

**ENGINEERING STATEMENT**  
**IN SUPPORT OF**  
**APPLICATION FOR MINOR MODIFICATION**  
**OF A LICENSED NON-COMMERICAL EDUCATIONAL FM STATION**  
**WITH(FM)**  
**HOBART AND WILLIAM SMITH COLLEGES**  
**ITHACA, NY**

**BACKGROUND**

Hobart and William Smith Colleges (HWSC), is the licensee of the Non-Commercial Education FM station WITH (BLED-20100524AFI, Facility ID# 86349), which serves the Ithaca, NY, area on Channel 211 (90.1 MHz) with an ERP of 1.0 kW (horizontal and vertical). HWSC, in the instant application, seeks to increase the ERP of the station from 1.0 kW to 2.0 kW. All other parameters of the facility will remain the same as currently authorized.

**SITE AND TOWER**

The coordinates of the site are:

42° 34' 55.2" N (NAD83)  
76° 33' 20.7" W

The antenna will remain side-mounted on the existing 60m tower structure. The structure is not currently registered as it is under 200 ft AGL and not in the approach pattern

of any nearby airports. Furthermore, the structure passes the FCC TOWAIR software. Since there will be no increase in the overall height of the structure, neither notification to the FAA nor registration of the structure with the FCC is required.

#### **ANTENNA, POWER, AND COVERAGE**

The antenna radiation center of the proposed facility will remain at 366.7m AMSL (87.3m HAAT). At the proposed ERP of 2.0 kW (both horizontal and vertical), using the specified omni-directional antenna, the proposed facility is not predicted to create any interference contour overlap both to or from surrounding co- and adjacent channel stations. Figure 1, attached hereto, is a contour overlap study for the proposed facility, generated using the V-Soft FM Commander software and the FCC 30m terrain database. As can be seen from the study, while the existing interference contour of WGMC will be close to the protected contour of the proposed WITH facility, no overlap is predicted to exist to or from the proposed facility. Figure 2, attached hereto, is a map showing the protected and interference contours of the proposed WITH facility and WGMC.

The F(50,50) 60 dBu contour of the proposed facility is predicted to cover the entire area and population of the Community of License (Ithaca, NY), as shown in Figure 3, attached hereto.

#### **TV CHANNEL 6 PROTECTION**

Per Section 73.525(a)(1) of the FCC Rules, a non-commercial educational FM facility operating on Channel 211 must determine the potential effect on any TV Channel 6 station within 196 km of the transmitter site when proposing a change to its facility. There are no domestic full-service TV Channel 6 facilities within 196 km of the proposed site. The nearest full-service station authorized to operate on Channel 6 is WKBS-TV (Altoona, PA) at 273.4 km distant.

**FM MONITORING STATIONS, QUIET ZONES, AND INTERNATIONAL COORDINATION**

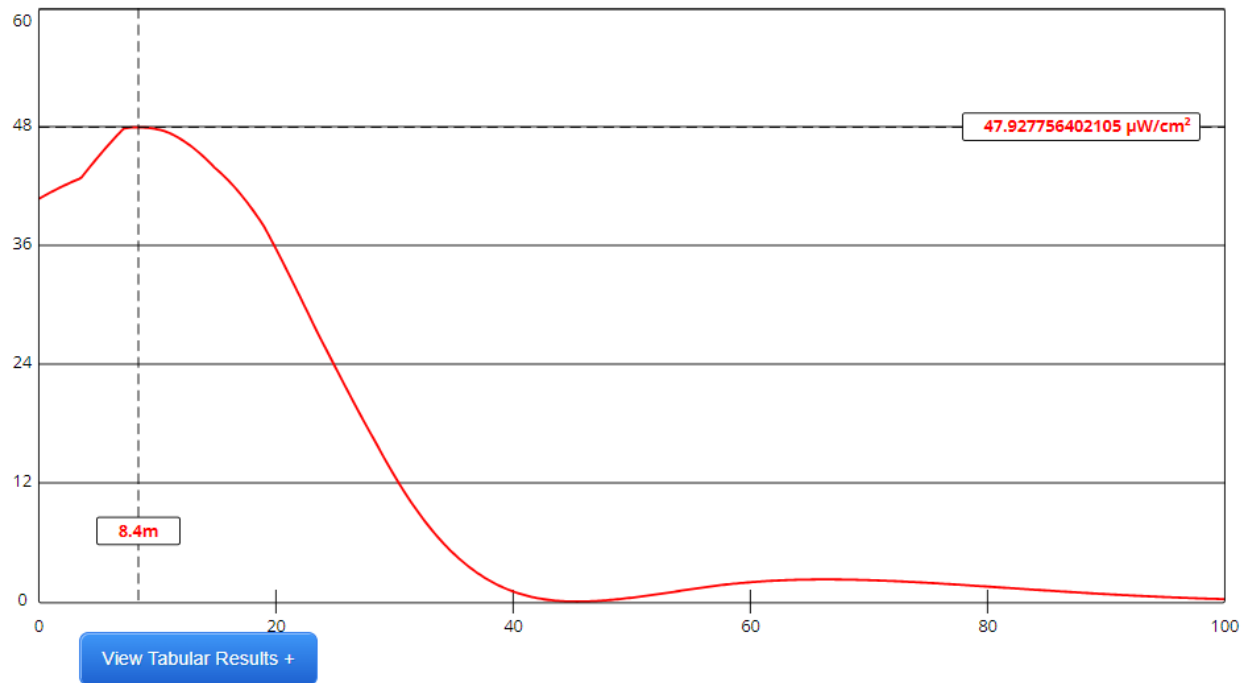
The proposed site is 68.9 km from the closest FCC Monitoring Station (in Canandaigua, NY), 529.7 km from the Virginia Quiet Zone, and 2415.6 km from Table Mountain. Each of these distances exceeds the minimum distance thresholds specified in Section 73.1030 of the FCC Rules for advanced consultation/coordination with the respective entities.

The proposed site is 118.5 km from the United States-Canada border which is within the 320 km border coordination zone with Canada. To the extent necessary, HWSC respectfully requests coordination with Canada. Figure 4, attached hereto, shows the worst-case co-channel interference contour [F(50,10) 34 dBu] of the proposed facility is not predicted to cross the United States-Canada border in any azimuth.

**ENVIRONMENTAL/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report. The location of the proposed facility is assumed to currently be “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65).

WITH is proposing to continue utilizing the existing Dielectric DCR-H3ER 3-bay ring style antenna. The results of the FCC FM Model calculator are shown below:



Channel Selection	Channel 211 (90.1 MHz) ▼		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▼		
Height (m)	42.7	Distance (m)	100
ERP-H (W)	2000	ERP-V (W)	2000
Num of Elements	3	$\lambda$	1
Num of Points	500	Apply	

The worst-case ground level RFR contributed by this proposal in public areas is calculated to be 0.0479277 mW/cm<sup>2</sup>, which is much less than the MPE limit for public exposure (0.2 mW/cm<sup>2</sup>) at Ch. 211.

HWSC agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information, and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



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Benjamin Pidek, P.E.  
December 4, 2023

Attached:

Figure 1- Contour Overlap Study of Proposed Facility

Figure 2 – Contour Map of Proposed WITH Facility and WGMCFM)

Figure 3 – Community of License Coverage Showing

Figure 4 – Map of F(50,10) 34 dBu Contour of Proposed Facility vs. US-Canada Border

Figure 1 - Contour Study of Proposed WITH 2 kW (Omni) Facility

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REFERENCE  
42 34 55.20 N.  
76 33 20.70 W.CH# 211A - 90.1 MHz, Pwr= 2 kW, HAAT= 87.3 M, COR= 366.7 M  
Average Protected F(50-50)= 20.6 km  
Omni-directionalDISPLAY DATES  
DATA 12-03-23  
SEARCH 12-03-23

CH CITY	CALL	TYPE STATE	ANT AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
211A WITH Ithaca		LIC_CN NY	0.0 0.0	0.00 BLED20100524AFI	42 34 55.20 76 33 20.70	1.000 87		---Reference--- Hobart And William Smith C		
6 -- <del>CJOH-TV-6</del> Deseronto		CHA_D_Y ON	346.6 166.2	178.30 DTVBL703894	44 08 30.18 77 04 33.04	2.200	13.0 396	208.4	221.4R	-43.1M
06 C <del>CJOH-TV-6</del> Deseronto		LI_DHN ON	346.6 166.2	178.30 CANADA170	44 08 30.18 77 04 33.04	2.200	13.0 396	208.4	221.4R	-43.1M
211B1 WGMC Greece		LIC_DCN NY	308.9 128.1	118.32 BLED20160615AAZ	43 14 40.20 77 41 35.00	15.000 42	88.9 153	20.1	0.1	14.3
212B1 WCDN-FM Ridgely		LIC_CN PA	198.2 18.0	80.42 BLED20181026AAW	41 53 39.30 76 51 30.90	4.000 161	53.0 651	32.4	1.8	11.7
209B1 WRFI Odessa		LIC_DCN NY	191.3 11.2	32.53 0000205077	42 17 42.00 76 37 59.00	3.200 191	3.1 627	26.4	6.6	3.0
210B WRVO Oswego		LIC_DEN NY	0.6 180.6	93.24 BLED20060705AAK	43 25 14.20 76 32 37.80	50.000 134	68.8 232	44.3	4.7	19.3
208A WEOS Geneva		LIC_CN NY	300.4 120.0	50.16 BLED20131213A0B	42 48 32.20 77 05 10.80	6.000 95	3.4 345	35.4	17.2	12.2
211A WIFF Windsor		STA_DCN NY	129.7 310.2	91.60 0000222286	42 03 10.20 75 42 05.60	0.100 209	53.7 619	14.3	12.8	14.3
211A WIFF Windsor		LIC_DCN NY	129.7 310.2	91.60 BLED20100420AHS	42 03 10.20 75 42 05.60	0.100 209	53.7 619	14.3	12.8	14.3
213A WSUC-FM Cortland		LIC_CN NY	86.7 267.0	30.03 BLED20130528ACR	42 35 48.30 76 11 21.70	1.400 -18	1.6 406	11.0	16.4	17.4
211A WRCU-FM Hamilton		LIC_CN NY	72.7 253.4	87.33 BLED20150210AAG	42 48 40.60 75 32 00.40	1.900 47	44.5 477	11.9	27.4	25.4
212A WRVD Syracuse		LIC_DCN NY	33.5 213.8	61.30 BLED19990625KC	43 02 27.20 76 08 20.70	0.280 13	10.1 201	7.3	33.5	36.6
212B AL9241« Deseronto		VAC____ ON	346.6 166.2	178.30	44 08 30.18 77 04 33.03	50.000 150	77.9 240	65.0	137.0R	41.3M
212B AL00613« Deseronto		ALO____ ON	346.6 166.2	178.30	44 08 30.20 77 04 33.00	50.000 150	77.9 240	65.0	137.0R	41.3M
210B WVI A-FM Scranton		LIC_DCN PA	159.8 340.2	165.64 BLED20081107AEO	41 10 55.30 75 52 15.70	7.400 381	89.9 761	61.0	42.8	56.9
213A WHRW Binghamton		LIC_HN NY	138.3 318.7	72.98 BLED1383	42 05 24.20 75 58 03.70	1.450 30	1.6 360	11.1	43.2	58.4
213A WBXL Baldwinsville		LIC_CN NY	17.0 197.1	67.57 BLED19981228KB	43 09 47.20 76 18 45.70	0.175 63	0.9 190	6.5	46.8	58.8

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference zone= - ZN1, Co to 3rd adjacent.

All separation margins (if shown) include rounding. Call signs with strikeout need not be protected.

Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

""affixed to 'IN' or 'OUT' values = site inside restricted contour.

« = Station meets FCC minimum distance spacing for its class.

Reference station has protected zone issue: Canada

Figure 2 - Protected and Interference Contours of Proposed WITH(FM) and WGMC(FM)  
Hobart And William Smith College

FMCommander Single Allocation Study - 12-02-2023 - FCC NGDC 30 Sec  
WITH's Overlaps (In= 0.12 km, Out= 14.31 km)

WITH CH 211 A

Lat= 42 34 55.20, Lng= 76 33 20.70

2.0 kW 87.3 m HAAT, 366.7 m COR

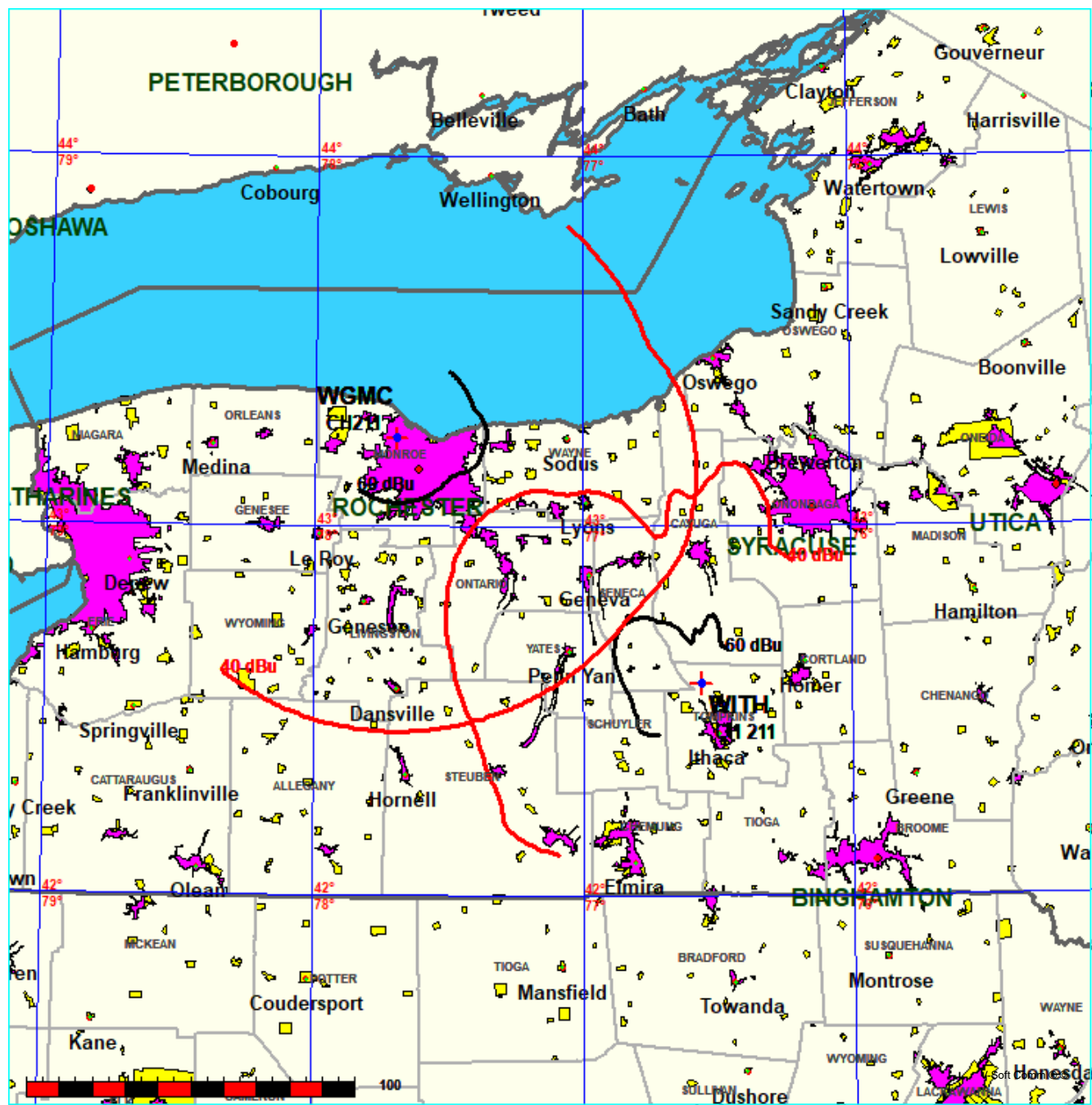
Prot.= 60 dBu, Intef.= 40 dBu

WGMC CH 211 B1 DA BLED20160615AAZ

Lat= 43 14 40.20, Lng= 77 41 35.00

15.0 kW 42 m HAAT, 152.5 m COR

Prot.= 60 dBu, Intef.= 40 dBu

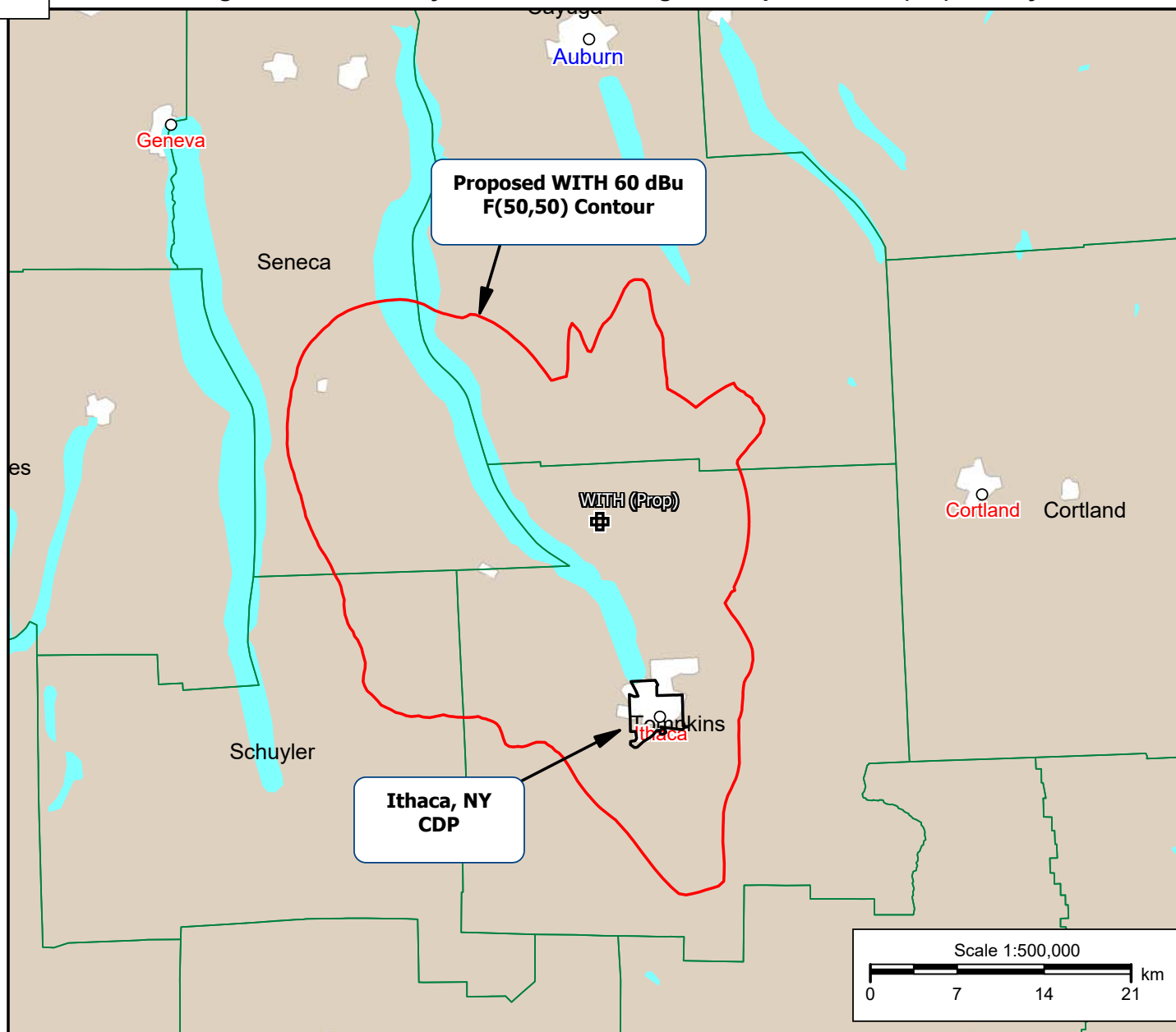


**Ben Pidek Consulting, LLC**

**Figure 3 - Community of License Coverage of Proposed WITH(FM) Facility**

**WITH (Prop)**

Latitude: 42-34-55.20 N  
Longitude: 076-33-20.70 W  
ERP: 2.00 kW  
Channel: 211  
Frequency: 90.1 MHz  
AMSL Height: 366.7 m





**Ben Pidek Consulting, LLC**

**Figure 4 - F(50,10) 34 dBu Contour of Proposed WITH Facility vs. US-Canadian Border**

**WITH (Prop)**

Latitude: 42-34-55.20 N  
Longitude: 076-33-20.70 W  
ERP: 2.00 kW  
Channel: 211  
Frequency: 90.1 MHz  
AMSL Height: 366.7 m

