

Wind Power GeoPlanner™

AM and FM Radio Report

Agricola Wind



Prepared on Behalf of
Liberty Renewables Inc.

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1. Introduction

Comsearch analyzed AM and FM radio broadcast stations whose service could potentially be affected by the proposed Agricola Wind Project in Cayuga County, New York (the Project). All AM and FM stations within 30 kilometers will be considered in the analysis based on proximity coverage. The Project area of interest is defined as the rectangular area with a minimum of a 2-mile buffer from all turbine locations as noted in Figures 1 and 2.

2. Summary of Results

AM Radio Analysis

Comsearch found six database records¹ for AM stations within approximately 30 kilometers of the Project, as shown in Table 1 and Figure 1. The closest station, WAUB, which broadcasts out of Auburn, New York, is located north of the Project, and is approximately 15.34 km from the nearest turbine location. WAUB is licensed to operate at two different power levels, a lower transmit power for daytime operations and a higher transmit power for nighttime operations.

ID	Call Sign	Status ²	Frequency (kHz)	Transmit ERP ³ (kW)	Operation Time	Latitude (NAD 83)	Longitude (NAD 83)	Required Separation Distance ⁴ (km)	Distance to the Nearest Turbine Location (km)
1	WAUB	LIC	1590	0.45	Daytime	42.909511	-76.602167	1.89	15.34
2	WAUB	LIC	1590	1.0	Nighttime	42.909511	-76.602167	1.89	15.34
3	WMBO	LIC	1340	1.0	Unlimited	42.951456	-76.584386	0.22	19.39
4	WSFW	LIC	1110	1.0	Daytime	42.915344	-76.774119	0.27	23.39
5	WPIE	LIC	1160	5.0	Daytime	42.545072	-76.710506	2.59	23.86
6	WPIE	LIC	1160	0.31	Nighttime	42.545072	-76.710506	2.59	23.86

Table 1: AM Radio Stations within 30 Kilometers

¹ Comsearch makes no warranty as to the accuracy of the data included in this report beyond the date of the report. The data presented in this report is derived from the AM/FM station's FCC license and governed by Comsearch's data license notification and agreement located at http://www.comsearch.com/files/data_license.pdf.

² LIC = Licensed and operational station; APP = Application for construction permit; CP=Construction permit granted; CP MOD = Modification of construction permit.

³ ERP = Transmit Effective Radiated Power.

⁴ The required separation distance is based on the lesser of 10 wavelengths or 3 kilometers for directional antennas and 1 wavelength for non-directional antennas.

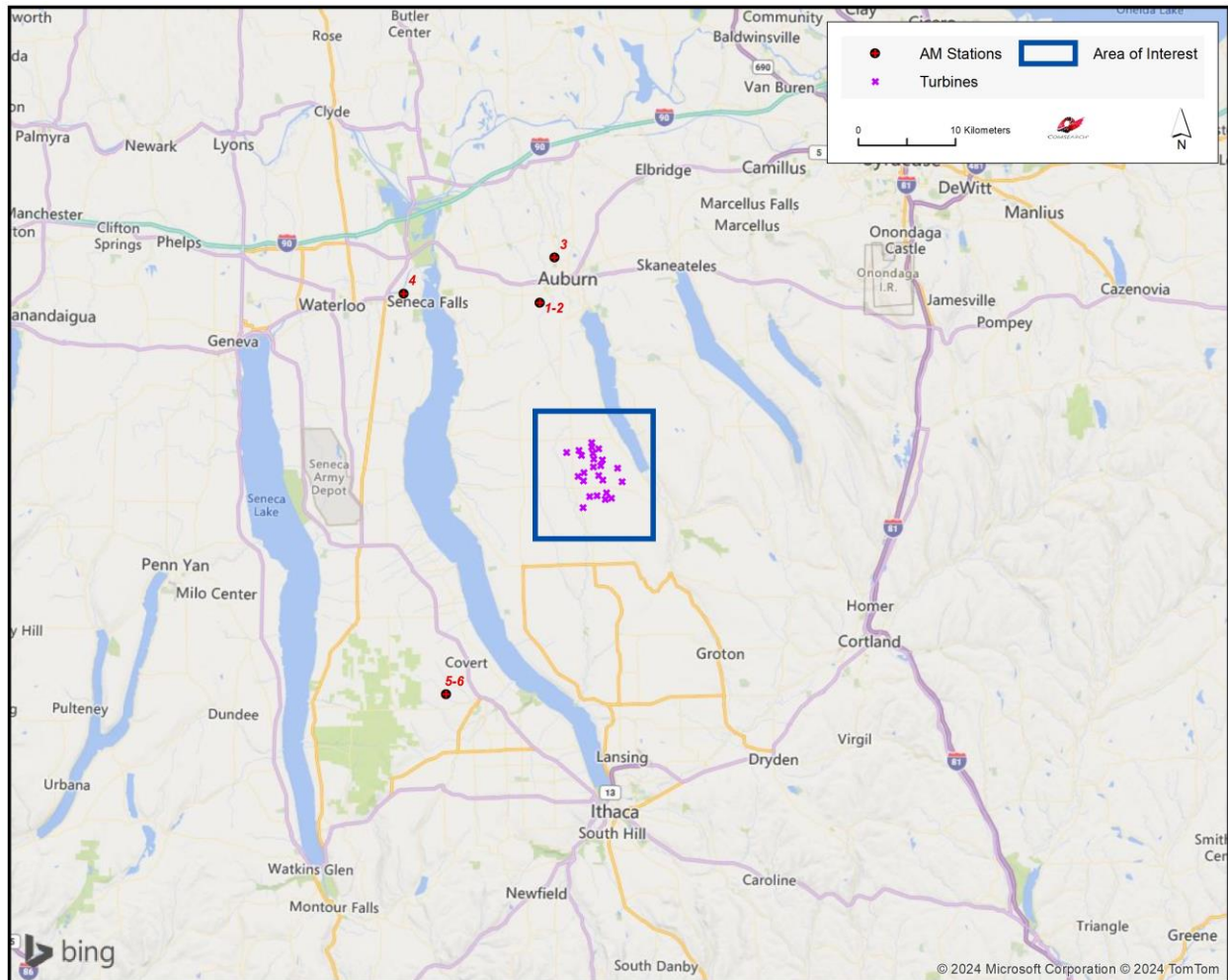


Figure 1: AM Radio Stations within 30 Kilometers

FM Radio Analysis

Comsearch determined that there were eighteen database records for FM stations within a 30-kilometer radius of the Project, as shown in Table 2 and Figure 2. Sixteen of these stations are currently licensed and operating, nine of which are translator stations and two are low power stations that operate with limited range. The closest station to the Project, WTMI, which is currently licensed in Fleming, New York, is located to the northeast of the project area, 7.11 km from the nearest turbine.

ID	Call Sign	Service ⁵	Status ⁶	Frequency (MHz)	Transmit ERP ⁷ (kW)	Latitude (NAD 83)	Longitude (NAD 83)	Distance to Nearest Turbine (km)
1	WTMI	FM	LIC	88.7	0.6	42.801389	-76.436944	7.11
2	W242DC	FX	LIC	96.3		42.909500	-76.602139	15.33
3	W251AJ	FX	LIC	98.1		42.909500	-76.602139	15.33
4	WITH	FM	LIC	90.1	2.0	42.582000	-76.555750	15.44
5	WSQG-FM	FM	LIC	90.9	5.0	42.582000	-76.555750	15.44
6	W221CW	FX	LIC	92.1		42.582000	-76.555750	15.44
7	W266BE	FX	LIC	101.1	0.027	42.931444	-76.562694	16.89
8	WDWN	FM	LIC	89.1	3.0	42.944500	-76.542139	18.18
9	W291CV	FX	LIC	106.1	0.21	42.951444	-76.584389	19.39
10	WNYR-FM	FM	LIC	98.5	3.2	42.806167	-76.846056	23.30
11	W240DO	FX	LIC	95.9		42.806111	-76.846111	23.30
12	W296DI	FX	LIC	107.1		42.915333	-76.774111	23.39
13	WXHC	FM	LIC	101.5	1.3	42.686722	-76.197972	25.13
14	WDRX-LP	FL	LIC	100.7	0.1	42.615333	-76.188806	28.90
15	WGCC-LP	FL	CP	104.1	0.1	42.825833	-76.923333	29.91
16	WSUC-FM	FM	LIC	90.5	1.4	42.596750	-76.189361	29.95
17	W205CB	FX	STA	88.9	0.18	42.446722	-76.537694	30.44
18	W205CB	FX	LIC	88.9	0.18	42.446722	-76.537694	30.44

Table 2: FM Radio Stations within 30 km

⁵ FM = FM broadcast station; FX = FM translator station; FS = FM auxiliary (backup) station; FL = FM low power station.

⁶ LIC = Licensed and operational station; APP = Application for construction permit; CP=Construction permit granted; CP MOD = Modification of construction permit.

⁷ ERP = Transmit Effective Radiated Power.

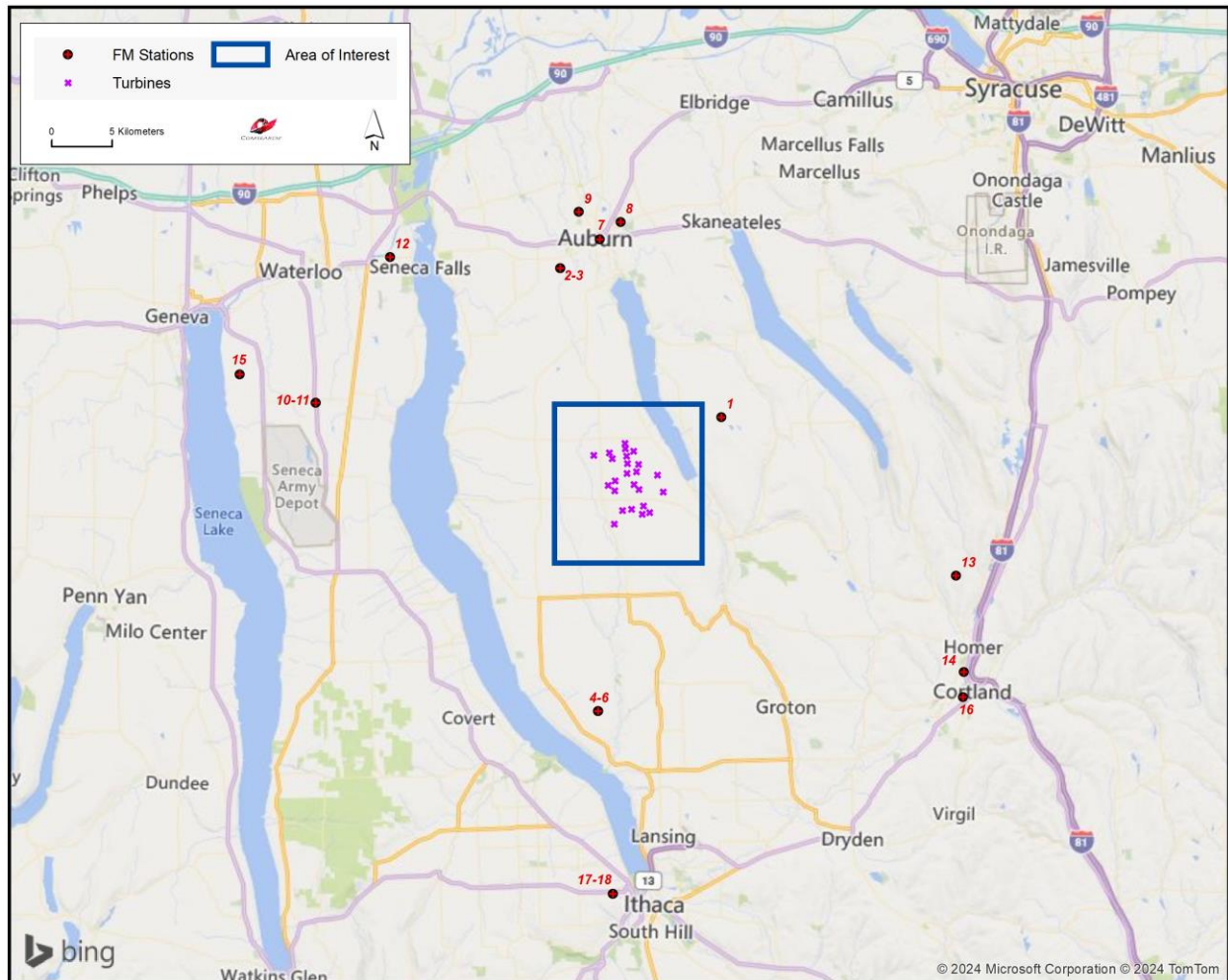


Figure 2: FM Radio Stations within 30 km

3. Impact Assessment

The exclusion distance for AM broadcast stations varies as a function of the antenna type and broadcast frequency. For directional antennas, the exclusion distance is calculated by taking the lesser of 10 wavelengths or 3 kilometers. For non-directional antennas, the exclusion distance is simply equal to 1 wavelength. Potential problems with AM broadcast coverage are only anticipated when AM broadcast stations are located within their respective exclusion distance limit from wind turbine towers. The closest AM station (WAUB) is located 15.34 km from the nearest turbine location. As there were no stations found within 3 kilometers of the Project, which is the maximum possible exclusion distance based on a directional AM antenna broadcasting at 1000 KHz or less, the Project is not anticipated to impact the coverage of local AM stations.

The coverage of FM stations is generally not sensitive to interference due to wind turbines, especially when large objects (e.g., wind turbines) are located in the far field region of the radiating antenna to avoid the risk of distorting its radiation pattern. Station WTMI, located approximately 7.11 km from the nearest proposed wind turbine, is the closest FM station. At this distance there should be adequate separation to avoid radiation pattern distortion.

4. Recommendations

Since no impact on the licensed and operational AM or FM broadcast stations was identified in our analysis, no recommendations or mitigation techniques are required for this project.

5. Contact

For questions or information regarding the AM and FM Radio Report, please contact:

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