

# Wind Power GeoPlanner™

## AM and FM Radio Report

Eight Point Wind Energy Center



Prepared on Behalf of  
Eight Point Wind, LLC

April 4, 2017



**COMSEARCH**  
A CommScope Company

## **Table of Contents**

<b>1. Introduction</b>	<b>- 1 -</b>
<b>2. Summary of Results</b>	<b>- 1 -</b>
<b>3. Impact Assessment</b>	<b>- 5 -</b>
<b>4. Recommendations</b>	<b>- 5 -</b>
<b>5. Contact</b>	<b>- 5 -</b>

## 1. Introduction

Comsearch analyzed AM and FM radio broadcast stations whose service could potentially be affected by the proposed Eight Point Wind Energy Center wind energy project in Steuben County, New York.

## 2. Summary of Results

### AM Radio Analysis

Comsearch found four database records<sup>1</sup> for AM stations within approximately 30 kilometers of the project, as shown in Table 1 and Figure 1. These records represent station WLSV, which broadcasts out of Wellsville, New York, to the west of the project area, and station WLEA, broadcasting from Hornell, New York, to the north. Both stations are licensed separately for daytime and nighttime operations, with a higher transmit power permitted during daytime hours.

ID	Call Sign	Status <sup>2</sup>	Frequency (kHz)	Transmit ERP <sup>3</sup> (kW)	Operation Time	Latitude (NAD 27)	Longitude (NAD 27)	Required Separation Distance <sup>4</sup> (km)	Distance to Nearest Turbine (km)
1	WLSV	LIC	790	1.0	Daytime	42.076944	-77.929722	0.38	16.89
2	WLSV	LIC	790	0.041	Nighttime	42.076944	-77.929722	0.38	16.89
3	WLEA	LIC	1480	2.5	Daytime	42.287500	-77.646389	0.20	17.78
4	WLEA	LIC	1480	0.019	Nighttime	42.287500	-77.646389	0.20	17.78

*Table 1: AM Radio Stations within 30 Kilometers of Project Area*

<sup>1</sup> 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](http://www.comsearch.com/files/data_license.pdf).

<sup>2</sup> LIC = Licensed and operational station; APP = Application for construction permit

<sup>3</sup> ERP = Transmit Effective Radiated Power.

<sup>4</sup> 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.

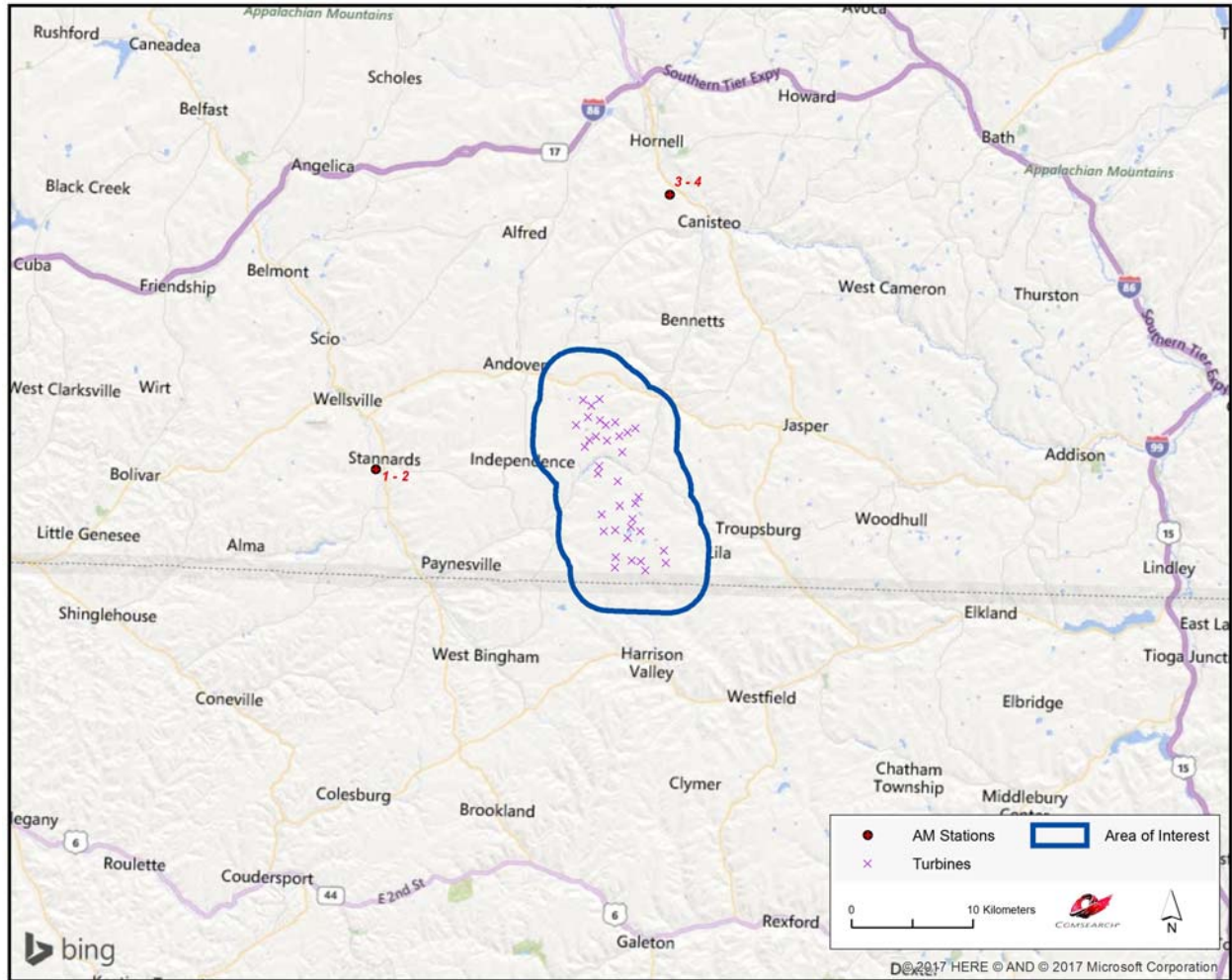


Figure 1: AM Radio Stations within 30 Kilometers of Project Area

### FM Radio Analysis

Comsearch determined that there were eighteen database records for FM stations within a 30-kilometer radius of the Eight Point Wind Energy Center project, as shown in Table 2 and Figure 2. All of these stations are currently licensed and operating, seven of which are translator stations that broadcast with limited range.

ID	Call Sign	Status <sup>5</sup>	Service <sup>6</sup>	Frequency (MHz)	Transmit ERP <sup>7</sup> (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Nearest Turbine (km)
1	WQRW	LIC	FM	93.5	1.1	42.190278	-77.821389	10.10
2	WZKZ	LIC	FM	101.9	1.0	42.190278	-77.821389	10.10
3	WALF	LIC	FM	89.7	0.2	42.254722	-77.786944	14.37
4	WETD	LIC	FM	90.7	3.2	42.260278	-77.797500	15.27
5	WSQA	LIC	FM	88.7	4.5	42.267222	-77.631944	16.08
6	W226AP	LIC	FX	93.1	0.02	42.267222	-77.631944	16.08
7	W280EB	LIC	FX	103.9	0.034	42.278056	-77.769722	16.45
8	W284BX	LIC	FX	104.7	0.0054	42.278056	-77.769722	16.45
9	W219CK	LIC	FX	91.7	0.043	42.121667	-77.945000	17.64
10	WKPQ	LIC	FM	105.3	43.0	42.292222	-77.674167	17.77
11	W294AV	LIC	FX	106.7	0.06	42.123611	-77.981667	20.68
12	WMTT	LIC	FM	94.7	12.0	42.061944	-77.360556	23.60
13	WMTT	LIC	FS	94.7	7.9	42.062222	-77.360556	23.61
14	WJQZ	LIC	FM	103.5	1.75	42.056667	-78.009444	23.85
15	W257AX	LIC	FX	99.3	0.01	42.350556	-77.690556	24.05
16	WCKR	LIC	FM	92.1	2.55	42.343889	-77.626667	24.25
17	W236CP	LIC	FX	95.1	0.03	42.401667	-77.660278	29.96
18	WZHD	LIC	FM	97.1	3.9	42.401667	-77.660278	29.96

Table 2: FM Radio Stations within 30 Kilometers of Project Area

<sup>5</sup> LIC = Licensed and operational station; APP = Application for construction permit; CP=Construction permit granted; CP MOD = Modification of construction permit.

<sup>6</sup> FM = FM broadcast station; FX = FM translator station; FL = Low-power FM station; FS = FM auxiliary (backup) station; FB = FM booster station.

<sup>7</sup> ERP = Transmit Effective Radiated Power.

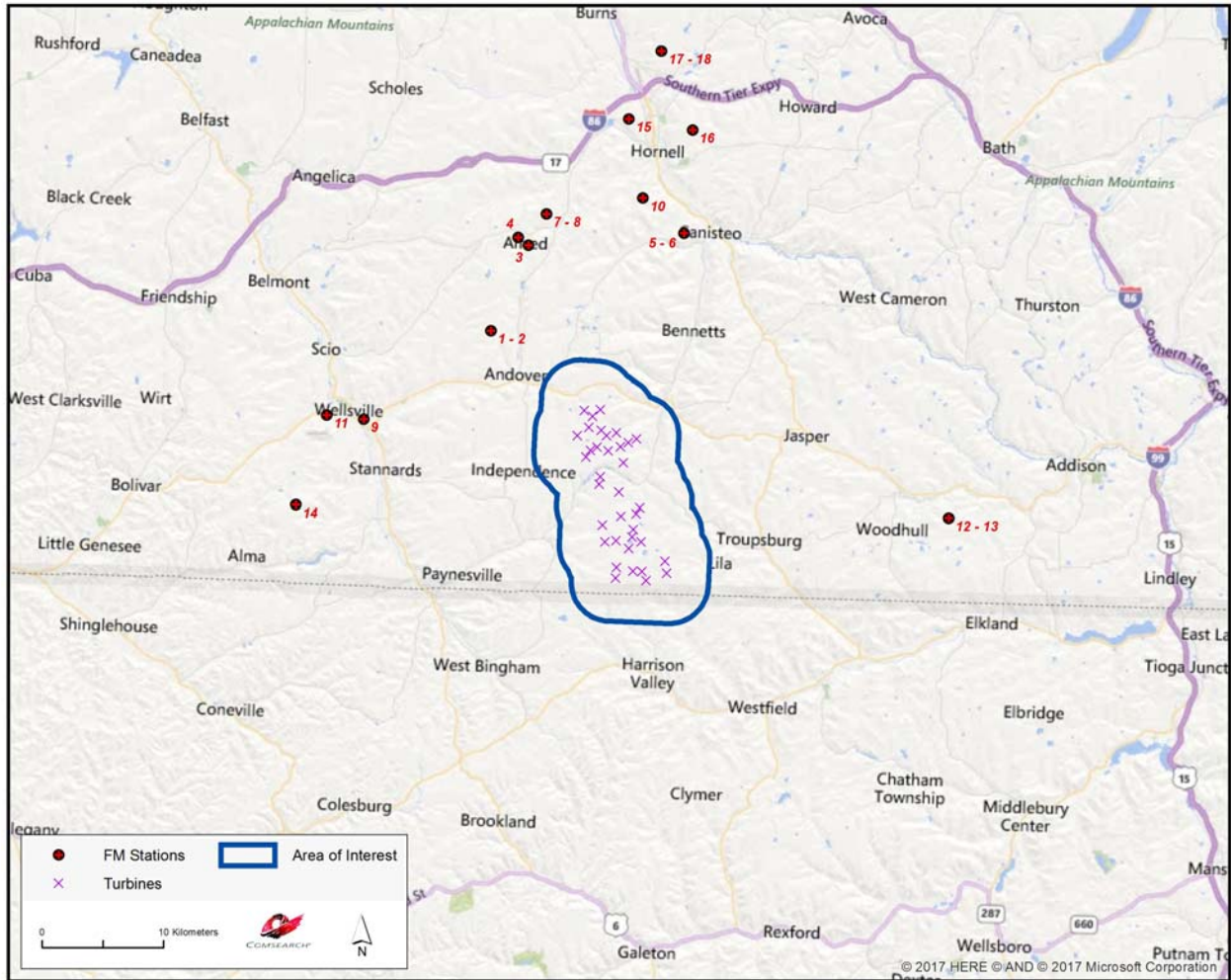


Figure 2: FM Radio Stations within 30 Kilometers of Project Area

### **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 to the Eight Point Wind Energy Center wind energy project, WLSV, is more than 16.8 kilometers 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 should not impact the coverage of local AM stations.

The coverage of FM stations is generally not susceptible to interference caused by wind turbines, especially when large objects, such as wind turbines, are sited in the *far field* region of the radiating FM antenna in order to avoid the risk of distorting the antenna's radiation pattern. The closest operational FM station to the Eight Point Wind Energy Center wind energy project, WQRW, is approximately 10.1 kilometers from the nearest turbine. 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:

Contact person:	Denise Finney
Title:	Account Manager
Company:	Comsearch
Address:	19700 Janelia Farm Blvd., Ashburn, VA 20147
Telephone:	703-726-5650 (office) / 703-726-5595 (fax)
Email:	dfinney@comsearch.com
Web site:	www.comsearch.com