

**University of Massachusetts Boston  
New FM Broadcast Facility Proposal for Milford, New Hampshire**

**Exhibit 16 for Section VII / 15.a**

**Contour Overlap / Protection**

Pursuant to 47 CFR 73.509(a), the FCC prohibits new NCE stations that have contours overlapping nearby NCE stations, as defined by this table:

<u>Frequency separation</u>	<u>Contour of proposed station</u>	<u>Contour of other station</u>
Co-channel	0.1mV/m (40 dBu) F(50,10)	1 mV/m (60 dBu) F(50,50)
	1 mV/m (60 dBu) F(50,50)	0.1 mV/m (40 dBu) F(50,10)
200 kHz	0.5 mV/m (54 dBu) F(50,10)	1 mV/m (60 dBu) F(50,50)
	1 mV/m (60 dBu) F(50,50)	0.5 mV/m (54 dBu) F(50,10)
400 kHz/600 kHz	100 mV/m (100 dBu) F(50,10)	1 mV/m (60 dBu) F(50,50)
	1 mV/m (60 dBu) F(50,50)	100 mV/m (100 dBu) F(50,10)

There were 40 broadcast facilities, applications and construction permits that were analyzed in relation to the proposed Dram Cup Hill facility. Of them, eight are relevant:

- WNCH 88.1 Norwich, VT
- WEVS 88.3 Nashua, NH
- WFCR 88.5 Amherst, MA
- WSEW 88.5 Sanford, ME
- WSEW 88.7 Sanford, ME
- WRVT 88.7 Rutland, VT
- WERS 88.9 Boston, MA
- WEVO 89.1 Concord, NH

The proposed Dram Cup Hill facility's contours cover the following areas and population:

<u>Contour</u>	<u>Type</u> <sup>1</sup>	<u>Area</u>	<u>Population</u> <sup>2</sup>
60dBu	F(50,50)	385.3 sqkm	55,857
54dBu	F(50,10)	838.7 sqkm	196,501
40dBu	F(50,10)	4072.0 sqkm	1,093,432
100dBu	F(50,10)	2.4 sqkm	128

As demonstrated in the accompanying contour maps, there is no prohibited contour overlap.

<sup>1</sup> F(50,50) are service contours, F(50,10) are interfering contours.

<sup>2</sup> All population figures are from the 2000 U.S. Census.

### **Contour Maps : Legend / Key**

Other facilities' contours with the same color represent the matching protected or interfering contour for that facility, depending on channel (adjacent or co-channel) and type of broadcast.

The contours are color coded for ease of interpretation. Prohibited overlap is visible only where the proposed station's (interference or protected) contour of a given color overlaps the corresponding color contour of another station. (Protected or interference) Ideally, these paired-color contours would not overlap.

#### **DRAM CUP HILL CONTOUR**

Green = 60 dBu protected

Blue = 100 dBu interfering

Orange = 54 dBu interfering

Red = 40 dBu interfering

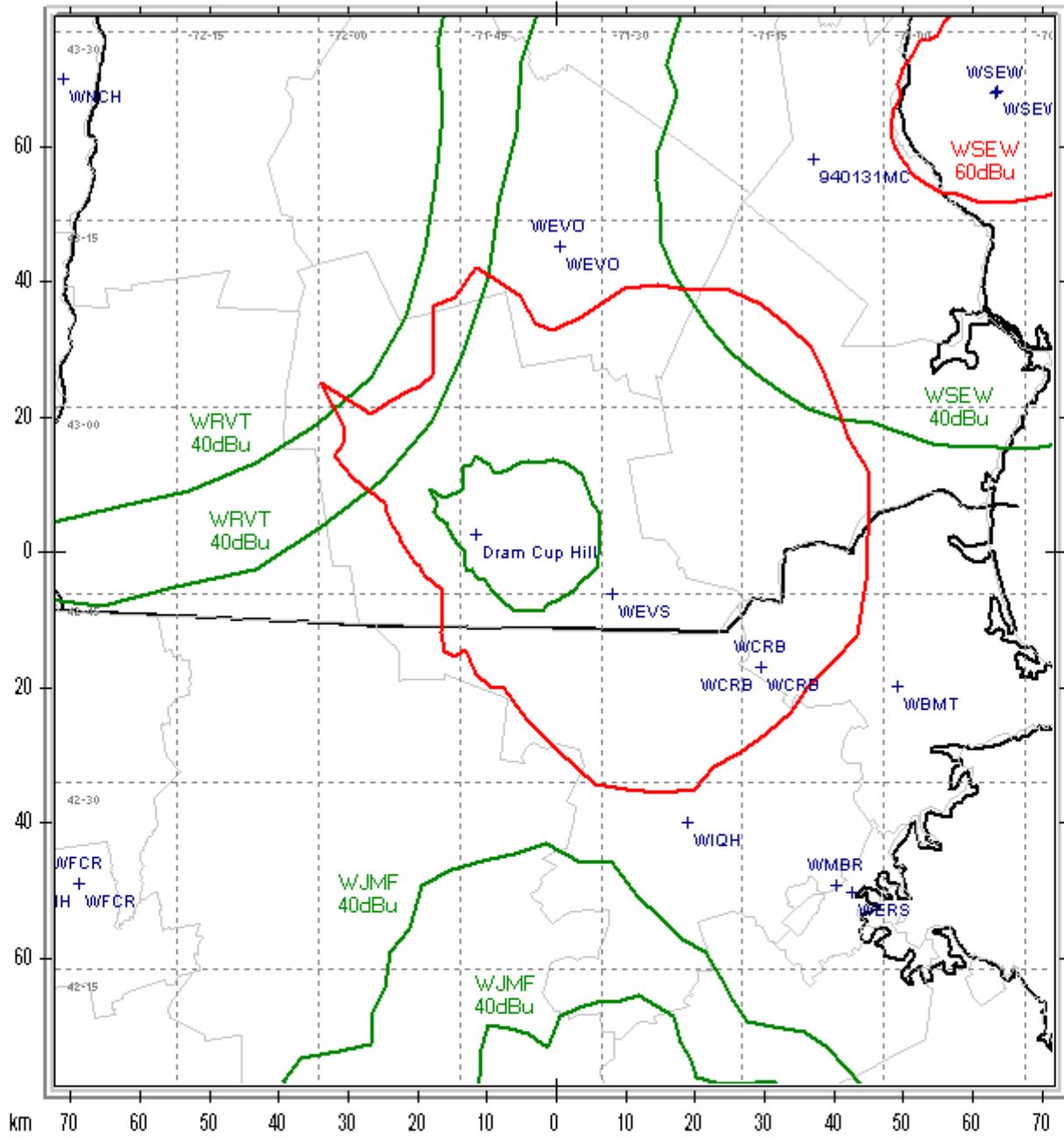
#### **OTHER STATION'S CONTOUR**

(60 dBu 2<sup>nd</sup> and 3<sup>rd</sup> adjacent)

(60 dBu 1<sup>st</sup> adjacent)

(60 dBu co-channel)

Dram Cup Hill 88.7 / Ch.204 Contour Overlap - CO-CHANNEL



Dram Cup Hill Facility Contours: F(50.50) Green=60dBu / F(50.10) Red=40dBu

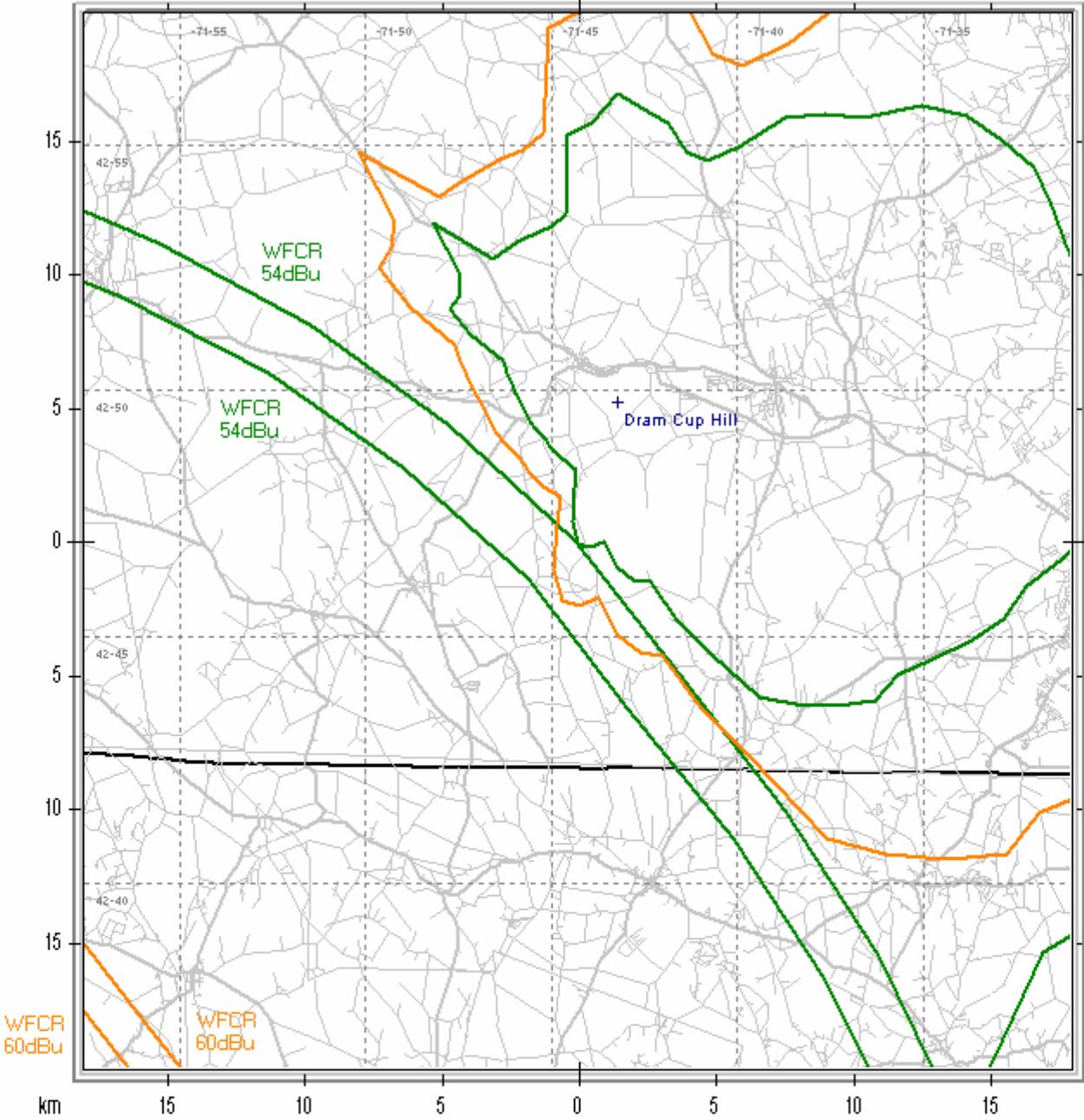
County Borders    State Borders    Lat/Lon Grid

Map Scale: 1:1000000    1 cm = 10.00 km    V|H Size: 158.19 x 143.96 km

Same color contours shall not cross.



Dram Cup Hill 88.7 / Ch.204 Contour Overlap - 1ST ADJACENT



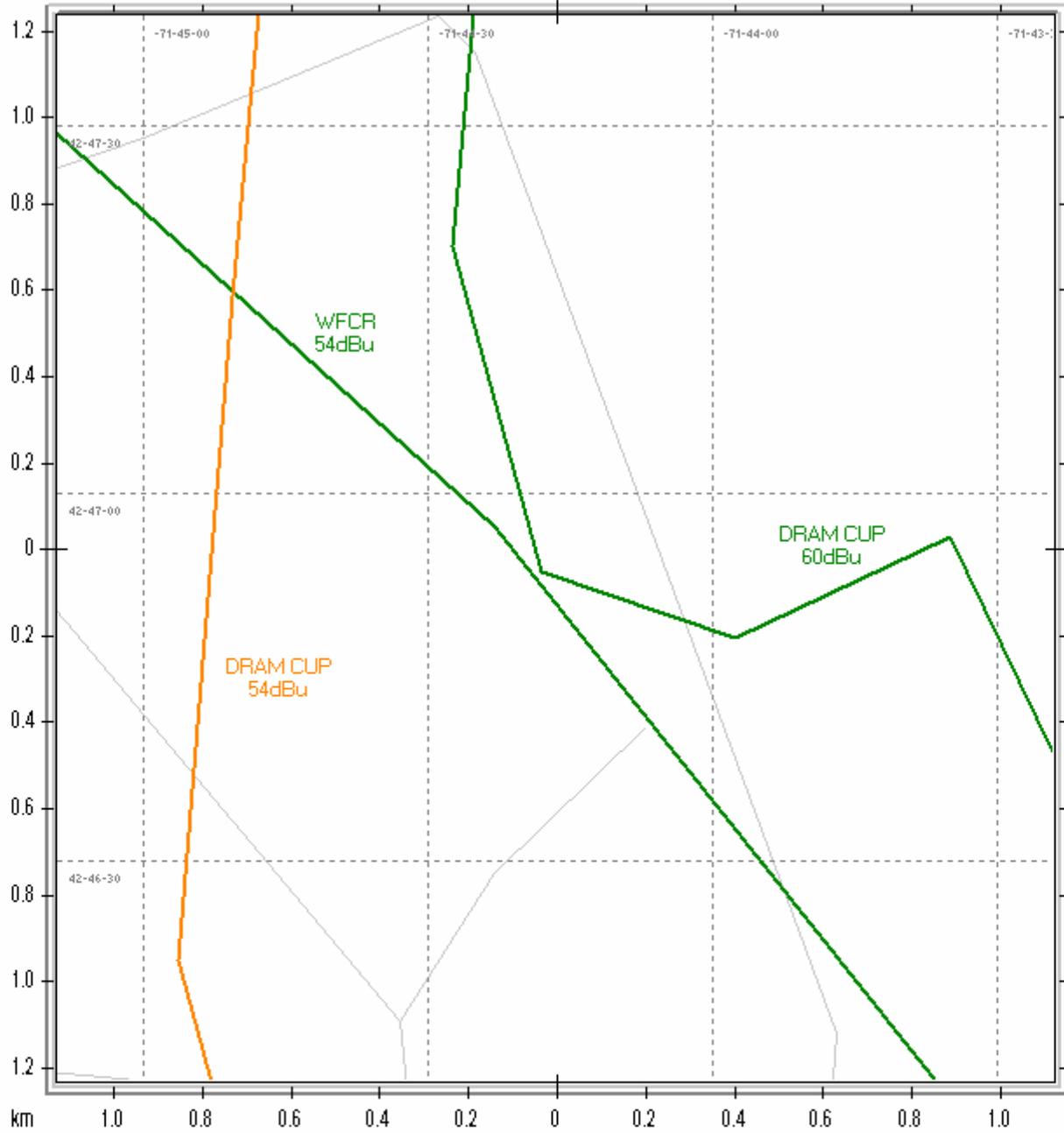
Dram Cup Hill Facility Contours: F(50,50) Green=60dBu / F(50,10) Orange=54dBu

County Borders    State Borders    Highways    Streets    Lat/Lon Grid

Map Scale: 1:250000    1 cm = 2.50 km    V|H Size: 39.55 x 35.99 km

Same color contours shall not cross.

Drum Cup Hill 88.7 / Ch.204 Contour Overlap - 1ST ADJACENT



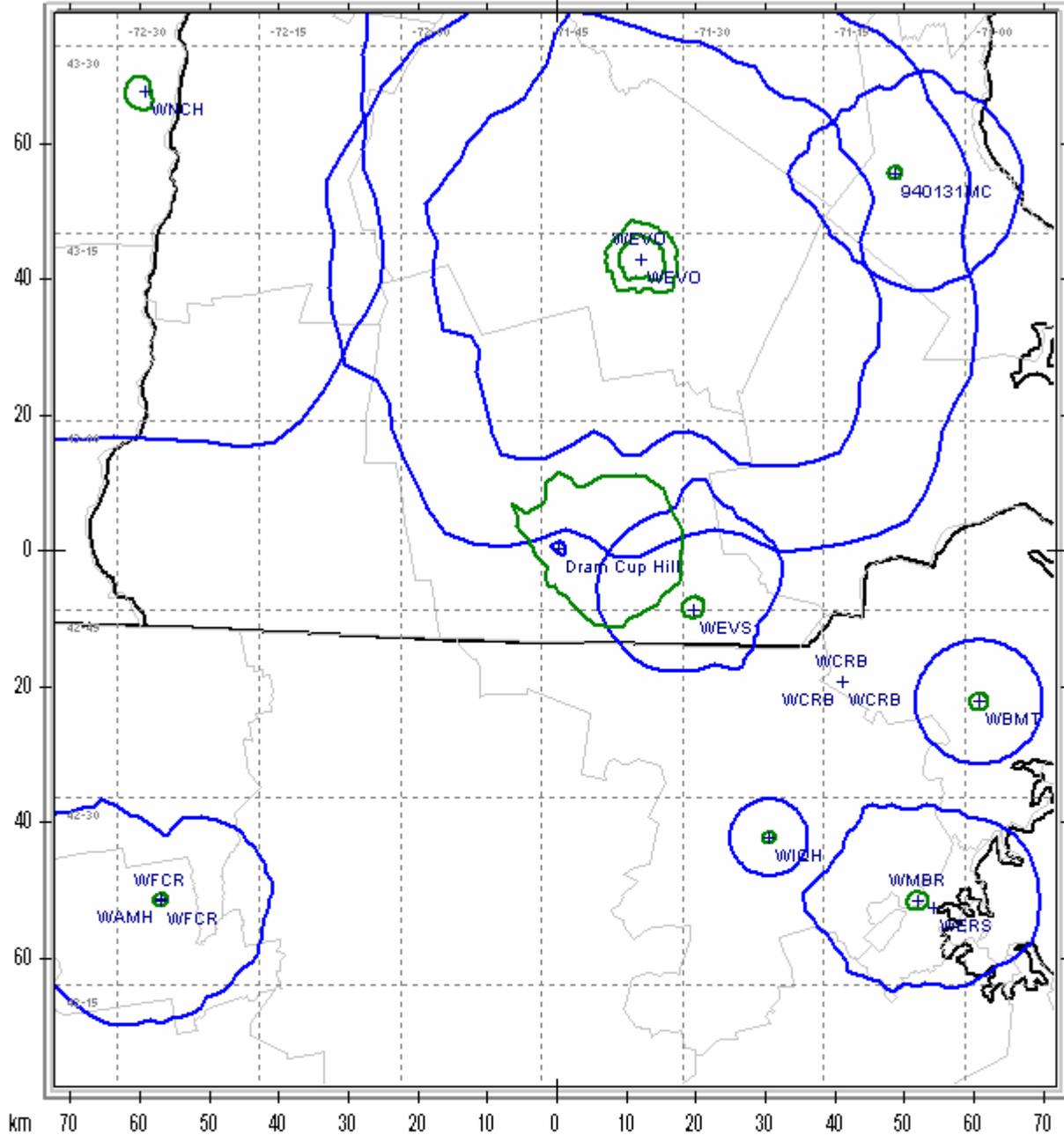
Drum Cup Hill Facility Contours: F(50,50) Green=60dBu / F(50,10) Orange=54dBu

County Borders    State Borders    Highways    Streets    Lat/Lon Grid

Map Scale: 1:15625    1 cm = 0.16 km    V|H Size: 2.47 x 2.25 km

Same color contours shall not cross.

Dram Cup Hill 88.7 / Ch.204 Contour Overlap - 2ND & 3RD ADJACENT



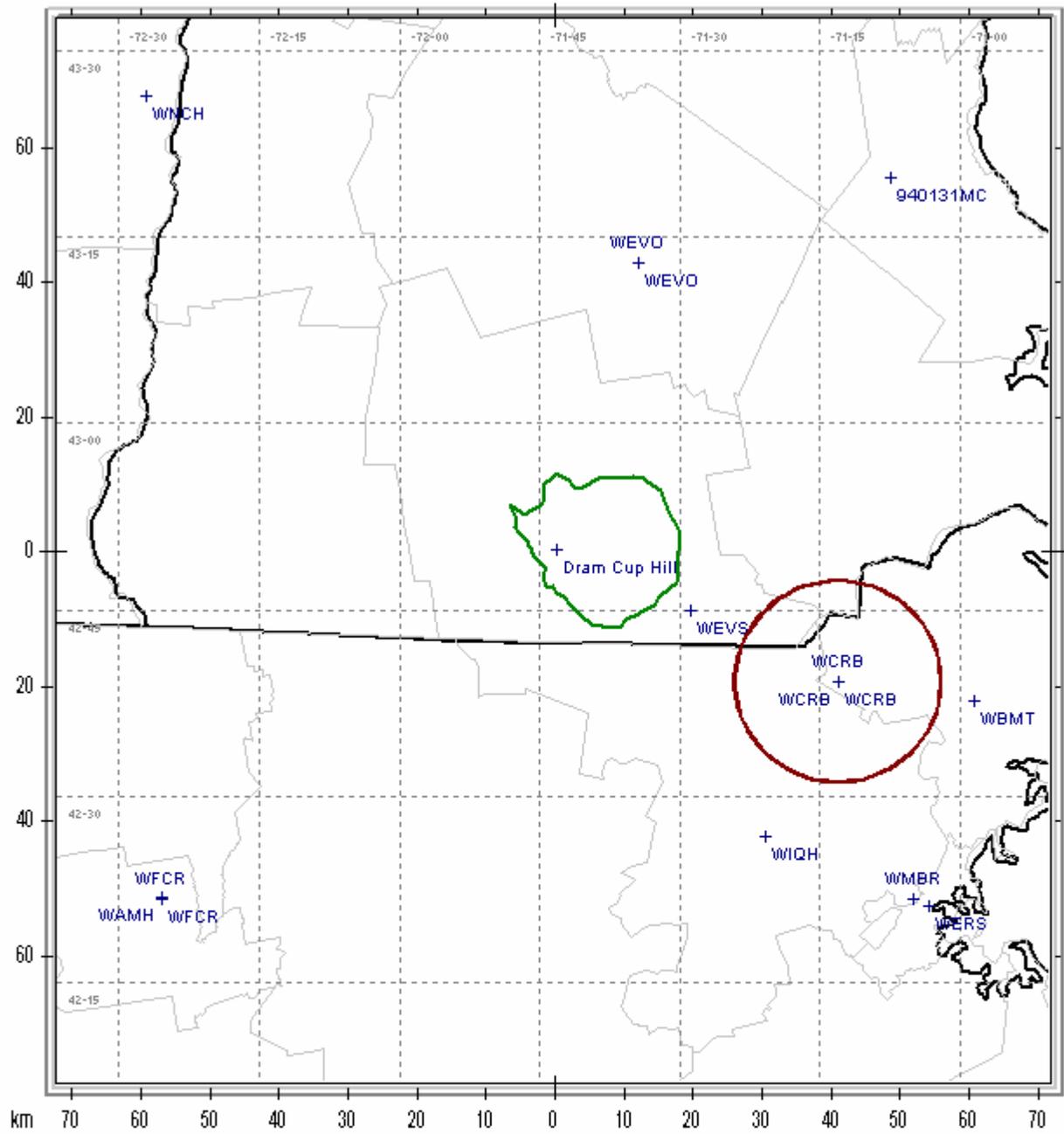
Dram Cup Hill Facility Contours: F(50,50) Green=60dBu / F(50,10) Blue=100dBu

County Borders      State Borders      Lat/Lon Grid

Map Scale: 1:1000000    1 cm = 10.00 km    V/H Size: 158.19 x 143.96 km

Same color contours shall not cross.

Dram Cup Hill 88.7 / Ch.204 Contour Overlap - I.F. Separation



Dram Cup Hill Facility Contours: F(50.50) Green=60dBu / F(50.10) Blue=100dBu

County Borders      State Borders      Lat/Lon Grid

Map Scale: 1:1000000    1 cm = 10.00 km    V/H Size: 158.19 x 143.96 km

Same color contours shall not cross.