	Adj	27	N	79	N	0.0	Y	0	170	Y
WMBC	51	63	Adj	27	N	88	N	0.0	Y	0	170	Y
WMBC	52	63	Adj	84	N	75	N	0.0	Y	0	170	Y
WMBC	53	63	Adj	41	N	96	N	0.0	N	1000	170	N
WMBC	54	63	Adj	-4	N	57	N	0.0	Y	0	170	Y
WMBC	55	63	Adj	12	N	87	N	0.0	Y	0	170	Y
WMBC	56	63	Adj	-45	N	81	N	0.0	Y	0	170	Y
WMBC	57	63	Adj	56	N	71	N	0.0	Y	0	170	Y
WMBC	58	63	Adj	8	N	69	N	0.0	Y	0	170	Y
WMBC	59	63	Adj	172	Y	109	Y	0.0	N	1000	282	N
WMBC	60	63	Adj	91	N	113	Y	0.0	N	1000	257	N
WMBC	61	63	Adj	253	Y	68	N		Y	0	240	Y
WMBC	62	63	Adj	-1	N	74	N	0.0	Y	0	631	Y
WMBC	63	63	Adj	27	N	74	N	0.0	Y	0	282	Y
WMBC	64	63	Adj	20	N	69	N	0.0	Y	0	631	Y
WMBC	65	63	Adj	-7	N	63	N	0.0	Y	0	209	Y
WMBC	66	63	Adj	153	Y	36	N		Y	0	257	Y
WMBC	67	63	Adj	185	Y	41	N		Y	0	155	Y
WMBC	68	63	Adj	185	Y	57	N		Y	0	263	Y
WMBC	69	63	Adj	109	N	59	N	0.0	Y	0	309	Y
WMBC	70	63	Adj	93	N	67	N	0.0	Y	0	309	Y
WMBC	71	63	Adj	92	N	79	N	0.0	Y	0	309	Y
WMBC	72	63	Adj	80	N	69	N	0.0	Y	0	251	Y
WMBC	73	63	Adj	303	Y	59	N		Y	0	102	Y
WMBC	74	63	Adj	195	Y	37	N		Y	0	123	Y
WMBC	75	63	Adj	181	Y	42	N		Y	0	269	Y
WMBC	76	63	Adj	-12	N	92	N	0.0	Y	0	141	Y
WMBC	77	63	Adj	12	N	66	N	0.0	Y	0	166	Y
WMBC	78	63	Adj	-123	N	70	N	0.0	Y	0	141	Y
WMBC	79	63	Adj	-23	N	78	N	0.0	Y	0	155	Y
WMBC	80	63	Adj	-99	N	40	N	0.0	Y	0	166	Y
WMBC	81	63	Adj	199	Y	102	Y	0.0	N	1000	295	N
WMBC	82	63	Adj	187	Y	98	N		N	0	112	Y
WMBC	83	63	Adj	481	Y	77	N		Y	0	288	Y
WMBC	84	63	Adj	258	Y	85	N		Y	0	234	Y
WMBC	85	63	Adj	180	Y	66	N		Y	0	138	Y
WMBC	86	63	Adj	129	N	62	N	0.0	Y	0	191	Y
WMBC	87	63	Adj	48	N	0	N	0.0	Y	0	269	Y
WMBC	88	63	Adj	135	N	100	N	0.0	N	150	234	Y
WMBC	89	63	Adj	119	N	125	Y	0.0	N	1000	229	N
WMBC	90	63	Adj	134	N	118	Y	0.0	N	1000	191	N
WMBC	91	63	Adj	144	N	133	Y	0.0	N	1000	234	N
WMBC	92	63	Adj	59	N	88	N	0.0	Y	0	162	Y
WMBC	93	63	Adj	97	N	83	N	0.0	Y	0	166	Y
WMBC	94	63	Adj	88	N	86	N	0.0	Y	0	138	Y
WMBC	95	63	Adj	42	N	80	N	0.0	Y	0	48	Y
WMBC	96	63	Adj	55	N	1	N	0.0	Y	0	282	Y
WMBC	97	63	Adj	-24	N	91	N	0.0	Y	0	33	Y