

Wind Power GeoPlanner™

AM and FM Radio Report

Jordan Creek Wind Farm



Prepared on Behalf of
Jordan Creek
Wind Farm LLC

August 30, 2016



COMSEARCH
A CommScope Company



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1. Introduction

Comsearch analyzed AM and FM radio broadcast stations whose service could potentially be affected by the proposed Jordan Creek Wind Farm project in Benton and Warren Counties, Indiana.

2. Summary of Results

AM Radio Analysis

Comsearch found two database records¹ for AM stations within approximately 30 kilometers of the project, as shown in Table 1 and Figure 1. These records represent stations WDAN and WITY, which broadcast from Danville, Illinois, to the southwest of the project area.

ID	Call Sign	Status ²	Frequency (kHz)	Transmit ERP ³ (kW)	Operation Time	Latitude (NAD 27)	Longitude (NAD 27)	Required Separation Distance ⁴ (km)	Distance to Project AOI (km)
1	WDAN	LIC	1490	1.0	Unlimited	40.149444	-87.626389	0.20	14.10
2	WITY	LIC	980	1.0	Unlimited	40.078056	-87.638889	3.00	21.44

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

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

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.

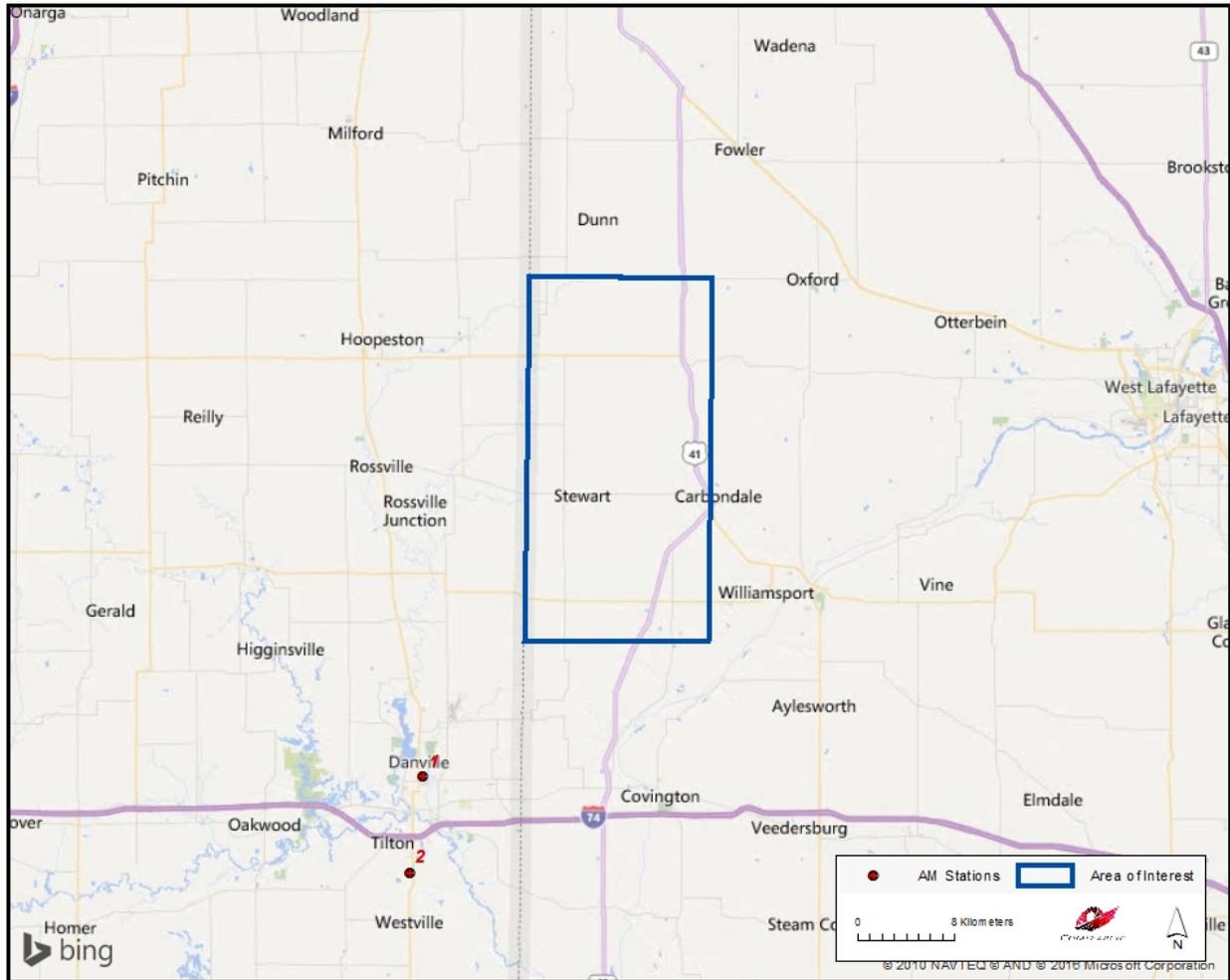


Figure 1: AM Radio Stations within 30 Kilometers of Project Area

FM Radio Analysis

Comsearch determined that there were sixteen database records for FM stations within a 30-kilometer radius of the Jordan Creek Wind Farm project, as shown in Table 2 and Figure 2. Only fifteen of these stations are currently licensed and operating, three of which are low-power or translator stations that broadcast with limited range.

ID	Call Sign	Status ⁵	Service ⁶	Frequency (MHz)	Transmit ERP ⁷ (kW)	Latitude (NAD 27)	Longitude (NAD 27)	Distance to Project AOI (km)
1	W216BB	LIC	FX	91.1	0.019	40.321389	-87.319167	2.78
2	WIBN	LIC	FM	98.1	25.0	40.572778	-87.453333	5.90
3	WRHK	LIC	FM	94.9	6.0	40.177778	-87.481944	8.12
4	WFWR	LIC	FM	91.5	0.165	40.279722	-87.247222	8.90
5	WFOF	LIC	FM	90.3	19.0	40.152222	-87.466111	10.96
6	WKZS	LIC	FM	103.1	3.0	40.146111	-87.454167	11.64
7	WSKL	LIC	FM	92.9	4.5	40.146111	-87.454167	11.64
8	WDNL	LIC	FM	102.1	50.0	40.149444	-87.626389	14.10
9	WHPO	LIC	FM	100.9	3.0	40.476667	-87.693333	14.12
10	WLBM-LP	LIC	FL	105.7	0.1	40.130000	-87.611389	15.24
11	W293AF	LIC	FX	106.5	0.055	40.125000	-87.630278	16.53
12	WAZY-FM	LIC	FM	96.5	50.0	40.383889	-87.131944	18.67
13	WYCM	LIC	FM	95.7	3.1	40.383889	-87.131944	18.67
14	W293AL	APP	FX	99.5	0.25	40.077222	-87.638889	21.52
15	WYXY	LIC	FM	99.1	50.0	40.148056	-87.772500	23.84
16	WYXY	LIC	FS	99.1	16.0	40.148056	-87.772500	23.84

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

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

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

⁷ ERP = Transmit Effective Radiated Power.

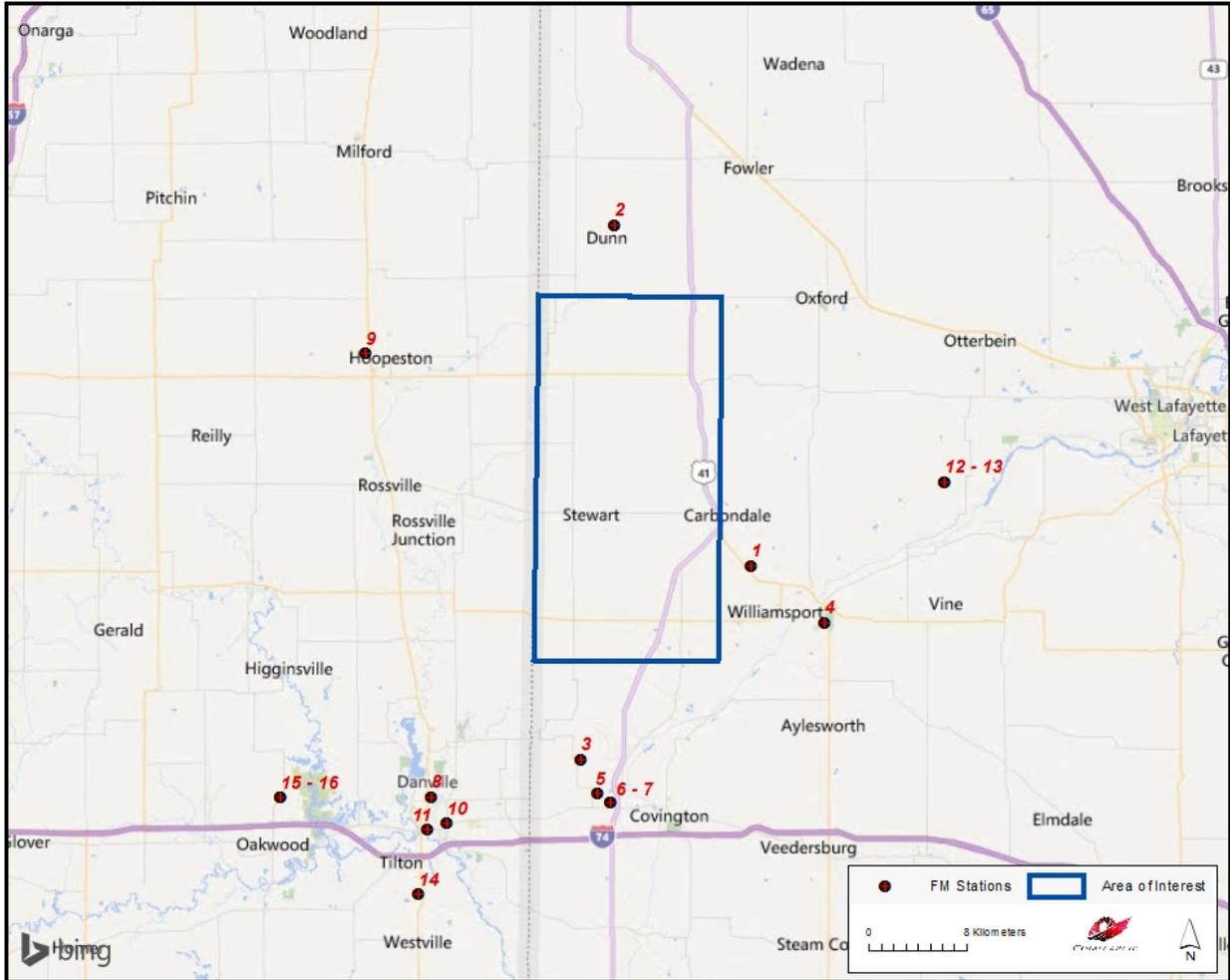


Figure 2: FM Radio Stations within 30 Kilometers of Project Area

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 Jordan Creek Wind Farm project, WDAN, is more than 14.1 kilometers from the limit of the project area. 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 Jordan Creek Wind Farm project, W216BB, is more than 2.7 kilometers from the project area. 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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