

## Engineering Exhibits in support of WCLP-LP

WCLP-LP is a low power FM station licensed to Lake Placid, NY that operates on ch.252 (98.3 MHz.) The station broadcasts with an effective radiated power of 100 watts vertical and 100 watts horizontal from a single bay Shively 6812B antenna.

Applicant seeks to relocate its antenna .07 km from its current transmitting site atop the steeple of St. Agnes Church (ground elevation 579 meters AMSL, center of radiation @ 30 meters AGL) to an accessory building attached to the rear of 164 Hillcrest Ave. in Lake Placid NY.

The proposed antenna will be mounted 1 meter below the top of a 12' (3.7 meter) long 2" pipe installed on a non penetrating roof mount on the gable peak at the end of the accessory building that is furthest away from the main building.

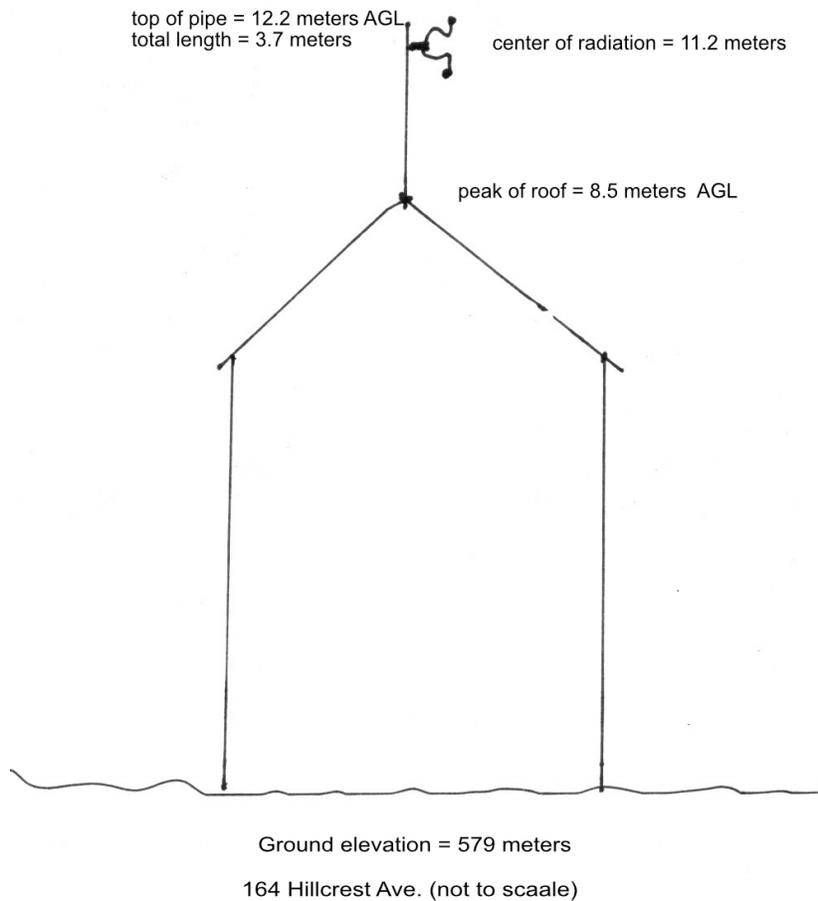
Height of accessory building:	28' (8.5 meters) AGL
Center of radiation:	36.7' (11.2 meters) AGL
Height of mounting structure:	40' (12.2 meters) AGL

## Airports:

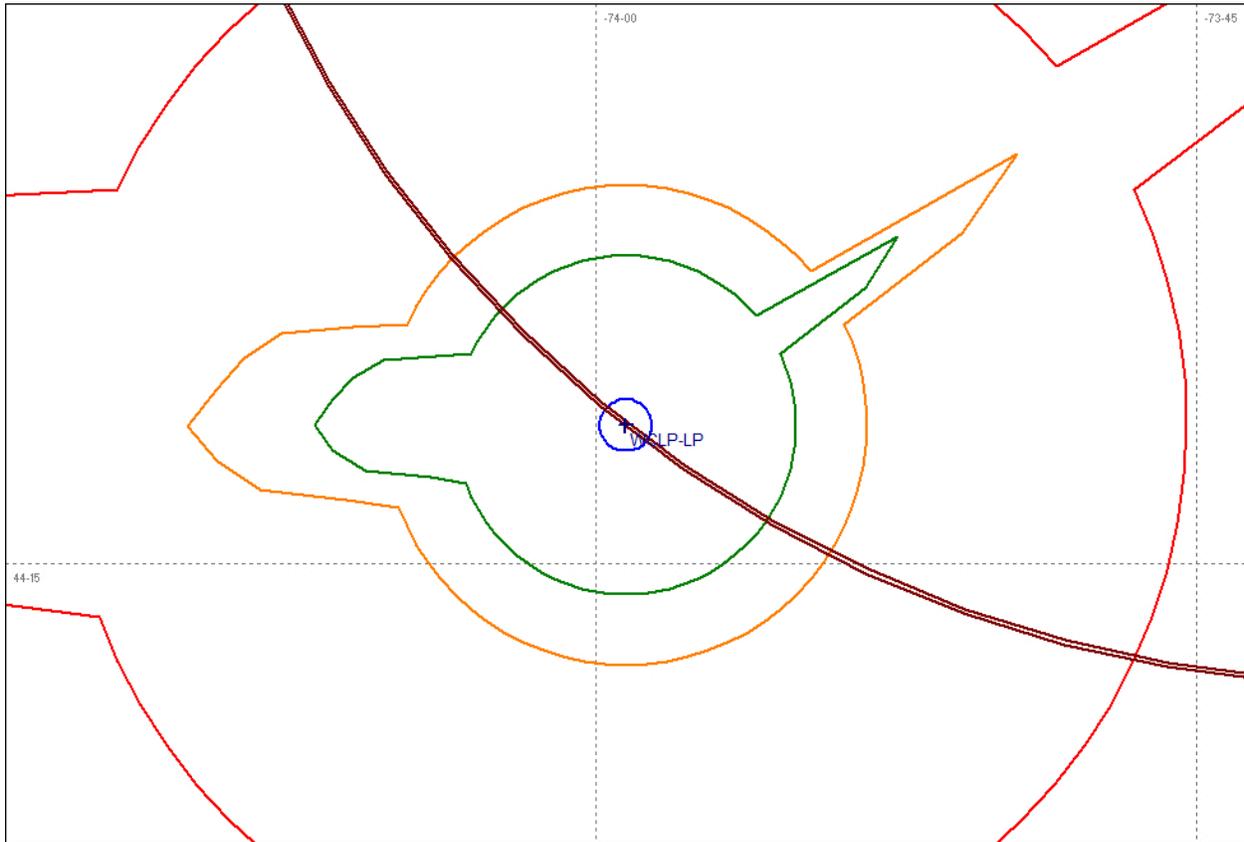
The closest airport to the proposed antenna is LKP (Lake Placid). As can be seen from the attached screen shot of the Commission's TOWAIR calculator the antenna is excluded from the necessity of FAA notification due to the support pole being less than 6.1 meters.

It should also be noted that both the St. Agnes steeple and the third floor of 164 Hillcrest rise above the height of the antenna structure.

DETERMINATION Results	
Structure does not require registration. The structure meets the 6.10-meter (20-foot) Rule criteria.	
Your Specifications	
NAD83 Coordinates	
Latitude	44-17-29.0 north
Longitude	073-59-15.5 west
Measurements (Meters)	
Overall Structure Height (AGL)	12.2
Support Structure Height (AGL)	8.5
Site Elevation (AMSL)	579
Structure Type	
BPIPE - Building with Pipe	



Allocation Window:



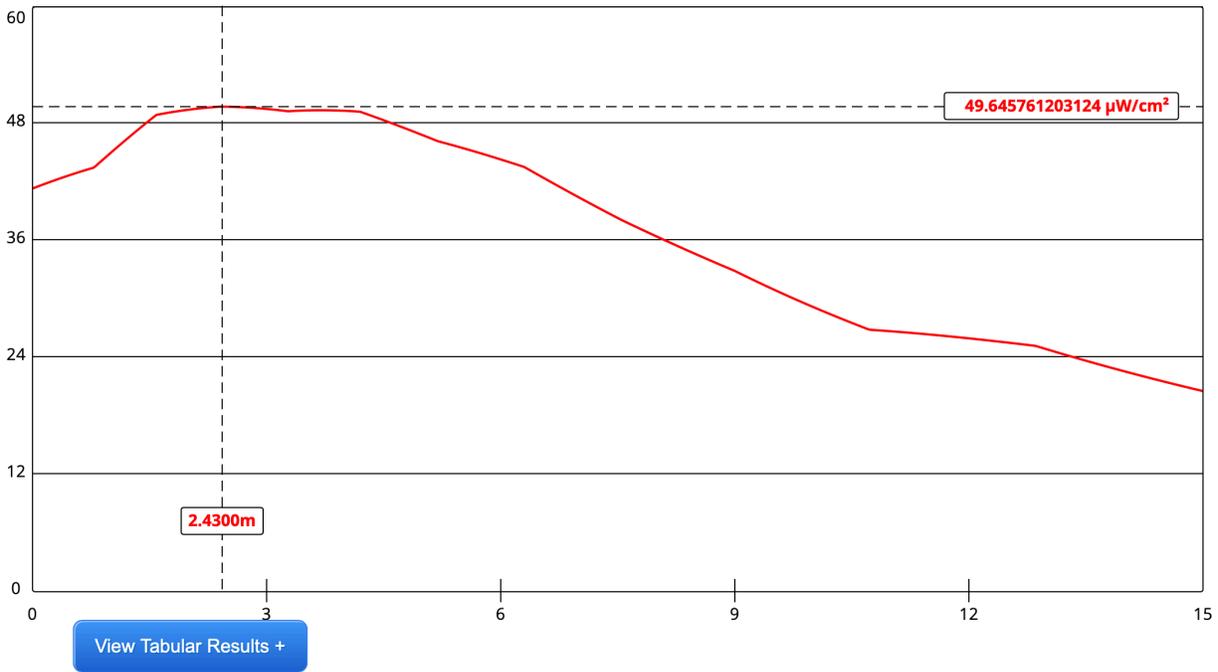
ComStudy 2.2 search of channel 252 (98.3 MHz Class LP100) at 44-17-29.0 N, 73-59-15.5 W.

CALL	CITY	ST	CHN	CL	DIST	SEP	BRNG	CLEARANCE
WXMS	AU SABLE	NY	250	C3	40.00	40.00	38.2	0.0
WXMS	AU SABLE	NY	250	C3	40.13	40.00	38.2	0.1
W254CY	SARANAC LAKE	NY	254	D	12.51	8.00	295.9	4.5
W252CJ	BURLINGTON	VT	252	D	65.73	32.00	69.3	33.7

## RF radiation study

The accessory building on which the proposed antenna will be mounted includes an above ground residential unit with an attic/storage above. The station transmitter will be located in this attic area. This, and the presence of part of the main building in the aperture of the antenna, suggested the need for three separate studies in order to cover each of the specific cases of potential exposure:

Exhibit 1. Demonstrates levels of RF radiation received under the general population guidelines to the parking lot and areas around the outside of the accessory building. The FM model program from the commissions web site was used.

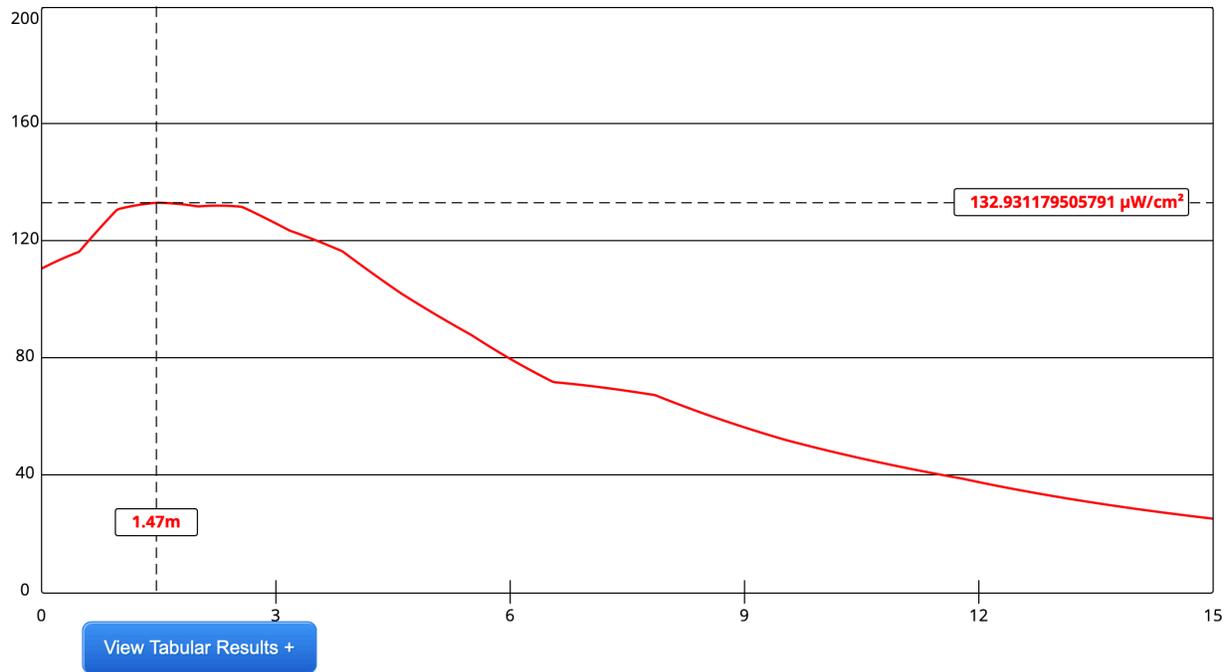


Channel Selection	Channel 252 (98.3 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other"		
Height (m)	11	Distance (m)	15
ERP-H (W)	100	ERP-V (W)	100
Num of Elements	1	λ	1
Num of Points	500	Apply	

Maximum exposure at ground level is 49.6 uW/cm<sup>2</sup> at a distance of 2.4 meters from the antenna, a figure slightly less than 1/4 of the maximum set forth in OET bulletin 65.



Exhibit 2. Demonstrates RF radiation received under general population guidelines at the level of the main building.

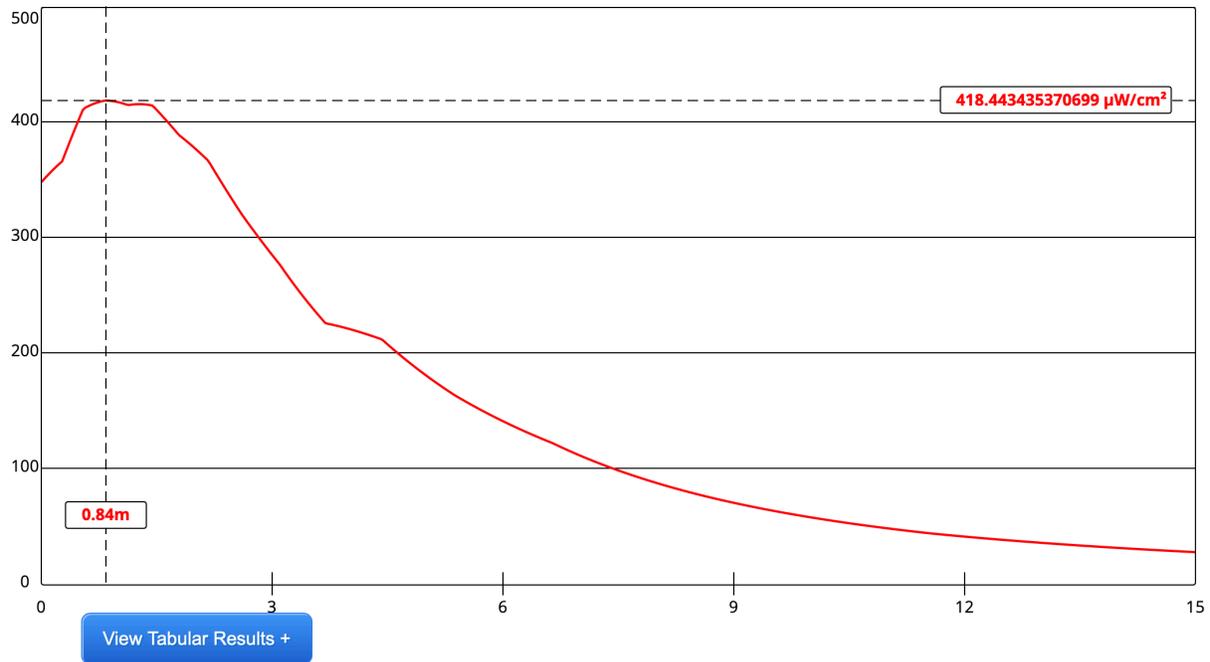


Channel Selection	Channel 252 (98.3 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other"		
Height (m)	7.5	Distance (m)	15
ERP-H (W)	100	ERP-V (W)	100
Num of Elements	1	$\lambda$	1
Num of Points	500	Apply	

Maximum exposure at the residential level is 132.9  $\mu\text{W}/\text{cm}^2$  at a distance of 1.47 meters from the antenna, a figure that does not exceed the 200  $\mu\text{W}/\text{cm}^2$  general population exposure standard.

Applicant also notes that the third floor of the main building is within the aperture of the antenna and located 28 ft (8.5 meter) from it. Subsequent re-calculation to adjust for depression angle produced expected RF radiation levels of 55  $\mu\text{W}/\text{cm}^2$  at the nearest wall of the residential area.

Exhibit 3. Demonstrates levels of RF radiation received in the attic/storage transmitter room under occupational exposure guidelines.



[View Tabular Results +](#)

Channel Selection	Channel 252 (98.3 MHz)		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other"		
Height (m)	5.1	Distance (m)	15
ERP-H (W)	100	ERP-V (W)	100
Num of Elements	1	λ	1
Num of Points	500	Apply	



Station employees working in the transmitter room will be exposed to a maximum RF radiation level of 418.4 uW/cm<sup>2</sup>. This level exceeds the general population exposure standard but falls within the permissible exposure limits for occupational/controlled spaces. Applicant will insure that suitable warning placards are installed and that the transmitter room is secured and inaccessible to the general public at all times when the station is in operation.

It is noted that the area within the transmitter room where exposure exceeds the general population limit is quite small, approximately 3 meters at the end of the building where the antenna will be mounted. To the extent possible applicant will position equipment away from this area in order to limit exposure to station personnel.