

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

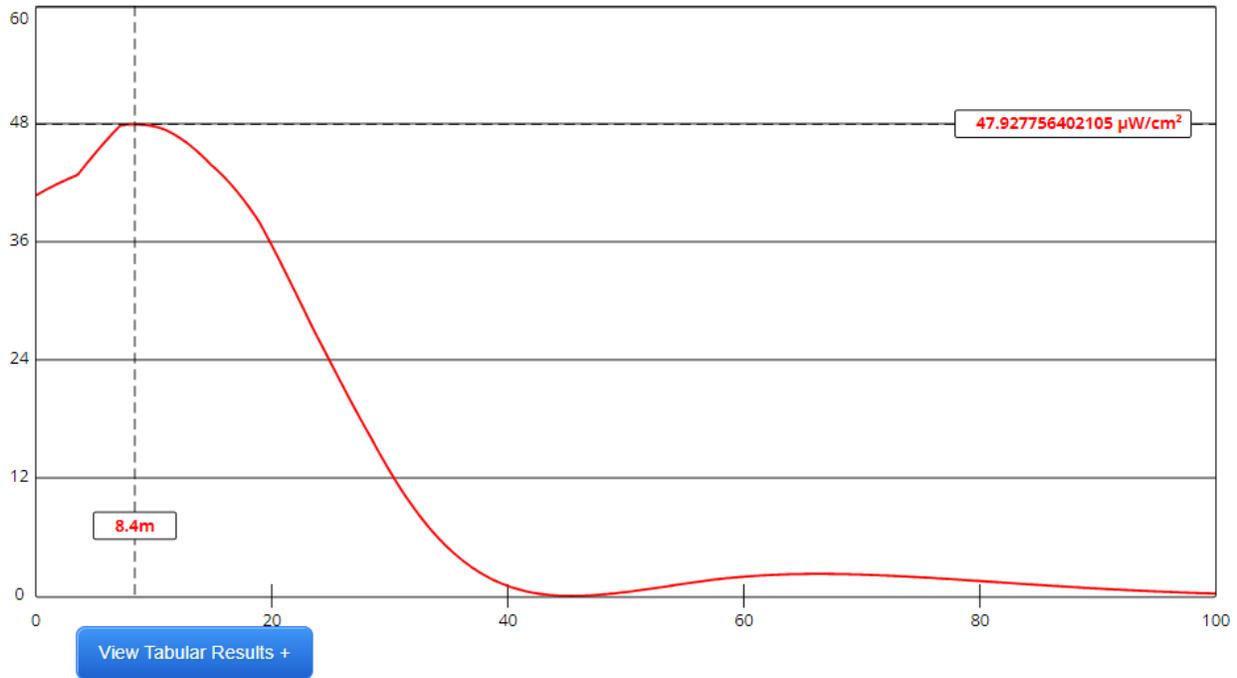
The proposed site is 68.9 km from the closest FCC Monitoring Station (in Canandaigua, NY), 529.7 km from the Virginia Quiet Zone, and 2415.6 km from Table Mountain. Each of these distances exceeds the minimum distance thresholds specified in Section 73.1030 of the FCC Rules for advanced consultation/coordination 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	λ	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/cm², which is much less than the MPE limit for public exposure (0.2 mW/cm²) 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.



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 WGMC(FM)
- 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
Hobart And William Smith Coll
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-directional

REFERENCE
42 34 55.20 N.
76 33 20.70 W.

DISPLAY DATES
DATA 12-03-23
SEARCH 12-03-23

CH CITY	CALL	TYPE STATE	ANT	AZI <--	DI ST 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	-- CJOH-TV-6 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	CJOH-TV-6 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 Greece Central School Dist
212B1	WCDN-FM Ridgbury	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 Family Life Ministries, In
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 Ithaca Community Radio, In
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 State University Of New Yo
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 Hobart And William Smith C
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 CSN International
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 CSN International
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 State University Of New Yo
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 Colgate University
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 State University Of New Yo
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 From CDBS
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	WVIA-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 Northeastern Pennsylvania
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 State University Of New Yo
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 Baldwinsville Central Scho

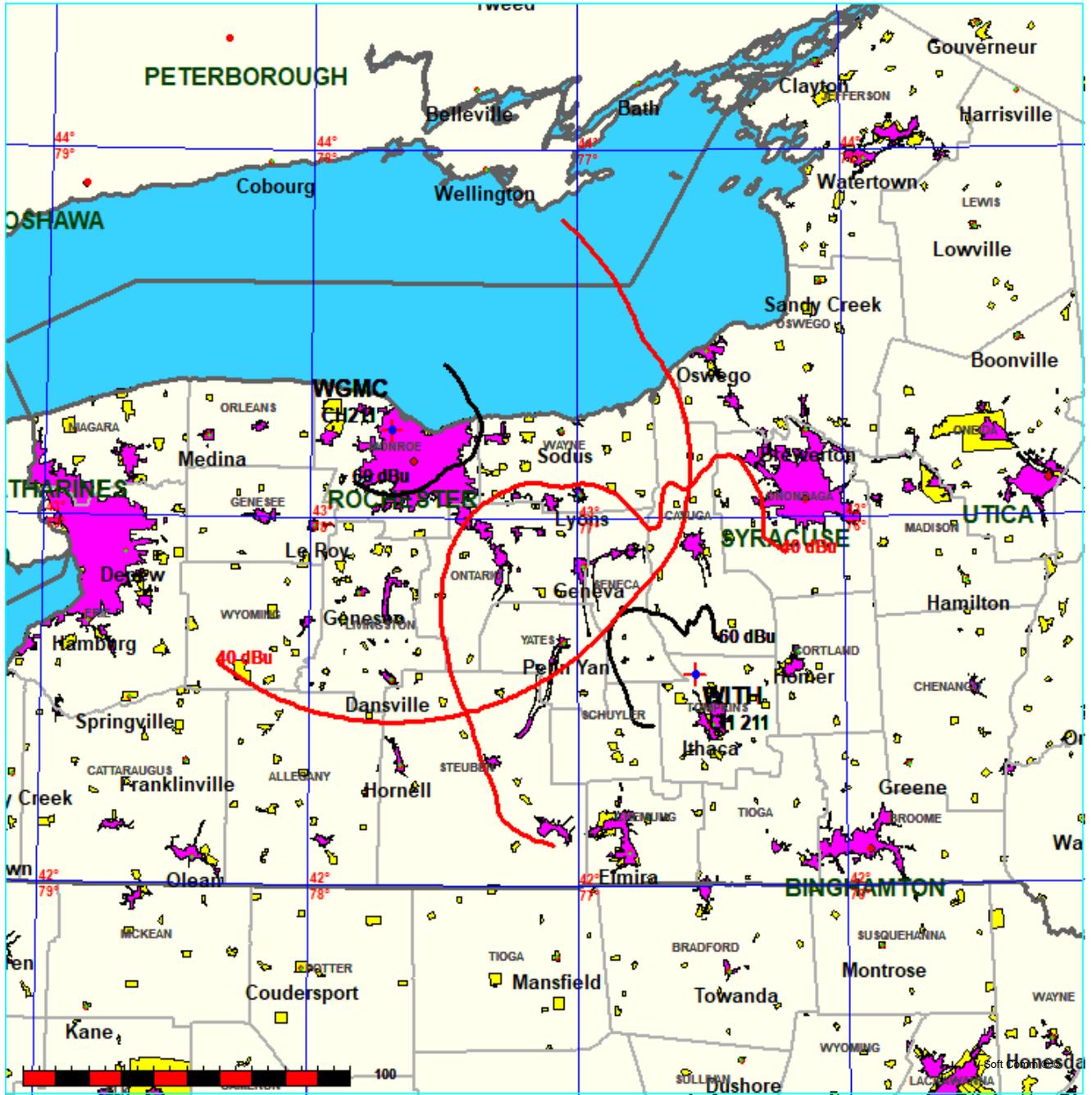
Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= - ZN1, Co to 3rd adjacent.
All separation margins (if shown) include rounding. Call signs with strikeout 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

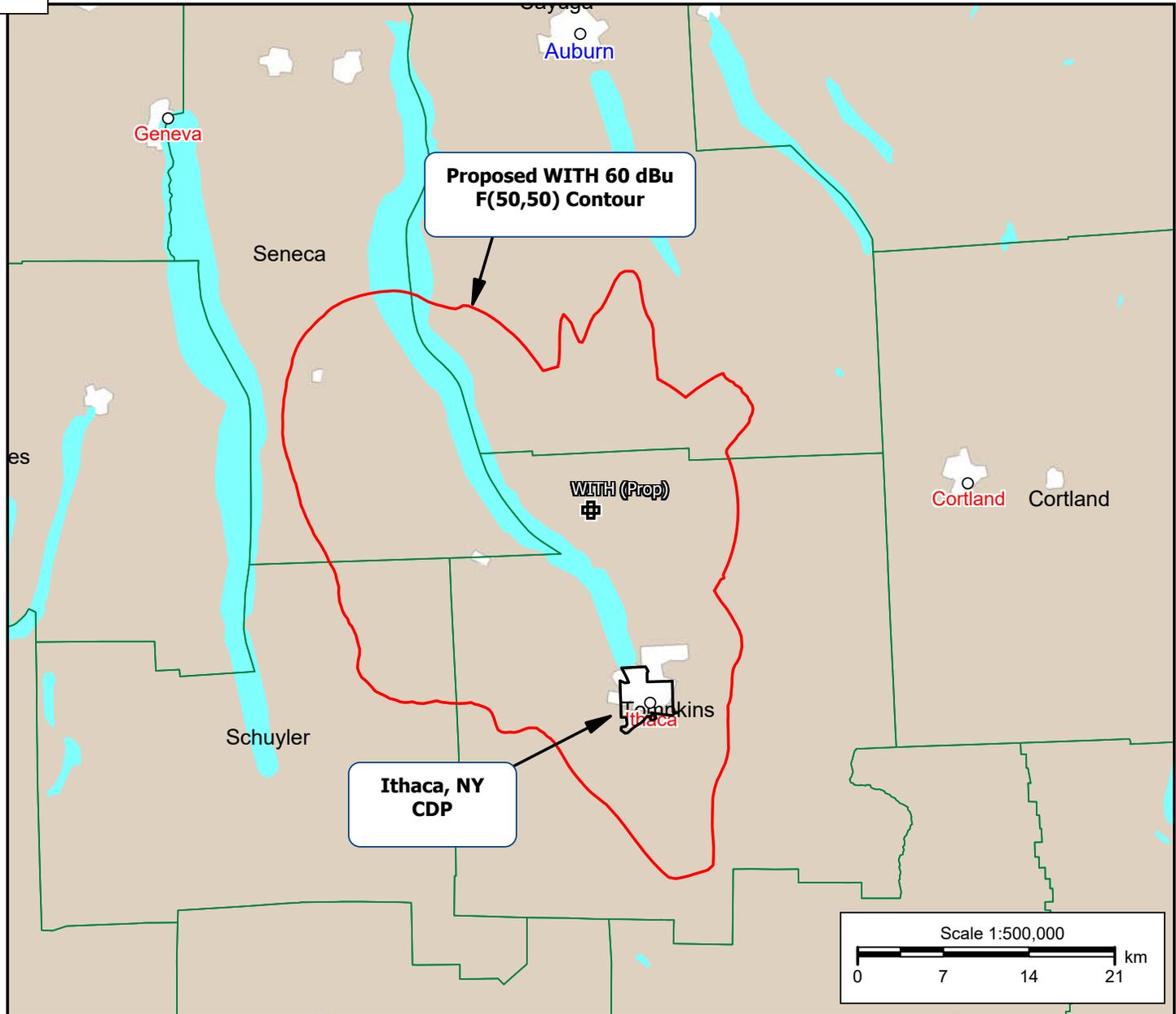


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Figure 3 - Community of License Coverage of Proposed WITH(FM) Facility

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

