

**August 2013  
New FM Translator  
Montpelier, Vermont Channel 252D  
Allocation Study**

The attached spacing study shows the spacing between the proposed translator site and the location of cochannel and adjacent channel stations and proposals. This study was made with the Commission's Class A spacing requirements, and individual situations were examined to determine the lack of prohibited contour overlap per the requirements of §74.1204 of the Rules. The attached allocation study maps demonstrate compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204.

The attached spacing study demonstrates compliance with §73.207 of the Commission's Rules regarding spacing restrictions to stations which are 53 or 54 channels removed from the proposed operation.

**Canada Border Zone**

The attached cochannel study map demonstrates that the proposed 34 dBu F(50,10) contour does not cross into Canadian territory. Therefore no further analysis is required to demonstrate protection to Canadian stations and allotments.

**LPFM Preclusion Study Not Required**

The instant proposal is located within 39 kilometers of the Burlington-Plattsburgh (Spectrum Available) 30 minute market grid identified in Appendix A of the *LPFM 4<sup>th</sup> R&O*. The proposal is not located within a Top 50 Arbitron market.

There is no change in the proposed channel or transmitter site location, from that which was on file as of June 16, 2013. While this application does incorporate an increase in ERP from 100 to 250 watts, and an increase in antenna height, and both the original and amended 60 dBu contour distances fall within the "lowest tier" of LPFM-to-translator spacing requirements. Specifically, for 100 watts ERP at -12 meters HAAT the 60 dBu contour distance is 5.7 kilometers; for 250 watts ERP at -1 meters HAAT the 60 dBu contour distance is 7.1 kilometers. Both of these values fall within the  $\leq 7.3$  kilometer range which is the "lowest tier" of LPFM-to-translator spacing requirements.

The proposed transmitter site is 31 kilometers from the Burlington-Plattsburgh market grid, but the cochannel LPFM-to-translator spacing requirement is only 26 kilometers.

This minor technical amendment does not change the proposal's preclusive effect upon potential LPFM applications, and is fully-protected from subsequent LPFM applications.

Therefore a grid study is not required as a part of this application.

## SEARCH PARAMETERS

FM Database Date: 130726

Channel: 252A 98.3 MHz  
 Latitude: 44 14 40  
 Longitude: 72 34 37  
 Safety Zone: 50 km  
 Job Title: MONTPELIER 252

Page 1

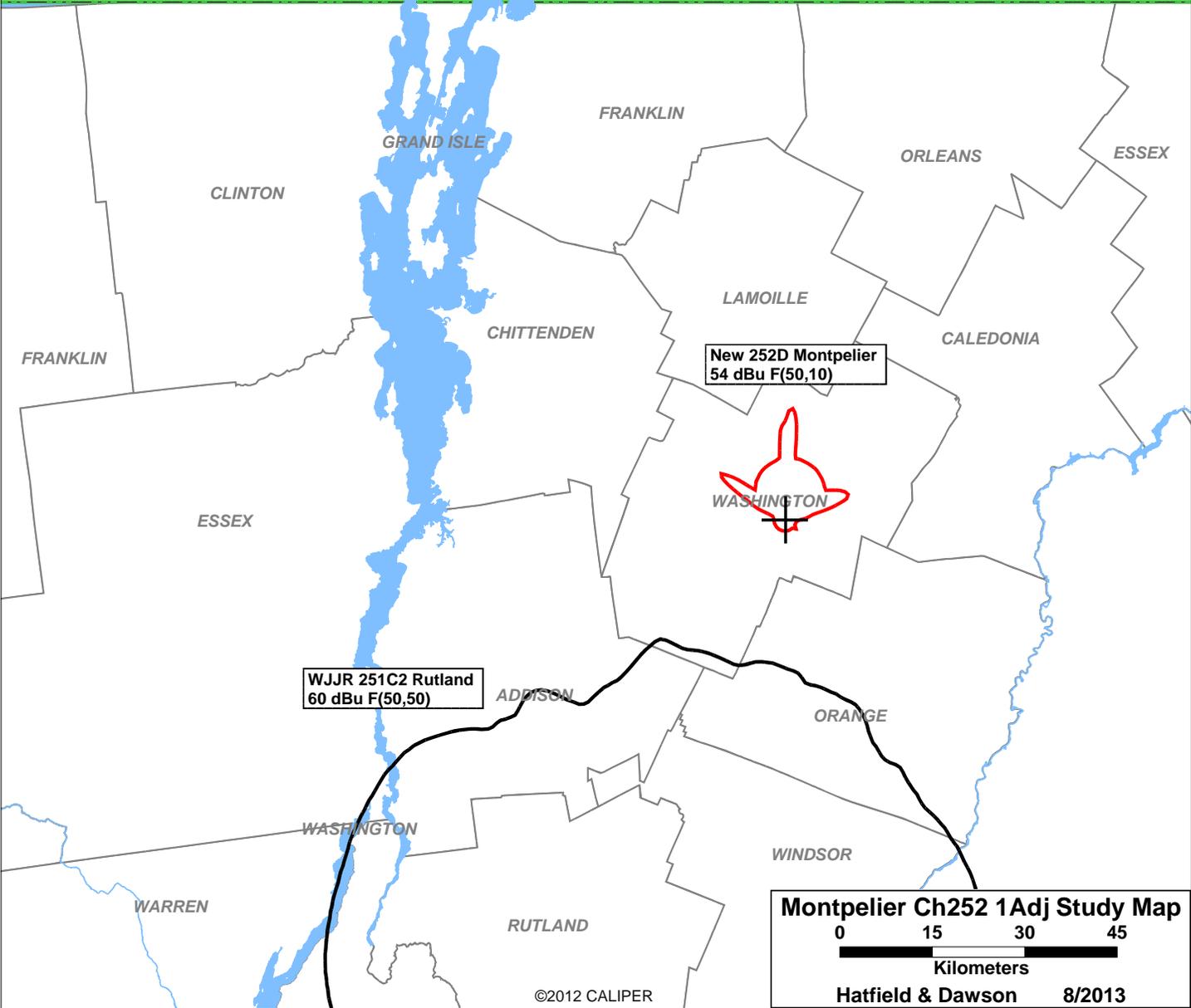
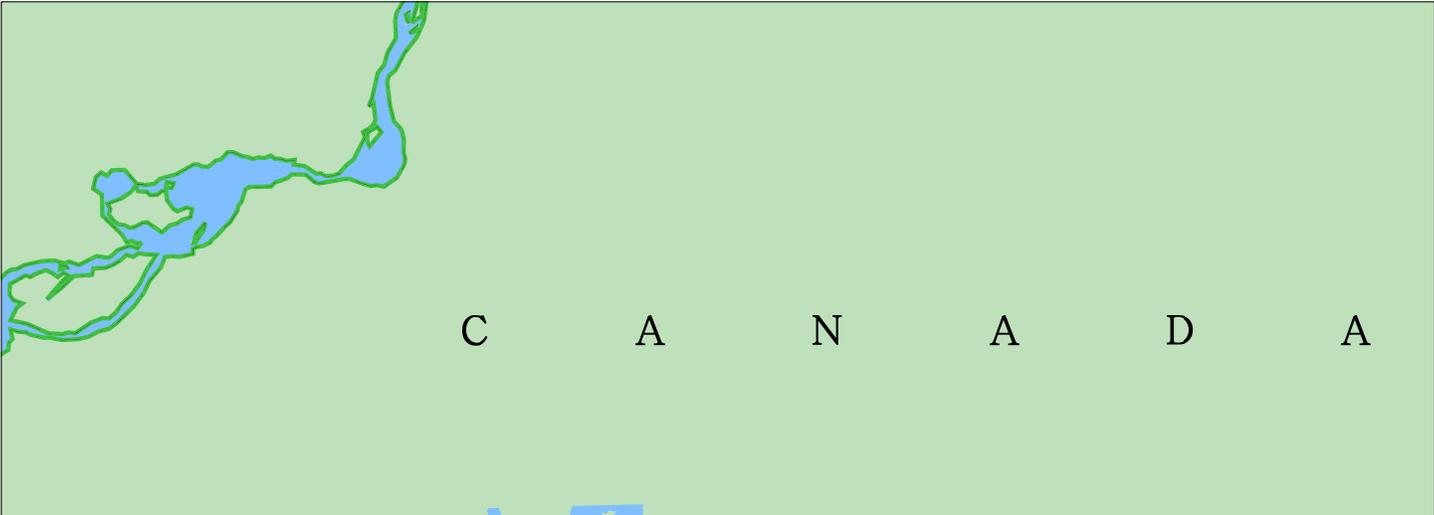
Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
W249AW LIC	LEBANON NH	BLFT-881108TF	249D 97.7	0.004 351.0	DA 43-37-17 072-10-30	154.9	76.38 0.00	0 TRANS
WGMT LIC	LYNDON VT	BLH-970801KD	249C3 97.7	0.600 574.0	DA 44-34-15 071-53-40	56.0	65.35 23.35	42 CLEAR
NEW-T APP	BARRE VT	BNPFT-30317HHV	250D 97.9	0.010 379.0	44-07-30 072-28-28	148.4	15.60 0.00	0 TRANS
CFGE-FM-MAGOG	QC	-	251B 98.1	0.980 578.0	DA 45-18-42 072-14-33	12.4	121.52 -15.48	137 SHORT
	LAC-BROME QU	-	251A 98.1	0.000 0.0	45-11-10 072-35-20	359.5	104.65 6.65	98 CLOSE
W251BD LIC	BERLIN NH	BLFT-51128AEO	251D 98.1	0.010 343.0	44-30-19 071-10-56	74.9	114.88 0.00	0 TRANS
WEVT-LP LIC	ENOSBURG FALLS VT	BLL-41118AAF	251L1 98.1	0.100 13.2	44-54-39 072-48-13	346.5	76.21 20.21	56 CLEAR
WJJR LIC	RUTLAND VT	BMLH-860411KF	251C2 98.1	1.150 790.0	43-36-17 072-49-14	195.4	73.72 -32.28	106 SHORT
	WINDSOR QU	-	252A 98.3	0.000 0.0	45-34-22 071-59-48	17.0	154.57 3.57	151 CLOSE
WLNH-FM LIC	LACONIA NH	BLH-30109ACA	252C3 98.3	0.700 547.0	DA 43-31-01 071-22-09	129.5 SS	126.32 -15.68	142 SHORT
W252CJ CP	BURLINGTON VT	BPFT-10711ABI	252D 98.3	0.220 97.0	44-29-50 073-12-51	299.3	58.04 0.00	0 TRANS
WAOT-LP LIC	DERBY VT	BLL-41117ADH	252L1 98.3	0.003 181.0	44-58-23 072-04-30	25.9	90.24 23.24	67 CLEAR
NEW-T APP	MONTPELIER VT	BNPFT-30312AJT	252D 98.3	0.100 146.0	DA 44-14-40 072-34-37	0.0	0.00 0.00	0 TRANS
W252CJ LIC	WESTFORD VT	BLFT-10621AAA	252D 98.3	0.080 384.0	DA 44-39-36 073-04-11	319.9	60.59 0.00	0 TRANS

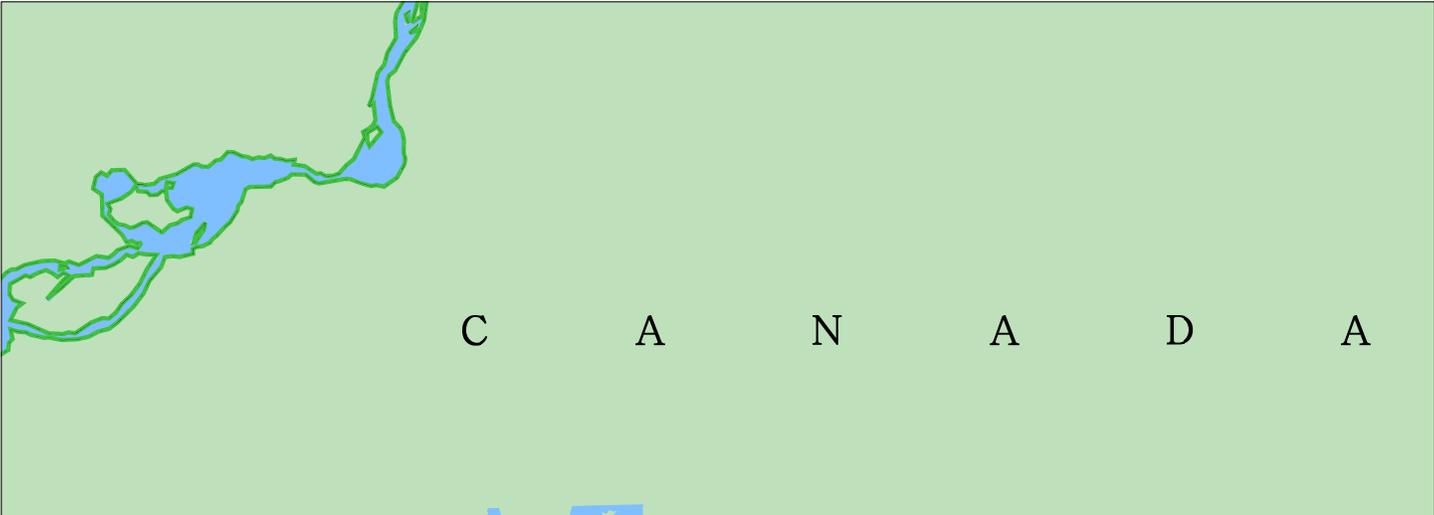
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SEARCH PARAMETERS                               FM Database Date: 130726
Channel: 252A      98.3 MHz                      Page 2
Latitude:  44 14 40
Longitude:  72 34 37
Safety Zone: 50 km
Job Title:  MONTPELIER 252
    
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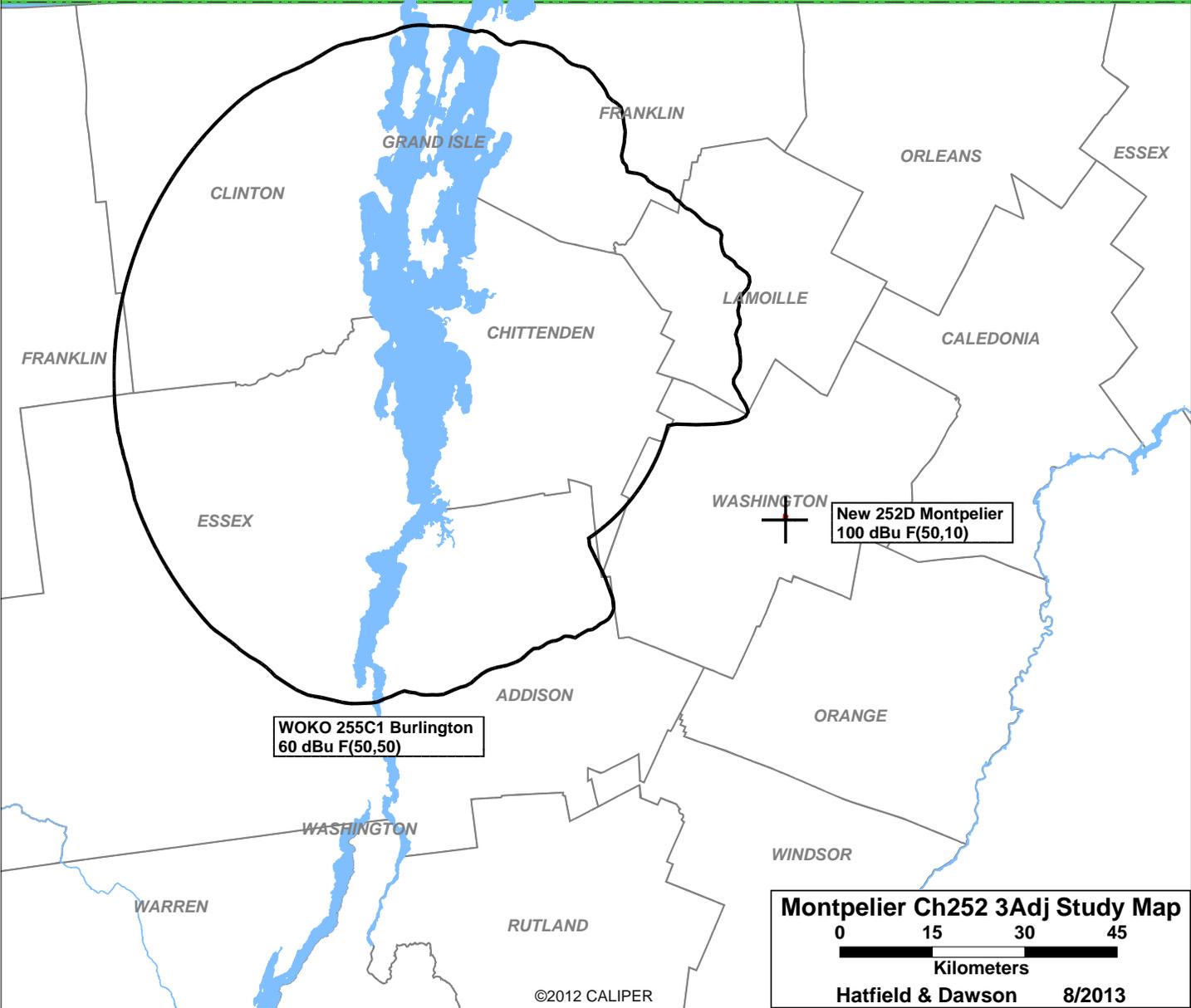
Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
CIELFM	LONGUEUIL		253C1	41.000	45-30-20	330.7	161.48	168
	QC -		98.5	302.0	073-35-32		-6.52	SHORT
W253AY	LITTLETON		253D	0.250	44-18-47	83.0	64.96	0
LIC	NH BLFT-71029AAC		98.5	126.0	071-46-08		0.00	TRANS
W255CF	WEST LEBANON		255D	0.250	43-39-16	160.9	69.36	0
LIC	NH BLFT-01115DQO		98.9	197.0	072-17-41		0.00	TRANS
WOKO	BURLINGTON		255C1	100.000	44-27-03	295.2	54.54	75
LIC	VT BLH-880920KB		98.9	94.0	073-11-51		-20.46	SHORT

==== END OF FM SPACING STUDY FOR CHANNEL 252 =====





C A N A D A



WOKO 255C1 Burlington  
60 dBu F(50,50)

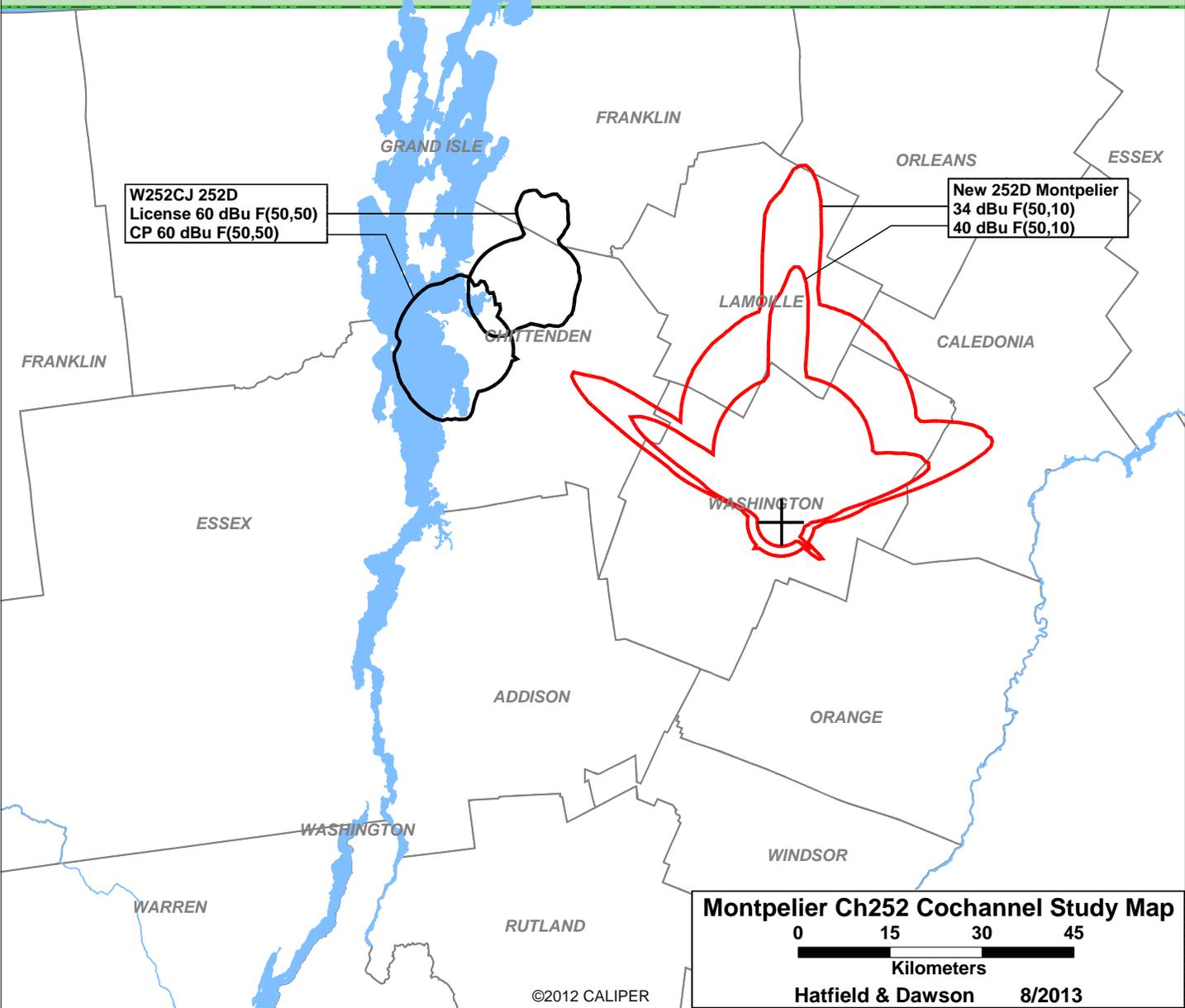
New 252D Montpelier  
100 dBu F(50,10)

**Montpelier Ch252 3Adj Study Map**

0 15 30 45  
Kilometers

Hatfield & Dawson 8/2013

C A N A D A



**August 2013**  
**New FM Translator**  
**Montpelier, Vermont Channel 252D**  
**RF Exposure Study**

**Facilities Proposed**

The proposed operation will be on Channel 252D (98.3 MHz) with a maximum lobe effective radiated power of 250 watts. Operation is proposed with an antenna mounted on an existing wooden pole, on a hillside south of Montpelier. Diplexed operation is proposed with W273AM, already at this site.

The proposed antenna support structure will not exceed 60.96 meters (200 feet) above ground and does not require notification to the Federal Aviation Administration. Therefore, this structure does not require an Antenna Structure Registration Number.

**RF Exposure Calculations**

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(\mu W / cm^2) = \frac{33.40981 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

*D* is the distance in meters from the center of radiation to the calculation point.

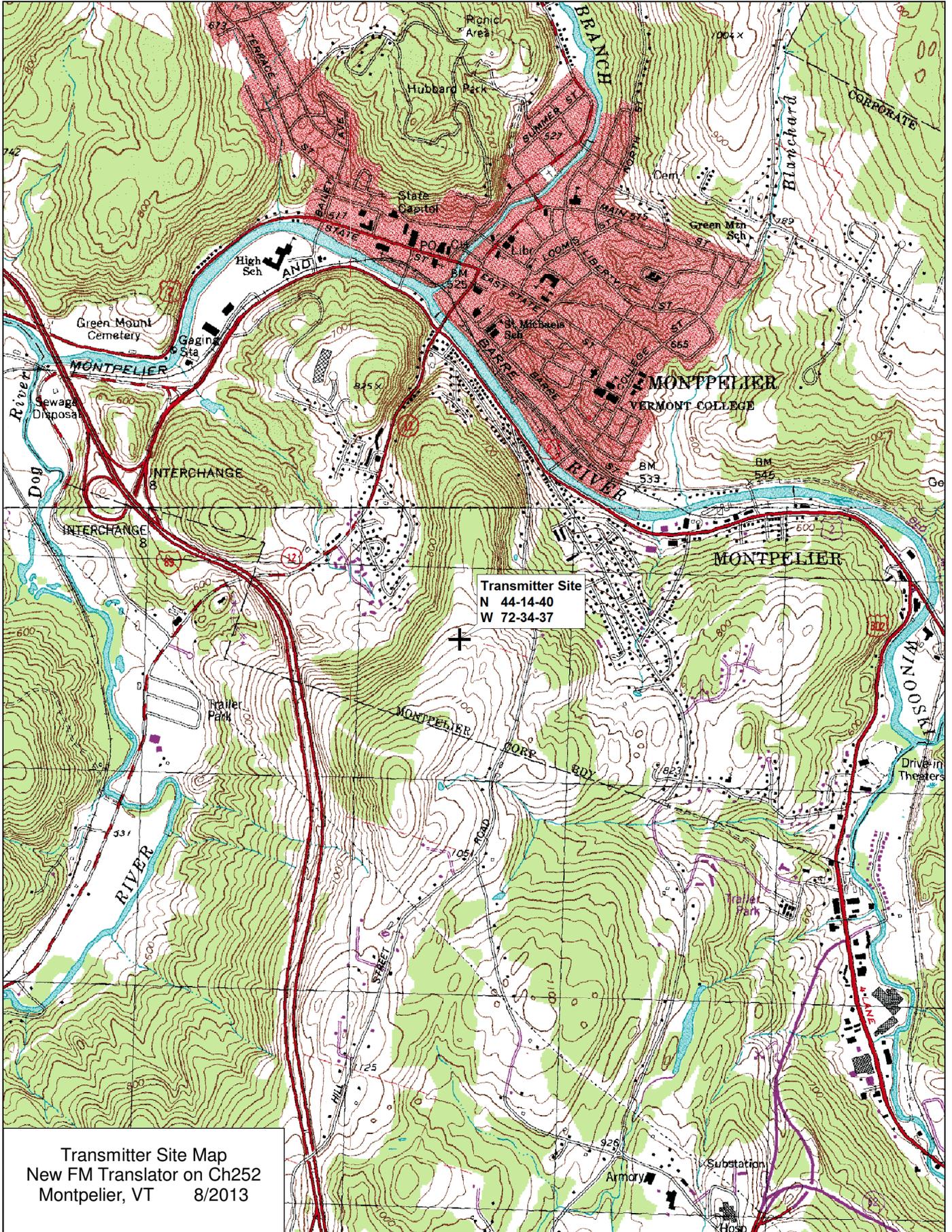
"Worst case" calculations of the power density produced by the translator antenna system have been made using the above formula, presuming that the antenna will radiate 250 watts straight down. The results indicate a maximum ground level power density of 23.1  $\mu W/cm^2$ , which is 11.6% of 200  $\mu W/cm^2$  (the FCC standard for uncontrolled environments). This is a worst-case figure. The actual ground level power densities from the antenna to be used will likely be lower.

"Worst case" calculations of the power density produced by the W273AM antenna system have been made using the above formula, presuming that the antenna will radiate 250 watts straight down. The results indicate a maximum ground level power density of 23.1  $\mu W/cm^2$ , which is 11.6% of 200  $\mu W/cm^2$  (the FCC standard for uncontrolled environments). This is a worst-case figure. The actual ground level power densities from W273AM are likely lower.

These calculations show that the maximum calculated power density produced at two meters above ground level by the proposed operation of Montpelier 252 and the present operation of W273AM is 23.2% of the FCC standard for uncontrolled environments.

The permittee/licensee in coordination with other users of the site must reduce power or cease

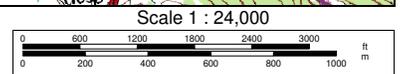
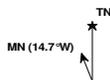
operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency radiation in excess of FCC guidelines.



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1 cm = 240.0 m Data Zoom 13-1