Wind Power GeoPlanner™

Single Tower Amateur Radio Report

High Bridge Wind Farm

Prepared on Behalf of
Calpine Corporation

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Table of Contents

1. Introduction - 1 -

2. Impact Assessment - 2 -

3. Recommendations - 3 -

4. Contact - 4 -

1. Introduction

An assessment of an amateur radio communications tower in the High Bridge Wind Farm project area was performed by Comsearch to identify the potential impact from the planned wind turbines. The tower coordinates are 42°27'12.00"N, 75°28'11.60"W and is located at 225 Whites Hill Road which is approximately 0.6 miles east of Highway 36 in Guilford, New York. Comsearch was informed that there are two amateur radio operators with antennas on this tower under FCC callsigns W2RME and K2DAR. An overview of the tower and the wind project area of interest (AOI) which spans Chenango and Ostego Counties, New York appears in Figure 1.

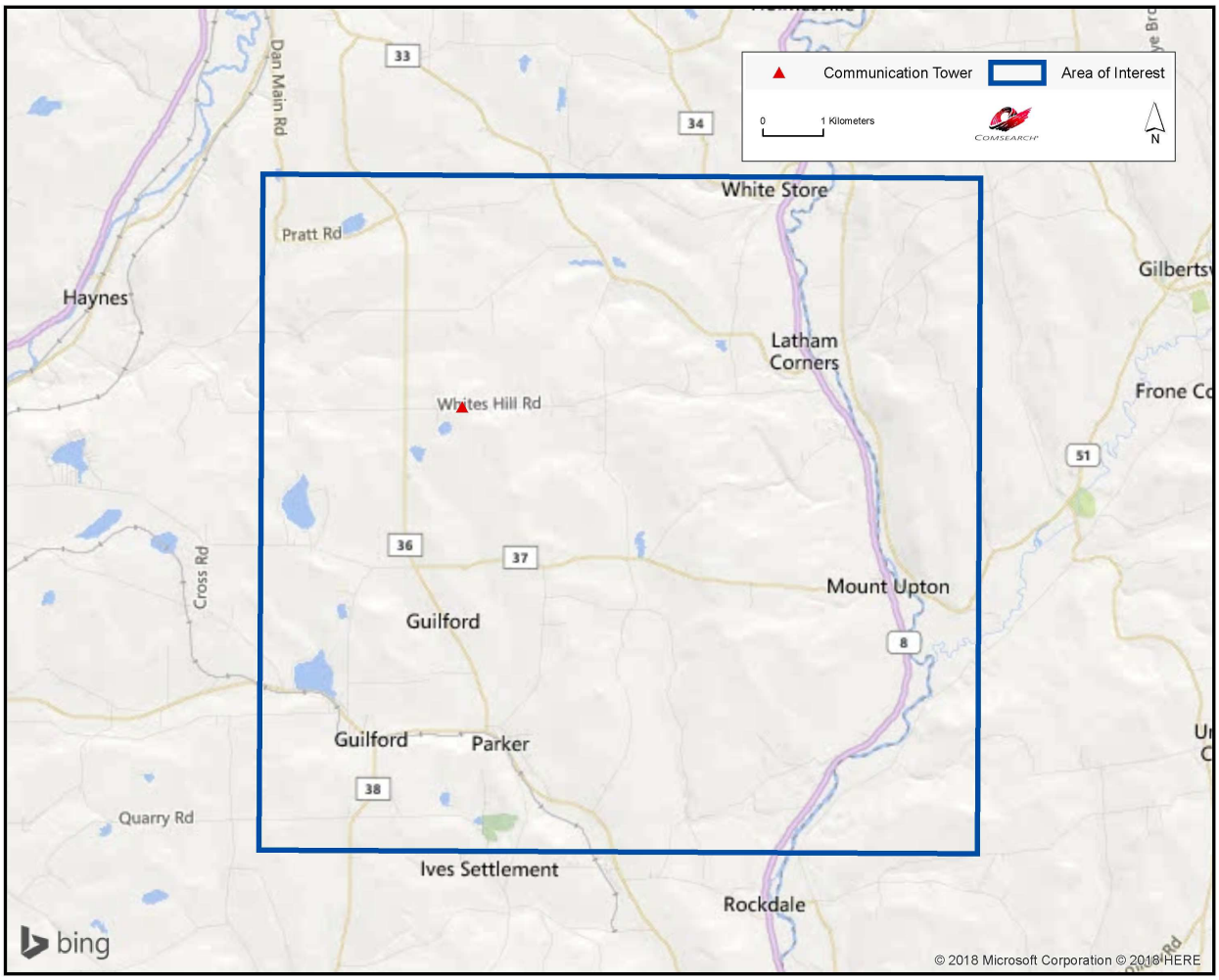

Figure 1: Overview of Tower and Wind Project Area of Interest (AOI)

2. Impact Assessment

Comsearch identified two FCC database records of amateur radio services on the tower of interest. Specific information about these licenses is provided in the table below.

ID	Call Sign	Frequency Band (MHz)	Licensee	Antenna Height AGL (m)	Latitude (NAD83)	Longitude (NAD83)	Distance to Nearest Turbine (m)
1	W2RME	146.085-146.685	Ray Darling, K2DAR	36	42-27-12.0N	75-28-11.6W	493
2	K2DAR	442.650-447.650	Ray Darling, K2DAR	23	42-27-12.0N	75-28-11.6W	493

Table 1: Amateur radio Sites on Tower of Interest

The amateur radio stations as identified in this report are typically unaffected by the presence of wind turbines, and we do not anticipate any significant harmful effect to their services in the High Bridge Wind Farm project area. Although W2RME and K2DAR operate in different frequency ranges and may provide different types of service including voice and data applications, there is commonality between them with respect to the impact of wind turbines on their service. Their frequencies of operation have wave characteristics that allow their signal to propagate through wind turbines and other man-made structures with minimal attenuation. As a result, their range of operation can cover wide areas despite non-line-of-sight (NLOS) conditions. Hence very little, if any, change in their coverage should occur when the wind turbines are installed.

3. Recommendations

Our study identified two amateur radio operators that are currently licensed and operating from the communications tower located within the High Bridge Wind Farm project area as shown in Figure 2.

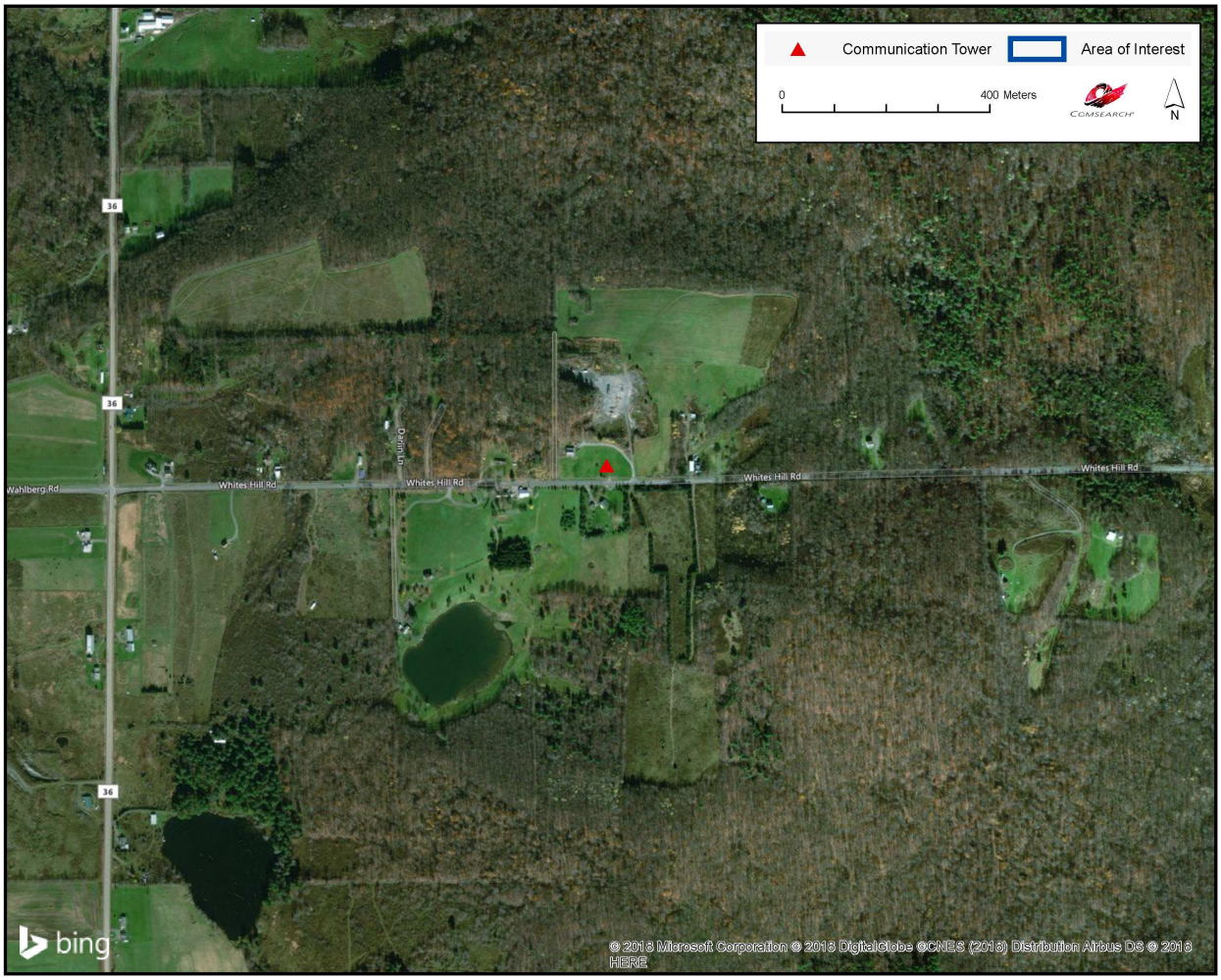

Figure 2: Plot of Amateur Licenses with Closest Turbines

When planning the wind energy turbine locations within the project area, a conservative approach would dictate not locating any turbines within 77.5 meters of the amateur radio antennas in order to avoid any possible impact to the communications services provided by these stations. This distance is based on FCC interference emissions from electrical devices in their licensed frequency bands. Since the nearest proposed wind turbine (ID #5) would have a separation distance of 493 meters, then the proposed wind farm will meet the setback distance criteria for FCC interference emissions relative to the communications tower.

4. Contact

For questions or information regarding this Single Tower Amateur Radio report, please contact:

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